Identity 2.0: Constructing identity with cultural software.

Anne Helmond
University of Amsterdam, January 2010

Source for the original Networked book chapter commissioned by Turbulence:

Helmond, Anne. "Lifetracing. The Traces of a Networked Life." *Networked: a (networked_book) about (networked_art)*. 2 July 2009. Available online: http://helmond.networkedbook.org/

Rewritten for the Digital Methods Initiative mini-conference January 20-22, 2010 at the University of Amsterdam.

ABSTRACT: This essay deals with the change of identity on the web as a result of the assemblage of social software platforms, engines and users. It can be stated that major platforms for presenting the self online have developed over time: the homepage, the blog, the social networking profile, the micro-blog and the lifestream. They each have their own specific way for presenting the self online. The advent of the search engine has had a major impact on both the construction and the presentation of the online identity. Search engines not only index the platforms on which identity is performed, but they also organize and construct identity online. They act as a central point where identity performance is indexed. Since identity construction and identity performance have significantly changed with the advent of these engines, identity must be reconsidered. It can be argued that the assembly of platform, engine and user has constructed a new type of identity: Identity 2.0. This type of identity, placed within the period of Web 2.0, is always under construction, never finished, networked, user-generated, distributed and persistent.

KEYWORDS: identity, search engines, software-engine relations, social software

Introduction

This essay centers on cultural software that is visibly and invisibly shaping our social lives online: social software and search engines. Cultural software is described by Lev Manovich as software that -through its usage- holds, transmits and displays our culture:

> Search engines, recommendation systems, mapping applications, blog tools, auction tools, instant messaging clients, and, of course, platforms which allow others to write new software – Facebook, Windows, Unix, Android – are in the center of the global economy, culture, social life, and, increasingly, politics. And this "cultural software" – cultural in a sense that it is directly used by hundreds of millions of people and that it carries "atoms" of culture (media and information, as well as human interactions around these media and information) – is only the visible part of a much larger software universe." (Manovich 2008: 3).

As it carries the atoms of our culture and creates new molecules by binding certain atoms together, this cultural software may be used to study social phenomena on the web, especially the interconnections between software, platforms and engines: "Software, of course, is what organizes the Internet [...] Software is the invisible glue that ties it all together" (Manovich 2008: 3-4). The software universe in Manovich' description consists of different types of software ranging from operating systems (Windows, Unix) to online platforms (Facebook). Software in this essay is used as described my Matthew Fuller in his Essays on Software Culture in which software is described as

> a form of digital subjectivity – that software constructs sensoriums, that each piece of software constructs ways of seeing, knowing and doing in the world that at once contain a model of that part of the world it ostensibly pertains to and that also shape it every time it is used" (Fuller 2003: 19)

When talking about software it is important to make a distinction between desktop software and web-based software[1] which marked an important shift in the 2000s when we entered "the cloud." The shift from desktop to web occurred after the bubble and marks the beginning of the Web 2.0 era . According to O'Reilly (2005) "Web 2.0 is the network as platform" and denotes the shift from desktop software to software running natively on the web, webware. The web as platform platform hides the software itself and the continuous updates that lie underneath.

This obscuring of software and its layers led mediatheorist Kittler (1995) to claim that "there is no software." While I would like to argue that there is such a thing as software, it is becoming increasingly invisible as noted by Manovich. This is especially the case with web-based software, webware, that runs on a server instead of the user's computer. In its invisibility it also displays what Galloway calls "the occult logic of software" where "*software*

1 Also named webware (applications running on the web) (Manovich 2008: 27)

hides itself at exactly the moment when it expresses itself most fully." (Galloway 2009)

Software did not evaporate in the cloud but is further obscured by rendering the installation invisible for its users. Software is pre-installed and pre-configured and is continuously updated by the supplier. This type of software architecture is defined as a platform. Platforms with open APIs[2] allow users and developers to make use of the platform by communicating with it or building upon it. APIs allow platforms, software and engines to communicate and it is the invisible glue that ties Web 2.0 together.

Previous research (Helmond 2008) has shown that search engines shape blog software which raises the question if the engines are also shaped by software? The relationship between software, platforms and engines is not one-way but bi-directional. In what way does software also shape the demarcating devices of the engines?

Software is tied together through the seemingly invisible glue of software-engine relations which place the users in the middle of software-engine politics. This has implications on a cultural level as it impacts our online behavior, on a political level in terms of privacy issues, and on a phenomenological level in relation to how our social environments are formed. Software-engine politics are visibly played out in the social web. This essay wishes to address these issues by reconsidering identity online in a time in which identity is performed through and shaped by social software and constructed by search engines. What does it mean when Google determines who you are? What role does social software play in shaping and distributing your identity?

These questions will be addressed by looking into three factors that play a role in shaping online identity: first, by examining the different platforms for presenting the self online; and second, by looking into the advent of the search engines. It can be argued that identity online is formed by an assembly of platform, engine and user, which constructs a new type of identity: Identity 2.0.

---

[2] An application programming interface (API) is an interface implemented by a software program to enable interaction with other software, much in the same way that a user interface facilitates interaction between humans and computers. (Wikipedia 2009)

1. Platforms for presenting the self online

The study of online identity has been approached from different angles for over a decade. However, there seems to be a shift from focusing on online identity constructions in anonymous environments such as MUDs, IRC and chat rooms to non-anonymous environments such as dating sites and social networking sites as noted by Zhao et. al. (2008: 1816-1817). If we adhere to the Merriam-Webster definition of identity as "the distinguishing character or personality of an individual" it is in the distinction we constitute our identity. According to Butler "identity is performatively constituted by the very "expressions" that are said to be its results" (1990: 31). We distinguish ourselves through identity performance in a

> public process that involves both the "identity announcement" made by the individual claiming an identity and the "identity placement" made by others who endorse the claimed identity, and an identity is established when there is a "coincidence of placements and announcements" (Stone 1981: 188 cited in: Zhao et. al. 2008: 1817).

If we see identity as a performative act then how can we perform our identity online? To what extent is performance enabled or constrained by the social software through which identity is performed? How has the idea of "identity placement" changed with software technologies like search engines? How do search engines such as Google endorse the claimed identity?

The following sections will describe various ways and platforms for presenting the self online which have developed over time: from the personal homepage to the blog, to the social networking profile, the micro-blog and the lifestream. It is not a teleological account in which one replaces the other. On the contrary, all five are still used for identity performance but they each represent in a different manner how identity is formed and shaped in current web culture.

1.1 The personal homepage

Before the social web with its endless number of profiles waiting to be created and filled out, the personal homepage was a popular way to document and present the self online in a central place. It became popular around 1995-1996 when Internet access became increasingly available to the general public and portals like Geocities offered users a free space to create their own websites. The first personal homepages were defined by their manually coded pages which required HTML knowledge. There were self-referential environments in which most links pointed inwards to other pages within the websites and not to external pages, except for the links page. The personal homepage is all about the self, and its contents are stored in one place — on the server of the website. Based on the unit of

the page it was a fairly static environment in which changes would be indicated with the 'new' (animated) gif image and later with 'last updated' Javascript code (Helmond 2007). Homepages, as a presentation of the self online, and their authors are always 'under construction' as

> [...] home page authors engage in bricolage, adopting and adapting borrowed material from the public domain of the Web in the process of fashioning personal and public identities. In such sites, what are visibly 'under construction' are not only the pages but the authors themselves (Chandler 1998).

1.2 The blog

The format of self-publishing changed with introduction of the one-button-publishing blog software *Blogger* in 1999. HTML knowledge was no longer required. After hitting the 'publish' button, the software automatically put the latest entry on top. This reverse-chronological order immediately shows the latest update, the blog post as the basic unit of the blog. The blog is often seen as the successor of the homepage and as such it duplicates the classic approach to identity which is always under construction. However, the blog is not a closed environment and it thrives on the exchange of links. Content is often stored using external services and photos stored on Flickr and videos stored on YouTube can be embedded within the blog. Embedding and sharing content through embed codes and widgets[3] makes content disperse. Everything that was once stored and expressed in the personal homepage on a single server is now distributed on the web. The sidebar of the blog is a place for self-definition through the use of widgets. In the case of the popular WordPress blog software a drag-and-drop identity is constantly modified and tweaked through widgets. Widgets are used to embed the scattered web self into one place, the blog, creating 'the widgetized self,' a term coined by Nancy Baym (2007).

> The widgetized self is not a solitary and antisocial self that withdraws from (social) sites in order to confine itself to the blog. While widgets are often used for display purposes only, they can also serve more engaging purposes. Widgets, less concerned with displaying external content and more with enabling social interactions, could change the relation between the blog, its audience and (external) content (Helmond 2008: 78).

The widget walhalla on blogs points to the distributed nature of the blog as its content shows the larger network blogs are embedded in:

> [...] blogs as sites for identity construction and self-invention and have underlined the unruly multiplicity of the social identity online (Consalvo & Paasonen 2002: 22).

---

3 Widgets are data files that can be embedded into a site's HTML code and are typically displayed in a small viewing pane on the site. They are most often used to display customized or personalized content on a Web site, such as to share photos or music recommendations, and are commonly found on blogs, social networking sites and other personalized pages. (comScore, 2007)

The blog as a centralizing force of the distributed identity is a "start page on steroids" (Baym 2007). A centralized identity in the sidebar does not necessarily lead to more clarity or a good overview as blogs often suffer from the cluttered sidebar syndrome.

1.3 The social networking profile

Social networking sites have been on the rise since the introduction of Friendster in 2003. According to boyd & Heer "Profiles have become a common mechanism for presenting one's identity online" (2006: 1). In the *Spaces for People: Suggested Fields* workshop (2008) the Digital Methods Initiative (DMI) deconstructed social networking profiles online on Myspace, Facebook and Hyves, a popular social networking site in the Netherlands similar to Facebook with 8.7 million members[4]. DMI found that database fields no longer impoverish the self (Poster 1990: 96) but offer more and more flexible fields and a space for identity performance:

> Do you fill in the defaults only? What does your form-filling say about you, or what it could be made to tell, if measured in great detail? Database philosophers were once deeply concerned about how field character limits – the number of letters that would fit on each line in the electronic form – would impoverish the self, just like bureaucracy turned people into numbers. People could not describe themselves in such short, mandatory lines. Now there are suggested fields, longer character limits, and free text spaces, with prospects for a more expansive self! The database has more memory. 'Other,' that last heading available on the form, standing for anomaly, has become 'add category,' helpfully offering a moment of self-definition. The database is warmer, reaching out, asking for more of you (DMI 2008).

The social networking profile changed with the introduction of the Facebook wall which is a space on the personal profile page where you can update your status and add content, where friends can leave notes and where network activity is displayed with a timestamp. The Facebook profile not only shows the information you have filled in yourself, but it also contains the notes and pictures others have left for you on your Wall. It also shows recent activities such as X (the profile owner) and Y are now friends, X is now single, X has been tagged in this note, X wrote on Y's wall. These notes and activities are visible to whoever has access to your profile and as such they have become part of your identity performance.

When you log into Facebook, you do not end up at your own profile page but at your home page with a News feed consisting of a real-time flow of the activities of all the persons in your network. This feed "has every single activity of all your friends — updating their status lines, posting photos and links, joining groups — and they appear as soon as they happen" (Kricfalusi 2009). This new News feed is an activity stream that contains the real-time social actions and data of your friends. The traces of what you do on Facebook, whether

4 "Already 8761300 members since oct 1st 2004!" As shown on the frontpage of Hyves.nl on May 26, 2009.

they are conscious actions ("poking" a friend) or less conscious (accepting a friendship request), are registered and gathered onto the Wall on your profile page and inserted into your friends' News feed activity stream.

An important feature of your Facebook homepage is the status update, displayed on the top of the page above the News feed with your friends' (status) updates. The history of the status update may be found in Bulletin Board Systems and Instant Messaging systems (Helmond 2008 & Van Grove 2009) but has been reintroduced in 2006 by the social networking site Facebook and further popularized in 2007 by the micro-blogging platform Twitter. The status update within Facebook was introduced in April 2006 with the launch of Facebook Mobile (Chin 2010) and it allowed you to notify your friends what you were doing. The original status update within Facebook was in third person, "X is," for example "Anne is currently writing a paper" which imposed a certain grammatical structure on the status update. Facebook members initiated a "Petition to Get Rid of "is" from Facebook Status Update!"[5] to drop the enforced "is" from the Status Update and the request was honored in December 2007. Currently Facebook asks the question 'What's on your mind?' in order to let your network know what you're thinking or doing. These updates are prominently displayed on people's Facebook home pages, their News Feeds.

As previously described, platforms are able to communicate through the use of APIs. This may be seen in the News Feed where status updates are displayed that have been posted from other platforms: "Yesterday at 11:05am via Foursquare" or "Yesterday at 7:44am via TweetDeck." The News Feed shows the wider media ecology the status update is part of.

1.4 The micro-blog

The status update became popular through the micro-blogging service Twitter that allows you to update your status within 140 characters from the web, a mobile phone or through third party applications. These updates, called 'tweets,' are displayed in reverse-chronological order on the personal user profile page and on the page of their followers. Twitter shares formal characteristics with the blog in the sense that it: displays reverse-chronological entries (in the form of tweets), and these tweets are the basic unit of the micr0-blog and contain permalinks. Commonly known within the blogosphere, the permalink "or permanent link, is a URL that points to a specific blog or forum entry after it has passed from the front page to the archives." (Wikipedia 2009) After tweets are no longer part of the front page they may be individually referenced to as they are marked with a status ID number.[6] What differentiates the micro-blog from the blog is that entries have a 140-

---

5 http://www.facebook.com/group.php?gid=2590361215

6 For example: http://twitter.com/jkrums/status/1121915133

character limit. This limit was first imposed by text messages that can only contain a 160 characters. Initially micro-blogging services were build to be able to post your status update through a SMS message. In order to save space for the username the amount of characters reserved for the content/status update was limited to 140 characters (Sarno 2009). This initial connection to text messages led to constraints in both the form (textual) and the length of content (140 characters). If you want to post a picture or video on Twitter you will have to put it on an external website and link to that item from your Twitter page[7]. This lead to an enormous growth in url shorteners because a single link in a tweet will quickly fill up the limited character space.

Another thing that differentiates the micr0-blog from the blog is that the micro-blog does not contain static pages, just a single user page with the user's latest tweets. The content of the sidebar is fixed and contains statistics on the amount of tweets and followers and basic information on the user. In this sense it also shares characteristics with the social networking site as described by boyd & Ellison (2007):

> We define social network sites as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.

Twitter enables users to (1) construct a personal profile through a picture, the 'Name,' 'Location,' 'Web,' and 'Bio' (limited to 160 characters) fields, (2) display a list of connections through 'Following' and 'Lists' and (3) display and follow a list of connections made by the users themselves with 'Following,' 'Followers,' 'Lists' and 'Listed.' The profile page is still an important place for presenting one's identity online (boyd & Heer 2006: 1) but the core of this page lies within the status updates. These updates, instead of the profile form fields in social networking sites, allow the user to "type oneself into being" (Sundén, 2003) with short 140-character messages. Status updates are a distinct feature of the micro-blog within the genre of the social networking software[8].

Taina Bucher describes how "micro-blogging services, such as Twitter, are *instances* of social network software that hinge on time and/or location specificity." (2009: 5, emphasis mine) This focus on time is and location is displayed by the larger media ecology is part of. Because of its open API different platforms are able to communicate with Twitter, for example, it is possible to post a status update in Twitter and automatically sync it to your Facebook or LinkedIn account. This synchronization of updates between platforms enables the user to keep their different profiles on the web up-to-date. Aggregating the real-time

---

7 Many third party applications show linked content from supported Twitter photo and video sites inline.

8 Facebook, in this sense, is an interesting object of study as it combines two important features of social networking software: profiles and status updates.

activity flow on all these different platforms lies at the root of the fairly new phenomenon of lifestreaming.

1.5 The lifestream

Lifestreaming is a new, popular type of identity performance taking place on various platforms and social networking sites. A lifestream is "the collection of one's activity on various services (i.e. online life), often arranged by time, into one central location" (Blain 2009). The term "lifestream" dates back to 1994 as a concept for organizing personal electronic information; it was described by David Gelernter in his Washington Post article 'The cyber-road not taken.'

> A lifestream is a time-ordered stream of documents that functions as a diary of your electronic life; every document you create and every document other people send you is stored in your lifestream. (Fertig, Freeman and Gelernter 1996)

The concept led to the development of the Lifestreams system by Eric Freeman and David Gelernter as a network-centric replacement for the desktop metaphor (Freeman 1996). The main difference between the conceptual lifestream in 1994 and the actual lifestream in 2009 lies in the networked nature of the stream. The concept was developed at a turning point in the increasing popularity of the Internet (1994/'95) which led to a shift in personal activity and software usage from the desktop to the web. The lifestream at present is not so much about a time-ordered stream of *documents* as it is about a time-ordered stream of *online activity* that represents a diary of the online life. The blog, or personal website, is a popular central location for the documentation and aggregation of the online life. There are a growing number of lifestreaming plugins and blog themes available that enable users to create a lifestream on their already existing personal platforms. In addition, new services and software platforms dedicated to the aggregation of social media activity are being launched. An example of such a platform is the service of Storytlr which enables you to "import your web 2.0 life" and "mashup your data into stories" in order to "reinvent your homepage." (Storytlr 2009). Jill Walker Rettberg (2009) is currently working on sorting out the various ways in which social media organize our data into stories or patterns, for example, by time, relationships, context or geography. This research may contribute to our understanding of lifestreams as our lives become one big data stream scattered across the web. Search engines also act as centralizing forces of our distributed identity by indexing the content of the platforms we perform our identity on, and recently, by indexing the actions we perform within these platforms, including status-updates.

2. The advent of the engines

This section will explain the way in which identity construction and performance have changed with the advent of search engines. Social software has become increasingly entangled in relations with search engines, creating software-engine relations, which have major implications for the construction and performance of identity online. It will also explain how the idea of "identity placement" has changed and how search engines endorse the claimed identity.

The rise of search engines took place about the same time as the rise of blog software. When we blog we feed our blog database with content but we also feed the databases of the engines. Once a blog post has been published on the web it becomes part of "a vast and recursive network of software agents, where it is crawled, indexed, mined, scraped, republished, and propagated throughout the Web" (Rose 2007). Blog posts automatically become part of this vast network because of standard features in the blog software which connect the blog to other blogs (through trackback and pingback) but also to engines (through RSS and ping). When the blog as a platform for identity performance is automatically indexed by search engines it can be argued that the identity construction in the blogosphere is largely performed by the engines.

2.1 Search Engine Reputation Management

Google — the number one search engine and website — is for many people the main entry point to the web (Dodge 2007). As such it also acts as an identity constructor and manager that reveals the traces you leave online and the traces others have left about you. Search engines are often used to find people either for business or personal purposes[9] and in an era in which "You're a Nobody Unless Your Name Googles Well", it is important to boost your visibility in search engines (Delaney 2007). While you can have a certain amount of control over what you write, post and upload it is hard to control what others write, post and upload about you. This has led to the practice of online identity management which is largely performed through search engines.

> The euphemistic phrase "reputation management issue" describes what happens when you have a problem arise in search engine result pages. Whether it's the result of an algorithm change, bloggers, or social media sites jumping on negative news or

9 Figures range from "7% of all searches are for a person's name, estimates search engine Ask.com" (Delaney, 2007) to "Singh says around 30% of searches are people-related" to "Tanne says 2 billion searches per month are on people (Facebook data tends to suggest this is probably vastly underestimated)." (Arrington, 2007)

> other negative linking bandwagons, reputation management issues are a major pain for brands. (Bowman 2008)

Search Engine Reputation Management (SERM) tactics are often used by brands to disguise negative search engine results in order to protect their brands. A recent example of creating a search engine friendly identity using SERM techniques is the case of Nina Brink. Brink was involved in a scandal surrounding the initial public offering of internet service provider World Online in 2000. In 2009 a search for her name in Google still returned two negative results related to the scandal in the search engine's top ten. In order to clear her name she is said to have hired a SERM specialist to improve the ranking of the positive results in order to drop the negative results out of the top ten [10]. When you now search for Nina Brink on Google the second result reads "Nina Brink is also a loving mother." This seemingly odd result raises the suspicion of SERM tactics being used to influence the results.

As employers can 'Google' their employees and potential job candidates (Cheng 2007) it is important to be able to have a sense of control over the search engine results of your name. Chances are that people are very willing to submit a large amount of information about themselves to search engines in exchange for a sense of control over the outcome.

2.2 Indexing and privacy issues

Users need to be aware of the fact that search engines have an indexing fetish: they want to index as much information as possible, not in order to create a "complete" index but to have as much user data (which can be sold) as possible:

> Google suffers from data obesity and is indifferent to calls for careful preservation. It would be naive to demand cultural awareness. The prime objective of this cynical enterprise is to monitor user behaviour in order to sell traffic data and profiles to interested third parties (Lovink 2008).

Software facilitates the indexing by search engines through the establishment of software-engine relations and the use of standards. For example, blog software automatically notifies the network (including the search engines) of a new blog post and Google Blog Search indexes *anything* that publishes an RSS feed. This means that Google Blog Search not only contains blog posts but also public status updates from the micro-blogging and social networking service Twitter. If you have a public profile, every single tweet (Twitter status update) you post on Twitter will be indexed by Google. Single tweets appear in Google and can be taken out of context. This is the main reason why some users have a private Twitter

10 Two Nina Brink websites: NinaBrink.com and NinaBrink.info are registered by an employee of UniversalXS, a company specialized in Search Engine Optimization and Search Engine Reputation Management (Deiters, 2009).

account: it cannot not be indexed by the engines.

Social networking sites are favorite targets for search engines as they contain user profiles filled with data and a large amount of user-generated content. The indexing fixation of the engines is slowly permeating the walled garden structure often seen in social networking sites. Walled gardens are closed environments which require a registration and login to enter. Once inside it feels like a safe haven and the walled gardens usually do not allow indexing. This structure in social networking sites also prevents anyone, who is not logged in to the network and who is not your friend, from seeing your profile. Facebook used to be the prime example of a walled garden social networking site: what happens on Facebook stays on Facebook.[11] However, social networking sites are increasingly working together with search engines to allow the indexing of their members' profiles and status updates.[12]

In December 2009 Google announced it's partnership with Facebook, MySpace, FriendFeed, Jaiku and Identica (Twitter was already announced in October) in order to keep up with indexing "real-time changes" aka status-updates. Google now demarcates a new sub-part of the websphere, namely the updatesphere, which is based on the indexing of status-updates. Identity performance online has become increasingly indexed by search engines. Cultural software has led to a reconfiguration of identity online which I would propose to call: Identity 2.0.

---

11 Private accounts on social networking sites are a common way to prevent indexing by search engines. The walls of Facebook are solid and personal and potentially privacy-sensitive data cannot 'leak' out of the garden when your profile is set to private. Different privacy levels also control the flow of data within the walls of the walled garden and determines who may see what.

12 On January 30, 2009 the Dutch social networking site Hyves opened up its walls and allowed Google in to index profiles and link them to surnames in Google. This decision, which was not officially announced to its 8.6 million members is based on an opt-out option. If you do not want your profile indexed by search engines you should opt-out. However, by default your last name is visible in Hyves so by default you will be indexed by Google. Indexed individual data records are now public by default. In return Hyves offers its users a sense of control by allowing customization of the search engine results for their profiles.

3. Identity 2.0

In Web 2.0 both identity announcement and identity placement are mediated, performed and constructed by cultural software in the form of social networking sites and search engines. Although everything nowadays seems to be labeled 2.0 — Government 2.0, Education 2.0, Travel 2.0, Library 2.0, Learning 2.0, Broadcast 2.0, Camping 2.0 — it can be used as a label to describe how things change within a Web 2.0 environment with the web as a platform (O'Reilly 2005). boyd (2008) describes Web 2.0 as "Yet-another-buzzword … means different things to different people":

> For the technology crowd, Web 2.0 was about a shift in development and deployment. […] For the business crowd, Web2.0 can be understood as hope. […] For users, Web2.0 was all about reorganizing web-based practices around Friends.

In this essay, Web 2.0 is used as a periodization, to indicate the period after the dot-com bubble. Identity 2.0 is not about 'porting' an identity online[13] onto the social web, it is rather seen as a break from online identity pre-Web 2.0. This section deals with the main features of Identity 2.0 as formed by the entanglement of search engines with social media platforms. The main characteristics of Identity 2.0 can be summed up as follows: it is in a perpetual beta, networked, part of a participatory culture with user-generated content, distributed, indexed by search engines and persistent. The sub-sections discussing these characteristics will show the impact of the search engines on identity performance online on a cultural level (user behavior), political level (privacy and control) and phenomenological level (distributed social media landscapes).

3.1 Beta-identity

The two-point-o in identity 2.0 refers to to the current web era, Web 2.0, the social web[14] with its beta software and update fetish. In the perpetual beta "in which the product is developed in the open, with new features slipstreamed in on a monthly, weekly, or even daily basis" (O'Reilly 2005) new features are added which may add new fields to the profile page

---

13 The field of virtual ethnography looks at identity online as a continuation of the offline identity and Miller and Slater state "we need to treat internet media as continuous with and embedded in other social spaces." (2000: 5)

14 The World Wide Web has always been social in the sense that it linked people together but social web refers to the web as constructed by social software/social media: "In tech circles, social media has replaced the earlier fave 'social software.'" (boyd, 2009). Social media is not something new because "[…] some of the first applications were framed around communication and sharing. For decades, we've watched the development of new genres of social media — MUDs/MOOs, instant messaging, chatrooms, bulletin boards, etc." (boyd, 2009) However, what has significantly changed is role of the users and producers with the increasing popularity of social media since the rise of Friendster in 2003 and the dominance of search engines as our entry point to the web. (from unpublished PhD proposal)

that need to be filled out. It seems nearly impossible to complete your profile as the database always wants more information. “Your profile is 85% complete” is a common sight when logging into a web service. The database is hungry and never seems to be fed enough.

Google recently joined the profile hunger with the release of their new product titled Google Me (April 2009). Google Me is a personal profile page which may be returned in Google’s search engine results when people search for your name. It demands a certain amount of information of the user for the user to be eligible to be featured in the search results. If you do not provide enough information you will receive the following notification: “Your profile is not yet eligible to be featured in Google search results. To have your profile featured, add more information about yourself” (Google Profile 2009). Adding your name, website, location, personal pictures and a one line biography is simply not enough.

The threshold for the amount of information needed in order to be eligible is unknown and there is no indicator showing how much more information is needed. Google simply states that “Adding more information will help you improve your profile’s rank” (Google Profile 2009) — the more the better. Google’s PageRank algorithm for ranking websites has always been determined by a combination of various factors, including the number of inlinks (references) to a certain webpage. The ranking of your ‘official’ Google web profile is determined by the amount of information you supply which “offers [users] control over their search appearance only in as much as they are willing to give Google *more information about themselves*” (Kirkpatrick 2009). A sense of control is offered by giving away your personal information. This sense of control is important because search engines play a major role in identity construction online.

3.2 Networked identity

The web self is no longer present on one single website, such as the personal homepage, nor is it present on just one single social networking site:

> It is common for adults to have a profile on more than one site - on average each adult with a social networking page or profile has profiles on 1.6 sites, and 39% of adults have profiles on two or more sites (Ofcom 2008: 5).

Each social networking site serves a different purpose and has different user demographics. Social network migration is common because you are there, where your friends are. Many social applications allow integration into other platforms and applications through the embedding of content or distributing of content or activity through APIs[15]. For example, when I take a picture with my mobile phone and upload it to the web using the Mobypicture[16] service it automatically notifies Twitter that a new picture has been posted with a link to it. Mobypicture can be configured to cross-post the picture to other platforms, such as a blog, a social networking profile, or a Flickr account. User-generated content is dispersed across the network and there is a reconfiguration of the user. Although lifestreaming is all about user activity it is much less about the user than it is about the applications and platforms exchanging and distributing user data. When visualizing the network of data flows of social services, the lifestream is more service-centered than user-centered (see illustration 1).

The various types of services within the personal media landscape are shown in illustration 2. There is a clear grouping of services each of which focuses on a particular type of content. Google and Twitter are found in the center of the social media flower. Google acts as a centralizing force within the media landscape indexing most of the content, links or social media behavior generated within the services. Twitter is also located in the center because it acts as a central social node in this particular social media landscape. Illustration 1 maps the data flows between the services and shows how services communicate reciprocally using RSS, APIs and embed codes. It shows how certain nodes in the network act as hubs, for example, Twitter, WordPress and Google. These maps were constructed with two user name check services that allow to check for a particular user name across a large number of social media websites.[17] These services can be used to check for the availability of a user name on a

---

15 "API, or Application Programming Interface, is a code that allows other computer programs to access services offered by an application." (Manovich, 2008: 9)

16 Mobypicture is a service that allows you to directly share your pictures with all your friends on all popular social sites: Facebook, Twitter, Flickr, Blogger, Vimeo, and more! http://www.mobypicture.com.

17 Sources used:
KnowEm UserName Check - Thwart Social Media Identity Theft: http://knowem.com/
Namechk - Check Username Availability at Multiple Social Networking Sites: http://namechk.com/

particular website but they can also be used to check the presence of a user across the social media landscape.

3.3 User-generated identity

Identity is not only constructed or performed by the users themselves; some aspects are determined by others. In the case of social media, user-generated content plays an important role in the identity construction by others. As there are low barriers to publishing content, users and others can easily upload pictures, videos and text about the user. Many platforms also provide feedback possibilities such as commenting or tagging. On the photo sharing site Flickr users can leave comments, place notes and add tags to pictures. Privacy levels can be adjusted but the recommended default settings are such that your known Flickr contacts can add notes and tags while your Flickr users can only comment on pictures. Why is the question of tagging so poignant when thinking about identity in the era of user-generated content?

In 2008 Facebook users uploaded over 10 billion photos to the social networking site, arguably making it the largest photo-sharing site to date (McCarthy 2008) compared with Photobucket with 7.4 billion images (2009) and Flickr which hit the 2 billion images mark in 2007. Photobucket, which was the most popular photo-sharing service before Facebook, is now losing its popularity to Flickr and Google's Picasa. Facebook and Photobucket (tightly integrated into MySpace) mainly rely on traffic from social networking sites while Flickr (owned by Yahoo!) and Google mainly rely on traffic from search engines and e-mail (McCarthy 2008). If we consider the idea that identity construction online is largely performed by the engines then tagging is a key item. Tagging is a common description mechanism for user-generated content and tags are used for indexing content by search engines and are often used for retrieval. This may lead to user practices of consciously tagging oneself in pictures you look good in and refraining from tagging pictures you do not look good in, in order to prevent being associated with that particular image. There is a distinction between providing descriptions and tags for your own content and for other people's content. The latter is sometimes referred to as External Meta Data which is described by Loren Baker as "Users who bookmark sites tag them with keywords and descriptions which add an honest and unbiased definition which is created by the public and not the owner of the site" (2009). However, if the service is set to allow anyone to tag your content the idea of "an honest and unbiased definition" is quite naive. Tagging can also be used as a strategy to destroy a public image which was the case of a journalist who was tagged with "grey, useless, dirty, old, vain and weird haircut." Images tagged with drunken teenagers are also common on social networking sites. One can now buy t-shirts that state

"Don't Tag Me In This Photo" as a statement. Tagging is one of the most popular features of Facebook and was recently expanded to the status update. By adding an @-symbol (a common way to reference a user in Twitter) one is now able to tag friends in their status update: "As you type the name of what you would like to reference, a drop-down menu will appear that allows you to choose from your list of friends and other connections, including groups, events, applications and Pages." (Occhino 2009) Tagging users within Facebook is expanding beyond photos and videos, increasing the ways user-generated identity is constructed.

3.4 Distributed identity

Identity performance is distributed across the web and performed using various social media such as social networking sites, blog platforms and photo and video sharing sites. If your photos are stored with one service, your videos with another service and your bookmarks with yet another service, the idea of data and identity management becomes very important. There is a need for a centralizing force within the distributed network: a central identity hub. Several services try to aggregate and facilitate the exchange of our distributed online presence. They point to all the platforms and services where identity is performed by the user.[18]

3.5 Indexed identity

The web is faced with the contradiction of fleeting content versus indexed content in which nothing is forgotten and everything is remembered:

> The Web, resembling one vast, rapidly fluctuating archive is, unlike a traditional archive, being rebuilt every minute. Its sites can disappear within days, hours or seconds. Web content is revised and updated, often leaving no records of the previous alterations. Viewing the Web on the one hand as an archival medium and ephemeral medium on the other, the two notions seem to challenge each other (Weltevrede 2009: 47).

On the one hand, we deal with the ephemerality of content since identity construction through search engines is always based on the latest version of the search engine index. This requires continuous updating of the distributed identity. So if you change jobs, you should update your Twitter biography, LinkedIn profile, Facebook profile and about page on your blog. On the other hand, with the indexing fixation of the search engines and the increasing cooperation of services allowing their user data to be indexed, it becomes nearly impossible not to have traces of your identity performance indexed by search engines. We are actively constructing an identity for the search engines in order to have a sense of control over the

[18] An example of such a service is My Name is E.

outcome. Not only our user-generated content and profiles are indexed but also our actions within networks performed on social objects:

- silvertje has started 0 topics. silvertje has made 1 reply. ... silvertje replied on May 13, 2009 06:25 to the question "We want all ..."
- Anteek added a contact: Anne Helmond. MyBlogLog Action submitted by Anteek -
- Uploads from Anne Helmond, tagged... - http://www.flickr.com/photos/silvertje/tags/amsterdam/
- Qik | Anne Helmond | Untitled. Streamed by Anne Helmond. More at http://qik.com/silvertje.

The indexing fetish of the engines has expanded to status updates as well, adding new identity performance traces to its index which may become persistent.

3.6 Persistent identity

Due to the large number of engines indexing your digital traces and services exchanging and distributing your data through APIs, embed codes, and RSS feeds it is nearly impossible to remove your digital traces. Persistent identity transforms our relations with others:

> It is said that true friendships last forever, however, in the case of online social networking this sentiment gets a completely different meaning. The digital trails of an online friendship – true or not – really do last forever, since they are stored indefinitely on servers. Moreover, the documentation of friendships becomes easily accessible because of the digital, portable nature of the information (Albrechtslund 2008).

Because of the persistence of the search engine index data it is very likely that your profile will outlive you. What happens to your profile when you are gone? Etoy, Mediamatic and Pips:lab are three (art) institutions that have addressed this question by offering a service allowing you to preserve and control your data after you have passed away.

DieSpace is "the first interactive internet community for people who have passed away" (pips:lab) and it allows you to record a message for those you leave behind. *DieSpace* allows you to upload your soul to the conceptual social networking community for the dead. *Mission Eternity* is a similar art project by Etoy which allows people to create a digital self-containing capsule with their digital remains. *IkRip*, part of the Mediamatic series about death and self-representation on the internet, is an initiative addressing the question of what will happen with your online profiles and online data after you have passed away. It allows you to control what will happen with your online self after your offline self has passed away. This question is becoming increasingly relevant in an age in which one grows up online and in which it is difficult, if not impossible, not to leave any traces online before one passes away. *IkRip* was initiated to address the issue of a lack of a clear policy on most social

networking sites after the death of a user:

> Facebook is one of the social networking sites that has included a statement on death in their Terms of Use: 'When we are notified that a user has died, we will generally, but are not obligated to, keep the user's account active under a special memorialized status for a period of time determined by us to allow other users to post and view comments.' The Dutch dance-community Partyflock allows members to post condolences to the profile of deceased friends. Their profiles remain on a special section of the site, with a notification of their death. Livejournal has a similar group for deceased members, but it is created by a member, not by Livejournal itself (Baudoin, 2009).

While these Terms of Service are often unclear in the case of the death of a user, when a user wishes to leave a social networking site they suddenly become obviously clear. When a user decides to leave a service the content previously uploaded to the server will often not be deleted and will continue to exist in the search engines' index. The Web 2.0 Suicide Machine points to the persistence of your online presence:

> This machine lets you delete all your energy sucking social-networking profiles, kill your fake virtual friends, and completely do away with your Web2.0 alterego. [...] We are doing our best to expand possibilities of erasing your entire presence, however it is a work in progress. Please note, that we are not deleting your account! Our aim is rather to remove your private content and friend relationships than just deactivating/deleting the account! [...] We still hope that by removing your contact details and friend connections one-by-one, your data is being cached out from their backup servers. This can happen after days, weeks, months or even years. So merely deactivating the account is just not enough! (SuicideMachine.org)

The Web 2.0 Suicide Machine critically addresses the problems that arise with an identity that is always under construction, never finished, networked, user-generated, distributed and persistent.

4. Conclusion

Identity 2.0 describes how online identity is performed and shaped within the symbiotic relationship between users, search engines and social software platforms. It analyses how online identity is constructed by software-engine relations, and how identity formation is subject to software-engine politics.

Through an historical analysis of self-presentation platforms — the homepage, blog, social networking profile, the micro-blog and lifestream — I have concluded that there has been a significant shift from the 'centralized' identity of the homepage to the 'distributed' identity of the lifestream, which both aggregates data from multiple platforms and organizes the online life into a continuous data stream. In this era where identity is formed and shaped by cultural software, search engines have reconfigured identity into Identity 2.0 which is always under construction, never finished, networked, user-generated, distributed and persistent.

Illustrations

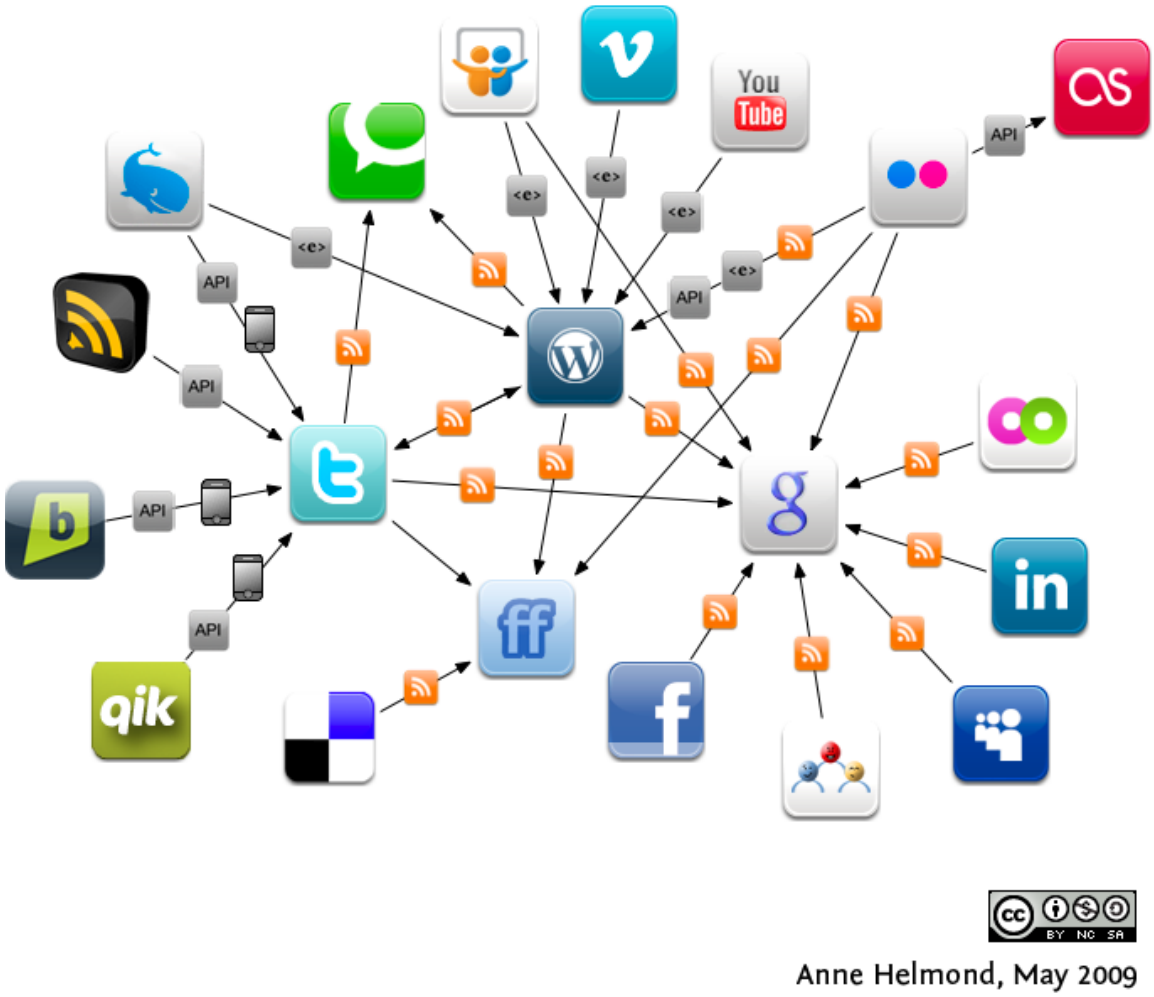

Illustration 1: Network of data flows of social services

Illustration 2: Various types of services within the personal media landscape

References

Albrechtslund, A., 2008. 'Online Social Networking as Participatory Surveillance', *First Monday, 13(3). A*vailable at: http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2142/1949 [Accessed March 18, 2008].

Anne Helmond - Google Profile. Google Profile. Available at: http://www.google.com/profiles/anne.helmond#about [Accessed April 24, 2009].

Baker, L., 2009. 'Microsoft Yahoo Meetings Signal Start of Intelligent Acquisition or Merger, Search Engine Journal. Available at: http://www.searchenginejournal.com/microsoft-yahoo-merger/9829/ [Accessed May 20, 2009].

Battelle, J., 2003. 'The Database of Intentions. John Battelle's Searchblog', Available at: http://battellemedia.com/archives/000063.php [Accessed June 3, 2009].

Baudoin, T., 'How to Deal with Death Online', Mediamatic. Available at: http://www.mediamatic.net/page/48756/en [Accessed May 22, 2009].

Baym, N., 2007. 'The Widgetized Self', Online Fandom. Available at: http://www.onlinefandom.com/archives/the-widgetized-self/ [Accessed May 23, 2009].

Blain, T., 'Lifestream vs. Socialstream: A Battle of Nomenclature', Lifestream Blog. Available at: http://lifestreamblog.com/lifestream-vs-socialstream-a-battle-of-nomenclature/ [Accessed May 25, 2009].

danah boyd and Nicole B. Ellison, 'Social Network Sites: Definition, History, and Scholarship' <http://jcmc.indiana.edu/vol13/issue1/boyd.ellison.html> [accessed 17 March 2008].

boyd, d. & Heer, J., 2006. 'Profiles as Conversation: Networked Identity Performance on Friendster', Available at: http://www.danah.org/papers/HICSS2006.pdf [Accessed May 3, 2009].

boyd, d. 2008. 'Understanding Socio-Technical Phenomena in a Web2.0 Era', MSR New England Lab Opening, Cambridge MA, September 22. Available at: http://www.danah.org/papers/talks/MSR-NE-2008.html [Accessed May 12, 2009].

Bucher, T. 'Technologies of immediacy: a critical investigation into the shaping effects of social software functionalities', presented at the 10th annual conference of the Association of Internet Researchers, Milwaukee, USA, 2009.

Butler, J., 1990. *Gender trouble*, New York: Routledge.

Chin, Meredith. 'History of the status update', 10 January 2010. E-mail correspondence with Facebook Corporate Communications employee.

Chandler, D., 1998. 'Personal Home Pages and the Construction of Identities on the Web', Available at: http://www.aber.ac.uk/media/Documents/short/webident.html [Accessed April 12, 2009].

Cheng, J., 2007. 'Google search by employer not illegal, say judges', *Ars Technica*. Available at: http://arstechnica.com/tech-policy/news/2007/05/google-search-by-employer-not-illegal-say-judges.ars [Accessed May 31, 2009].

Consalvo, M. & Paasonen, S., 2002. *Women & Everyday Uses of the Internet: Agency & Identity*, New York: Peter Lang Publishing.

Delaney, K.J., 2007. 'You're a Nobody Unless Your Name Googles Well', *Wall Street Journal*. Available at: http://online.wsj.com/article/SB117856222924394753.html [Accessed May 9, 2009].

Deiters, E., 2009. 'Ontgoogle jezelf', DePers.nl. Available at: http://www.depers.nl/economie/304337/Ontgoogle-jezelf.html [Accessed May 29, 2009].

Digital Methods Initiative, 2008. 'Space for People: Suggested Fields', Available at: http://wiki.digitalmethods.net/Dmi/SpaceForPeople [Accessed April 11, 2009].

Dodge, D., 2007. 'Search engines are the Start page for the Internet', Don Dodge on The Next Big Thing. Available at: http://dondodge.typepad.com/the_next_big_thing/2007/12/search-engines.html [Accessed April 25, 2009].

Facebook features. Wikipedia, the free encyclopedia. Available at: http://en.wikipedia.org/wiki/Facebook_features#Wall [Accessed May 31, 2009].

Galloway, A. 'What Can a Network Do?' presented at A Topological Approach to Cultural Dynamics. Barcelona, Spain, 2009.

Google, 2009. 'Google Flu Trends | How does this work?' Available at: http://www.google.org/about/flutrends/how.html [Accessed June 3, 2009].

Helmond, A., 2007. 'The Perceived Freshness Fetish', Unpublished manuscript. University of Amsterdam, 2007. Available at: http://www.annehelmond.nl/2007/06/22/essay-the-perceived-freshness-fetish/ [Accessed May 3, 2009].

Helmond, A., 2008. 'Blogging for Engines. Blogs under the Influence of Software-Engine Relations', MA thesis, University of Amsterdam. Available at: http://www.annehelmond.nl/2008/09/23/blogging-for-engines-blogs-under-the-influence-of-software-engine-relations/ [Accessed April 19, 2009].

Identity. Merriam-Webster Online Dictionary. Available at: http://www.merriam-webster.com/dictionary/identity [Accessed April 11, 2009].

Krums, J., 2009. 'http://twitpic.com/135xa - There's a plane in the Hudson', Available at: http://twitter.com/jkrums/status/1121915133 [Accessed April 26, 2009].

Kirkpatrick, M., 2009. 'Now You Can Change What Google Says About You', ReadWriteWeb. Available at: http://www.readwriteweb.com/archives/now_you_can_change_what_google_says_about_you.php [Accessed April 24, 2009].

Kricfalusi, E., 2009. 'Tech for Luddites: Using the New Facebook Home Page Pt. 1', Tech for Luddites. Available at: http://www.techforluddites.com/2009/03/using-the-new-facebook-home-page-pt-1.html [Accessed May 3, 2009].

Lovink, G., 2008. 'The society of the query and the Googlization of our lives. A tribute to Joseph Weizenbaum', *Eurozine*. Available at: http://www.eurozine.com/articles/2008-09-05-lovink-en.html [Accessed April 17, 2009].

Lev Manovich, *Software Takes Command*. Unpublished book. Available at: http://lab.softwarestudies.com/2008/11/softbook.html [accessed 12 January 2010].

McCarthy, C., 2008. "Facebook hosts 10 billion photos". The Social - CNET News. Available at: http://news.cnet.com/8301-13577_3-10066650-36.html [Accessed May 20, 2009].

Mejias, U. 2007. *Networked Proximity: ICTs and the Mediation of Nearness*. Unpublished dissertation, Teachers College, Columbia University, New York, NY.

Miller, D. & Slater, D., 2000. *The Internet: An Ethnographic Approach*. Oxford: Berg Publishers.

Miller, C.C., 2009. "Putting Twitter's World to Use". *The New York Times*. Available at: http://www.nytimes.com/2009/04/14/technology/internet/14twitter.html?_r=1 [Accessed April 21, 2009].

Ofcom, 2008. 'Social Networking. A quantitative and qualitative research report into attitudes, behaviours and use', Available at: http://www.ofcom.org.uk/advice/media_literacy/medlitpub/medlitpubrss/socialnetworking/ [Accessed April 13, 2009].

O'Reilly, T., 2005. 'What Is Web 2.0', *O'Reilly Media*. Available at: http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html?page=4 [Accessed April 12, 2009].

pips:lab, 2008. 'Diespace'. Available at: http://www.diespace.nl/ [Accessed May 22, 2009].

Poster, M., 1990. *The Mode of Information*. Chicago: University of Chicago Press.

Rogers, R. 2008. 'The Politics of Web Space', Unpublished manuscript. Available at: <http://govcom.org/publications/full_list/rogers_politics_web_space_2008_pre.pdf> [Accessed May 12, 2009].

Rose, F., 2007. 'The Life Cycle of a Blog Post, From Servers to Spiders to Suits -- to You', *Wired Magazine*, (16.02). Available at: http://www.wired.com/special_multimedia/2008/ff_secretlife_1602 [Accessed May 28, 2009].

Sarno, D. 'Twitter creator Jack Dorsey illuminates the site's founding document. Part I.', *Los Angeles Times*, 18 February 2009, section Technology <http://latimesblogs.latimes.com/technology/2009/02/twitter-creator.html> [accessed 13 January 2010].

Search Engine Reputation Management. Wikipedia, the free encyclopedia. Available at: http://en.wikipedia.org/wiki/Search_engine_reputation_management [Accessed May 11, 2009].

Storytlr, storytlr | your life online. Available at: http://storytlr.com/ [Accessed May 13, 2009].

TwitterAnalyzer / Twitter Analytic stats for silvertje. Available at: http://twitteranalyzer.com/mainStatistics.aspx?userId=silvertje&mt=u&tt=d# [Accessed April 8, 2009].

van Dijck, J. (2009). 'Users like you? Theorizing agency in user-generated content'. *Media Culture Society* 31(1):41-58.

Van Grove, J. 'A Brief History of the Status Message', *Mashable. The Social Media Guide.*, 8 April 2009. Available at: http://mashable.com/2009/04/08/status-update-history/ [accessed 12 January 2010].

Walker Rettberg, J., 2009. 'Witing with a little help from your friends', jill/txt. Available at: http://jilltxt.net/?p=2393 [Accessed May 26, 2009].

Weltevrede, E., 2009. Thinking Nationally with the Web. A Medium-specific Approach to the National Turn in Web Archiving. MA thesis. University of Amsterdam.

Wikipedia. http://en.wikipedia.org/wiki/Permalink [Accessed January 13, 2009].

Will (law). Wikipedia, the free encyclopedia. Available at: http://en.wikipedia.org/wiki/Will_ (law) [Accessed May 14, 2009].