An Analysis of Twitter and Facebook Use by the Archival Community*

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Abstract
This paper discusses how social networking services Twitter and Facebook are being used by the archival community as outreach tools. The study analyzes the usage patterns of 195 individual and institutional users over a 32-day period during the summer of 2009. By focusing on the 2,926 outbound links posted to the services during the period, the author shows that use is dramatically different between the three test groups: archival organizations using Facebook, archival organizations using Twitter, and archivists using Twitter. The study shows that archival organizations overwhelmingly use the services to promote content they have created themselves, whereas archivists promote information they find useful. In all cases, more frequent posting did not correlate to a larger audience. By examining how others have applied social networking, archivists and archival organizations can determine a social media outreach platform that is suitable to their institutional needs. This study may serve as a starting point towards a greater understanding of outreach in the digital age.

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As times change, so do the methods with which archives seek to reach out to their potential clientele. While most archives would relish the chance to launch an expensive professional advertising campaign to promote their holdings and services, few can afford it. Instead, many archivists must add the role of outreach officer to their duties to ensure the day-to-day success of the archives. With lean budgets, and for many the prospect for even leaner budgets in the future, archivists must ask themselves: what is the most effective and efficient way of promoting our holdings without overextending our resources?

But, before asking how best to perform outreach, many archivists question whether it is necessary in the first place. A debate over the value of outreach occurred in Canada at the 1990 Association of Canadian Archivists conference and subsequently in the pages of Archivaria. Among the strong supporters were Gabrielle Blais and David Enns who urged that “we must forge links with the public” and must “recognize that we do not operate in a vacuum.”¹ Among the detractors, Terry Cook warned that the archival profession must be wary of catering to the fleeting whims of the public and must ensure outreach does not undermine the goals of the archivist - particularly when that outreach influences decisions made about appraisal and description.² A few years later, the debate had shifted from a discussion about whether or not outreach was worthwhile, to a conversation about how best to achieve it. In the early days of the Internet, some archivists saw the web’s growing potential as a way to attract onsite users, notably Barbara Craig, who in 1998 contended “that the proliferation of computer and communications technologies provide an unprecedented opportunity for archives to extend our client base (while

remaining true to core values) – providing that we reach out to new clients, including even casual visitors roaming cyberspace without a set purpose beyond exploration.\(^3\)

By the twenty-first century, archivists began trying to determine how best to provide outreach programs by looking at how users prefer to seek information. A survey of Canadian academic historians, published in 2004 by Duff, Craig and Cherry, showed that most historians favor archival sources, finding aids, archivists and footnotes in their search for research materials: 83% of respondents ranked the above four means as “important,” whereas only 45% rated the Internet as an important source.\(^4\) Studies of the information-seeking habits of genealogists show a different story. A 1997 survey by Christopher Barth revealed that even in the early days of the Internet, genealogists looked favourably upon automated and computerized services offered by archives.\(^5\) A 2005 study by the Public Record Office (PRO) at Kew, England, revealed that genealogists visited the PRO website 72 times more often than they came through the door.\(^6\) The growth in Internet reliance by genealogists is surely in part due to successful web marketing efforts by archives and websites such as Cyndi’s List or Ancestry.com, which make one-stop shopping viable for researchers seeking specific types of resources.\(^7\) From these studies, one might be tempted to conclude that when addressing genealogists, it is best to have a good website containing online resources, whereas archives that cater primarily to academic researchers can pay less attention to the web. However, this conclusion fails to

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recognize the speed at which the Internet has infiltrated society as a whole and, in particular, the general searching habits of potential archival users. Over the past fifteen years, many archives have followed general societal trends and have created websites so that visitors can find basic information about their repositories and services. Most of the earliest archival websites resembled virtual brochures. On these brochures, users might find a logo, contact information, driving directions and a few pages of descriptive text designed to promote the repository’s holdings and services. If people wanted to find the website, they could use a search engine such as Google or Yahoo in the same way they might look up a phone number in the *Yellow Pages*.

As the web grew and the audience of potential casual visitors increased, computer programmers invented more advanced and creative technologies. Many archival sites added searchable databases of finding aids or item-level descriptions. By 2004, Tim O’Reilly of *O’Reilly Publishing* had coined the term “Web 2.0” which, he argued, embodied a new way of thinking about the Internet.⁸ Users increasingly decreed that it was no longer enough to offer a static webpage, but that now they expected to be able to participate in an online experience. This might mean that a website could let the user add tags to virtual copies of artifacts or encourage visitors to express their opinions about an interactive exhibit. Many archives created sites capable of this level of interaction. But for others, it was simply not an option; building advanced websites with dynamic content is expensive and in many cases requires the full-time help of several dedicated, highly specialized employees, not to mention the time and resources required to digitize records for use as web content.

Some American studies put forth different conclusions as to why archives have not introduced, or have hesitated to introduce more Web 2.0 practices. A 2009 survey completed by

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Mary Samouelian acknowledged that many university archivists were receptive to Web 2.0 technologies as a way to promote their collections and communicate with clients, however the archivists in the study complained that *time* was the overwhelming reason for why they did not integrate more Web 2.0 features in their outreach program (71% of respondents). The same study found that a second leading factor for the lack of Web 2.0 technologies in archives was that many archivists believe that giving researchers the ability to reorder and re-describe a collection undermines the role of the archivist. This reordering and re-describing refers to the relatively new ability some Web 2.0 websites have incorporated allowing visitors to participate in virtual curation by adding tags or creating virtual collections of artifacts. Another American study by Elizabeth Yakel offered another explanation: resistant archivists, who were less experimental and slow to adopt new services, were to blame for the lack of a push towards more novel outreach.

However, Web 2.0 is not limited to expensive or technologically advanced services; neither does it have to involve tagging. An archives need not adopt all Web 2.0 services to offer an effective web-based outreach program. There are many tools under the Web 2.0 umbrella that can help to serve the mandate of an archives without requiring heavy investments of time or money. These tools fall under the blanket terms “social media” or “social networking,” which refer to an increasing number of online services, almost all free. These tools range from instant messaging services to social networking websites. Some allow users to post photographs or video, some are purely text-based, and some mix many media formats. What they all have in

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10 Forty-three percent of respondents did not want to relinquish the ability to reorder or redescribe collections to researchers. Samouelian, p. 64.
common is their ability to reach a self-selected, interested audience if used effectively, without requiring expensive overhead or extensive experience.

By understanding what services are available and how they can help an institution’s outreach goals, archivists and archives can choose a combination of tools that is right for promoting their institutions. Social media and social networking services are, by their nature, trendy. The successful tools often experience a meteoric rise in popularity, remain in use for a few years, and then disappear when something newer and better comes along.\(^{12}\) Undoubtedly, by the time readers find this article, there will be a new trendy tool on the rise and those highlighted in this paper will have evolved. But their impermanence does not detract from their value as outreach tools for the present. Having an understanding of what tools are available and how they can be used is a valuable asset for any self-promoter.

The first thing to understand about social media is that not all tools perform all jobs equally well. Some tools are completely incapable of performing certain tasks, either by oversight or by design. In many cases, the most effective promotion requires using multiple forms of social media in concert. Some of the more useful services for archives are those that allow information to be broadcast.\(^{13}\) Much like traditional newsletters, the social networking sites Facebook and Twitter provide this opportunity. Both are free and allow users to post messages that are delivered to whomever has subscribed. Posting to a Facebook page or a Twitter account that has a reasonably large audience can be effective ways of drawing attention

\(^{12}\) The popular instant messaging tool *ICQ* is a good example of this ebb and flow in popularity. It became popular in the 1990s as one of the first instant messaging systems to gain widespread use, but is now all but a memory; \url{http://icq.com} (accessed on 3 March 2010).

\(^{13}\) Broadcasting itself is not a Web 2.0 concept, as it does not directly involve interaction between the broadcaster and the website user. However, the tools discussed in detail in this paper are Web 2.0 applications with which it is still possible to perform some activities that may traditionally fall under a Web 1.0 definition. This distinction between Web 1.0 and 2.0 should not be misconstrued as meaning “outdated” and “relevant” respectively; rather the terms describe different types of online experiences based on the level of interaction the website or service offers a user.
to upcoming events, a new blog post, interesting items in a collection, or a newspaper article promoting the institution itself.

Unlike other online communication tools such as wikis or blogs, Facebook and Twitter host two distinct communities of Internet users. Whereas anyone can stumble across and read a post or comment on a blog or wiki, Twitter and Facebook users have consciously decided to join and maintain profiles on these services. One cannot connect with a Facebook user unless one has a Facebook account, just as one cannot telephone someone who does not have a telephone. The same is true for Twitter. This paper will focus on Facebook and Twitter communities in order to provide insight into their recent use as outreach tools by archivists and archives.¹⁴

Facebook

The social networking site Facebook started in 2004 and currently (Spring 2010) has over 350 million users, almost half of whom log in to the site each day.¹⁵ Facebook has a reputation for being a tool used primarily by youth, and statistics from marketing sources support that claim.¹⁶ However, according to the company, membership growth is strong amongst those over 35 years old; this demographic may have represented over 30% of registered users by early 2010.¹⁷

When people sign up for a free Facebook account, they are invited to maintain a profile about themselves, as well as connect with others by adding friends who must reciprocate the friendship request before further exchanges can occur. In most cases, users who are not friends

¹⁴ Both Facebook and Twitter are dynamic, evolving services which have changed since the study was conducted and will continue to change. The following introduction should not be considered an up to date manual; rather, it provides enough background information to understand the services as they existed when this study was conducted.
will not be able to access most of the information on an individual’s profile page. This feature makes Facebook reasonably private or closed compared to other social networking sites. Readers should not mistake this “privacy” for the service’s ability and willingness to protect personal information, which continues to come under question by privacy commissioners around the world.\footnote{“Facebook needs to improve privacy practices, investigation finds,” Office of the Privacy Commissioner of Canada, 19 July 2009, \url{http://www.priv.gc.ca/media/nr-c/2009/nr-c_090716_e.cfm} (accessed 23 March 2010); Gillian Shaw, “Facebook, privacy advocates square off over what’s public and what’s protected,” \textit{The National Post}, 5 May 2010, \url{http://www.nationalpost.com/related/topics/Facebook+privacy+advocates+square+over+what+public+what+protected/2989814/story.html} (accessed 19 June 2010).}

Once a profile has been established, users can then upload photos and videos, send messages to friends, and post short messages, which only other Facebook users can read. One of the most useful features is the information aggregation system that Facebook provides, known as a user’s \textit{News Feed}. Depending on filtering settings defined by the user, each person’s news feed shows them a personalized aggregated display of recently updated information from all of his or her friends, as well as messages written directly to the user by friends. Newest changes appear nearest to the top, which allows a user to monitor activity at a glance, rather than having to check each friend’s page for updates. If an organization wants to create messages that will appear in someone’s news feed, it must create a Facebook \textit{page}, which is much like a user profile, but with a few extra benefits that help in self-promotion. The most important distinction between a personal user account and a page is that pages are publicly accessible and can be viewed by anyone with a Facebook account, not just pre-authorized friends. Once an organization has set up a page and completed a profile, it has a Facebook \textit{wall}, which is much like an online bulletin board. People can become \textit{fans} of a Facebook page so that when an organization posts a message on its wall, the message will be sent to the news feed of all of the
page’s fans. Fans can also post to an organization’s wall, which invites dialogue and a means for online community building. The audience for a message posted on a Facebook page is generally equal to the number of fans. If an archives has 100 fans, a post on its wall would conceivably reach 100 people, assuming they are all active Facebook users. Archives can use Facebook to post photographs, video, announce upcoming events or engage in dialogue with fans by posting comments.

**Twitter**

Frequently referred to as a *micro-blogging* service, Twitter is a hybrid between earlier instant messaging programs and blogs, allowing users to broadcast messages known as *tweets* of up to 140 characters in length. The service first appeared in 2006 and currently (Spring 2010) has over 100 million accounts. Users can *follow* others’ tweets in an aggregated feed, not unlike a Facebook news feed. The major differences between Facebook and Twitter are that Twitter posts (“tweets”) are limited to 140 characters, and most Twitter accounts are completely open and visible to any Internet user without having to sign up as a member. Tweets are searchable within the Twitter site and are indexed by Google, whereas Facebook content is usually not visible in search engine results - though that is subject to change at the whim of the major search engine companies. Google now displays Twitter content prominently in search engine rankings,

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19 Measuring audience is not quite this simple. Some users may block certain updates in their news feed by adjusting their user settings. Conversely, a particularly engaged community of friends might increase the audience of a Facebook page because comments posted by a fan on an organization’s wall will also be sent to the news feed of all of his or her friends, thereby alerting more people of your page’s existence. “Facebook Pages Product Guide March 2009,” [http://www.facebook.com/advertising/FacebookPagesProductGuide.pdf](http://www.facebook.com/advertising/FacebookPagesProductGuide.pdf) (accessed on 3 March 2010).


21 Twitter users have the option of making their Tweets “private” or visible only to their followers; private accounts are used for personal communication, rather than broadcasting. For “unprotected” (open) accounts, anyone including non-Twitter users can read the tweets by visiting [http://twitter.com/xyz](http://twitter.com/xyz) where “xyz” is the username of the Twitter user in question.
especially content created by users with large numbers of followers. This added exposure can have a considerable impact on how many people a message can reach. Unlike Facebook, Twitter does not have separate types of accounts for individuals and institutions.

Recent Twitter demographic statistics suggest that the largest group of users is in the 35-54 year-old range, followed closely by 18-24 and 25-34 year-olds. Use amongst teens tends to be lower, possibly because tweets are openly available, allowing parents, authority figures and anyone else to know what the teen is doing, whereas sending text messages on a cell phone, or posting on a Facebook page is much more private. Others have suggested that the main reason for a lack of teen interest in the service is that teens are too busy using other social media tools such as Facebook and cannot be bothered to maintain two online profiles. What this means is that different people prefer different social media platforms, and an archival organization should consider its target audience’s preferences before it decides which tools to incorporate into its outreach program. Though much of what people tweet is inconsequential, some common uses include recommending blog posts to followers, promoting one’s own work, and chatting with others. An archives can use Twitter to advertise events and services, highlight aspects of its collection, notify users of important website updates, or engage in conversations with potential users. Twitter has a significant advantage over Facebook for disseminating information: re-tweets. When a follower re-posts someone else’s tweet, attributing the author, the message is

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called a re-tweet, and it usually occurs when someone finds a post particularly useful or interesting. When someone re-tweets a post, all of the people on that person’s list (i.e., all of their followers) will also see the message. Compared with Facebook, where 100 fans means an audience of approximately 100, re-tweets can draw many more people to a message. For example, if a user has 100 Twitter followers and posts a message that gets re-tweeted by someone with 300 followers the message will likely reach close to 400 people (although some people may be duplicates, appearing on both lists). If that message then gets re-tweeted by others, the audience increases exponentially. Coupled with the chance for Google users to find a tweet, the audience is potentially much larger with Twitter than with Facebook. Table 1 presents a comparison of some key statistics about Twitter and Facebook.

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The Study

27 Kincaid, “Twitter has 105,779,710 Registered Users, Adding 300K A Day.”
29 Lipsman, “What Ashton vs. CNN Foretold About the Changing Demographics of Twitter.”
30 Users have the option of protecting their tweets by keeping them hidden from strangers, but by default an account is open to all Internet users.
Several books and websites explain how to effectively use social media to promote a business, and thus this paper will not seek to duplicate that information.\textsuperscript{31} Instead, it will measure how archival organizations and archivists are currently using Facebook and Twitter so that archives currently using or considering using these services can understand how others in the field have applied them as outreach. The question is what to measure? Since most posts to social media services are text-based, it might be tempting to try to infer meaning from posts by applying textual analysis. That is what the Twitter.com website's “trending topics” does: uses word frequency across all posts to determine what the most people are talking about at any given time. While such analysis can be useful for discerning trends across many posts by a diverse group of users, for a study of archives and archivists the topics most likely to appear are much narrower than what one would find amongst the general public. This type of analysis also gives greater weight to users who post more frequently. Textual analysis also fails to acknowledge that many Facebook and Twitter users post “outbound links” in order to drive traffic to a blog, website or photo-sharing site, where more substantial content can be found. A textual analysis of a tweet that consisted of an outbound link to a photo would fail to register that the photo was the intended message for the reader. For these reasons, this study does not use textual analysis. Rather, the study focuses on the outbound links themselves posted by Facebook and Twitter users.

If an archives posts the headline “Come to our event next Thursday,” followed by a link, on an interactive level, this shows that the archives is asking users to click on the link and read self-promotional information. If an archivist posts, “silly jokes about ducks” and a link to a joke website, that too shows how a member of the community is using social media – in this case, for

\textsuperscript{31}Lon Safko and David K. Brake, \textit{The Social Media Bible: Tactics, Tools & Strategies for Business Success} (Hoboken, N.J, 2009).
an off-topic diversion. By looking at all links posted over a defined period, a clearer picture of social media use by the archival community emerges. Both Facebook and Twitter allow users to post links, and so it is possible to fairly compare the two services.

Identifying Relevant Users

This study performed quantitative and qualitative analyses of the webpages to which an archivist or archivist linked using either Facebook or Twitter. First, the author employed reasonable searching methods to identify Facebook and Twitter users who belonged to the archival community. “Reasonable” means that for both services, profile descriptions were searched for the words “archives,” “archive,” or “archivist” and a manual check was performed to ensure the user was involved with the archival field; this eliminated several users, including those who were members of musical bands that included the word “archives” and were not relevant to this study. Since this study sought to identify those who associated themselves strongly with the archival community and who used the service to promote their archival interests, it makes sense that those interested in forging this bond would use one of the above keywords in their profile. Nothing was done to selectively identify accounts originating in any one English or French-speaking nation; rather, the numbers are representative of all accounts that predominantly published in English or French. For logistical reasons, accounts that frequently posted links to websites that operated in other languages were omitted. At the time these data were taken, Twitter “lists” did not yet exist, which have since made it much easier to identify Twitter users who belong to particular communities.

For Facebook, only organizational pages were studied. Facebook personal pages are private and are not searchable beyond one’s list of friends. Even if the author had solicited
“friend” status with individual archivists, since individual Facebook users have the option to refuse “friend” requests - and since many who do not know the author personally would be likely to do so - a study of this group would have produced data for a self-selected population, rather than a significant portion of the total community. For these reasons, individual archivists using Facebook were not included in the study.

While the searching methods used to identify relevant users are not perfect, and undoubtedly some archival organizations or archivists were left out of the study, the author believes that those included are a representative sample of the ever-changing group of Facebook and Twitter users from the archival and special collections community. This search resulted in 104 archival organizations with Facebook pages, 64 archival organizations using Twitter, and 27 archivists using Twitter. Eight of the organizations maintained both a Facebook page and a Twitter account, but for the study, both accounts were analyzed separately. A list of the 195 archives and archivists included in the study can be found in the appendix.

_Categorizing Links_

All of the posts made between 20 August and 21 September 2009 were gathered for each of the 195 users. Together, this included 5,422 posts containing 2,926 outbound links. Each link was then manually followed and the corresponding website was categorized by the relationship of the site to the person or institution who posted the link. All categorization was done solely by the author of this study to improve consistency of reporting across all links. Each site was placed into one of the following five categories, the first three representing user-generated content and the last two, content produced by others:

- User’s own website
- User’s own blog
• User’s own Facebook page
• External website
• External blog

In most cases, the users indicated the address of their website or blog within their Facebook or Twitter profile, which made categorization easier. Where this information was not present, some digging with Google almost always revealed the websites or blogs each user maintained, if any. In this study, a blog was classified as a website that used typical blogging platforms and that posted periodic entries by a single or small group of defined authors, in reverse chronological order. Newspaper websites were classified as “external websites,” though posts often appear in reverse chronological order, because they do not embody the same self-publishing principles as a blog.

All links were also placed into one of four categories that describe the motivation of the person or archival organization posting:

• Non-Archival
• Promotional Outreach
• Interest to Archivists / other Archives
• Broken Links

For this qualitative categorization, “Non-Archival” was only used in cases where it was clear that the poster did not intend to promote his or her institution, himself or herself as an archivist, or the archival field in any way. Common topics that appeared in this category included photos of friends, jokes, or unrelated partisan messages. “Promotional Outreach” included links to sites that were meant to promote the archival organization itself, the person (in the case of archivists), a closely related organization, or the subject with which a particular organization is most closely associated. The “Interest to Archivists / other Archives” category was reserved for links to sites

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32 These platforms include blogs hosted by “Blogger” (http://blogger.com) or using “WordPress” (http://wordpress.com).
that would more likely interest other archivists or archives than potential archival users, such as a peer reviewed article about the Smithsonian Institution’s use of Flickr, or a blog post about why the Presidential Records Act of 1978 means that all the White House’s tweets and Facebook messages must be archived by the National Archives and Records Administration. This categorization was meant to help determine if social media was purely an outreach endeavour for archives and archivists, or if it was being used primarily to connect and share with other archivists on a professional level. The “Broken Links” category refers to website addresses that had expired by the time the author had reviewed them. In almost all cases it is safe to assume that these links worked at the time they were posted, but the content had since been removed. Such content might include announcements that had been removed shortly after the event being announced had passed, or stories that had since been posted elsewhere. Contrary to what one might think, it is still possible to categorize the type of site referenced by a broken link (own website, external blog, etc.) because the uniform resource locator (url), also known as the website address, contains information that indicates to which website the link was meant to point. For example, the link http://myblog.com/post-from-last-month may no longer work, but we can determine who owns the site as well as the site’s format by visiting the url http://myblog.com/. All broken links in this study were categorized by type of site.

A small number of links were difficult to categorize but the author made every effort to categorize them nevertheless. For example, a link to a site that discussed the future of the printed book was considered of interest to archivists and archives, even though archival researchers may too be interested in the topic. If a university archives posted a link to a rally for

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the university’s football game, it was considered promotional outreach, because it promotes the parent institution of the archives (the university) and may be part of a larger corporate branding endeavour. Likewise, a link to an American folk song on YouTube posted by an archives that specializes in American folk music was deemed to be promotional outreach because the link was meant to generate interest indirectly in its own holdings. These ambiguous cases represented a minority of links; most could be very clearly categorized.

**Findings and Analysis**

The results showed that the three groups - archival organizations using Facebook, archival organizations using Twitter and individual archivists using Twitter - broadcast very differently from one another.

**Geographic Distribution**

Of the 195 accounts followed during this study, 25 were managed by Canadians, 124 by Americans, 18 by people from the United Kingdom, 13 by members of other countries, and 15 accounts were of unknown geographic origin. Given the population of Canada, Canadians have more representatives in this study per capita than the United States or United Kingdom, but relative to the total number of archival institutions in these three countries, overall use of these tools is low. Canadians managed 18% of Facebook accounts in the study, but only 8% of Twitter accounts. The other countries did not seem to favour one service over the other as much as Canada did; however, it is important to note that 12% of Twitter accounts could not definitively be located geographically based on the information supplied. Therefore, it is

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34 These other countries included: Australia, Bangladesh, France, Ireland, Israel, the Netherlands, New Zealand and South Africa.
possible, but not probable, that a majority of those are run by Canadians. The number of accounts followed in this study is also quite small relative to the entire population of Twitter and Facebook users; thus, the above statistics should not be considered representative of populations outside of the study group.

Audience

With any outreach project, it is helpful to understand the size of the audience a venture is likely to reach, and how one archival organization’s or archivist’s efforts compare to others using similar means. For all 195 users - including inactive ones - the mean number of fans or followers and thus the mean number of people theoretically receiving the content was 303 per account, with a median of 87.5. However, distribution was not even across the three groups: Facebook users had a median of 40 fans, whereas archives using Twitter had 135.5, and archivists using Twitter had 218. This study does not take into consideration how many months it took for each account to reach that number of fans or followers. Five months after the study, in January 2010, the number of fans and followers for the same 195 users had grown by 51.7%. This growth rate was not spread evenly amongst users. The Facebook group saw its fans grow by 72% in the five months after the study, despite the fact that so many accounts were inactive. Archives using Twitter saw growth of 37% and archivists of 52% (see Figure 1).
No correlation was found between frequency of posting and growth in number of fans/followers. Amongst organizational users, factors that seemed to affect the number of fans/followers most were the organization’s status as a national institution, and whether the organization is strongly associated with a social cause. For example, the Library of Congress had over 15,000 followers on Twitter in August 2009. The next most popular organization had just over 2,200. Nothing about the Library of Congress’s posting patterns, frequency or content suggests it is a significantly better user of Twitter; therefore, it stands to reason that its reputation has attracted a significant number of followers. On the other hand, despite the frequent posting of archivists using Twitter, none of the users in this category had a follower count in the top ten, and the most frequent poster - an archivist with 380 posts during the period - ranked 22nd in number of
followers. What these data show is that frequent posting does not necessarily gain a larger audience.

Several Facebook users who were completely inactive during the study period, or who had set up an account and never posted to their wall, had large followings, possibly because of the nature of their groups. Prominent examples include the Lesbian Herstory Archive (1200 fans), Archives de Radio-Canada (966 fans), and Library of Congress (700 fans). In terms of audience, these three ranked in the top twenty, but provided no content or interaction for visitors. In these cases, since fans receive no useful information, one might hypothesize that the perceived cause behind the institution (lesbian rights, and French Canadian culture), or the desire to be associated with a well-known institution (Library of Congress) is the motivation for joining.\footnote{Certainly, the Library of Congress’s reputation would not be the only reason someone would become a fan. Other possibilities include being recommended by a friend, or having visited on a trip to Washington.}

Archives strongly associated with video or audio collections, as well as organizations that focused on family history, tended to outperform those which held primarily text-based collections, but this was certainly not always the case. The most prominent exception is the Nova Scotia Archives, which maintains both a Twitter account and a Facebook page that engages users in a dialogue and highlights interesting items found in the collection. While it is clear the Nova Scotia Archives puts considerable time and effort into the social media outreach - compared to most organizational users - it is a good example of effective use by a traditional archives. As of January 2010, both its Facebook and Twitter accounts rank in the top 20 in terms of fans or followers amongst those in this study.

Unfortunately, it is not possible to tell how many people are actually reading each user’s messages because there is no way to tell how many fans or followers are active Facebook and Twitter users. This is especially complex with Twitter, as thousands of users have set up
accounts that automatically follow other accounts in the hopes that some people will follow them in return. A Twitter account can experience a large growth in followers while not necessarily gaining true readers. Most website administrators maintain statistics of visitors to their site and would be able to determine how many visitors arrived because of a link posted on Facebook or Twitter. However, this information is private and because the links posted by users go to thousands of different sites, it is not possible to gather this information consistently.

**Longevity**

In general, Facebook users were far more likely to abandon their account than Twitter users: 56 of the 104 Facebook pages (53.8%) started by archives had either been abandoned by the time of the study, had no new posts during the study period, or had been set up and never used. Conversely, 88% of all Twitter accounts were active during the period. These numbers only reflect accounts that were set up and abandoned, not those that were set up and at some point deleted and thus no longer accessible. This means that nearly half of Facebook pages belonging to archives were sitting outdated, unused, but still accessible to the public. Since this study was solely observational, it is not possible to declare definitively why Facebook users more commonly abandoned that form of social media outreach, while Twitter users continued their endeavours, but the author can offer some speculative suggestions. One reason might be the lack of positive feedback some Facebook users may experience. The owners of Facebook pages have access to statistics about visitors to their page, known as “insights.” Unless an account has an

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36 The data collection period, 20 August – 21 September 2010 falls within a traditionally slow business period for many archives. The author acknowledges that some archivists responsible for maintaining organizational Facebook and Twitter accounts may have been on vacation, thereby making it seem that archivists are more prolific users compared to organizations than they actually are. However, if this were the case, archives using Facebook appear far more likely to take time away from their social media outreach than those using Twitter. The data collection period should not affect results when comparing archival organizations using Facebook to archival organizations using Twitter.
active community who routinely post comments or visit the organization’s Facebook page, it can become clear that an outreach endeavour is not reaching the target audience, or that it takes too much time to justify its impact. This may lead an archives to discontinue its Facebook updates. Conversely, Twitter does not directly provide these reader statistics and so a user may be hopeful that people are reading what is posted without having concrete evidence to contradict that belief. In addition, Twitter makes dialogue between users easier and more engaging than Facebook, as Twitter conversations are often real-time whereas Facebook conversations occur over several hours or days. Twitter is also much newer than Facebook, and in some cases it may simply be that Twitter users continue to be enamoured with the novelty of the tool, whereas early adopters of Facebook have tired of it and moved on.

Analysis by Type of User

Of active accounts, on average, individual archivists using Twitter posted most frequently (p < 0.001), followed by archival organizations using Twitter, and finally archival organizations using Facebook. Due to wide variations in the posting patterns of individual users, quartile values for the number of posts within the selected time period are presented (see Figure 2, Table 2 and Table 3). These values clearly identify the posting patterns of the middle 50% of users, while incorporating outliers (those who posted a lot and those who did not post at all), without overemphasizing them.

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37 Statistical comparisons were performed using a Wilcoxon-Mann-Whitney test. A non-parametric test was chosen due to the large ranges in posting patterns of individual users. The results of these tests appear in the text as (p < x or p = x) where x represents the test result and p represents the p-value. A p-value of 0.001 means there is a 99.9% chance that the data from the groups were different.
Figure 2: Total Number of Posts and Links per User (minimum, maximum, 1\textsuperscript{st}, 2\textsuperscript{nd}, and 3\textsuperscript{rd} quartiles)

Table 2: Median (1\textsuperscript{st} quartile, 3\textsuperscript{rd} quartile) Number of Links Pointing to Each Type of Site

<table>
<thead>
<tr>
<th>Type of Site</th>
<th>Twitter (Archivists)</th>
<th>Twitter (Organizations)</th>
<th>Facebook (Organizations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own Website</td>
<td>0 (0, 2)</td>
<td>4.5 (1, 17)</td>
<td>1 (0, 2)</td>
</tr>
<tr>
<td>Own Facebook Page</td>
<td>n/a</td>
<td>0 (0, 0)</td>
<td>1 (0, 2)</td>
</tr>
<tr>
<td>Own Blog</td>
<td>1 (0, 2)</td>
<td>0 (0, 1.5)</td>
<td>0 (0, 0)</td>
</tr>
<tr>
<td>External Website</td>
<td>34 (12, 52)</td>
<td>3 (1, 8)</td>
<td>1 (0, 2)</td>
</tr>
<tr>
<td>External Blog</td>
<td>8 (1, 13)</td>
<td>0 (0, 1)</td>
<td>0 (0, 0)</td>
</tr>
</tbody>
</table>

Table 3: Median (1\textsuperscript{st} quartile, 3\textsuperscript{rd} quartile) Number of Links Posted as Categorized by the Motivation for Posting

<table>
<thead>
<tr>
<th>Motivation for Posting</th>
<th>Twitter (Archivists)</th>
<th>Twitter (Organizations)</th>
<th>Facebook (Organizations)</th>
</tr>
</thead>
</table>
Based on the collected data, the typical archivist using Twitter posts approximately three to four times per day, and posts just over one link per day. The high proportion of posts without links suggests that archivists are engaging in considerable dialogue with other Twitter users, or are posting short thoughts throughout the day, which may be about any number of topics. The links they posted were heavily weighted towards material written by others (93% of all links posted by archivists using Twitter). Unlike the other groups in the study, a significant number of links (26% of all links) were to blog posts - either their own (16% of links to blogs) or those of others (84% of links to blogs). More than half of the links posted by archivists (58% of all links) led to pages of interest to other archivists or archives. Of the remaining links, 22% of all links were non-archival, 14% of all links were broken, and only 6% were self-promotional. These numbers suggest that a typical archivist using Twitter reads blogs and a variety of sites which discuss archives or archival theory. They are willing to promote content they think is worthwhile, even if they themselves are not the author; they seem more interested in promoting quality content than promoting themselves directly. How actively an archivist used Twitter varied significantly, ranging from a few posts per day to twelve - much more than a typical archives is likely able to devote to an outreach activity. Based on these data, individual archivists are using Twitter to engage in a conversation about archives, rather than as an outreach tool to directly promote themselves or their institutions.
b) Archival Organizations using Twitter

Twitter accounts owned and operated by an archival organization posted approximately once per business day (with a median number of postings of 24.5 times over the 33-day period) and about half of those included links (13.5 over 33 days). While this is significantly less posting activity than the archivists (p < 0.001), it is approximately five times more frequent than posts to Facebook pages (p < 0.001).

In striking contrast to the archivists, organizational Twitter users overwhelmingly posted links to content they had created themselves (66% of all links posted by institutions and organizations using Twitter; with significantly more links posted to their own material (p = 0.003)). Links to Facebook pages were relatively uncommon (3% of all links) as were links to blog posts (17% of all links). The motivations for posting were also different from those of the archivists, with 76% of links posted for promotional outreach reasons, and another 9% being broken links, which may also have been intended as outreach. Almost no non-archival links (3% of all links) and few links of interest to other archivists or archives (12% of all links) were posted.

The data suggest that archival organizations are less impulsive than archivists with their use of Twitter, using the tool predominantly to promote their holdings, services or events, while spending less energy engaging in conversation about archival theory. A typical post by users in this group was a link to content posted on the organization’s own website, meant for promotional purposes.

c) Archival Organizations using Facebook pages
Compared to the other two groups, organizational owners of Facebook pages are largely inactive with more than half of organizational Facebook pages unused during the test period. Of those that were used, they were updated far less frequently than either of the Twitter groups, averaging one to two posts and less than one link per week. The top Twitter user posted more links than all 51 active Facebook pages combined (380 posts as compared with 363 posts). One possible explanation is that if an organization already maintains a website, re-posting the same information to Facebook may not be the best use of resources.

Archival organizational Facebook users were comparable to archival organizations using Twitter in terms of distribution of posts across the various categories: 73% of posts were to content they created themselves, compared with the aforementioned 66% for archival organizations on Twitter (p = 0.12). However, when that number is broken down, 35% of all links went to an organization’s own Facebook page, suggesting that they were attempting to build their Facebook presence just as frequently as they used Facebook as a tool to direct traffic elsewhere.

Much like archival organizations using Twitter, archival organizations using Facebook used it to post links for promotional outreach (89% of all links posted by archival organizations using Facebook) followed by posts of interest to archivists or other archives (9% of all links). Almost no non-archival discussions (1% of all links) and very few broken links (1% of all links) were found on Facebook pages, suggesting that those posting links on Facebook are choosing to point to material that is less ephemeral than their Twitter counterparts. A typical post on a Facebook page’s wall contains a link to other material created by the user somewhere else on Facebook, be that a photo, video or upcoming event.
Future Directions

Though the focus of this paper is quite specific, the author hopes that this will be but one piece in a larger discussion about how archives and archivists can continue to adopt and employ new technology in the Internet era. An observational study such as this one cannot definitively answer questions about why some tools are more popular than others; for that, a participatory survey of archives using social media is necessary and would be a useful addition to our understanding of electronic means of archival outreach. A study analyzing the demographic characteristics of people receiving the tweets or Facebook messages of archives would clarify whether the outreach was successfully reaching its desired audience or if messages were merely being directed to other institutions and robotic accounts set up to disseminate spam. There is room for studies that expand the scope of this paper, looking at other tools such as blogs, podcasts and social bookmarking services, or even of services that did not exist at the time of writing.

It is also important to look beyond the Internet and even beyond the archival community. A study that compares the effectiveness of online outreach versus in-house programming for attracting and maintaining users would provide important information for archives deciding where to focus their outreach energy. Likewise, studies that compare how online archival outreach compares to online outreach of other heritage communities such as museums and libraries would allow the archival community to reflect on its own practices. It would also be interesting to know if there are national or local factors that come into play with regards to online outreach using social media tools.

Conclusion
The two social networking tools examined in this paper offer different advantages, and archives and archivists may wish to experiment with both to determine which works best for their organization’s needs. Facebook is more established, and because of its younger user demographic, it might be a better way to connect with school or university-aged users. Its larger user base also means there is the potential for more people to find the online outreach. However, despite more users overall, in practice, most archival organizations on Facebook have smaller audiences than archival organizations on Twitter. This may suggest that Facebook users are more interested in connecting with friends than institutions. Archives should also consider the level of competition on Facebook: because Facebook is more established, there are already thousands of businesses and institutions competing for the scant attention of users, which may make it more difficult to stand out - especially if an archives is not nationally recognized.

When an archives is deciding if Facebook is an appropriate outreach tool, it should keep in mind that a Facebook page is largely invisible to non-Facebook users and may duplicate content on an archives’ primary website. The high attrition rate amongst organizational Facebook users (over half of the institutions in the study have abandoned their account), may reflect doubt about its usefulness or the effort required to maintain a page. Twitter may be a better choice for archives that want to minimize the time spent on outreach activity and avoid building resources that recreate content available elsewhere. Archives looking to drive traffic to an institutional website, or engage in dialogue with users and other archives, should find Twitter an easier solution. Furthermore, Twitter seems more effective for those looking to engage a slightly older audience. The diverse range of tools that can be used with Twitter such as TweetDeck and Twitterfeed makes Twitter much more flexible than Facebook in terms of creating automatic updates or posting quickly without having to log in to a website (though this

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38 Smith, “December Data on Facebook's US Growth by Age and Gender: Beyond 100 Million.”
is changing as Facebook adapts to compete). However, these tools have a learning curve that some archivists may initially struggle with, particularly those who are uncomfortable with technology. The Twitter jargon requires patience when a user first starts tweeting and is a common criticism from non-Twitter users. Twitter also has a much smaller user base than Facebook, but as discussed above, may reach a larger audience.

Archivists using Twitter are more interested in websites relevant to archives than they are in self-promotion. They are also more likely to engage in a conversation with other Twitter users than are the archival organizations, but will not likely enjoy as large an audience. Following archivists on Twitter is an excellent way of staying up to date with online material about archives and archival theory. However, this may not be relevant to an organization’s outreach goals and the excessive posting of some users can bombard a Twitter feed with information overload if the user tries to follow everyone, or even the most prolific posters. Based on the observations made in this study, individual archivists using Twitter are not doing so as part of an outreach program for their organizations; rather they are using Twitter to connect with like-minded individuals interested in archives. For individual archivists, social networking services can be enriching tools for individual professional development. For archives, if used effectively, social networking services can be an engaging aspect of an archives’ outreach program. As long as they are managed properly and a plan developed for what to post and how frequently to post, these efforts can reach a large, targeted audience with little or no cost to the archives. Which, if either of these services an organization decides to use for its outreach program should depend on

\[39\] The feeds this author found the most interesting to read were those that consistently showcased interesting items from an archival collection (for example, a video from that day in history), or those that posted links to a variety of different websites (including both self-promotional and material of general interest to archivists), and that engaged in dialogue with others. Some of the most engaging examples include the Coca-Cola Archives on Facebook (http://www.facebook.com/search/CokeArchives), the CBC Digital Archives on Twitter (http://twitter.com/cbc_archives) and the Nova Scotia Archives on Twitter (http://twitter.com/NS_Archives).
its goals and needs. By understanding how others have chosen to employ these free broadcasting tools, an archivist or archives can strategize their use for meeting their own outreach goals.
Appendix: List of Institutions and People Traced During the Study

Facebook (Organizations):
- Alabama Department of Archives and history
- Anomaly Archives
- Anthology Film Archives
- Archives & Special Collections at UAAAPU Consortium Library
- Archives Audiovisuelles de la Recherche (AAR)
- Archives from Atlanta
- Archives of African American Music and Culture
- Archives of the City of Kingsport
- Bangladesh Archives
- Baptist Historical Society and Archives of South Africa
- Bibliothèque et Archives nationales du Québec
- Billy Graham Center Archives
- Black Cultural Archives
- Bonavista Archives
- California Views Photo Archives
- CBC Digital Archives
- Center for History of Physics Niels Bohr Library & Archives
- Chicago Film Archives
- Chicago State University Archives and Special Collections
- Chilliwack Museum and Archives
- Christian Archives
- Coca-Cola Archives
- Columbia College Chicago Archives
- Columbia University Archives
- Dalhousie University Archives and Special Collections
- Department of Special Collections and College Archives, FIT | SUNY
- Dundas Museum and Archives
- Edmund S. Munskie Archives and Special Collections Library
- Fort Hays State University Archives
- Galt Museum & Archives
- Gurukuli Archives
- Gut of Canso Museum and Archives
- Huntley Film Archives
- Jewish Museum and Archives of British Columbia
- Judaica Sound Archives at FAU Libraries
- Kalamazoo College CACHE Archives
- Kennesaw State University Department of Archives & Records Management
- Lane Community College Archives
- LaGuardia and Wagner Archives
- Lawrence University Archives
- Leather Archives & Museum
• Les Archives de Radio-Canada
• Lesbian Herstory Archives
• Lewisham Local History and Archives
• Lynn and Louis Wolfson II Florida Moving Image Archives
• LSUS Archives and Special Collections
• Michigan State University Archives
• Mobile Medical Museum and Archives
• Moravian Archives, Bethlehem
• National Archives of Australia
• New England Folk Music Archives
• New Jersey Division of Archives and Records Management
• Nova Scotia Archives & Records Management
• ONE National Gay & Lesbian Archives
• OPUS Archives and Research Center
• Oregon State University Archives
• Oshawa Community Museum and Archives
• Penticton Museum & Archives
• Peterborough Historical Society Museum and Archives
• Peterborough Museum & Archives
• Port Hope Archives
• Research at the US National Archives
• RIT Libraries Wallace Library - Cary Library - & Special Coll
• Roosevelt University Archives
• Ruth A Myers Library / Ojibwe Archives at Fond du Lac Tribal & Comm College
• Ruth Lilly Special Collections and Archives
• SABC Radio Archives
• Scottish Jewish Archives Centre
• Smithsonian Center for Archives Conservation
• Smithsonian's Archives of American Art
• Sophienburg Museum & Archives
• South Carolina Department of Archives and History
• Southern Methodist University Archives
• Special Collections & Archives, George Mason University Libraries
• Special Collections & University Archives UCF Libraries
• Special Collections and University Archives, Du Bois Library Umass Amherst
• Teesside Archives
• The Black Archives History * Research Foundation of South Florida
• The Canadian Baptist Archives
• The Carver High Museum & Archives of West Georgia
• The Freedom Archives
• The June Mazer Lesbian Archives
• The National Archives
• The Prelinger Archives
• The Vancouver Voice Archives
• Tishomingo County Archives & History Museum
• Tower Hamlets Local Studies : Archives
• Tulsa Area Music Archives
• Tyne & Wear Archives Service
• UA Archives Upper Arlington History
• University of Delaware Archives and Records Management
• University of South Alabama Archives
• University of Wisconsin - Eau Claire Special Collections & Archives
• Urban Archives (Payley Library, Temple University)
• US National Archives
• UW - River Falls Area Research Centre & University Archives
• Valparaiso University Archives
• Virginia Kelly Karnes Archives and Special Collections Research Center
• Ward Irish Museum Archives
• Woodhorn - Northumberland Museum, Archives and Country Park
• Yarmouth County Museum & Archives
• YMCA Archives
• Youngstown State University Archives and Special Collections

Twitter (Organizations):

• @archivesatbbc
• @archives_gov
• @Archives_Mtl
• @archiveshub
• @buspecialcollec
• @cbc_archives
• @ChristianArchiv
• @coke_archives
• @ColumbiaRBML
• @DeserontoArch
• @DoddCenter
• @drexelarchives
• @DundasMuseum
• @ETRC_archives
• @foresthistory
• @GetArchivisJobs
• @HCSpecial
• @HiphopArchive
• @internetarchive
• @IUBArchives
• @JewishFilm
• @KSU_Archives
• @LA_Research
• @laneccarchives
• @ljbnnow

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40 Twitter usernames are usually represented by @ followed by the username. To locate a person's Twitter page online, drop the @ symbol and place the username at the end of the following URL: http://twitter.com/
• @lcra_archives
• @librarycongress
• @mnhs
• @NewportArchive
• @NLNZ
• @NS_Archives
• @NSArchive
• @NYHistory
• @opusarchives
• @PhiGamArchives
• @plymoutharchive
• @ransomcenter
• @RussellLibrary
• @SCArchives
• @seekingmichigan
• @SLSA
• @SoAConference09
• @soundarchive
• @spcouta
• @staterecordsnsw
• @SwemSCRC
• @UAarchives
• @UHCL_Archives
• @UkNatArchives
• @UTSAYesterday
• @VanArchives
• @WolfsonArchives
• @ww1lit
• @wyorkarchives
• @yarchives

Twitter (Archivists):

• @adravan
• @archives_masala
• @archivesnext
• @archivesopen
• @DCPEST
• @footage
• @gbrannanarchive
• @ipodlesley
• @jwaonline
• @kitschqueen
• @legloaj
• @LiamTSullivan
• @librarchivist
• @lisagrimm
• @lynnemthomas
• @mike_rush
• @Musebrarian
• @rcdl
• @RobinRKC
• @sally_j
• @SchapiroArchive
• @ShellyHKelly
• @SociallyAwkArch
• @spellboundblog
• @vickylapointe
• @yhoitink
Adam Crymble graduated with an MA in Public History from the University of Western Ontario in 2008. Since then, he has been responsible for the online presence of the Network in Canadian History & Environment (NiCHE), where he has experimented with a variety of communication tools, including Facebook and Twitter. He has recently moved to England, where he has started a PhD in history at King’s College, London, studying mass communication from a historical perspective.