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Networked campaigns: Traffic tags and cross platform analysis on the web

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Abstract. This article defines a new methodological framework to examine emerging forms of political campaigning on and across Web 2.0 platforms (i.e. Facebook, Youtube, Twitter) in the North-American context. The proposed method seeks to identify the new strategies that make use of campaign texts, users, keywords, information networks and software code to spread a political communications and rally voters across distributed, and therefore seemingly unmanageable spheres of online communication. The proposed method differentiates itself from previous Web 1.0 methods focused on mapping hyperlinked networks. In particular, we pay attention to the new materiality of the Web 2.0 as constituted by shared objects that circulate across modular platforms. In this paper we develop an object-centered method through the concept of *traffic tags* – unique identifiers that by enabling the circulation of web objects across platforms organize political activity online. By tracing the circulation of traffic tags, we can map different sets of relationships among uploaded and shared web objects (text, images, videos, etc.), political actors (online partisans, political institutions, bloggers, etc.), and web based platforms (social network sites, search engines, political websites, blogs, etc.).

1. The challenge of 2.0 networking

Politics has always been about networking. Well before seeking office prospective candidates are advised to identify well-connected individuals – those who can help raise funds, make insider connections in party circles, and otherwise "open doors". And while political networking today still requires face-to-face meetings, it now also requires a virtual dimension, one that raises significant opportunities and pitfalls for campaigns and political life in general. For candidates, political party strategists and communications staff, social media (such as *Facebook*, *Twitter*, and *Youtube*) offer distinct opportunities to reach segmented communities and to narrowcast messages to party members in specific electoral ridings and districts, regionally, or nationally, at particular times of the day, and for specific purposes (campaign stops, stump speeches, fundraising, candidate nomination meetings, leadership contests, etc.). Yet at the same time social networking sites also challenge the ability to control and otherwise manage so-called talking points[1], election policy and platforms, and more broadly overarching election campaign "scripts". Indeed, A message, image, or video can be shared with political opponents and remixed or critiqued in very short order. Networked political communication, in other words, has become mutable, evasive, and much more difficult to manage in the social media universe. For political actors the sheer

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[1]See for example the publication of in-camera party "talking points" on new 2.0 sites such as "wikileaks". https://secure.wikileaks.org/wiki/Canadian_Conservative_Party_May_Constituency_Week_Caucus_Pack%2C_May_2009<accessed May 16, 2009>.

number of new media spaces, 2.0 platforms, social networks, and information aggregators , complicate the ability to deploy contemporary political campaigns. Where does one start? What should one share? Or reserve solely for party supporters? How should one respond to political attacks and rumours on social media? Gone are the days when political strategists focused exclusively on editorial boards of newspapers, briefing notes and stump speeches for media campaign buses and planes, and fund raising letters.

In light of such radical changes in the information and communications sphere, political scientists and communication scholars have sought to develop new experimental methods of understanding this new digitally networked terrain of politics [7]. Web 1.0 studies – those primarily concerned with political communication, organizing and networking on the world wide web – sought to develop methods of mapping hyperlinked relationships among web sites for political candidates, parties, and civil society organizations, to name but a few. Building upon earlier forms of social network analysis, hyperlink networking methods and tools [29], notably programmable "crawlers" that jumped from link to link, sought to identify key political actors or "hubs" in networked hyperlink diagrams [19,22,31]. Such research sought to locate the most influential political actors on the web through identifying the most linked-to web pages. For our purposes here we refer to such forms of analysis as *http methods*, in recognition of their use of one sole form of code that link together html documents on the world wide web: the HREF (or hyperlink) command [15].

The reliance upon the hyperlink as sole indicator of techno-political association both online and offline [15,32, p. 38], however, has not been without its skeptics [23]. Elmer [11] has argued that hyperlink mapping faces numerous technological hurdles as web servers often crash and need to go-offline for routine maintenance. Web sites and pages are often blocked for a host of other reasons, politically, inter-regionally or otherwise. Thus, researching political connections and associations on the web requires one to also recognize disconnected or disrupted forms of networked computing. Whatever one thinks of early forms of hyperlink analysis, such methods clearly contributed to innovative forms of data visualization, attempts to more accurately – or perhaps more creatively – represent distributed forms of political networking[2]. New data visualization software[3], some representing a seemingly infinite number of hyperlinks[4], however, often produce undecipherable, death star-like maps of hubs and spokes, posing significant challenges to meaningful forms of analysis [5]. Hyperlink maps, furthermore, only render and visualize f*unctional* hyperlinks and websites at specific moments. In other words, where are the network maps for example that denote disconnections, server timeouts and crashes, and deleted links between sites? Such positivism, in both senses of the term – meaning successful, and empirically verifiable links – in the absence of various forms of disconnectivity and dysfunction, in our opinion, reify political networking *as successful forms of connectivity*. Political networking (much like computer networking) is, however, often quite the opposite: laboured, unstable, precarious, unverifiable, sometimes unconscious, and hidden. How might such forms of research therefore acknowledge such qualitative distinctions in and across such networks?

This paper sets the stage for another approach to the study of internet politics and networking, one that addresses the impact that new web 2.0 interactive platforms have had upon what we refer to as the conditions of networked connectivity. By *conditions*, we again suggest that connectivity itself has

[2]Cf < http://manyeyes.alphaworks.ibm.com/manyeyes/>.

[3]For a list of representative software see www.visualcomplexity.com.

[4]Cf this representation of hyperlinks among political blogs in June 2008: <http://simoncollister.typepad.com/.shared/image.html?/photos/uncategorized/2008/06/26/polblogo.jpg>.

been largely understudied, or worse – interpreted as either a sign of political alliance, support, or merely "successful" connection. In contrast, this paper offers the building blocks for methods that attempt to account for connection failures, disruptions, and roadblocks, some "accidental", others the obvious result of restrictive terms of use encoded into web 2.0 platforms (and their application programming interface, protocols and algorithms). By focusing on the conditions of connectivity, we seek to integrate user based experiences and of course their shared, remixed, and uploaded digital objects[5] into the broader research paradigm[6]. This involves mapping networking (file sharing, etc.) opportunities and restrictions on the one hand, and dysfunctions and incompatibilities on the other.

In the process of developing new methods for studying the relationship between political actors, objects, and platforms online, this paper first offers a brief "meta-tag" analysis of political keywords (text) on the world wide web as a test case for demonstrating how non-hyperlink forms of software code can also provide insight into networked political campaigns on the world wide web. After some initial reflections and analysis of our "tag" based study of political networking, we will then discuss how such "tags" operate in the much more complex world of the web 2.0, where users are increasingly called upon to self-categorize (through titles, keywords, hash tags, etc.) their online contributions (images, blog posts, tweets, comments, videos, etc.). The paper concludes with an initial effort at further expanding and analyzing how a plethora of 2.0 based forms of user and automatically generated software code can be harnessed to better understand the possibilities and constraints of political networking across a number of web sites and 2.0 platforms (eg. twitter, Facebook, Youtube, blogs, etc.). The ultimate goal of this longer term project is to offer methods and tools that might diagnose the possible reach of online political campaigns, communications, and networks. Our approach seeks to determine the constitution and constraints afforded by different sets of relationships among uploaded and shared web objects (text, images, videos, etc.), political actors (online partisans, political institutions, bloggers, etc.), and web based platforms (social network sites, search engines, political websites, blogs, etc.).

To this end, and in moving from so-called web1.0 http or html approaches to 2.0 cross platform based methods, this paper is particularly interested in harnessing, methodologically speaking, user-generated forms of classification – or *tags* to use the net-vernacular. Such forms of text/keywords are commonly used by social media partisans and activists to associate their online contributions (blog posts, *Youtube* videos, etc.) to likeminded political and social debates, actors, sites, platforms, and other online objects. To identify the relationships – the networks – forged by objects, actors, and platforms, however, this paper also makes the case for identifying discrete forms of communication and networking *in motion*, that is as internet network *traffic*. While http based hyperlink analysis offered a means of identifying relationships among web sites and their assumed owners/webmasters, our *traffic tag* approach seeks to determine the multiplicity of avenues (across web 2.0 platforms) – or conversely dead ends – that limit the reach and political possibilities of online campaigns. Only through tracking the unique forms of ID associated with platforms (eg. through their URLs), online political actors (eg. their accounts, usernames, etc.), or networked objects (titles, URLs, etc.) can we begin to diagnose the possibilities and pitfalls of 2.0 political networking, communications, and campaigning.

2. Trafficking political rhetoric – "Stand up for Canada"

In this section of the paper, we offer a brief analysis of how meta-tag keywords on the world wide web can be harnessed and analyzed to understand the reach and circulation of political campaigns on

[5]Most notably videos, digital images, blog posts, twitter posts, shared hyperlinks, etc.

[6]Cf. Hindman's [22] *The Myth of Digital Democracy* for a good overview of http based methods of network analyses.

the internet. The study offers a glimpse into why subsequent 2.0 forms of analysis need to take into consideration the role that self and automatically generated tags play in the generation of possible avenues for networked political content (objects) and actors across a number of popular 2.0 platforms. So as not to overstate the novelty of our proposed method of research, of mapping political networks, issues, actors, and objects across the 2.0 universe, it is important to note that the building blocks of a more nuanced, 2.0 enabled form of network mapping or "traffic tags" approach to the study of political campaigns, were to a much lesser degree present on the world wide web. While HTML encoded web pages offered HREF tags (hyperlinks) as conduits for network mapping, http header meta-tag keywords and other meta data have also afforded other opportunities for qualifying and expanding network analysis[7]. One such line of inquiry has focused on the relationship between websites and their visibility and ranking via industry leading search engines. Google's indexing bots, for example, "read" the http header keywords of html web pages so that they can be better integrated into Google's archival, page ranking, information aggregation, commercial advertising, and user profiling functions [21]. Webmasters thus encode their websites' header keywords to sufficiently represent their sites' content, enabling accurate indexing from Google and other information aggregators. Such keywords thus link web sites to web aggregators, most notably Google via its "page rank" algorithm [4].

Political consultants and campaign staff in the most recent American presidential election were quick to recognize the many different techniques that campaigns could use to better "optimize" their candidate's visibility on the web by refining titles and other keywords in the headers of campaign web pages [8]. Similarly, the home page for the Conservative party of Canada includes rather obvious meta tag keywords such as "conservative party" and "Stephen Harper" (the Canadian prime minister). However, reviewing the http header – that one can easily do by choosing the "view > page source" pull down menu on most web browsers – also reveals the strategic insertion of a recent election campaign slogan "Stand up for Canada", and a short list of political issues and buzzwords: "trade, transit, accountability, childcare, etc."[8]. While Conservatives in Canada strategically use such tags to brand their political campaigns and messages, web masters as a whole can dream up and encode their http header with any sequence of keywords, tactically deployed to gain greater Google-visibility (higher ranking), resulting in increased traffic to their site[9]. In lieu of considering these connections between websites as networked associations then, we should also consider the view that such keywords serve to self-identify web pages and cultivate new sources of traffic. The "tagging" of one's content – through the use of keywords – suggests a degree of self-promotion, a form of publicity, that from time to time stretches the indexical purpose of such meta tag keywords[10].

[7]The British Liberal democrat party encodes a geo-tag in their http header that Identifies their location as Westminister, UK.

[8]<http://www.conservative.ca/> , under view>page source option. Accessed April 8, 2009.

[9]This tactic is often referred to as "meta-tag stuffing", it falls under the less subjective term "search engine optimization". The topic has been vigorously debated by lawyers worldwide [28].

[10]The most blatant example of so-called "meta-tag stuffing" therein refers to nefarious attempts to try to latch on to popular or trendy keywords that users use as search words on Google to increase internet traffic to web sites – a form of traffic spam if you will. The de-regulated nature of meta tag html page encoding thus raises broad questions and concerns about the over-promotion of certain content (porn, dubious credit cards, etc.) and the burying of perhaps more socially relevant information. Ira S. Nathenson (1998) draws a rather clever yet frustrating analogy of a "spamdexed" network:
Imagine a never-ending traffic jam on a ten-lane highway. Road signs can't be trusted: the sign for Exit 7 leads to Exit 12, the sign for Cleveland leads to Erie. If you ask the guy at the Kwik-E-Mart how to get to I-79, he gives you directions to Route 30. To top it off, when you ask for a Coke, he gives you a Pepsi. Enough already. You stop at a pay phone to call directory assistance for the number to the local auto club, and instead get connected to "Dial-a-porn." (p. 45).

A brief search of the "Stand up for Canada" phrase, using the Google search engine, offers an glimpse into the circulation and adoption of such politically loaded and "genetically" encoded[11] words from the Conservative Party's website. Google results for the Conservative's phrase "Stand up for Canada", for example, provides an intriguing picture of the numerous web sites and 2.0 platforms that repeat, adopt, or otherwise circulate the phrase[12]. In addition to a page from the Conservative Party website that re-uses the phrase as a generic headline for political reaction to a constitutional crisis that emerged shortly after the Canadian federal election in 2008, Google also returns the following results:

Web platform	**Content**
1. Conservative Party Website	Political content, using phrase as headline
2. Conservative Party Website	Home page, phrase used as main header-banner
3. Childcare resource center	Archive of Conservative party platform document that used the phrase in its title
4. Youtube	2 Youtube videos, i) critical of the PM, using phrase in title and in content ii) phrase included in title and description of video critical of North American Union policies
5. United Steelworkers website	"Stand up for Canada: Save Manufacturing" advocacy article.
6. Political website	Uses the phrase to critique a wide set of government policies.
7. personal blog	"Time for CRTC to Stand up for Canada" title for blog post
8. Prime Minister's Facebook page	Headline to same article as #1 result, reproduced for Facebook.
9. Government Web page	Speaking notes for government minister that uses phrases in title and 3 times in body of speech
10. PM's Myspace page	Reproduction of #1 and #8.

[13]

Through this brief glimpse of meta-tag keywords one can make a series of preliminary though important methodological conclusions and claims, the most broadest of all supporting our contention that certain web based tags – words inserted into a HTTP header by webmasters in this 1.0 case study – can be used in much the same way that hyperlink analysis has been deployed, that is to track the relationship between and dissemination of digital objects, issues-language, coordinated campaigns, and lastly, political actors. While the nature of digital objects tends to multiply exponentially in a 2.0 web environment, a keyword and tag based method of analysis conducted above, is largely restricted to the study of plain text, political keywords or short catch phrases used to symbolize ideologies, policies, and legislative priorities. However, by tracking, albeit rather simplistically, the dissemination of such keywords across the web – as aggregated by *Google* – we can also catch a glimpse of the spread and adoption of such political keywords

[11] By using this biological term we mean to suggest that such http headers tags and keywords serve to implicate and reproduce both political languages and possible sites for articulating, networking, and organizing political agendas.

[12] Since this search was conducted in July 2009, the results discussed here offers a significant "time delayed" picture of the Conservative slogan – one that provides, perhaps, a more steeped view of the spread, adoption, and reuse of the phrase.

[13] A lit of the URLs for the "Stand up for Canada" search (July 9, 2009).
1. www.conservative.ca/EN/2459/107759, 2. <www.conservative.ca>, 3. http://action.web.ca/home/crru/rsrcs_crru_full.shtml?x=84178&AA_EX_Session=c8b1cacfb93b7da41cf1b4f974865afd>, 4. i) <http://www.youtube.com/watch?v=Dgp7-XjQ7rg> ii) < http://www.youtube.com/watch?v=9CrR0UYrnq8>, 5. http://www.uswa.ca/program/content/4606.php, 6. <http://www.titanrainbow.com/garydavidson/betrayed.html>, 7. <http://harveyoberfeld.ca/blog/time-for-crtc-to-stand-up-for-canada/>, 8. <http://www.facebook.com/note.php?note_id=42004436572>, 9. http://www.hrsdc.gc.ca/eng/corporate/newsroom/speeches/blackburnjp/070925.shtml>, 10. <http://blogs.myspace.com/index.cfm?fuseaction=blog.view&friendId=405845189&blogId=453480096>.

and slogan (e.g. "Stand up for Canada"), by whom (actors), in what political context (coordinated campaign, or political retort), and across specific platforms (2.0 social network sites or otherwise). For example, five of the top ten results of the phrase aggregated and ranked by Google emanated from either the government of Canada or its ruling political party (the Conservative party of Canada). The keywords are most commonly associated with three identical texts, a political document circulated by the Conservative party of Canada that attacks Canada's opposition parties. Results #1, 8, and 10, in other words clearly demonstrate a coordinated, cross-platform campaign by the Conservative party to utilize a title ("Stand Up for Canada"), to frame a word for word verbatim attack on their political opponents. Result #2, furthermore suggests that the party is also using the heading as a more generic keyword to frame its broader P.R. strategy. The ninth result, where the phrase is found in the full text of a speech delivered by a Conservative government minister, demonstrates that the phrase "Stand up for Canada" is also used not only for partisan purposes, but also as a key political phrase repeated in public and policy settings. The third result for the phrase also points to the phenomenon of third parties, in this case a Childcare resource center, archiving certain government and political documents for, presumably, their own political use, such as lobbying purposes and internal membership campaigns. Opponents and critics of the Conservative government are equally accounted for in Google's top ten results for the meta-tag phrase "Stand up for Canada". Two user-generated 2.0 sites, a blog, and a Youtube account clearly attempt to usurp the government phrase for critical purposes, as does to a lesser extent a manufacturing advocacy piece from the website of the United Steelworkers union.

From this brief analysis of embedded html keywords then, one can clearly see that this political phrase "Stand Up for Canada" is a contested one online, bringing together party communications staff, government departments-ministers, interest groups covering industrial and social issues (steel workers, and childcare advocates), and social media users. This brief analysis shows that the phrase circulates across established HTML web sites, to blogs, top English language social networking sites Facebook and Myspace, and the popular Youtube social media aggregator. Objects, actors and political campaigns become increasingly remediated across social media and web 2.0 platforms, and as such the need to develop a traffic tag approach to the study of political networking takes on an even greater sense of urgency.

3. Social media: The sharing of objects

Since much of this paper presumes a radical shift in web operability (from 1.0 to 2.0), some important conceptual remarks on social media are required to establish the building blocks of a 2.0 method of researching political networking. This is particularly urgent for, as a concept, Web 2.0 feels a bit like a black hole: everything gets trapped within its porous boundaries, from commercial and private social networks to the collaborative site *Wikipedia*, from the latest online social networking craze *Twitter* to the one of the first and enduring successful online business model, *Amazon.com* (O'Reilly, 2005). That said, mainstream discourse about Web 2.0 often refers to a projected perception of the contemporary state of the World Wide Web as correcting the shortcomings of the previous Web 1.0 era and fostering a democratically infused and dis-intermediated commercial sector [2,14]. Thus, while *YouTube*, *Facebook*, and *Wikipedia* each emphasize different functions, media, and business models, all are intensely reliant upon user-generated content. To clarify, Web 2.0 largely relies on users to not only produce and upload content, but more importantly, to share and circulate it across friends networks of like-minded individuals and groups. Social networks on sites like *Facebook*, *Myspace*, *Bebo*, *Cyworld* and others are in effect produced by the sharing of objects on their sites. Without such trafficking of objects (links,

images, videos, text, etc.), the owners of such sites would be unable to aggregate and data mine personal information from users and their like-minded friends. Similarly, the popularity of *YouTube* is not simply linked to its capacity to act as a repository or archive of videos – rather it continues to grow as a result of its ability to the share, through embedded code, videos on a number of platforms across the web [20]. Web 2.0, in other words, relies upon shared objects – and avenues for circulating said objects – that link together individual users and their networking affinities. We like to think of such avenues and objects as "friendly traffic", of course not to downplay the fact that such sites subsequently aggregate user's psychographics, profiles and online behaviours to sell "targeted" advertising [34]. The focus on such friend-based traffic – the sharing of objects on and across social media platforms – thus calls into question the architecture of social media, as themselves objects of research and analysis. Political research on social media, in other words, must take into account not only users (be they political partisans, or institutions) but also the possibilities that social media platforms afford on their sites – the opportunities and roadblocks of uploading, of sharing, and networking across the web, hand-held devices, and beyond.

4. 2.0 Networking: From universal protocols to unique identifiers

To begin to map and analyze the circulation of objects, actors, and broader networked campaigns on the web today, we argue for a cross-platform approach – a method that seeks to determine the networking opportunities and limitations among and across so-called web 2.0 sites. A methodology that would witness the unfolding of the circulation of virtual political campaigns and networks via Web 2.0 platforms would be of considerable benefit in terms of identifying specific networking opportunities, limitations, and pitfalls in the political sphere. The first step in developing such a perspective requires a move beyond, and below the user interface. That is, we need to challenge our perception of the Web as rooted within the visual aesthetics of the user interface. This is all the more crucial and challenging on proprietary and closed websites such as *Facebook*, the interface becomes a limiting factor as our only point of entry is through the customized or, should we say, personalized (1st person, that is) perspective of our own networked environment. Web 2.0 social networking is in other words by definition an intensely personalized medium, no two *Facebook* interfaces and accompanying "friend" networks are the same. We all see – and operate within – *Facebook* through the contours of our own social networks. Such networks bias, and to a degree determine, the searches we perform via *Facebook's* search window, skewing the results to highlight our own aggregated friend-network-profiles. No two search results via *Facebook*, in other words, are alike – even for the exact same search term. Thus we can never have access to the totality or even common set of information available on *Facebook* via the interface – and as network researchers this always-already personalized interface and algorithm complicates our ability to analyze from third person perspectives, that is from the "outside". Indeed, the user perspective creates an oddly narcissistic worldview of Web 2.0 – one individuated through a me-centric (and thus uncannily familiar) network-interface. Adopting a cross-platform perspective, however, helps to overcome the limitation of the user worldview by disaggregating objects, actors, and networks from 2.0 user accounts.

Web 2.0 protocols are largely concerned with managing users and user-generated content 'objects', connections that enable relationships that populate networks across Web 2.0. In other words, Web 2.0 platforms set up the channels through which information can circulate. Our proposed method, in turn, seeks to develop tools to track, map and visualize such channels or traffic routes. Such an approach has roots in the critical aesthetics of software studies – for instance, Fuller's *Webstalker* [17], an alternative Web browser that simply sought to represent the linked relationships between websites, a browser devoid of any aggregated information or iconic graphics. Our critical approach to Web 2.0 platforms likewise

requires a process of disaggregating the relationship between interface and back-end code and protocols, a form of reverse engineering, if you will. The building blocks of a disaggregated net, as previously stated, begin with a process of identifying the key components in political/computer networking – actors, objects, and platforms – each of which contain unique forms of ID, including user-generated tags. Once we can identify each of these actors and objects on the net, we can then map the traffic or the routes of such IDs-tags, to determine how and where political campaigns circulate across the web.

Such "traffic tags" serve to not only organize cross-platform communication but also to enable connections across different actors and to organize online activity. Our focus on traffic tags emerged from a realization that there is a need to include the beyond and below the discursive dimension of online content, and from an acknowledgement that what used to be discrete Web objects have morphed into entities capable of enabling different forms of connection simultaneously at different levels. By beyond and below the discursive dimension of online content, we mean the material aspects and social effects of political content networked across Web 2.0 platform. Below content encompasses the data processes and network routes through which content is circulated and published. Beyond content refers to the capacity of content to not simply represent, but more crucially in the online political context, to organize and spur action (i.e. voting, fundraising, protesting). Furthermore, the acknowledgement of the morphing of web objects into traffic tags offers a methodological incentive to pay closer attention to the beyond and below aspects of online content.

Let's use Barack Obama's famous political phrase "Yes We Can" by way of example. "Yes We Can", as a rallying cry, a lasting rhetoric gesture, and as the summation of an expansive, and expensive political campaign, should be considered as a brand, that is, as a "platform for the patterning of activity, a mode of organizing activity in time and space" [26, p. 1]. What are the aspects of patterning and organization expressed through the online circulation of "Yes We Can"? First, the online "Yes We Can" is a multi-dimensional Web object: it is a rhetorical logos, a cultural symbol to which are associated a range of media objects (official texts, videos and pictures, citizen responses, critiques and parodies) It is also, as a link object, a deictic or pointer [9,10,33] to different platforms (the official campaign website, the Facebook page, other websites).Under its repurposable form as a button that can be embedded in individual Facebook pages, blogs and websites, it is a form of political action to declare allegiance and vote intention. As an application, especially a Facebook application developed by Obama campaign staff, it serves as a covert polling technology – to cull more information on supporters and would-be voters. As such, "Yes We Can" is a multilevel traffic tag that serves to organize and centralize different types of activity. From the point of view of the user, "Yes We Can" is both a content and a deictic pointer to a broader community of like-minded individuals. At the political level, the importance of the "Yes We Can" logo is not simply that it is a symbolic rallying cry, but that is also an operative one that can quantify its effects by being turned into a tracking device and enable precise quantification of the reach of a message. From a computer-networking point of view, "Yes We Can" is the user-understandable facet of a range of data processing that aims to identify and link relevant information, according to different platform logics. For instance, while the Google search engine logic aims to identify the most relevant material for the large population of users, the Facebook search engine will operate through a logic of personalization, such as friends' preference, and geographic proximity. Traffic tags are thus operators that allow for the conjunction of multiple modes of organization, of connection of different actors – for instance political rallying and web tracking. As such, they express multiple practices that aim to organize political relationships, political discourse and informational networks. For this reason, traffic tags should be considered as objects of analysis to better understand political activity across Web platforms, as well as analytical objects through which we can derive new methodologies for tracking the unfolding of online political campaigns, communications, and networks.

"Traffic tags" can be human-generated, such as the title of video, or the formal name of a user as they appear on the user-interface, or the user tags that describe how an object belongs to a class of object (i.e. 'X's wedding' or 'election 2008'). Traffic tags are also computer-generated: unique identification numbers are assigned to a *YouTube* video, as well as to users on *Facebook*. Traffic tags allow for the identification of objects across the Web, most notably through search engines, but also through application programming interfaces (APIs), which, as we have already noted, govern how objects circulate within and sometimes across most web platforms. For instance, when a user clicks on the 'Share on *Facebook*' button after watching a video on YouTube, the ID number of the video will reappear in the *Facebook* source code of the user's page. The current challenge thus lies in identifying and following traffic tags associated with Web objects so as to see how information circulates within and across Web 2.0 platforms. This process of tracking the migration of object or actor-specific-code will provide us with clues as to how cultural processes that are traditionally only visible at the level of the user-interface are governed by the largely commercial imperatives of APIs (particularly on the larger and more popular platforms like Facebook and Youtube).

5. The taxonomy of traffic tags

While meta-tags offer an important contrasting view to the use of hyperlinks as indicators of political associations and networks, their use has been vastly complicated and expanded in the web 2.0 universe. In fact, as we have argued elsewhere [24], such forms of user-generated content serve as a key component in the production of web 2.0 sites – since they are almost entirely rely upon user-generated content to function and thrive. However, the task of developing methods for tracking individual users and networked political objects across platforms is a complex one, in large part because each platform has its own set of protocols that disrupt the more free flowing aspects of web 1.0 (or html based forms of publishing and networking). In the remainder of this paper we identify new forms of code and software functions that might allow one to track objects and users across web 2.0 sites. Such software artifacts serve as possible sites of 2.0 research, though, as we detail below, this de-centered method of analysis, which begins with objects and users, as opposed to networks, communities or other digital collectivities, will inevitably raise questions about one's choice of a starting point – that is, the rationale for what objects one begins to track, and what sequence and series of information aggregators one deploys to view the dissemination of said "traffic tags". Lastly, before we move on to discuss such new sites of research, we should reiterate that "traffic tags" typically come in two forms – both of which are required to track objects and map routes of networked content, and relationships between users, content, and other users – namely code that individually identifies specific users/objects and code that facilitates the circulation of shared objects. In many respects this method is not entirely new, as it also duplicates, albeit with some differences of course, the techniques and technologies that are deployed to diagnose the circulation of commodities, consumers, and services in today's economy [11]. In lieu of traffic tags discussed below then, such networked objects, users, and routes, have employed well know technologies such as barcodes, RFID tags, and more broadly "just-in-time-delivery systems", for many decades now.

While inevitably incomplete, we have identified a number of traffic tags that exemplify our search for code that can be employed in a object centered method of web 2.0 analysis:

- plain language (text)
- individual user IDs
- APIs

- tags that accompany user-generated objects (self generated, auto-generated)
- hyperlinks
- spam-strings
- RSS feeds
- object title
- file formats
- usernames
- formal names
- IP addresses
- copyright code (eg. creative commons)
- email addresses.

This list is of course not exhaustive, but is rather meant to offer a starting point for discussion. That said, we would argue that plain language or text is one the most overlooked forms of traffic tags on the web. As we argue elsewhere, with respect to the re-use and circulation of Wikipedia entries [25], one can take formal language and deploy it in a series of net information aggregators (search engines for example) to identify the dissemination of similar or exact duplicates of sentences, and paragraphs. Plain language is a particularly cogent form of traffic tag as they double of course as both semiotic and deitic signs [12,33], meaning that they provide researchers with the rhetorics of networked politics, as well as to how terms are used to, literally in the case of hyperlinked words, take users to other documents and web platforms.

APIs, or application program interfaces are similarly pivotal in our proposed research perspective since, as we noted earlier, they sit "in-between" interfaces and back-end code, often providing more savvy users with an ability to data-mine specific platforms for information on users and objects. So perhaps to qualify a bit here, APIs serve as search engines of sorts, as they link together users with objects and particulars spaces on platforms like Facebook (eg. on groups, or "causes" pages, etc.). One can "query" an API for example, for various data associated with a particular user[14] or group of users. That said, APIs can also be used to better understand how networked political objects move across, are slightly modified, or become the domain of specific 2.0 platforms – to the degree that their sharing becomes more difficult.

Really Simple Syndication or RSS feeds similarly offer researchers a universally recognizable code embedded on many political websites, blogs, and media sites, that serve in many respects as a content portal, a mega hyperlink in 1.0 language, to the extent that it creates a gateway from which almost all content and indeed some meta-tags and information for specific website entries, stories, or posts (date stamps, bylines, etc.) can be collected and used for comparative cross platform analysis. Much like API's, in other words, RSS feeds serve to *traffic* meta-tagged content. Our own analyses of political blogs in Canada used the RSS feeds from partisan blogs to performs various forms of content analysis across the Canadian political blogosphere [13]. A slightly modified version of these traffic-focused tags and code includes the creative commons logos and tags, signs and code that govern, classify, and enable access to various forms of multimedia on the web (Flickr images for example). Content, actors, and platforms associated with creative commons licenses speak directly to the rules concerning the ability to publicly use, reuse, remix, and broadly share digital objects. Searching for creative commons code across platforms using search engines, APIs, and RSS feeds thus provide helpful sets of data that provide insight

[14] See, for instance, the API test console on Facebook: http://developers.facebook.com/tools.php.

onto the various forms of digital ownership and subsequently trafficking of content that takes place across the internet. Such issues are of increasing importance for the political sphere as various jurisdictions around the world move to more open source models of information management and access[15].

Identifying and tracking the contributions of political actors (partisan bloggers, vloggers, political staff, journalist-bloggers, etc.) is perhaps one of the easiest components of our suggested method of inquiry. In large part because almost all web 2.0 sites require some form of user registration, individual IDs are common place. These IDs are of course then platform specific, which can help when trying to determine the success of failure of various cross-platform political campaigns. User accounts almost always require registrants to register a unique username, thus making it relatively easy to track all of the content and objects uploaded, remixed, commented upon, etc. by specific users. We might also extend this logic to less formalized definitions of usernames, for example "AXXO" a well-known user of peer-to-peer software known to upload and circulate DVD ripped material on bittorrent networks[16]. Email addresses, likewise, offer opportunities to identify the circulation and contribution of individuals across platforms and time, though with important caveats that speak to the limits of political networking – both as a practice and site of research. Emails listed on *Facebook* pages for instance are not retrievable through interface searches or through the platform's API, thus making it harder to analyze and also circulate calls to action posted on *Facebook* that often end in an organizer's email address. IP addresses are similarly one of the more reliable and unique forms of identifying specific users, or in the case of "whois" searches, the unique address where a computer is registered. Journalists often turn to such "whois" searches during election campaigns to determine the owners of specific attack or parody websites – a daunting task as according to one estimate over 2,357 sites were registered for candidate Obama[17]. In terms of identifying specific internet users or actors, formal names of course, while less specific, can also be used in conjunction with other IDs to track the contributions of specific users or 2.0 platform accounts, an important caveat again as often multiple techniques of identifying actors are required when searching for networked campaigns and content across 2.0 platforms.

The last set of traffic tags discussed herein speak more to the qualification and characterization of digital objects, a means by which posts, images, and videos are "tagged" typically using keywords, hash tags, and other content related indices. Such user-generated forms of classification of course serve a central role in various projects seeking to monitor trends on social media platforms like twitter or in the blogosphere, for instance as aggregated by the platform specific search engine Technorati. Such tags serve particularly those in the fields of information science, information retrieval and library science, to complicate objective means of classifying, controlling and circulating documents and media objects. The emergence of the folksonomy epistemology, conversely, can also be overly celebrated as the ultimate freeing of information, wherein citizens not only produce and circulate their own political campaign objects, but also play a pivotal role in classifying their contributions to a networked political landscape.

6. Conclusions

While we recognize that this paper has only begun to enumerate a new 2.0 inspired approach to the study of online networks and political networking, there are clear examples in the political sphere that

[15] The decision by the Obama whitehouse to switch to an open source "Drupal" website management suite was widely lauded by information activists. < http://drupal.org/node/375843>.

[16] Cf. < http://www.mininova.org/user/aXXo> for an online list of files uploaded by this "username". Wikipedia also provides an interesting overview of this "internet alias" <http://en.wikipedia.org/wiki/AXXo>.

[17] <http://inside.123-reg.co.uk/archives/domain-names-the-web-and-the-us-election>.

suggest we are on the right track. Journalists now routinely seek to track the original of digital objects that seek to anonymously attack or parody public figures and politicians[18]. Such forms of political research is also practiced by party staff. One of Canada's most social media savvy reporters, for example, recently noted that political staff in the Canadian capital matched the exact software code for a shade of blue used by the governing party on its political/party website (Pantone #333399!) to a government website in an effort to argue that the current administration was politicizing – through similar branding – various government programs[19].

Our paper has similarly attempted to provide examples of code that can be analyzed to track political campaigns and communication across web 2.0 platforms. However, much remains to be done. First, a road map of sorts is required to understand how – and under what conditions – an actor (political party, blogger, or other user) can best take advantage of the routes in, through, and across social media sites. Certain opportunities to network content between two platforms are routinely prohibited. Youtube videos can be embedded on blogs, but up until recently not on Facebook or Twitter. Blog posts can be linked to Facebook friend feeds, but not Youtube, etc. Such distinctions are important to recognize when studying the effectiveness of online political campaigns, yet the speed at which such networked platforms emerge, and then later change their back-end code and APIs however makes such network mapping always and already out-of-date.

Studying political networking across the web 2.0 thus requires a commitment to experimenting with numerous traffic tags in the process of trying to track the uploading, spread, reuse or remixing of various digital objects. Some sites provide for easy data collection with RSS feeds (such as blogs or information aggregators like Google), while others like Facebook and Youtube require an engagement with their API to collect large data sets. And again just when one thinks that a sound method has been achieved to collect and track youtube videos to blogs or Facebook their API is changed (as was the case in 2009), forcing researchers to readjust their methods again.

While the broader task of tracking inter-relationships between platforms is fraught with pitfalls, the concept of traffic tags is still a fundamentally sound one if one wants to understand the relationship between objects, users (actors), and social media platforms. Shared 2.0 objects, like internet packets, need unique identifiers to distinguish themselves from each other, in addition to providing the glue which binds together not only users (as "friends" on Facebook, for example), but also between and among social media or 2.0 platforms. Without uploading, sharing, commenting, and remixing there would be no networked media to map or take advantage of. Blog posts, comments, videos, and photos serve as molecular objects, always moving among the larger networked apparatus.

What is needed then is a road map that can point to how one can not only identify users and objects, but also how these can be tracked across any two social media platforms – a process, that requires constant updating, to include to new platforms, new functions, and new APIs. Such maps of traffic tags would consequently move research on political network away from implied definitions of political connections or associations online, through an overreliance on hyperlink mapping research, to a much richer understanding of what practices and sets of objects, users/actors, and 2.0 sites make for an effective (or botched!) networked campaign.

[18] Our own work with the Canadian Broadcasting Corporation focused heavily on determining the source of social media barbs and dirty tricks during the 2008 federal election in Canada. <http://www.cbc.ca/news/canadavotes/campaign2/ormiston/> accessed January 25, 2010.

[19] http://davidakin.blogware.com/blog/_archives/2009/10/27/4363377.html <accessed January 25, 2010.

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