Citizen-Driven Political Blogs as Web-based Research Samples: Opportunities and Challenges

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The increasing adoption of blogs by Internet users during the last seven years, has contributed to the restructuration of the online political mediascape in many national contexts. Based on an analysis of the socio-political behavioural profile of French-speaking Quebec political bloggers in the spring of 2008, this article provides an assessment of the multidimensional challenges and opportunities linked to the constitution of social media research samples through non-probabilistic viral or decentralized strategies. More specifically, it argues for the development of more methodologically-rigorous quantitative and qualitative investigation approaches that can deal with the constantly-evolving structural and functional particularities of the Web 2.0 political media environment. This is especially relevant considering the rising popularity of blogs, social networking services (SNS) and other Web 2.0 tools as objects of research among the international scientific community.

This article proposes a multidimensional assessment of the methodological opportunities and pitfalls linked to the study of citizen-driven political blogs. The emergence of these media tools as an increasingly trustworthy and influential source of politically-oriented news and commentary since 2004, has been fuelled by many contextual variables.[1] For example, the public's growing levels of distrust and discontent with offline-based conventional media organizations and public institutions during the last two decades, coupled with their desire to be exposed to a diversifying range of viewpoints, frequently ignored by the mainstream press, have helped blogs gain significant traction in the political mediascape in many Western-styled national contexts (Gil de Zúñiga, et al. 2009; 2011; Johnson and Kaye 2004; 2009; Kim and Johnson in press; Ekdale, et al. 2010; Kenix 2009).

While blog usage and interest levels have sharply dropped among certain demographic groups like teens and younger adults over the

last few years with the rise and rapid popularization of social networking services (SNS) such as Facebook and microblogging sites like Twitter (Zickuhr 2010; Lenhart, et al. 2010), they remain an important component of the political communication, mobilization and persuasion landscape. For instance, they are consistently ranked as one of the most trusted online and offline sources of political information among frequent or 'experienced' blog readers and politically-savvy Internet users in the United States (Johnson and Kaye 2009: 176; Johnson, et al. 2008; Ekdale, et al. 2010; Trammell 2007; Kaye and Johnson 2011). More specifically, they are seen as equally or more credible than conventional media outlets by these segments of the online public. In comparison, members of the online population at large who are less familiar with the structural and function properties of blogs, generally have moderate to low levels of confidence in these media channels (Johnson and Kaye 2009; Johnson, et al. 2008; Kaye and Johnson 2011; Kim and Johnson in press; Banning and Sweetser 2007; Armstrong and McAdams 2011; Kaye 2010). Several studies point out that the credibility of political blogs is generally hard to evaluate, because it rests on the consideration of different multidimensional factors such as their format and visual design, the user-generated nature of their content, the depth and often informal or highly-partisan tone of their publications, the content and social interactive functionalities they offer to their readers, the socio-demographical and professional background of their authors and their visibility in the offline mass media environment (Kaye and Johnson 2011; Armstrong and McAdams 2009; 2011; Iosifidis 2011; Carlson 2007; Metzger, et al. 2010).

The relatively high profile of blogs in recent years has led to the production of a growing body of scientific literature, tackling a wide range of politically-oriented blog-related themes such as content production, coproduction and dispersion, community building, identity management and civic engagement (eg.: Schmidt 2007; Kim and Johnson in press; Larsson and Hrastinski 2011; Jankowski and Van Selm 2008; Skoric, et al. 2009).[2] More specifically, it is possible to argue, based on Siapera's work (2008), that the bulk of the research on citizen-driven political blogs has centered on four of their primary roles which can affect in varying ways formal and informal political processes. First, the previously-mentioned increasing loss credibility of traditional formal political players has heightened their capacity to influence in a bottom-up fashion the structure of online as well as real-world public deliberation, more broadly known as grassroots-driven agenda-setting (Siapera 2008; Park 2009; Payne 2010; Blumler and Coleman 2010).

Indeed, their publications often comprise facts, arguments, opinions and analyses that have little to no resonance in the offline mediascape, but that can complement, challenge and, in some cases, shape offline-based journalistic organizations' news coverage and politicians' discourse (Johnson and Kaye 2004; 2009; Sweetser and Kaid 2008; Gil de Zúñiga, et al. 2011; Meraz 2009). In the words of Wei (2009: 548), they play the role of 'mainstream media fact-checkers and ideological watchdogs' (Glaser 2009).

Secondly, the relative independence of their authors from commercial, political and corporate interests gives them more latitude to conduct in-depth investigations and publicly expose political scandals or controversies. Moreover, it allows them to discuss more extensively issues or events that receive limited coverage in conventional media outlets because they generate little interest among the public (Siapera 2008; Kenix 2009; Woodly 2008; Johnson and Kaye 2009). Thirdly, citizen-driven political blogs constitute an aphysical conversational and deliberational arena where Web users can independently engage in multidirectional discussions, share information and build issue-oriented transient social networks. In some cases, they can have politically-oriented educational and mobilizatory effects on the public and ultimately lead to increased levels of formal and informal political engagement

(Siapera 2008; Gil de Zúñiga 2009; Lev-On and Hardin 2008; Skoric, et al. 2009; Farrell, et al. 2008). Finally, citizen-driven political blogs constitute a flexible media channel that can potentially foster the development and the strengthening of two-way communication bridges between members of the citizenry and the formal political sphere (Siapera 2008; Woodly 2008; Coleman and Wright 2008).

However, little scholarly work has been done in recent years on the methodological implications of investigating Web 2.0 media technologies or, in the specific case of this article, citizen-driven political blogs (e.g. Boyd and Ellison 2007; Ahn, et al. 2007; Li and Walejko 2008). Several variables are responsible for this situation, such as the complexity and resource-heavy nature of academic research, as well as the slow pace of the scientific publication process, which prevents scholars from keeping up with their constantly-evolving structural and functional properties (Karpf 2008). As noted by Karpf (2008), blogging research conducted in 2004 and 2005 was generally available in scientific books and journals in 2008. Several authors point out that this constitutes a challenge for the contemporary scientific community (Karpf 2008; Roman 2011).

Building from a previous project on the online and offline socio-political behavioural profile of Quebec-based French-speaking political

bloggers which was conducted in the spring of 2008 (Giasson, et al. 2008; 2009), this article provides a broad characterization of the methodological constraints and opportunities linked to the study of political blogs and, by extension, other Web 2.0 media channels. The first section will provide a brief overview of the implications of broader Internet research for political communication scholars. This article will then feature an in-depth look at the various sampling issues facing social scientists studying Web-based decentralized content dispersion and social networking political networks. More specifically, an examination of structural and functional particularities of political blogs and their impact on sampling and research designs will be conducted. This will help to identify the major concerns that need to be considered for the constitution of viable research samples through conventional and non-conventional modes of sampling. The sampling strategy used for the Quebec blogging project was particularly important due to the need to select a group of bloggers that would adequately reflect the membership of the political blogosphere of Quebec, a Canadian province characterized by its linguistic, geographical, cultural, economic, religious and political specificities (Fournier 2001; 2002). Due to the availability of a wealth of scientific and professional political blogging-related studies conducted recently in United States

and many European countries, this section of the article will offer an extensive assessment of the methodological strengths and flaws of the sampling tactics used by social media researchers since 2004. Finally, the last section of this article will feature a brief discussion of the growing relevance of decentralized or viral-oriented sampling techniques which were used in the study of Quebec-based French-speaking political bloggers, and the role they are expected to play in future social media-related scientific work.

The opportunities and pitfalls of conducting online political communication research

Web-based media platforms have been rapidly adopted by formal political actors for content dissemination, mobilization and persuasion purposes in many Western-styled national contexts since 1996 (Davis, et al. 2009; Blumler and Kavanaugh, 1999). More specifically, they frequently used them in ways replicating the conventional media dynamic, thus rendering real-world investigation methods partly applicable. For example, the campaign website of an overwhelming majority of institutionalized political players before the 2000 Presidential campaign in the United States strictly adhered to the 'broadcast politics' paradigm which governed real-world mass-mediated political communication (Benoit and Benoit 2005; Kreiss and Howard 2010). The re-

cent rise of social media channels, which vastly differ from Web 1.0 technologies due to their distinct structural and functional specificities, as important players in the political communication, mobilization and persuasion landscape has yet again challenged social scientists' conception of the media world (Li and Walejko 2008; Verdegem 2011; Hanson, et al. 2010). More broadly, Morris and Ogan (1996) believe that the Internet represents an aphysical media space, forcing 'scholars [from all fields] to rethink assumptions and categories, and perhaps even to find new insights into traditional communication technologies'.

Computer-mediated communication (CMC) technologies have rapidly become widespread and 'fashionable' multidisciplinary research objects during the last two decades (Kim and Weaver 2002; Wright 2005; Schneider and Foot 2004; Dahlberg 2004). Many factors have been inciting and, inversely, deterring academics from conducting Web-related research projects over the last two decades. The newness, the speed, the flexibility and the relative ease and low cost in terms of time and resources of this type of research work, constitute the primary incentives of online research. Conversely, the nascent nature and the on-going development of this media environment, which forces scholars to constantly rethink and redefine their theoretical and methodological assumptions and adopt

new ones, coupled with the general lack of understanding of online research objects by the scientific community, constitute the main drawbacks of this type of scientific work (Nancarrow, et al. 2001; Bennett and Iyengar 2008; Hine 2005; Hopkins and King 2010). There are several other challenges posed by Web-only research, such as the need for the development quantitative and qualitative content analysis techniques tailored for the study of multi-dimensional digital material, flexible sampling processes as well as new result presentation and description designs (Jankowski and Van Selm 2008; Hopkins and King 2010).

More specifically, many mass media scholars overlooked the World Wide Web in its early years for several reasons. For example, it was incompatible for a long period of time with their widely-recognized theoretical and conceptual vision of the conventional media environment. Indeed, it was 'locked [...] into models' of unidirectional content dispersion and social relations which were privileged by dominant offline-based broadcast media outlets (Morris and Ogan 1996). Several facets of conventional media-inspired investigation techniques, which were designed for the analysis of one-to-one, one-to-few or one-to-many highly-hierarchical information transfers and socio-interactional processes, were progressively altered for the study of online communication technologies

(Livingstone 2004; Jankowski and Van Selm 2008).

According to Wellman (2004: 123), Web research from a social science perspective has undergone three (3) distinct developmental stages throughout the last three decades. First, the Internet was treated as a 'bright light, shining above everyday concerns' and its impact were studied through the consideration of the 'conjecture and anecdotal evidence', consequently rendering the results of analyses mostly utopian and potentially unrepresentative, thus mostly unreliable. The second phase, which started in 1999, focused on the documentation of 'Internet uses and users' through different socio-demographical data-gathering tools such as large-scale online surveys and interviews (Wellman 2004). According to several authors (e.g. Dahlberg 2004; Kim and Weaver 2002), this type of research still constituted the bulk of published Internet-related scientific work as of 2004. The last online research stage is characterized by the emergence and development of highly-specific and multidisciplinary projects relying on a strong theoretical and conceptual framework (Wellman 2004). Social media research, which gained significant traction in recent years, should fall in this category. However, it is possible to argue that the majority of scholars currently studying the social media phenomenon have adopted mostly-descriptive

approaches which are more in line with the first and second stages of Internet research (e.g. Larsson and Hrastinski 2011).

While online political research can be characterized as still being in its relative infancy compared to most other fields of scientific work, sharp divisions have already emerged between two groups of scholars who represent the 'philosophical forces of stability versus change' (Dutta-Bergman 2004: 42; Anstead 2008). On one hand, social scientists adhering to the normalization theory[3] argue that online media tools are replicating and, in some cases, strengthening according to reinforcement theorists real-world political communication, persuasion and mobilization patterns that are prevalent in mature Western-styled democratic contexts (Park and Perry 2008; Foot, et al., 2009; Lee and Park 2010). They are characterized by the unidirectional top-down transfer of highly-controlled multidimentional digital content and mobilization initiatives from a limited number of politically-dominant elites, also known as 'established power structures' (Strandberg 2008: 224; Latimer 2009; Margolis and Resnick 2000). On the other hand, equalization or cyber-optimistic theorists[4] believe that they are contributing to the progressive emergence and development of transformative political communication, persuasion and mobilization ways (Park and Perry 2008; Foot, et al. 2009). More

broadly, they have adopted a technological deterministic vision of the evolution of socio-political processes (Smith and Chen 2009).

Some scholars have adopted a middle-of-the-road vision of the effects of the Internet on politics, which can be arguably seen as essential to consider, in order to fully understand the contemporary digital campaigning dynamic. In fact, they argue that the consideration of both analytical approaches is essential to fully understand the Internet-based political dynamic. While they agree that the content circulated online by formal and informal political actors constitutes one of the primary drivers of the transformation of socio-political processes, they also acknowledge that the distinct capabilities of Web-based communication tools can have important structuring effects on information flows and social contacts (e.g. Lee and Park 2010; Bimber 2000). They believe that the complex relationship between the Internet and politics is influenced in varying ways by several contextual factors 'such as the achieved level of democratic and economic development, [the level of development of digital communication technologies with different publication capabilities,] institutional dynamics and offline political culture' (Lee and Park 2010: 33; Foot, et al. 2009).

This paper will take a pragmatic look at the methodological challenges and opportunities of studying citizen-driven political blogs. A large number of researchers have exclusively relied on traditional methodologies that are still widely used for the study of offline-based political communication phenomena when examining different facets of the blogosphere (Li and Walejko 2008). This paper will argue for the development of robust methodological approaches inspired from offline-inspired techniques, but adequately suited to deal with the structural and functional specificities of the social media environment (middle-of-the-road methodological solutions). More specifically, it will take a look at specific methodological issues that were encountered in the study of the Quebec-based political blogging community such as the identification of politically-oriented blogging populations and the selection of appropriate sampling strategies.

Identifying political blogging populations

The identification of the population studied, in this case the politically-oriented Quebec-based blogging community, was complicated by several structural characteristics of the political blogspace which can affect any political blogging studies. First, a detailed portrayal of political blogs is required to clearly differentiate them from other blogging subcategories (Farrell, et al. 2008). While the term 'blog' previously referred to a well-defined group of activities, it can now be associated to highly-heterogeneous practic-

es (Karpf 2008). For example, the search engine *Yahoo!* listed eighteen different blog genres in 2006 (Efron 2006). Political blogs, which are often categorized as 'news blogs' due to their heavy focus on current events with politically-oriented ramifications, can take different formats, feature a diverse range of multidimensional content genres and serve various information dissemination, mobilization and persuasion purposes (Trammell and Keshelashvili 2005; Jones and Himelboim 2010; MacDougall 2005; Serfaty 2011). For example, the majority of influential political blogs in the United States can be defined as 'filter blogs' due to the omnipresence of hyperlinks in their publications. Web links can have channelling effects on audience members' content selection and consumption behaviour by redirecting them to publicly-available online resources comprising information directly or indirectly linked to the argumentation made in the original blogpost (Hookway 2008; Herring, et al. 2005; Wei 2009). Interestingly, filter blogs have been garnering the bulk of the conventional media coverage in recent years in the United States, thus partly explaining their popularity among the public (Jones and Himelboim 2010; Schmidt 2007).

Several studies have also shown that politically-oriented digital material is present on all types of blogs, thus significantly complicating the identification of those that can be categorized as truly political. As noted by Sweetser and Kaid (2008: 73), not all blogs are in-your-face political. For example, Trammell (2005) studied the posts of 47 celebrity blogs in 2004 and found that 18 per cent of them featured overt politically-oriented digital material such as 'blatant political statements' (Sweeser and Kaid 2008). Moreover, many of their posts also comprised 'parapolitical' (Dahlgren 2005) or entertainment-oriented content that could have direct or indirect shaping effects on readers' perceptions of politics and potentially modify their levels of political interests and engagement. Interestingly, celebrity bloggers, which 'make political statements at a much higher rate than' other members of the blogging community, are considered by younger Web users as equally credible to politicians or other independent political groups (Sweetser and Kaid 2008: 73; Kaid and Postelnicu 2006; Trammell 2005; Sweeser and Kaid 2008). More recently, a content analysis of 23,904 blogs focusing on a wide range of topics not necessarily linked to politics, which were selected through the online portal *Bloggers.com* from January 6th to January 20th 2008, showed that their posts and comments left by readers (when a comment tool was available) featured a sizable 'volume of political discussion' (Munson and Resnick 2011).

According to Wallsten (2005), there are two main techniques to

determine if blogs can be catego-rized as political. First, a quantitative keyword analysis of their content can be conducted to evaluate the publication periodicity of politically-charged material, but few authors have provided precise benchmarks for the determination of the political nature of blogs. Secondly, research-ers can rely on bloggers' own as-sessment of their blog through, for instance, the consultation of bio-graphical sections when available, or by conducting structured or semi-structured interviews with them through email messages or secure online surveys. However, this ap-proach can be seen as potentially biased since some of them might characterize their publications as political when, in fact, they contain little to no politically-oriented digital material (Wallsten 2007). According to Wallsten (2005), these methods generally require 'a large sample of bloggers just to find the small num-ber of blogs that are political'.

Other approaches to identify po-litical blogs have been developed in recent years such as consider-ing public directories or political blogrolls, analyzing conventional media's reporting, which frequently mentions political bloggers consid-ered as highly-influential, or con-ducting large-scale surveys or in-terviews with blog readers (Park 2009; Wallsten 2005; 2007; Park and Thelwall 2008; Karpf 2008). More recently, Munson and Resnick (2011) used *Amazon*'s Mechanical Turk, a Web-based micro-tasking labor market, to assemble a panel of five Web users who were shown blogs and were then asked to classi-fy them based on a list of pre-deter-mined eight categories in exchange for small payments.[5]

However, these methods have multiple drawbacks. For example, public directories and news media reports generally feature a small number of A-list blogs, and ignore the thousands of B-list and C-list blogs which can be defined as 'less read political blogs that are writ-ten by average citizens every day' (Wallsten 2005). In fact, the conclu-sions of previous studies of the U.S. political blogosphere that relied on these techniques are potentially un-reliable due to their consideration of only a small and potentially unrepre-sentative fraction of the blogspace that does not provide an adequate depiction of overall politically-ori-ented blogging activities (Wallsten 2005). As for Munson and Resnick's use of *Amazon*'s Mechanical Turk to assemble a panel of Web users to evaluate the political nature of blogs, the validity of this approach can be questioned. While they were able to rapidly identify 'bad workers' and replace them on the panel, it was still impossible for them to inde-pendently evaluate the competence (eg.: level of familiarity with blogging practices, level of political sophisti-cation, etc.) of all the panel mem-bers, thus their ability to positively contribute to their research project

(Munson and Resnick 2011). More broadly, it is possible to argue that the categorization of blogs heavily relies on informal and potentially biased evaluation processes (Farrell, et al. 2008).

Secondly, the constant launch of new blogs has on-going restructuring effects on the blogspace, thus preventing the constitution of comprehensive and up-to-date repertoires of all its members and the mapping of its architecture (Hargittai, et al. 2008; Trammell and Keshelashvili 2005). For example, David Sifry (2007) has demonstrated through a series of periodical surveys that the U.S. blogosphere has rapidly expanded since 2004. Also, the specialized search engine *Technorati* tracked nearly 70 million blogs in March 2007 with more than 120.000 new ones being launched every day. However, the rapid expansion of the blogspace that was observed between 2004 and 2007 has considerably slowed throughout the last three years, especially with the popularization of new social media platforms such as social networking sites and status-updating tools (Zickuhr 2010; Lenhart, et al. 2010).

Thirdly, many weblogs can remain inactive for periods of time of varying length or even be temporarily or definitively abandoned by their authors, thus further complicating the process to identify which blogs are active members. A study conducted in 2004 showed that 66 per cent of blogs were not updated after two consecutive months (Perseus 2004). Some researchers have established clear benchmarks to determine whether blogs are dead, or no longer active in the blogosphere, or they can be considered as alive. However, it is important to point out that the research objectives of scholars will dictate if they can consider these blogs in their study or not (Li and Walejko 2008).

Fourthly, the heavy presence of fake or spam blogs which are often launched by commercial, corporate or political actors to promote specific issues, ideas or events, can further complicate the process. Just like the identification of political blogs previously discussed in this article, it can force researchers to develop a similar approach to determine whether blogs serve genuine political purposes (Li and Walejko 2008; de Zúñiga, et al. 2010). According to some estimates, fake or spam blogs represented between two per cent and eight per cent of the U.S. blogosphere in 2010 (de Zúñiga, et al. 2010).

Finally, the geographically-specialized nature of the study of the members of the Quebec political blogosphere required the determination of bloggers' physical location. Blog authors generally have a tight control on the personal information they disclose on their blogs (Su, et al. 2005). However, political bloggers tend to disclose 'slightly' more identity markers than personal

bloggers (Su, et al. 2005). Several reasons can incite bloggers to volunteer identity markers on their blogs, such as their desire to build and maintain a network of social contacts, to play an active role in their immediate geo-political context or to bolster their credibility by enabling their readers to evaluate their personal background or expertise (Flanagin and Metzger 2008).

The geographical location of bloggers can be determined with the help of different techniques. First, personal and geographical information can be found in the biographical section of blogs. Secondly, informal interviews can also be conducted with bloggers or weblinks to online surveys can be sent to them in order to gain personal information about them and ultimately pinpoint their geographical location (Wallsten 2005). However, it is often impossible for researchers to independently verify the information disclosed by bloggers. Thirdly, a content analysis of their publications can provide insights of varying level of precision on their physical location. For example, geographical references or recurrent publications on political issues or broader themes associated to specific geo-political contexts can provide details on their physical location. Fourthly, many bloggers are affiliated with one or more groups and organizations based in specific geographical locations, thus helping to determine where they are located. Finally, scholars can turn to in-

formal public directories listing weblogs by the geographical location of their authors. However, there are few mechanisms enabling the verification of the validity and accuracy of these directories and the credentials of their creator(s).

While the total size of the Quebec French-speaking political blogging community was unknown at the time of the analysis due to a lack of comprehensive quantitative surveys, it was possible to argue that it counted no more than 125 active members in April 2008. This approximation was based on the consideration of two informal repertories of political blogs publicly-available at http://www.tlmeb.com and http://www.top-blogues.com, which provided rough estimates of the weekly traffic in the Quebec blogosphere. The first site identified 65 active political bloggers, while the second listed 121 individuals. The thirty most-trafficked political blogs from both indexes were relatively similar, thus indicating their relative compatibility. While the methodology used for the classification of blogs by the creators of these repertoires was not readily available, the political nature of the selected bloggers was later confirmed through their answers in the online survey as well as an informal analysis of the content of their posts (Giasson, et al. 2008; 2009).

Engineering a flexible sampling strategy

Another methodological hurdle

encountered when conducting the study of the Quebec-based political blogging population was the selection of a sampling strategy that would lead to the constitution of a reliable research sample. Several sampling approaches, specifically addressing the structural particularities of the U.S. political blogosphere, have been developed in recent years by the international scientific community. The selection of the sampling tactic is frequently guided by different elements, such as the broad objectives of the research project, the method of analysis privileged (eg.: quantitative, qualitative, etc.) and the unit of analysis selected. While the individual blog was the primary unit of analysis in the majority of blog-related articles in major scientific journals back in 2004 (83,3 per cent), researchers have progressively shifted their attention to a rapidly-diversifying range of micro-content such as blogposts, blogrolls, 'blogs in combination with similar Internet phenomena' as well as images, videos and hyperlinks imbedded in blogposts. More broadly, the 'blog as a whole' was the primary unit of analysis in 57,7 per cent of the blogging studies available in major scientific journals between 2002 and 2008 (Larsson and Hrastinski 2011).

From a broad perspective, there are two categories of sampling approaches: probabilistic and non-probabilistic. First, probabilistic sampling is characterized by the fact that 'each unit in the population [studied] has a known, non-zero chance of being sampled' (Li and Walejko 2008). While many conventional offline-inspired probabilistic sampling practices such as simple random sampling, stratified random sampling and cluster sampling have been utilized by researchers interested by the blogging phenomenon during the last seven years, they have so far failed to generate adequate samples and therefore need to be redefined (Nardi 2006; Ahn, et al. 2007). As argued in this article, the constant-evolving nature of the political blogosphere renders the establishment of a probabilistic and representative sample highly difficult and, in some cases, unlikely (Li and Walejko 2008). At the same time, many methodologically-questionable sampling tactics have been exploited to study the blogosphere. In fact, many of the approaches used by researchers can be defined as experimental, 'though not lacking in creativity' (Gruszczynski 2009: 7). This situation reaffirms the need for the development of comprehensive and conceptually-robust methodological strategies. The highly-fashionable status of social media-related research projects must not deter academics from conducting methodologically-sound descriptive and, more importantly, analytical work which has been lacking in recent years in order to better understand this growingly-important media phenomenon (Gruszczynski 2009;

Dahlberg 2004).

A clear identification of the corpus is necessary, so the ensuing analysis can generate precise and meaningful data. Several scholars have opted for mostly random identification and selection processes since the rise of social media research in 2004. On one hand, some of them preferred totally random sampling techniques that could have negative effects on their research results. For example, Bar-Ilan (2005), who conducted a study of topic-oriented blogs in 2005, based her blog selection on her informal browsing of the blogspace, as well as her personal and professional interests. On the other hand, others have opted for stratified random sampling tactics, which are characterized by their ability to ensure that all the different segments of the population are adequately represented (eg.: McKenna and Pole 2008; Li and Walejko 2008). According to Wallsten (2005), probabilistic random sampling techniques can be used effectively if there is an exhaustive and accurate blogging population directory. For example, the political nature of every blog's content could be checked in order to determine whether it meets a specific, and often arbitrary, threshold to be included in the research sample (Wallsten 2005). This procedure could be repeated until the desired sample size is reached. However, the changing nature of the blogosphere, which prevents the constitution of a com-

prehensive and up-to-date list of its members and a portrait of its internal structure, renders this approach difficult to implement (Jankowski and Van Selm 2008).

A non-probabilistic sampling method was chosen for the study which constituted the basis of this article. Non-probabilistic sampling can be defined by the fact that 'the probability of sampling all elements in this target population is unknown' (Li and Walejko 2008). In other words, the size and composition of the population studied is unknown. Non-probabilistic snowball techniques have been extensively used to study the blogosphere and other online social networks in recent years (Herring, et al. 2005; Johnson, et al. 2008; Ahn, et al. 2007). They arguably represent one of the few sampling strategies currently suitable for blog-related research, for different methodological reasons. Other Web-only sampling strategies that have been developed over the last few decades, such as node and link sampling, which favour the creation of samples through the consideration of the hyperlinked structure of the Web, do not adequately represent the decentralized and unpredictable nature of social relations and information flows characterizing Internet-based communities. They could potentially have detrimental effects on the validity of research samples (Ahn, et al. 2007).

It is possible to argue, based on Vergeer and Hermans (2008) and

Li and Walejko's work (2008), that strict snowball sampling procedures can lead to the constitution of biased samples, not adequately portraying the structure of Web-based content dissemination and social relations. However, the absence of precise and exhaustive sampling bases of political blogs has made non probabilistic sampling strategies the default choice for many social media researchers in recent years. In fact, these methods, which are primarily used in qualitative investigations similar to the one carried out in the Quebec study, represent one of the few viable alternatives to identify these types of population. They are likely to gain significant traction among the international academic community over the upcoming decade, especially with the growing role of social media platforms in the public mediascape of several national contexts.

The selection of sampling strategies was also guided by the data-gathering techniques used by researchers. In the case of the investigation of Quebec-based political bloggers, the data was collected through a publicly-available secure online questionnaire, available on the *Groupe de recherche en communication politique*'s (GRCP) website, hosted by Laval University's Web servers for two weeks (April 15th 2008 to May 1st 2008 inclusively). Many studies focusing on bloggers have opted for this approach to collect data (eg.: Johnson, et al.

2008). Other methods could have been used, such as email interviews or more conventional methods such as mailed questionnaires. The survey comprised 58 structured and semi-structured questions unevenly distributed in seven thematic sections, focusing on bloggers' socio-demographics, their political profile and preferences, their blogs' content and structure, their blogging practices, their communication objectives and intentions, as well as their broader use of social media tools.

According to Wright (2005), online survey technologies have several internal characteristics that can, directly or indirectly, affect the constitution of research samples. First, their electronic format favours their fast circulation to a large pool of respondents, independently of several considerations such as their geographical location. Their answers can be subsequently sent back electronically, and automatically entered into databases and processes with the help of different software. Secondly, unlike paper-based surveys, their format is cheaper because it does not require the questionnaires to be printed, thus eliminating 'postage, printing, and data entry' costs (Wright 2005). Moreover, it does not require respondents to provide important personal information, such as their mailing address. In the case of the survey of Quebec-based political bloggers, the Web-based data col-

lection mechanism selected enabled the questionnaire to reach an important number of recipients who would have not normally participated in the study, because several limitations, such as geographical distance and time constraints were evacuated. Moreover, it was better suited to the profile of the respondents who were more likely to be technologically-savvy.

The research sample for the study on the Quebec blogosphere was constituted through the use of a two-step sampling procedure. First, a conventional reasoned choice approach was employed to select twenty-two A-list political bloggers who were not formally affiliated to political, commercial or conventional media organizations. They were identified through the consideration of the two blog listings, as well as following an informal content analysis on the coverage of the 2007 Quebec Provincial elections by the mainstream press, which often referred to members of the Quebec-based blogging population. An email invitation to fill out the survey with a hyperlink to the online questionnaire was subsequently sent to them. Secondly, a snowball technique with a viral dissemination component enabled the multidirectional and, to a certain extent, uncontrolled circulation of the survey within the Quebec blogosphere. This viral diffusion was accomplished through two distinct communication channels, an approach used by other researchers

in recent years (e.g. Wallsten 2008; Jankowski and Van Selm 2008). First, the selected A-list bloggers who positively responded to the initial request in the reasoned choice sampling phase were asked in a second email to forward the survey's Web link to three other Quebec-based political bloggers they knew through their personal online or offline social network. They were also asked to publicize the study on their blog by embedding at least once a hyperlink pointing to the questionnaire on their blog. It should be noted that this strategy for advertising a scientific investigation has been used previously by other scholars (e.g. Johnson, et al. 2008). Finally, an email was sent to four Quebec-based French-speaking journalists maintaining widely-read blogs, often focusing on specific topics (e.g. technology, politics, etc.), to ask them to publicize the study. Two of them responded positively to the request and mentioned the study in their reporting.

Fifty-six bloggers ultimately completed the online secure questionnaire during the two weeks recruitment period. More specifically, sixteen out of the twenty-two highly-influential political bloggers contacted in the first sampling round answered the secure online survey. Additionally, forty bloggers contacted during the viral dissemination phase participated in the project.

While the total number of respondents is relatively smaller than

comparable studies (e.g. Braaten 2005), the high level of geo-political specialization of this project and the relative small size of the Quebec political blogosphere explain and, to a certain extent, warrant, the size of the research sample. Moreover, the underdeveloped nature of the digital media infrastructure of the rural regions of the province of Quebec, where a sizable portion of the population resides, can be seen as another factor explaining the small size of the Quebec blogging population (Zamaria and Fletcher 2007; Institut de la Statistique du Québec 2009). Still, the Quebec political blogosphere study can be advantageously compared to investigations of political bloggers conducted in other national contexts, such as the United States, which featured generalizations based on relatively small samples in comparison to the potential size of the population (e.g. McKenna and Pole 2008).

It should be noted that the ideological portrait of the Quebec political blogosphere generated through the survey was influenced by several unavoidable selection effects linked to the nature of viral sampling strategy as well as the data-gathering technique selected. For example, the results of the Quebec blogging study showed that while the Liberal Party of Quebec won the 2007 Provincial elections with 33.08 per cent of the vote, the vast majority of the political bloggers surveyed revealed that they supported other

political parties. For example, 35.7 per cent of the respondents reported voting for the Parti Québécois (PQ), 5,4 per cent for the Green Party of Quebec (GPQ) and 16.1 per cent for Québec Solidaire (QS), a left-leaning political formation. Only 5.4 per cent of the respondents voted for the Quebec Liberal Party (PLQ) on Election Day. These results clearly indicate that the Quebec-based French-speaking blogging population was not representative of the overall public.

While invitations to fill out the survey were sent personally or virally disseminated to Quebec-based bloggers of all political allegiances, the very nature of the sampling method used in this project might have contributed to the larger circulation of the survey within ideologically-specific blogging networks. For example, some bloggers might have deployed greater efforts to transmit invitations to participate in the study within their personal social networks, comprised of bloggers with relatively similar political preferences, for different reasons such as their desire to influence the study's conclusions in politically-specific ways or to gain credibility among their peers.

The heavier participation of certain segments of the Quebec political blogosphere could indicate higher level of mobilization as well as the presence of a potentially tighter social network in certain online political communities. More specifi-

cally, the viral sampling technique could be in itself an indicator of the socio-political behavioural profile of Quebec-based bloggers. The data showed that left-leaning political bloggers answered the online questionnaire at a higher rate than their right-leaning counterparts. This deeply influenced the study's evaluation of the ideological structure and composition of the Quebec political blogging community. More broadly, it demonstrated that bloggers supporting left-leaning political parties were more politically-energized than members of other political groups in the spring of 2008.

While the viral sampling dimension of the study prevents future research from fully replicating its approach, the very nature of the Web environment renders the exact reprisal of research projects extremely difficult and, in some cases, highly improbable. Indeed, the continuous evolution of online information dissemination architectures and social networks, in this case the Quebec political blogosphere, only allow social scientists to produce a detailed portrayal that is representative and valid for a short time period (Kautsky and Widholm 2008). Therefore, the timing of the Quebec blogging study (time the surveys were sent to A-list political bloggers, time the study was forwarded to other participants, time it was mentioned by the two journalists) might have influenced the results of the viral sampling process due, for example, to the levels of mobilization in specific political segments of the Quebec blogging population. Still, the sampling strategy that was selected for this study was the source of meaningful findings. Indeed, it accurately depicts the political reality within Quebec's political blogspace at a specific moment in time.

Conclusion

This article presents a broad characterization of the methodological opportunities and challenges linked to the study political bloggers, based on a study of the membership of the Quebec political blogosphere conducted in the spring of 2008. It shows that while an important number of multidisciplinary investigations focusing on blogs in different national contexts have been conducted throughout the last seven years, there are still significant conceptual and methodological gaps that need to be filled. This paper aims to address some of the methodological hurdles facing social scientists interested by the blogosphere and, to a certain extent, other Web 2.0 outlets. First, it discussed the main challenges linked to the clear identification of political blogging populations such as the portrayal of political blogs which can have different formats and feature a wide range of politically-oriented material as well as the constantly-evolving nature of the political blogosphere. Secondly, it demonstrated that sampling techniques

used for the study of real-world political communication phenomena could not be used to assemble a representative research sample of political bloggers. Indeed, researchers must develop flexible sampling techniques that are tailored to the structural specificities of the political blogspace when they are conducting their investigation. More broadly, the main argument of this paper that the constantly-evolving nature of the political blogosphere requires researchers to be constantly questioning their methodological approach and, more importantly, quickly modify it when required.

Most blog-related studies have predominantly focused on A-list or highly-influential bloggers which only represent a small proportion of the blogging population in many Western-styled national contexts. However, the popularization of these media channels among the mainstream public coupled with the growing fragmentation and decentralization of formal and informal political communication, persuasion and mobilization practices in several national contexts are likely to force researchers to redefine their analytical scope. Indeed, several factors have contributed in recent years to the progressive hyper-compartmentalization of the public political discursive arena, such as partisan or ideological preferences, issue specialization, geographical context as well as individuals' socio-demographic profile. This situa-

tion has arguably mobilized some members of the electorate who are more likely to use a wide range of Web 2.0 technologies to directly or indirectly participate in the public deliberational and conversational arena. This complexification of the Web-based politically-oriented informational and socio-interactional environment will require the redefinition of sampling and investigation techniques to render the study of specific aspects of the formal and informal online politicking dynamic possible.

It is important to point out that the emergence and popularization of different social media platforms during the upcoming decade will force social scientists to further adapt their sampling and analytical techniques. Beyond blogs which have been extensively studied in recent years, other Web 2.0 media technologies such as social networking sites, micro-blogging or status-updating technologies such as *Twitter* as well as synchronous or asynchronous video and audio-sharing platforms like *Ustream* or *Flickr* have become growingly-popular multidisciplinary research objects. Indeed, they foster diverse forms of information dispersion and socio-interactional patterns that will require tailored and often highly-flexible methodological approaches. Moreover, they will provide researchers with a new set of methodological challenges and, conversely, opportunities that will need to be clearly defined and sub-

sequently addressed. For example, the increasing ability of SNS users to protect their personal informal with different privacy tools, thus making it unavailable for researchers, and the growingly-central role of the structure of social networks, especially in the case of social networking services such as *Facebook* and *Google+*, will force social scientists to develop new investigation parameters. In other words, the 'perpetual beta' nature of the social Web will require them to be far more methodologically-flexible (Carpenter 2009). Also, many companies who own social networking services and status updating tools, such as Twitter, have started to prevent individuals and organizations from having access to the content produced by their users.

While this article has primarily looked at sampling issues associated to blog-related research, more scientific work is urgently required to better understand the strengths and weaknesses of quantitative and qualitative research techniques for the study of social media content. Indeed, the growing importance of hyperlinked content as well as other multidimensional digital material that can have direct or indirect quantitative and qualitative implications, such as Twitter hashtags and Facebook photo tags, will require researchers to significantly modify their analytical approaches. In other words, methodological flexibility and creativity is likely to become very important for members of the scientific community who are interested by the social mediascape.

Endnotes

[1] For example, they played a central role (eg.: information dissemination, fundraising, mobilization, etc.) in Howard Dean's campaign for the U.S. Democratic Presidential nomination in 2004 (Kim and Johnson in press; Gil de Zúñiga 2009; Davis, et al. 2009). However, they had some influence in the U.S. mediascape prior to the 2004 Presidential elections, especially after the 9/11 terrorist attacks. For instance, they are credited for forcing Trent Lott to leave his post as Senate majority leader in 2002 by publicizing his racially-insensitive comments on Strom Thurman's segregationist Presidential campaign in 1948 (Ekdale, et al. 2010; Jones and Himelboim 2010; Serfaty 2011; Kim and Johnson in press). They also scrutinized the work of several conventional media organizations which led to the resignation of New York Times executive editor Howell Raines in the wake of the Jayson Blair plagiarism affair in 2003 (Gil de Zúñiga, et al. 2011).

[2] For example, Larsson and Hrastinski (2011) determined that 34 blogging studies focusing on politics were published between 2002 and 2008 based on the consideration of two databases that index the content of '3,300 journals of high quality'.

[3] The normalization theory states that the political communication, mobilization and persuasion dynamic that is dominant in the offline political mediascape is more to likely to be replicated online with the rise and growing popularity of Web-based media channels. For instance, political actors that are dominant in the real-world media environment usually have a strong Web presence while peripheral ones are more likely to have a minor presence (Margolis, et al. 1999; Margolis and Resnick 2000; Foot and Schneider 2002).

[4] According to the equalization theory, the emergence of Internet-based communication technologies is expected to contribute to the progressive transformation of political communication, mobilization and persuasion patterns which were dominant in the offline media world. For example, the World Wide Web is likely to reduce the media gap online and, to a certain extent, offline between dominant and peripheral political players (Margolis, et al. 2009; Tyler 2002; Lee and Park 2010).

[5] https://www.mturk.com/mturk/welcome (accessed May 22nd, 2011).

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