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Indigenous Adoption of Internet Voting: A Case Study of Whitefish River First Nation

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Abstract
Indigenous communities and organizations are increasingly using digital technologies to build community capacity, strengthen community consultation, and improve political participation. In particular, Internet voting is a type of technology to which First Nations have been drawn. This article explores Whitefish River First Nation's (WRFN) experience introducing Internet voting in the course of ratifying a new matrimonial real property law (MRP). Specifically, we examine the implications of Internet voting for political participation and electoral administration at the community level. Although community members' uptake of Internet voting was very modest, we find the experience of adoption had other subtle impacts on community capacity, specifically in terms of empowering the community to pass its own laws and connecting youth and elders. With respect to administration, Internet voting provided an opportunity to connect with community members using technology, to modernize voting processes, and to better accommodate community members needs.

Keywords
Internet voting, participation, self-determination, community-based participatory research, election administration, community capacity

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Indigenous communities have long sought strategies to improve community engagement, build capacity, and work towards self-determination. Recently, a number of First Nations governments have turned to digital technology as a means to engage community members. Specifically, First Nations are deploying digital technology for elections and voting, community consultations, and to transform community members' interaction with local governments (see for example Krebs, 2011; Lavoie, 2012; McMahon, 2014; McMahon, O'Donnell, Smith, Walmark, Beaton, & Simmonds, 2011). Internet voting, in particular, is one type of technology that communities have been drawn to. Approximately 15 First Nations in Canada have used Internet voting, and other Indigenous communities are also considering adoption (see the Appendix for a complete list). First Nations governments are optimistic about the potential improvements to accessibility and participation that this technology might provide. However, there has yet to be any systematic analysis of the effects of Internet voting in Indigenous communities.[1]

This research examines Whitefish River First Nation's (WRFN) experience deploying Internet voting for the ratification of a new matrimonial real property law (MRP) in March 2015. Using the experiences of WRFN as a case study, this article contributes to current understandings of the ways in which Internet voting can affect the participation and administration of votes in First Nations communities. Observations of the WRFN experience provide a point of departure for ongoing analyses of the effects of Internet voting and other digital technologies on the quality of local democracy, as well as the potential impacts of such technologies on self-determination and aspirations of self-governance.

Electoral Participation and Internet Voting

Literature on Indigenous Participation

Most research on Indigenous voter participation has focused on low turnout in federal and provincial elections. The main debate is whether low Indigenous turnout in federal elections can be best accounted for by an "individual resources" model, or by an "Aboriginal politics" explanation. According to the individual resources model, Indigenous Peoples vote or do not vote for the same reasons as non-Indigenous voters, such as low social, economic, and political resources that would otherwise facilitate their engagement and mobilization (Bargiel, 2012; Fournier & Loewen, 2011; Harell, Panagos, & Matthews, 2009). In contrast, the Aboriginal politics explanation focuses on factors and circumstances affecting voting that uniquely affect Indigenous Peoples and that might account for their lower electoral participation. This includes Indigenous Peoples' distrustful and contentious relationship with the Canadian state, and their suspicion about the legitimacy of electoral outcomes over which their peoples can have no real impact (Belanger, 2009; Cairns, 2003; Dalton, 2007; Jacobs, 2009; Ladner, 2003; Ladner & McCrossan, 2007).

[1] We prefer to replace the use of the word "Aboriginal" with the more uniting and less colonizing term "Indigenous" to refer to First Nations, Inuit, and Métis peoples of Canada.

Far less attention has been paid, however, to voter participation in band council elections. While turnout in some communities rarely exceeds 10 percent, others regularly achieve participation rates of about 90 percent (Bedford & Pobihushchy, 1995; Bedford, 2003). The causes of such differences in turnout are not well understood; however, the enormous spatial variation suggests that it has much to do with the distinctive internal politics and social geographies of each First Nation, and with each community's unique history and relationship with the Canadian state.

Similar to the Aboriginal politics explanation discussed above, low voter participation in many band council elections can be attributed to organized resistance to the legitimacy of governing bodies elected under the terms of the Indian Act (Senate of Canada, 2010).[2] Low turnout may also be related to geography, especially in cases wherein communities encompass vast territories and significant land and water barriers. The size of on-reserve and off-reserve populations also differs between communities. Finally, the matter of "membership" and who should have voting rights to participate in band council elections may be more contentious in some communities than others. All of these characteristics likely contribute to lower rates of voter turnout in many communities. Alport and Hill (2006) echoed the above sentiments and suggested:

> Voting abstention among Aboriginal people seems to have a number of sources; it may be a form of protest or a function of disinterest, low external efficacy, cultural difficulties, under-enrolment, language literacy problems, practical or ergonomic obstacles or the result of insufficient civic education . . . e-solutions that optimise the opportunities for voting engagement may be apposite and welcome. (p. 6)

All of these factors and suggestions cause us to question the usefulness of conventional metrics of voter turnout for evaluating the impact of Internet voting on First Nations. If we do not understand what is a positive level of electoral participation, or even whether increased turnout (in general, or among off-reserve members) is acceptable as an appropriate goal across First Nations, then this makes the selection of benchmarks for new voting technologies additionally challenging.

Literature on Internet Voting

Research on Internet voting and voter participation in non-Indigenous contexts has yielded mixed results. In Canada, a study of Ontario municipal elections found that Internet voting was associated with a 3.5 percent increase in turnout in 2010, but over time the results were inconclusive (Goodman & Stokes, 2014). Studies in other jurisdictions have found increases of about 10 points (Spada, Mellon, Peixoto, & Sjoberg, 2015) or more modest increases of close to 3 points (Trechsel, Schuman, & Vassil, 2010), while others have found no effect, or attribute fluctuations in turnout to other factors (Bochsler,

[2] A noteworthy example is the history of band council elections for the Six Nations of the Grand River First Nation. In 1924, the federal government used its power under section 74(1) of the Indian Act to replace the traditional Haudenosaunee Confederacy Council that had been selected via customary traditions, with a chief and council elected under the Indian Act. This action continues to be vehemently opposed by Haudenosaunee leadership (see for example Hill, 2013), and by a large number of Six Nations members. Consequently, even today, Six Nations voter turnout is exceptionally low, with roughly 6 to 10 percent of eligible voters taking part.

2010; Segaard, Baldersheim, & Saglie, 2013). Part of the difficulty in assessing whether Internet voting affects voter participation is that many studies typically examine a single electoral event, or different level elections (e.g., local and national), but data from the same government elections over time has been more challenging to obtain. This is due partly to the novelty of the voting method, and also that many jurisdictions pilot Internet voting programs only to suspend or terminate them shortly thereafter. Some descriptive analyses based on survey research found that the option of Internet voting positively affected respondents' propensities to vote in the 2007 Estonian general election (Vassil & Weber, 2011), and Canadian survey-based studies examining Ontario municipal elections found that the option of casting a ballot by Internet encouraged only a very modest proportion of non-voters to participate (Goodman, 2014; Goodman & Pyman, 2015). Studies in other countries have also observed that a modest segment of less committed voters were inclined to vote when Internet voting was made available (Chevallier, 2009; Madise & Martens, 2006; Trechsel, 2007; Trechsel et al., 2010). Despite these analyses, we are not aware of any examination of the effects of Internet voting on First Nations elections or votes, either descriptively or substantively.

The adoption of Internet voting technologies by First Nations is a new practice and thus data regarding the topic is hard to come by. Furthermore, it is likely that the potential impact of the technology on voter participation in Indigenous communities will be mediated by a variety of contextual factors, such as community cohesiveness, size, and geographic dispersion. In some communities, a key issue is how to encourage participation among youth, while for others a primary issue is how to facilitate the participation of off-reserve members. In addition, differences in geographic remoteness and overall levels of poverty among First Nations have a direct impact on voters' potential access to both personal computers and quality broadband, which could mean that Internet voting may not be a viable strategy for every community. Finally, unique contextual factors surrounding particular votes (e.g., issue salience) may impact members' willingness to vote whether Internet voting is offered or not.

Community Capacity

Beyond impacting voter turnout, perhaps the most promising area for improvement that Internet voting offers to Indigenous communities involves the potential development of community capacity and improvements to electoral administration. Building community capacity is understood as a necessary precondition for the effective development and administration of community programs, as well as for fostering political participation and citizen engagement (Goodman et al., 1998; Liberato, Brimblecombe, Ritchie, Ferguson, & Coveney, 2011; Scully & Diebel, 2015). Community capacity building refers to the "identification, strengthening and linking of [a] community's tangible resources, such as local service groups, and tangible resources like community spirit" (Ontario Healthy Community Coalition, 2015, para. 1). It can be observed along a number of social and political dimensions, including citizen participation, leadership, social and intergenerational networks, and sense of community (Goodman et al., 1998). With respect to the relationship between Internet voting and community capacity, our research addresses how Internet voting can contribute to building community capacity for First Nations, so they might thereby enact a greater degree of local control (e.g., self-determination) over the development and administration of their own affairs. In this context, the use of Internet voting by WRFN to ratify its MRP legislation offers some insight.

In addition to contributions to community capacity, a small body of research has examined the impact of Internet voting on electoral administration. In Canada, election administrators have reported benefits of cost savings, compliance with accessibility requirements, and counting efficiency, but have also cited concerns about security and electoral fraud (Goodman & Pyman, 2015). These are important issues, as First Nations communities are tasked with running elections and referenda on an increasing number of high-stakes issues that are important for the development of self-governance. Some challenges are the needs for both the presence of a supportive legislative framework and the necessary development of a sufficient regulatory framework to implement the technology (Alvarez, Hall, & Llewellyn, 2009). The absence of a legislative provision has posed a problem for Canadian municipalities wanting to adopt the technology (Pammett & Goodman, 2013), and presents an issue for First Nations, such as WRFN, whose elections are governed by the Indian Act. Such communities are authorized to use Internet voting for referenda and consultations, but not for band council elections.[3]

Whitefish River First Nation

Whitefish River First Nation is a rapidly growing community of 1,200 members of Ojibway ancestry with approximately 440 members living on the First Nation. It is located on the shores of Georgian Bay and the North Shore channel to Manitoulin Island, Ontario. There are 185 homes in the community, with about half of the members owning their individual homes and half accessing social housing (Whitefish River First Nation, 2014). WRFN is governed by the Indian Act and holds its band council elections every 2 years, with the most recent election being held in February 2015. Over the past few elections, voter turnout in WRFN has averaged approximately 57 percent of members. This level of turnout may be related to a level of community well-being that is high compared to other First Nations in Ontario.[4]

Like many First Nations, however, political participation in WFRN is challenged by multiple factors. Almost two-thirds of community members live off-reserve, which can make it difficult to equally engage community members in decisions regarding band affairs. Further, communities such as WRFN that are required to hold elections every 2 years under the terms of the Indian Act tend to experience voter fatigue and frustration as well high levels of political churn, turnover, and family competition (Senate of Canada, 2010). All of these factors can contribute to instability and unpredictability in governance, along with the politicization of public service. While these do not appear to be intense problems in WRFN, they are nevertheless challenges that require considerable resources and competent leadership to overcome. In addition, WRFN is a small community, and yet is tasked with the delivery of an enormous range of services including education, health and social assistance, housing, policing, natural resource and environmental management, and economic development—among others. Finally, while communities like WRFN face a large reporting burden to the federal government, they lack the

[3] First Nations with custom community election codes or self-government agreements can use Internet voting for their local elections (Goodman & Pammett, 2014).

[4] In 2011, WRFN was tied for fourth highest among 85 Ontario First Nations in "community well-being" (Indigenous and Northern Affairs Canada, 2015).

necessary funding and capacity to develop their own laws and administrative structures (see Palmater, 2010).

Matrimonial Real Property Law

In December 2013, the federal government passed the new Family Homes on Reserves and Matrimonial Interests or Rights Act (2013).[5] This legislation is intended to fill a policy gap created by the Indian Act (1985), wherein matrimonial property rights respecting spouses have not been fully applied on First Nation reserves. Off-reserve, there are laws in each province and territory that protect the matrimonial property rights of both spouses in a manner that respects the equality of men and women. This protection is available both during marriage and after a separation, and applies equally to married and common-law couples. However, the Indian Act did not provide rules to deal with matrimonial property issues on reserves, and also did not recognize First Nations' law-making power in relation to matrimonial property matters. In two decisions reached in 1986, the Supreme Court of Canada determined that provincial matrimonial property law does not fully apply on Indian Act reserves (*Derrickson v. Derrickson,* 1986; *Paul v. Paul,* 1986).[6] Since that time, organizations representing First Nations women have urged the federal government to take action to address matrimonial real property issues on-reserve. The Act sets out criteria and guidelines for the enactment of First Nation laws regarding on-reserve matrimonial real property. It also provides provisional rules to fill the legislative gap until such time as individual First Nations enact their own laws. In addition, the government established a $5 million dollar Centre of Excellence for Matrimonial Real Property that is operated at arm's length by the National Aboriginal Lands Managers Association.

While many Indigenous communities in Canada are keen to create and adopt their own legislation, there are significant hurdles to doing so. Each community must hold a ratification vote on their proposed laws, with a quorum requirement of 25 percent. This is the penultimate step that follows the extensive work of drafting the law and engaging in community consultation. Support for MRP law within communities is not self-evident given significant differences in the status and rights of members, citizens, and non-members residing on First Nations in relation to the land, access to land, and residence. Critics further argue that the MRP law is flawed both with respect to property issues and women's rights (see Cornet & Lendor, 2013; Palmater, 2010; Ridgen, 2014).

[5] The Act went into force officially in December 2014.

[6] Both of these cases involved marriage breakdowns involving couples living on-reserve. In the first case, Mrs. Derrickson asked for the application of provincial matrimonial property law to declare that she had a half interest in the reserve land allotments held in her husband's name. In the second case, Mrs. Paul requested a temporary order granting her exclusive possession of the family home on-reserve since she was caring for the couple's three children. The Supreme Court applied the same reasoning in both cases, denying the requests on the grounds that provincial law could not be used to determine possession of matrimonial real property that is situated on reserve land.

Context and Method

The McMaster Research Ethics Review Board (MREB) approved our research in February 2015. In addition to MREB approval, we also obtained ethics review and approval from the Manitoulin Anishinabek Research Review Committee (MAARC), and by local leaders and administrators in the Whitefish River First Nation.[7] Our engagement with WRFN was grounded in principles of community-based research, including involvement with, control over, and ownership of the research. The four First Nations principles of ownership, control, access, and possession (OCAP®) governing data collection and use were adapted to fit the context of our research. With respect to ownership and control, our approach emphasized consensus between involved parties in all aspects of the research process, rather than a power relationship between community and university stakeholder. Access to research results took the form of research reports, and follow-up discussions and presentations. Survey and interview data were held in the possession of the university researchers and the WRFN band office. A research agreement was put in place with the community partner incorporating the four principles mentioned above. In our research, community members, leaders, and administrators informed the research process at every stage and helped guide the translation and application of the project's research findings at the community level. Additionally, the research created an opportunity for elders and youth to spend time engaged in activities that, from their perspectives, are important and contribute to the well-being of the community.

Given that our engagement with WRFN was grounded in principles of community-based involvement, and control and ownership of research, a considerable process of trust building, information sharing, and consultation undergirded our entry into the community, as well as our efforts to assist with and observe their Internet voting pilot project. This community-based approach is especially appropriate for this project given the need to learn from Indigenous Peoples about how they experience electoral politics. Indigenous Peoples are often excluded and disengaged from research processes (Castellano & Reading, 2010; Jackson, 1993; Mitchell & Baker, 2005; Porsanger, 2004; Smith, 2006; Wilson, 2008). Community-based participatory research (CBPR) addresses this imbalance by creating bridges between researchers and communities through the use of shared knowledge and experiences. Finally, CBPR establishes a mutual trust between researchers and communities that enhances both the quantity and the quality of data collected.

Although our interaction with WRFN predates the MRP ratification vote, our discussion focuses on this one event, which took place over a period of 5 days from March 2 to 6, 2015. The advance voting period (March 2 to 5) was hosted entirely online, while in-person paper voting was an option on the final day (March 6). Data collection took place over 2 days of preparation for and observation of in-person voting on the MRP law proposal. We also conducted "exit polls" to gauge voters' satisfaction or lack thereof with the voting process. Once community members had cast their paper ballots, the youth community research assistants approached voters to complete a survey about their voting experiences. Voters had the option to complete the survey via paper or on a tablet, and could also do so orally with the assistance

[7] Information on this ethics committee is available at http://www.noojmowin-teg.ca/SitePages/Manitoulin%20Anishanibek%20Research%20Review%20Committee.aspx

of an interpreter. The survey probed voters' awareness of the Internet voting option, their intentions to vote using the Internet in future elections, and their socio-demographic characteristics. A total of 123 surveys were completed, resulting in a response rate of 81 percent. While the entire project followed a CBPR approach, these 2 days of data collection were based on methods of participant observation, as researchers observed and interacted with various members of the community involved in the voting process, which included the permanent administrative staff who organized the election, two representatives of the Internet voting firm, a local translator, a "driver" (available to help members get to the polling station), four youth who were hired to assist in electoral observation and exit-survey administration, as well as community members who either arrived to vote on the proposal or accompanied other voters. We were careful not to interfere with individuals as they voted, but our presence was very visible and consequently many community members approached us after casting their ballot to share their views and ask questions. We also set up a lunchroom during voting day, which provided further space for interaction and exchanges among band administrators and community members. These situations resulted in numerous serendipitous encounters and observations within and around the band council offices. In addition, we conducted 14 semi-structured interviews with a (non-random) sample of community members. These interviews were non-standardized and of varying length. To ensure that the data collection process was as natural and non-intrusive as possible, we did not use any kind of electronic data recording devices. Rather, each member of the research team kept detailed field notes throughout the day, recording their observations and interview data. Field notes were both descriptive (e.g., recording the number of women and men who voted) and analytic (e.g., what symbols or devices were used to signify the integrity of the electoral process, and how effective were these). All interviews with community members were fully transcribed within hours of voting day, based on written notes and memory. A research team debriefing meeting was held at the end of each day; each member shared his or her field notes and discussed his or her interpretation of what had been observed. Descriptive and analytic field notes and transcribed interviews were then entered into a single chronological data log. Using this source, we subsequently applied an iterative process of open and focused coding to establish patterns across the data. Following analysis and preliminary write-up, short interviews were also conducted by telephone with band administrators to verify specific information.

This research approach afforded us an expansive and in-depth understanding of both the electoral administration process and the diverse perspectives of community members regarding the legitimacy and appropriateness of Internet voting in WRFN. Following a rigorous method rooted in CBPR, participant observation, and systematic recording and analysis of naturalistic data, our research findings illuminate the key issues and challenges confronting this community in its adoption of Internet voting. They also speak, with considerable nuance and depth of understanding, to perspectives within the community on the substantive matter—matrimonial real property law—that their leadership has put to it. Of course, our findings are intrinsic to this community's particular experience; we make no claims as to their generalizability to other First Nations or other local policy decisions. Nevertheless, the validity of the findings obtained from this approach—especially the development of valid concepts and their inter-subjective meaning—is superior to what could be gleaned a more "contrived" closed-ended, large sample survey approach.

Findings

What Did the Vote on MRP Law Mean to Community Leaders and Members?

The specific features of MRP law are complex and potentially controversial, and thus necessitate extensive community consultation in addition to the strict requirements of the ratification vote. Community leaders were excited to be one of the first communities in Ontario to seek ratification of their own MRP law and to adopt Internet voting. For WRFN leaders, this represented an important step toward self-government, allowing them to be removed from provisions of the law imposed by the federal government. According to the WRFN band manager:

> The assertion of creating our own laws is very important . . . It is the principle of it being "our law" rather than the federal government's law. We also want to have a community-based approach [to resolving matrimonial property conflicts], to be able to deal with it locally rather than having to go through the provincial courts, or the federal government. (Field Interview, March 6, 2015)

The ratification of the MRP law had symbolic importance, tied to the achievement of self-government. One of the councilors explained that, for her, adoption of the new law meant:

> We are literally stepping from one world into another world. (Field Interview, March 5, 2015)

Several members of the community spoke about the particular importance of this vote for women. One described her efforts to inform other members:

> People don't know what the vote is about. I tell them it is about getting out from under [the] Indian Act, which does not give women rights. (Field Interview, March 5, 2015)

Another community member described in personal detail why she supported the law:

> I married in. I was not Status, but I married during those years when you could gain status by marriage. What if my husband had died? Could the chief come and tell my kids to get out? Could it happen to my son? He's engaged to be married to a non-Status girl; what would happen to their kids? (Field Interview, March 6, 2015)

Chief and Council identified three interconnected strategies for taking on the challenge of ratifying their own matrimonial real property law through the use of Internet voting. First, they relied on their partnership with the Union of Ontario Indians, which has provided considerable legal and policy advice to their 39 First Nation members in the development of MRP Law. Second, they drew on funding from the First Nation Market Housing Fund (FNMHF) to support the community consultation and ratification phases. Finally, the community, in collaboration with technology vendor Scytl, used this opportunity to implement an Internet-based electronic voting process for the very first time.

Chief and Council anticipated several advantages from the deployment of Internet voting for the proposed MRP law. First, due to a funding window with the FNMHF, the MRP ratification vote was scheduled at a somewhat sub-optimal time—just one month following the most recent band council

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elections. It was therefore hoped that the introduction of Internet voting would help to distinguish this vote and to thereby raise attention to the MRP issue. Second, it was anticipated that Internet voting would help the community achieve the required 25 percent quorum. Third, WRFN administrators viewed Internet voting as a strategy to improve overall outreach to the community, especially to off-reserve members. Fourth, personnel from the technology vendor would spend time in the community to consult and provide technical guidance with the hope that this process would raise community members' interest in and awareness of the MRP vote.

Did Internet Voting Increase Turnout?

In a word: no. In total, 51 people registered to vote by Internet and, of those, 21 voted online. Quorum was met, barely, with an overall turnout of 27 percent, and the MRP law was approved by a wide margin: 136 (yes) to 38 (no). Our research suggests that a lack of awareness of Internet voting was not a problem. Rather, community members' low uptake of Internet voting appears to be related to the two-step process that required self-registration prior to voting. In addition, community members reported technical impediments to accessing the online registration and voting portal, including lack of familiarity or comfort with the Internet voting process, and a lower sense of urgency to participate online (given that paper ballot voting was available). On-reserve members do, for the most part, have the necessary hardware to access online voting. According to data provided by WRFN band administration, 160 of 185 households have Internet access, and most community members have mobile phones with Internet access. Older members may have faced technical challenges to a greater extent than younger ones. Older members were also more likely to use Indigenous languages, and while an interpreter was available to assist voters at the physical polling station, the Internet voting system was entirely in English.

For WRFN's first experience with Internet voting, it was critical that voters retained the option to vote by paper. Also, challenges in use for off-reserve members were likely quite different than those faced by on-reserve members. Given the higher proportion of young members living off-reserve, and the fact that they typically reside in urban areas, it is unlikely that technical barriers were an impediment to online voting for them. Rather, the challenge here—much as with ordinary voting methods—lay in communicating the issues and details of the vote to those living off-reserve.

While some members were keen to see the community adopt Internet voting, others, particularly older community members, were less certain that the voting method was the right fit for WRFN. For example, one community member, Angus, though clearly supportive of the community passing its own MRP law, felt that Internet voting was not culturally appropriate:

> It's not "our way"—it's not traditional. (Field Interview, March 6, 2015).

He explained that the traditional voting method for the people of WRFN involved people lining up behind whichever candidate they supported, so that "everything was completely transparent" (Field Interview, March 6, 2015). He also felt that there needed to be more time for community consultation. The lack of understanding of the complex issue, he felt, made Internet voting less desirable. His opinion was that coming in person to the band office to vote by paper offered people "the opportunity to discuss

the issue with each other, to ask questions; people don't have that same level of discussion when they vote by Internet" (Field Interview, March 6, 2015).

The low number of votes cast online and the reticence toward it voiced by some members of the community raises questions about the usefulness and cultural appropriateness of remote voting methods in First Nation communities. However, there are three caveats to this pessimistic conclusion. First, there was strong support for the MRP law, particularly among the women we spoke to, and some linked the innovation of the community passing its own MRP law to the innovation of Internet voting. For example, a community member named Margaret talked to us about the need for advancement in technology use (especially among older members), and in the same breath spoke of the need to modernize First Nations' laws. Concerning the certificate of possession in her family, she explained:

> My husband's name is on it, not my name. It was passed down to him from his father. So it is something that is 100 years old. And today, people are getting wills. We didn't do that before, and they need to learn to put girls on the will. So that's why we need this law. We need to change some of our attitudes and behavior. (Field Interview, March 6, 2015)

Second, exit poll data from paper voters suggests that more voters *may* opt for Internet voting in a future vote or election for reasons of accessibility and convenience. When asked if they would be likely to make use of Internet voting in a future vote, 60 percent of paper voters said they would. Twenty-two percent said they would do so "no matter what" and 38 percent commented that they would under certain circumstances, such as in the case of illness or inclement weather—instances when remote voting from home could promote access to the ballot box. Of course, these individuals are already voters, so their use of Internet voting would not increase participation, but it could promote voting in the future. Preserving current voters is equally important for electoral legitimacy and maintaining turnout levels as attracting new ones.

In terms of satisfaction with traditional voting, a majority (51%) of voters reported being dissatisfied with the paper voting process. This represents a sizable segment of voters, and speaks to an important undercurrent of dissatisfaction with current voting methods. It suggests that there is a need to improve the voting process, and it raises questions as to whether alternative methods such as Internet voting may provide a more satisfactory election experience for voters. It is important to note that neither the technology vendor nor the band leadership appeared particularly concerned about the low uptake of Internet voting. Though reaching quorum was a critical issue for both parties, they felt that the experience with Internet voting on MRP was good practice, and that the community would become increasingly comfortable with it over time. When asked for his view, the Chief said he had no regrets adopting Internet voting and explained:

> This is the future for us. (Field Interview, March 6, 2015)

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Can Internet Voting Bring Advances in Electoral Administration and Community Capacity?

Among the potential benefits for WRFN election administration was the opportunity to:

a. Connect with community members through technology, particularly email;

b. Improve and modernize electoral administration and voting processes; and

c. Engage off-reserve members.

First, with respect to community capacity, although votes cast by Internet were modest, officials also observed subtle impacts on community dialogue, specifically the discussion it stimulated between elders and youth about technology and the MRP law.

Band administration hoped to use Internet voting deployment to collect email addresses to build an email directory of community members. The exercise helped band administration to gather some additional email addresses for the directory, and officials continue to look for opportunities to gather more. Email is seen as an especially useful form of contact since some community members keep email addresses longer than mailing addresses, some members (such as students, for example) have multiple mailing addresses throughout the year, and mail is becoming increasingly costly. Registering voters online to vote by Internet made a small contribution to a centralized email list.

Second, the adoption of Internet voting was also a step toward modernizing the election and voting process at WRFN. It was an exercise in learning how band officials could accommodate technology in votes and how they might better adapt electronic voting in future events. The introduction of an alternative, remote method of voting was also a step toward improving access to the voting process for all community members. While there are clear benefits of accessibility and convenience for off-reserve members, the additional voting method was also an improvement for on-reserve inhabitants should they not be able to leave the house, or simply "want to stay and vote in their pyjamas." It presented the community with more choice and control with respect to electoral involvement. As one administrator observed:

> The use of Internet voting in the MRP referendum is a step toward modernizing our voting processes and showing our community members we are working on new ways to engage them in case they can't make it out to a physical poll. It also got us thinking about how we can better accommodate electronic voting in the future. (Interview, March 6, 2015)

Third, Internet voting deployment is seen as a vehicle of inclusion for off-reserve members who may not be able to travel the distance required to cast a vote at a physical polling location on-reserve. In WRFN, the process for plebiscites used to involve going from door-to-door to explain the issue and parameters of the vote to community members. As one community member commented:

> There would be a whole system in place. The office would drop all other work, and focus on this, so that everyone in the community was aware. If no one was home, then the package of

> information would be dropped at the door, and in the office they would keep a record of who was to be contacted. Contact them, talk by phone, record their questions, cross them off the list. Make sure that everyone in the community was reached. All the concerns and question would be collected, and we would have a full sense of what aspects of the issue people had problems with, so that we could tweak the proposal. All that changed once the federal government said that off-reserve people had a right to vote. Then it was impossible to drive 5 hours to Toronto, or to Sudbury, to talk to everyone. (Interview, March 1, 2016)

Leveraging technologies such as Internet voting is one way of adapting to changes in the voting rights of off-reserve members and is also a step toward working to promote inclusion in the voting process. From a policy perspective, if uptake of Internet voting among off-reserve members improves over time it could be a means of bringing a broader segment of community voices into the voting arena to take part in the decision-making processes surrounding community policies and laws.

Potential engagement of off-reserve members also speaks to the development of community capacity. Increased member participation in community processes and events will ideally promote further engagement and strengthen the participatory richness of the community. Once it is complete, using the email directory to reach members with important updates and information is another tool to reach members and enable their engagement in community life. In the WRFN case, band administrators observed that Internet voting had a positive impact on the on-reserve community. Specifically, it opened up dialogue regarding technology that brought youth and elders together in new ways and enabled conversations about the content and substance of the MRP law. Youth in particular were interested in how Internet voting was being set up and how it worked. In this way, the adoption of technology stimulated conversations about the issue being voted on. As noted by band administration:

> The implementation of Internet voting provided an opportunity to engage with community members in a different way, which opened up new dialogue. Youth were excited about the initiative and youth and elders engaged in discussions they might not have otherwise. (Interview, March 1, 2016)

Interest in the technology and the new dialogue it stimulated were seen as positive outcomes. Despite that fact that Internet voting uptake was not high, its deployment had more nuanced impacts on discussion and intergenerational engagement.

Conclusion

Our findings suggest that the implications of Internet voting for participation in this community are far from straightforward. While a large increase in voter participation—the conventional metric for assessing the success of Internet voting—was not observed, WRFN realized some advancement to community capacity. Specifically, the deployment of Internet voting empowered the community to pass their own laws and sparked community dialogue regarding the MRP law and technological adoption, particularly between youth and elders. With respect to administration, Internet voting provided an opportunity to connect with community members using technology, to modernize voting processes, and was a means of better accommodating and engaging community members. It further shows a willingness

to harness digital technology in a manner that is respectful and consistent with the political, social, and cultural goals of this community. Internet voting was one digital experience, much like the email address directory, aimed at fostering community engagement by reaching members in different ways.

With specific reference to policy, the WRFN case suggests that Indigenous governments in Canada and abroad could leverage Internet voting in order to achieve the following outcomes related to engagement and policy adoption:

- Internet voting can be a useful tool for ratifying and passing important policies and laws at the community level that may contribute to self-determination.

- Internet voting has the ability to engage off-reserve members in important votes pertaining to policy, especially considering that the time required to travel to a physical poll location when living outside the community can influence an off-reserve member's decision to vote. This is intended to better enable their voting rights and broaden the breadth of voices consulted in the policy adoption process.

- Internet voting, in this case, fostered new opportunities for dialogue within the community by bringing together different types of people, namely elders and youth. As a result of excitement and discussion related to Internet voting, community members also discussed the merits of the MRP law. This brought different voices into the dialogue to share their perspective and could be a benefit for other policy issues or laws where community approval is sought.

Finally, this exercise was a first step at modernizing government service for the community. WRFN administration plans to use Internet voting in a future referendum and eventually in elections and other areas. As Indigenous communities deploy technology as part of their electoral institutions, it is likely that digital policies will be adopted elsewhere in government as part of community modernization.

While this research is limited to Canada, specifically WRFN in Northern Ontario, we know of only one other Indigenous experience with voting technologies in another jurisdiction. The Mohawk Council of Akwesasne in the United States has deployed Internet voting to ratify their own property laws, a court law, and for a plebiscite on an island corridor. The property law vote in particular had considerable uptake among members and increased voter participation (Simply Voting, n.d.). Given that more Indigenous communities and organizations are experimenting with technology, our current research considers Internet voting and its compatibility with traditional decision-making. Community leaders need to be part of larger policy structures to ensure that Indigenous voices are heard and traditional values are upheld. Future research might consider examining the potential for technologies beyond Internet voting to address the problem of political exclusion among Indigenous groups and other excluded groups of voters.[8] It is important to understand the impacts of Internet voting on voter

[8] Our current research is exploring the use of kiosks in Indigenous communities. Alport and Hill (2006) suggested that kiosks could provide instructions in local languages, thereby overcoming minority language and literacy or numeracy issues that impede participation.

participation in Indigenous communities and to work with communities to explore how technologies can be leveraged to both serve and connect members, and to widen the scope of voices included in votes, public consultations, and decision-making regarding policies and laws. There is also a need to better understand what full participation means in an Indigenous context, and how, or if, digital technologies can be harnessed to achieve these goals.

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Appendix

Table 1. First Nations in Canada That Have Used Internet Voting

Province	Community	Year(s)	Type of Vote	Topic
ON	Whitefish River First Nation	2015	Referendum	Matrimonial Real Property
ON	Nipissing First Nation	2014	Referendum	Constitution
ON	Shawanaga First Nation	2015	Agreement Vote	Land Codes
ON	Mississauga First Nation	2014 2015	Election (2014) Referendum (2015)	First Nations Education Act (2014), Election (2015)
ON	Batchewana First Nation	2015	Referendum	Matrimonial Real Property Law
BC	Talthan First Nation	2011 2014 2015	Agreement Vote (2011), Agreement Vote (2011), Election (2014), Referendum (2015)	Transmission Line (2011), Impact Benefit Agreement (2011), Central Council Election (2014), Co-Management Agreement (2015)
BC	Huu-ay-aht First Nation	2012	General Assembly	General Assembly
BC	Squamish First Nation	2013	Referendum	Membership Amendment
BC	Ucluelet First Nation	2015	Election	Election
BC	Tla'amin (Sliammon) First Nation	2015	Referendum	Constitutional Amendment Vote
BC	Shxwowhamel First Nation	2015	Ratification Vote	Mutual Benefits Agreement
BC	Uchucklesaht First Nation	2015	Election	Election
BC	Saulteau First Nation	2015	Referendum	Impact Benefit Agreement