Lifetracing

ABSTRACT: This chapter 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 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.

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It aims to contribute to the emerging field of Software Studies which addresses the role that software plays in our society. She recently participated in SoftWhere 2008, the Software Studies Workshop led by Noah Wardrip-Fruin and Lev Manovich at the University of San Diego and gave a lecture on software-engine relations at the HASTACII conference at UC Irvine. Anne continues her research on software-engine relations with the Digital Methods Initiative at the University of Amsterdam.

From 1999 – 2003 Anne studied at the Utrecht School of Arts where she received a Bachelor degree in Interaction Design and a Master degree in Interactive Multimedia. As a freelance photographer she works for VPRO 3VOOR12, the Institute of Network Cultures and covered various new media conferences such as New Cultural Networks, the Next Web and PICNIC. Her personal and professional pictures are located at Flickr.

Besides blogging on her personal blog about new media and software issues she previously blogged for the Blog Herald and still occasionally writes for the Masters of Media blog and the Next Web blog.

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Lifetracing 1. Platforms for Presenting the Self Online

Preface

What is a networked book and what does it mean to write and publish a networked book?

Isn't everything published online automatically networked through the fetishized indexes of engines that shape the web? A networked book is not a self-referential object as it alludes to and embeds objects from the network it is part of, in this case the web. This chapter includes quotes from and references to webpages, blog posts, and pictures originally uploaded to the photo sharing site Flickr. While this text is written in the OpenOffice word processing software, the natural habitat of the networked book seems to be the blog. Blogs show the tension between the individual and the network which is duplicated in the notion of authorship. In contrast to wiki collaborators, blog contributors cannot edit the text itself but can add content to the entry by leaving comments. Once the entire book has been published online the open character of the networked book may thrive on the network. The blog software automatically notifies the network of updates and links and the Trackback and Pingback mechanisms notify other blogs of incoming links. The blog as an environment for the networked book appears to be more embedded in the network than the wiki because of the notification of links, updates and the possible use of (third-party) widgets which continue the online flow of the network.

This chapter has emerged from my fascination with web phenomena from a software studies perspective. It consists of research done over the past year and it was greatly inspired by *Walled Garden - Communities & Networks post Web 2.0*, organized by Virtueel Platform; the Govcom.org project *Spaces for People: Suggested Fields* workshop with the Digital Methods Initiative held at the Netherlands Media Art Institute, Montevideo/Time-based Arts and Archive 2020, an international event on the archiving of born digital cultural content organized by Virtueel Platform.

Introduction

In the canonical new media work "The Language of New Media," Lev Manovich calls for a new field of study that moves away from media theory to software theory (2001: 48). It acknowledges how media have become programmable and how they are increasingly formed and shaped by software. The emerging field of Software Studies has been officially established with the publication of the Software Studies lexicon, edited by Matthew Fuller (2008), the first in a series of MIT publications on software studies. The field itself is very diverse, with contributions from authors in the field of Writing and Humanistic Studies, Communication, Visual Arts, Computer Science and Humanities. The issues these authors address are diverse but they all have in common their focus on the major role of software in our society. Software is shaping our society. Software has become ubiquitous and opaque at the same time which is why it should be properly critiqued.

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)

This chapter centers on cultural software that is visibly and invisibly shaping our social lives online: social software and search engines. They carry the atoms of our culture and create new molecules by binding certain atoms together: "Software, of course, is what organizes the Internet […] Software is the invisible glue that ties it all together" (Manovich 2008: 3-4). Software itself is also 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 chapter 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; next, by looking into the advent of the search engines and finally, by looking into the internal drive of the social media user to record the self online. 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.

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 and the lifestream. It is not a teleological account in which one replaces the other. On the contrary, all four 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/'96 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 the 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 [1] 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)

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.

Illustration 1: Blog sidebars with widgets.

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 [2]. 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 normally end up at your own profile page but at your homepage 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 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. Aggregating the real-time flow of your own activity stream lies at the root of the fairly new phenomenon of lifestreaming.

1.4 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 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.
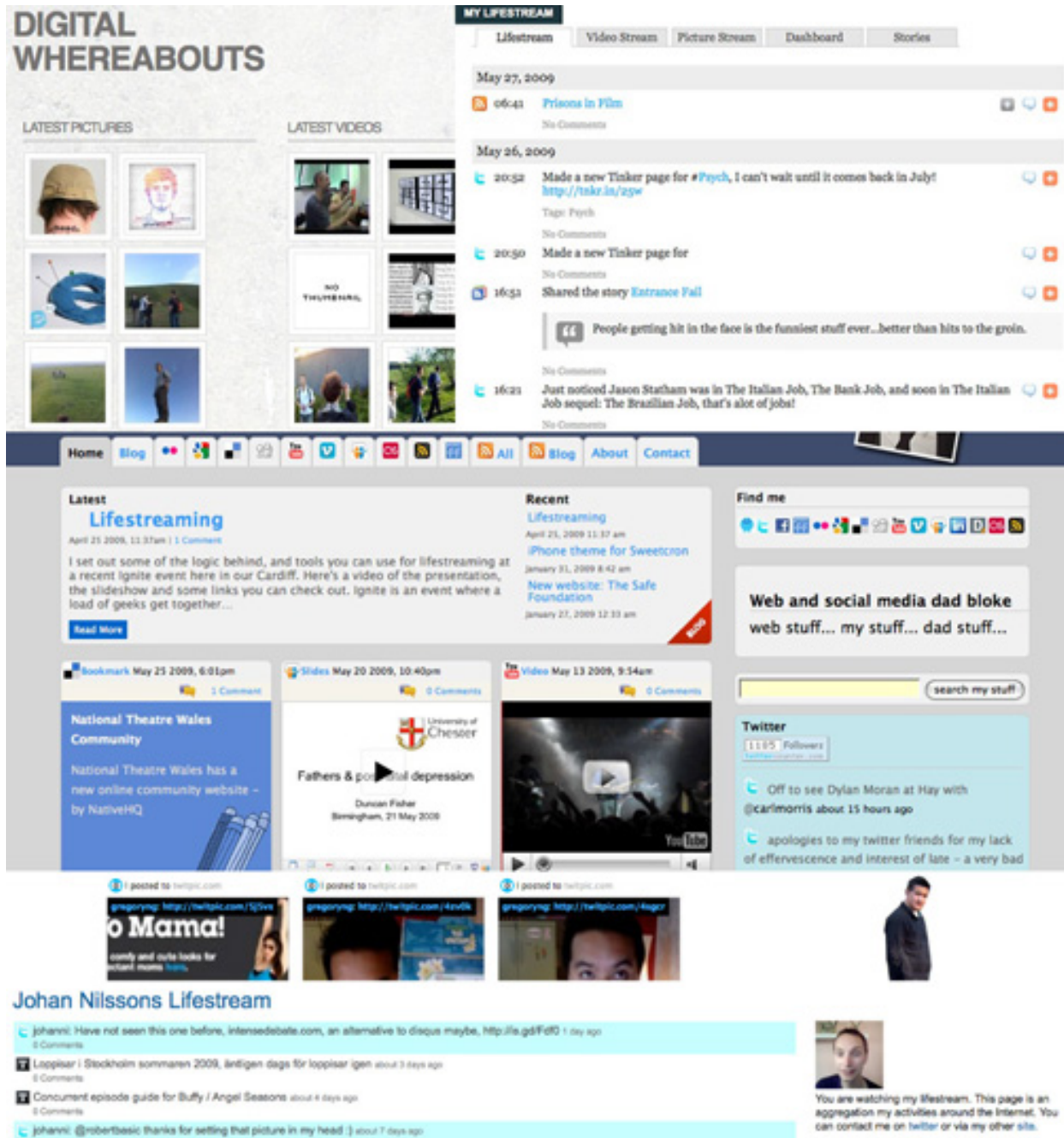
Illustration 2: Various lifestreaming personal webpages

Footnotes

[1] 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)

[2] "Already 8761300 members since Oct 1st 2004!" As shown on the frontpage of Hyves.nl on May 26, 2009.

Lifetracing 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.

Illustration 3: Google Me Business Card by Ji Lee

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 [3] 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 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 [4]. When you now search for Nina Brink on Google the second result reads "Nina Brink is also a loving mother" (see illustration 4). This seemingly odd result raises the suspicion of SERM tactics being used to influence the results.

Illustration 4: Nina Brink Google results.
Result nr. 2: "Nina Brink is ook een liefdevolle moeder" means "Nina Brink is also a loving mother"

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. This will be further addressed in paragraph 4.1.

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 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*. However, social networking sites are increasingly working together with search engines to allow the indexing of their members' profiles.[5]

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.

The social web has seen the advent of a new type of search engine focusing on people search. *Wink*, *yoName*, *Spock* and *Pipl* are search engines specialized in finding people. By entering a name, username or e-mail address it not only searches the web but also the social networking sites and online communities like *MySpace*, *LinkedIn*, *Friendster*, *Digg*, *YouTube*, etc. Your digital traces online have now become increasingly indexed by search engines.

The following section will describe how these digital traces are produced by the conscious and unconscious recording of our daily lives and how software has given rise to the phenomenon of lifelogging and the related self-surveillance and statistics envy.

Illustration 5: Customizing Google/Hyves results.

Footnotes

[3] 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)

[4] 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).

[5] 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 privacysensitive 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.

Lifetracing 3. Recording Frenzy and Monitoring

As described by Nicholas Carr (2009) in "The self-recording craze is nothing new -- but now we do it digitally", the major shift in the recording of our lives has been from important events to mundane things due to "the proliferation of mobile phones, digital cameras, personal websites, blogs and podcasts". Software enables and facilitates the logging of our daily lives -- lifelogging -- with its potential ability to capture, store, search and retrieve. Kevin Kelly describes the goal of lifelogging as the desire "to record and archive all information in one's life. This includes all text, all visual information, all audio, all media activity, as well as all biological data from sensors on one's body. The information would be archived for the benefit of the lifelogger, and shared with others in various degrees as controlled by him/her." (Kelly 2007)

In 2004 Nokia launched its Lifeblog software and service which creates "a multimedia diary of your life through images, messages, and videos you collect with your phone" (Nokia 2009). You can post your images and messages to your blog or to a photo account such as Flickr. [6]

Illustration 6: Nokia lifelogging software automatically tracks and stores all your text messages, photos, audio, etc. on your phone and displays it in a timeline.

The popularity of recording the 'mundane' things of our daily lives may be seen in the microblogging and social networking service *Twitter* that asks us the question: What are you doing? Besides the mundane answer of "having lunch", it is also used to record the extraordinary events in our lives:

http://twitpic.com/135xa -- There's a plane in the Hudson. I'm on the ferry going to pick up the people. Crazy. 9:36 PM Jan 15th from TwitPic. (Krums, 2009)

With the proliferation of mobile devices equipped with cameras and the advent of cheap flat-fee Internet subscriptions, lifelogging seems to be on the rise. We upload content and context (for example GPS data and timestamps) to the web which is networked by nature because of the indexing machines called search engines. We are not only feeding our content platforms with our own content; we are also feeding the search engines with user data. This data is used for datamining and therefore "[...] it is crucial to understand the new role of the users as both content providers and data providers" (van Dijck, 2009: 47). John Battelle describes Google's index filled with user data as a "database of intentions" which is:

The aggregate results of every search ever entered, every result list ever tendered, and every path taken as a result. It lives in many places, but three or four places in particular hold a massive amount of this data (i.e., MSN, Google, and Yahoo). This information represents, in aggregate form, a place holder for the intentions of humankind -- a massive database of desires, needs, wants, and likes that can be discovered, subpoenaed, archived, tracked, and exploited to all sorts of ends. Such a beast has never before existed in the history of culture, but is almost guaranteed to grow exponentially from this day forward. This artifact can tell us extraordinary things about who we are and what we want as a culture. And it has the potential to be abused in equally extraordinary fashion. (Battelle 2003)

Google Flu Trends "uses aggregated Google search data to estimate current flu activity around the world in near real-time" (Google) and is a famous example of the database of intentions in action. Another example is *We Feel Fine* by Jonathan Harris and Sep Kamvar who datamined the blogosphere for feelings. In a subsequent project, *I Want You to Want Me*, they used data from public dating profiles, visualized this data and described it as a mosaic of humanity. Instead of using this data for health issues or for artistic purposes it may also be used for monitoring or surveillance.

3.1 Self-Surveillance

The changing notion of the user as content provider and data provider also implies a change in thinking about consumer surveillance:

Discussing the role of the consumer, Siva notes another Google illusion -- that of the free service. We pay for Google with our data -- our searching habits, our surfing habits -- and this fuels Google's cash cow, personalized advertising. Siva calls for a renewed approach to understanding this kind of consumer surveillance, one that pushes aside the tired model of the panopticon (which Foucault analyzed in Discipline and Punish). He cites some of the ways surveillance has changed: it is private rather than state-run, and we don't know how much they know. Most of all, we're encouraged to transgress -- to enjoy! as Zizek would say -- rather than forced to reform as in Bentham's model. That is, on the Web we need to show our true selves. (Stevenson, 2007)

While we pay for *Google* with our data, we also have increasing access to our own data. We show our true self on the web by exposing detailed information about ourselves. A *Twitter* related service that allows you to track and expose detailed information about yourself is *your.flowingdata* (YFD) which "lets you record personal data with *Twitter* to both increase awareness and improve yourself. For example -- your weight and eating habits" (YFD 2009). As a *Twitter* based software tool that focuses on the registration of the self it is part of a new software genre of self-surveillance.

Illustration 7: your.flowingdata: Collect Data About Yourself via Twitter © flowingdata.com

Self-surveillance can be seen as a form of "sousveillance", a term coined by Steve Mann as a potential counter term for surveillance. Surveillance is the act of watching performed from above by organizational structures, whereas sousveillance is the act of watching from below by individuals. Sousveillance consists of:

hierarchical sousveillance, e.g. citizens photographing police, shoppers photographing shopkeepers, and taxi-cab passengers photographing cab drivers, as well as personal sousveillance (bringing cameras from the lamp posts and ceilings, down to eye-level, for human-centered recording of personal experience). (Mann 2004: 620)

We could consider self-surveillance as a subcategory of sousveillance in which the object being watched is not the other but the self:

Self-surveillance is usually understood as the attention one pays to one's behavior when facing the actuality or virtuality of an immediate or mediated observation by others whose opinion one deems relevant -- usually, observers of the same or superior social position. But we propose to open the concept to include individuals' attention to their actions and thoughts when constituting themselves as subjects of their conduct.

The enlargement of the concept of self-surveillance implies associating it with practices of the care of the self. These practices require the stipulation of the part of the individuals that must be cared for and worked upon, a movement which corresponds to the production of an ethical substance. (Foucault, 1985 cited in: Vaz & Bruno: 273)

This relationship with the "care of the self" is clearly seen in YFD which focuses on sleeping, weight and eating habits. Through self-surveillance in the form of collecting data about the self and exposing this data, "people are liberated from shame and the 'need' to hide, which leads to something called 'empowering exhibitionism'" (Koskela 2004: 1999). A web phenomenon related to this exhibitionistic empowerment is showing off your statistics on social media platforms.

3.2 Statistics Envy

A common trend on the social web is the showing off of statistics of how many people have read your blog, how many friends you have on *Facebook* and how many people have favored your pictures on *Flickr*. This type of user data was previously only accessible for the platforms carrying the content and user data for internal reference only. If you wished to know which kind of browser had been used to visit your website you had to pay for a statistics provider. Nowadays, services and engines gathering and harnessing all types of user data and behavior are

increasingly opening up; especially the APIs, which leads users to develop new programs on top of the existing services.
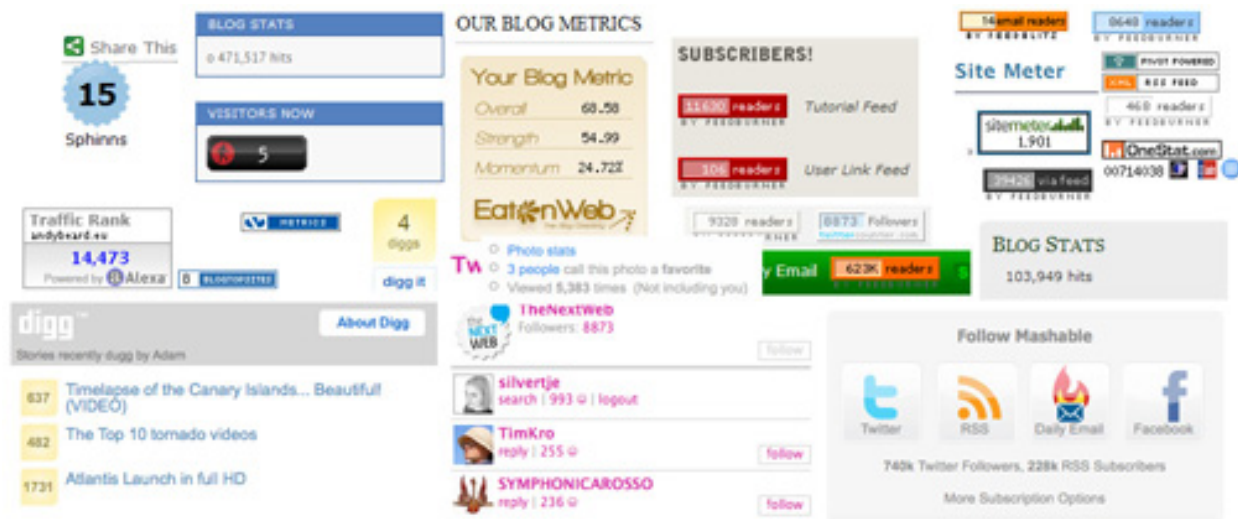

Illustration 8: Showing off statistics

The increasing availability of statistics/numbers about the self is leading to a vanity or statistics envy trend on the social web. *TwitterCounter*, "The Ultimate Twitter Statistics Provider", is a service allowing you to track the growth in your *Twitter* followers and provides you with a badge for your blog or website to display your current number of followers in order to attract even more followers. It also shows your rank within the global top 100 most followed *Twitter* users or the local top 100. Another *Twitter* related service, the *Twitter Analyzer*, allows you to analyze your *Twitter* friends and provides sensitive information such as your "Most Loyal Friends (ReTweeting)," "Closest Friends," and "Disregarded Friends."

Statistics are used to measure or compare one's self but are also used by engines for ranking content. Just like the Google PageRank algorithm that ranks webpages according to the number of inlinks a webpage receives, Twitter users can be ranked by the number of followers a user has and Twitter content can be ranked by the number of retweets a tweet has received. Popularity is measured by the amount of attention shown in the number of *Diggs*, followers, subscribers, visitors, stars, positive reviews, times an item has been shared or favored, etc. The public display of these numbers is typical of Web 2.0 behavior and reveals the entanglement of positioning oneself online through the use of social media platforms, search engines and user behavior. A new type of online identity is formed in this assemblage of platform, engine and user: Identity 2.0.

Footnotes

[6] Nokia Lifeblog now seems defunct as nokia.com/lifeblog redirects to nokia.com/photos an application for managing your photos. This may have to do with the proliferation of applications being able to post images and messages to the web. The Internet Archive has archived Nokia's Lifeblog page from March 18, 2004 – October 27, 2007 at http://web.archive.org/web/*/http://www.nokia.com/lifeblog.

Lifetracing 4. 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, Web 2.0 can be understood as hope. [...] For users, Web 2.0 was all about reorganizing web-based practices around Friends.

In this chapter, 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 [7] 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).

4.1 Beta-Identity

The two-point-o in identity 2.0 refers to to the current web era, Web 2.0, the social web [8] 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 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.

Illustration 10: Incomplete profiles.

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 (see illustration 11).
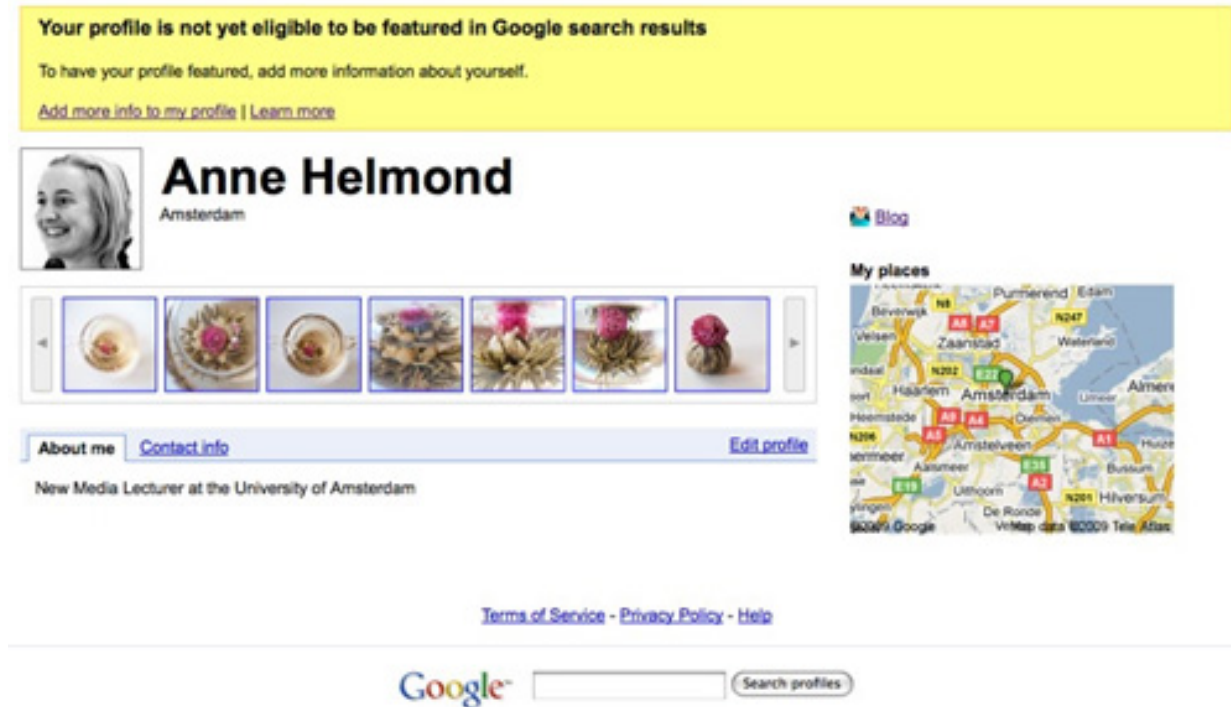
Illustration 11: Ineligible Google Me profile.

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.

4.2 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 [9]. For example, when I take a picture with my mobile phone and upload it to the web using the *Mobypicture* [10] 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 12).
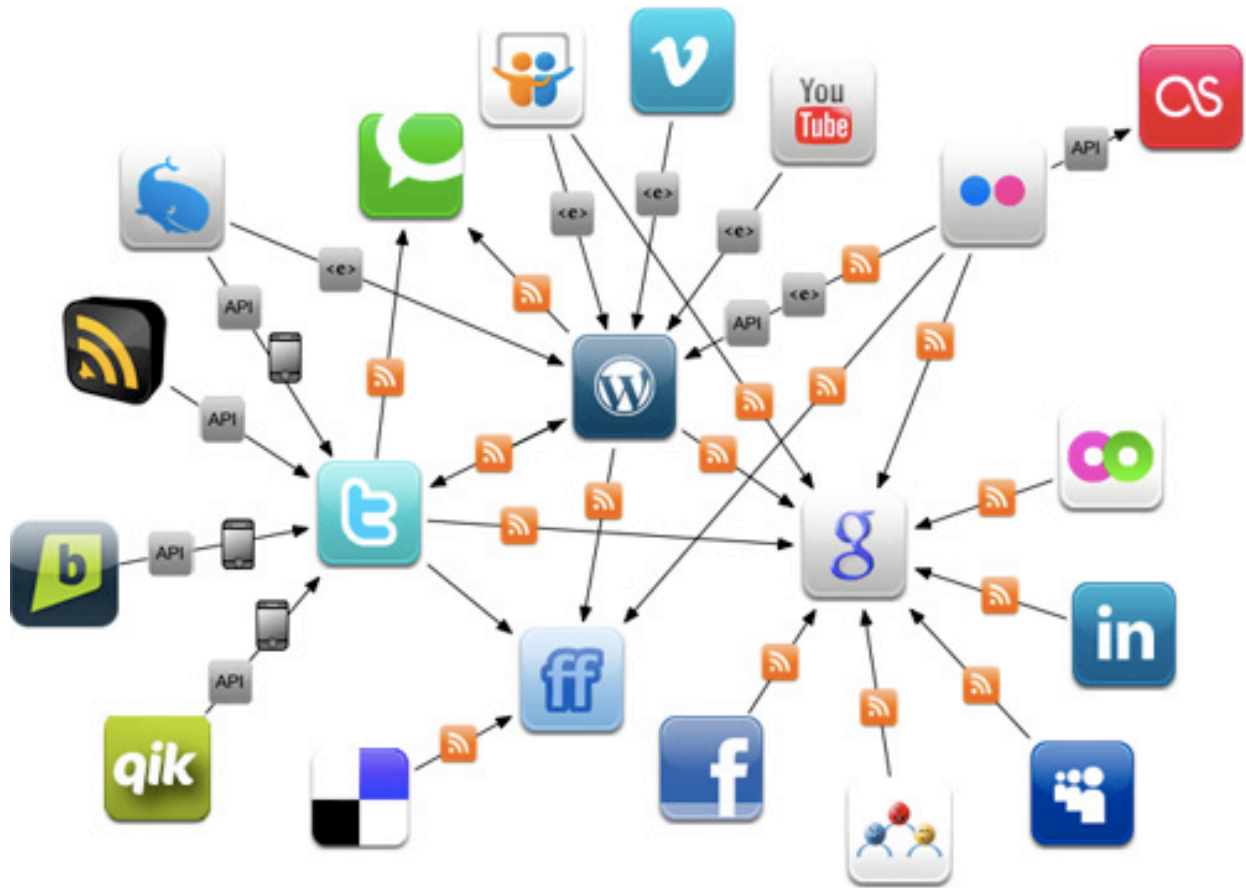
Illustration 12: Personal social media landscape. Social media map from user Anne Helmond. May 2009.

See **Illustration 18** on the *Conclusion* page for key to symbols.

The various types of services within the personal media landscape are shown in illustration 13. 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 13 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 you to check for a particular user name across a large number of social media websites.[11] These services can be used to check for the availability of a user name on a particular website but they can also be used to check the presence of a user across the social media landscape.

Illustration 13: Data flows within personal social media landscape.

4.3 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."

4.4 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. An example of such a service is My Name is E.
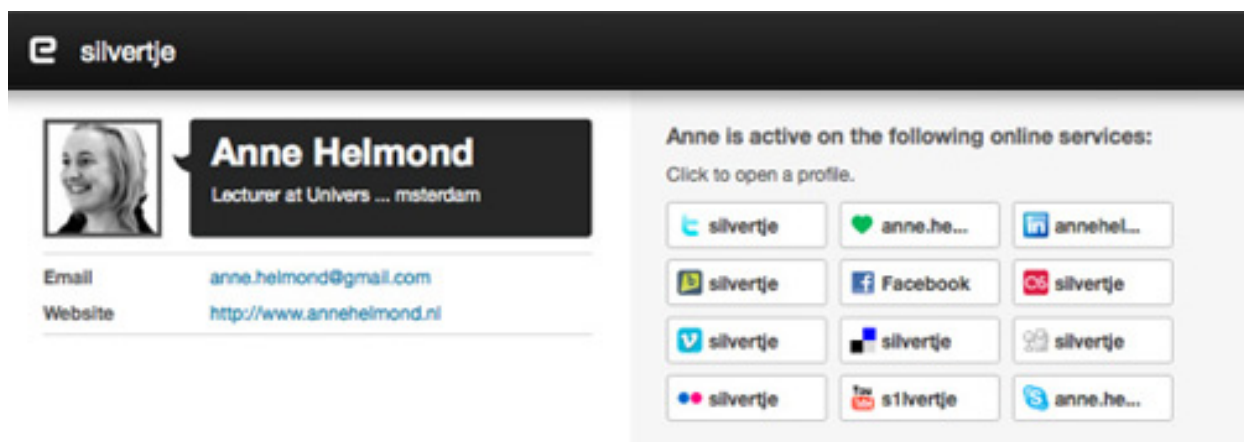

Illustration 14: My Name is E.

4.5 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 record 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 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 social actions as well, adding new identity performance traces to its index which may become persistent.

4.6 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.

4.6.1 DieSpace

DieSpace is an interactive, multimedia, theatre performance by pips:lab which addresses the question of "online" life after "offline" death. Visitors can create their profiles during the show using the *pips:lab Lumasol* light writing technique to fill the *DieSpace* database with information. *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.
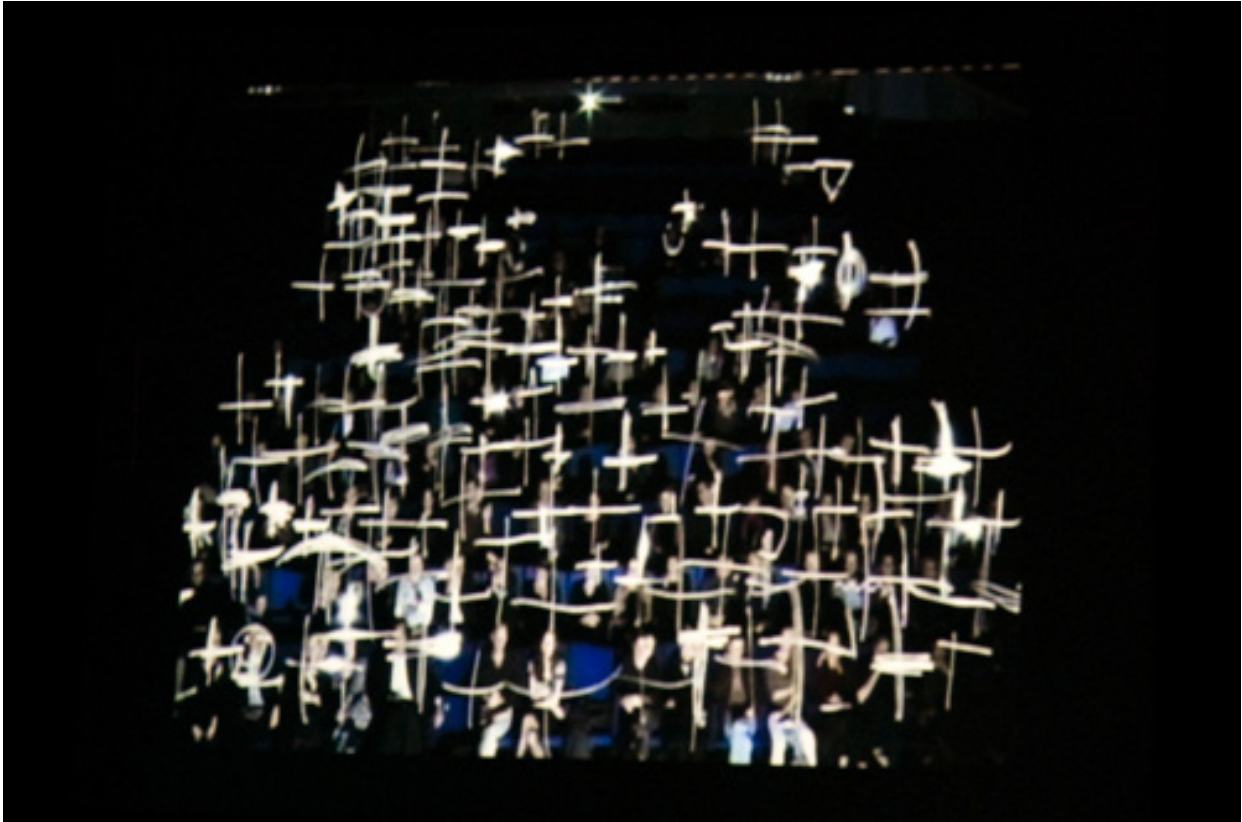
Illustration 15: Visitors write their answers to the DieSpace profile questions using the Lumasol technique.

4.6.2 Mission Eternity

Mission Eternity is a similar art project by Etoy. It allows people to create a digital self-containing capsule with their digital remains. Each capsule has a unique 16 character alphanumeric code to identify each pilot and the deceased's data, and can be used to search for traces in search engines. *Mission Eternity* is about memory in an era in which people are paranoid about losing data. Etoy aims to host the capsules eternally and is developing open source software allowing the capsules to rebuild themselves because code and software also have an expiration date.

Illustration 16: The remains of Mission Eternity pilot Timothy Leary, shown at a Etoy lecture.

4.6.3 IkRip

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)

IkRip allows you to create your own license after answering a series of questions about what should happen to your profiles and data online (see illustration 17). This may be seen as the online equivalent of a will or testament, "a legal document declaring a person's wishes regarding the disposal of their property when they die" (WordNet). Personal property in the form of images, videos, music, text is also located and stored online. These properties are often hosted with third parties that do not have clear policies about user content after the user has passed away.

IkRIP of Tanja Baudoin

Who shall we contact to verify your death?
Michel Langendijk @

What will happen to your profile?
I want a friend to manage my profile.

Who would you like to manage your content?
A friend from my List of Contacts will manage this

How do you want your profile to express your departing?
Show the date of my birth and death after I have departed

Do you want a personal message on your profile?

What will happen to the text on your profile?
Keep current text

What about the pictures on your profile?
Keep all pictures

Add the pictures for on your profile after your death

Day of the Dead

Who can express their condolences?
Everyone in my List of Contacts

Do you want to remain visible in others' List of Contacts?
Yes, but I leave this decision up to my contacts

Illustration 17: IkRIP profile page

Footnotes

[7] 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)

[8] 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)

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

[10] 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.

[11] 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.

Lifetracing 5. Conclusion & References

Conclusion

The Traces of a Networked Life has made an analysis of online identity 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, 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. I have called this Identity 2.0 -- an identity always under construction, never finished, networked, user-generated, distributed and persistent.

Acknowledgments

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Illustration 1: Blog sidebars with widgets. Compilation from various blogs.
Illustration 2: Various lifestreaming personal webpages.
Illustration 3: Google Me Business Card by Ji Lee. Available at: http://pleaseenjoy.com/project.php?cat=4&subcat=&pid=112 [Accessed May 25, 2009].
Illustration 4: Nina Brink Google results. Search query for "Nina Brink" on Google.nl Nr 2. "Nina Brink is ook een liefdevolle moeder" (Dutch) translates to "Nina Brink is also a loving mother." Available at: http://www.google.nl/search?hl=nl&client=firefoxa&rls=org.mozilla%3Aen-US%3Aofficial&hs=M9d&q=%22nina+brink%22&btnG=Zoeken&meta= [Accessed May 29, 2009].
Illustration 5: Customizing Google/Hyves results.
Illustration 6: Nokia lifelogging software automatically tracks and stores all your text messages, photos, audio etc on your on your phone and displays it in a timeline.
Illustration 7: your.flowingdata: Collect Data About Yourself via Twitter © flowingdata.com.V Available at: http://flowingdata.com/2009/03/10/yourflowingdata-collect-data-aboutyourself-via-twitter/ [Accessed May 25, 2009].
Illustration 8: Showing off statistics. Compilation from various social media websites.
Illustration 9: Publicity Plant website by Sander Veenhof. http://sndrv.nl/publicityplant/ [Accessed April 21, 2009].
Illustration 10: Incomplete profiles on various social media websites, including LinkedIn, BlipFM and SlideShare.
Illustration 11: Ineligible Google Me profile - Anne Helmond - Google Profile. Google Profile. Available at: http://www.google.com/profiles/anne.helmond#about [Accessed April 24, 2009].
Illustration 12: Personal social media landscape. Social media map from user Anne Helmond. May 2009. Available at: http://www.flickr.com/photos/silvertje/3582813518/ [Accessed May 31, 2009].
Illustration 13: Data flows within personal social media landscape. May 2009. Available at: http://www.flickr.com/photos/silvertje/3582297307/ [Accessed May 31, 2009].
Illustration 14: My Name is E. Available at: http://www.mynameise.com/ [Accessed April 27,2009].
Illustration 15: Visitors write their answers to the DieSpace profile questions using the Lumasol technique at the New Cultural Networks - You Google My Second Space conference, Amsterdam, November 2, 2007.
Illustration 16: The remains of Mission Eternity pilot Timothy Leary, shown at the Etoy lecture at Mediamatic, Amsterdam, March 12, 2009. This container (with the 16 digits code) will be placed in the Mission Eternity

sarcophagus.
Illustration 17: IkRIP profile page. Available at: http://www.ikrip.nl/ [Accessed April 17, 2009].

Key to symbols

	Blip.fm		MySpace
	Brightkite		Slideshare
	Delicious		StumbleUpon
	Digg		Technorati
	Facebook		Twitter
	Flickr		Vimeo
	FriendFeed		Wakoopa
	Google		WordPress (Blog: www.annehelmond.nl)
	Hyves		YouTube
	LastFM		
	LinkedIn		
	Mobypicture		