Hit, Link, Like and Share.

Organizing the social and the fabric of the web in a Like economy.

Carolin Gerlitz (Goldsmiths, University of London) and Anne Helmond (University of Amsterdam)

Paper presented at the DMI mini-conference, 24-25 January 2011 at the University of Amsterdam.

Introduction

Different types of social buttons[1] have diffused across blogs, news websites, social media platforms and other types of websites. These buttons allow users to share, bookmark or recommend the webpage or blogpost across different platforms such as Facebook, Twitter, Digg, Reddit, Delicious, Stumbleupon, etc. The buttons often show a counter of how many times the page/post has been shared or recommended: x likes, x shares, x tweets. These likes, shares and tweets may be approached from a new media studies perspective as new types of hyperlinks and from an economic sociology perspective open up questions about the increasing interrelation between the social, technicity and value online. Within new media studies the hyperlink has previously been studied as a form of currency of the web establishing an economy of links (Walker 2002 & Jarvis 2009) and as an indicator of a discursive relationship (Rogers 2002).

The economy of links describes the link as a currency of the informational web in which search engines use hyperlinks to look at the relations between websites in order to establish a ranking. The term informational web is often used to describe the world wide web as a publication medium for publishing content (Ross 2009) and is characterized by the linking of information (Wesh 2007).[2] In this web search engines act as main actors to be able to navigate through all the information by recommending pages based on authority measures.

According to social networking site Facebook "the informational Web is being eclipsed by the social Web" (Claburn 2009). In contrast to the informational web where search engines focus on links between websites, the social web "is a set of relationships that link together people over the Web" and "the applications and innovations that can be built on top of these relationships" (Halpin & Tuffield 2010) and is characterized

1 The term social buttons is used here to include: social bookmarking buttons, voting buttons from social news sites/content aggregation sites, sharing buttons and like buttons. This definition based on social activities on platforms excludes sharing through e-mail.

2 The name informational web is often used as a synonym for Web 1.0.

by the linking of people (Wesh 2007).[3] Within the social web search engines and social media platforms look at the connections between people and their relations to other web users or web objects. Facebook popularized the term Social Graph "to describe how Facebook maps out people's connections" (Zuckerberg 2009). As Facebook considers its services inherently social and its plugins and buttons are called 'Social plugins' we summarize the activities they generate as so-called "social activities."

Where Google can be seen as the main agent of the informational web and the regulator of the link economy, Facebook is currently seen as the emerging agent of the social web. Especially the company's recent efforts to make the entire web experience more social mark the advent of a different type of economy which is based on social indexing of the web: the Like economy. Key elements of this economy are the social buttons, the activities they generate and the way they connect Facebook with the entire web.

According to Facebook, liking and sharing are valuable for users and the company because they enable to experience the web more socially. A similar connection between the social and economic value has been developed by Adam Arvidsson (2009) with his idea of an ethical economy in which value creation is based on collective negotiation and in which economic value creation is related to the quality of social bonds that are generated. Within this paper we want to question the centrality of social dynamics and social relations as key driver for platform engagement and the Like economy. Through merging a new media with an economic sociology perspective, we will shift attention away from the users and the social to the impact of issues on social activities, as well as their interrelation with technicity and the fabric of the web. Based on an extensive empirical study of button presence and engagement within a sample of 592 URLs, we ask how issues, technicity and the social create a productive assemblage of value creation in an emerging Like economy.

In what follows, this paper aims to address these questions by first looking at the history of different types of web economies over time. How do these 'new' social activities central within the social web relate to the hit and link economy of the informational web? What creates engagement and how does this engagement organize the fabric of the web and sociality? And finally, what are the perspectives of a Like economy?

3 Hence, the social web is a different way to address Web 2.0.

1. History, presence & use of social buttons

This section will look into the history of social buttons and their associated counters as a metric of social activities and as indicators of a particular web economy. The buttons foster social activities which are then quantified in the button counter and can be used as web analytics metrics. Web analytics is defined as "the measurement, collection, analysis and reporting of Internet data for the purposes of understanding and optimizing Web usage" (Web Analytics Association). Distinct metrics in web analytics can be seen as belonging to particular web periods and economies. This section contextualizes the emergence of social buttons by addressing the shift from the informational web, characterized by the hit and link economy, to the social web with its emerging Like economy. Taking a genealogical approach these web periods and their metrics are not mutually exclusive, but rather overlap, built upon, enrich and complicate each other.

The hit economy (web counters)

The history of the social buttons may be traced back to the mid 1990s when web counters were a common sight. These web counters displayed a number of 'hits' representing "a computerized request for information from the site" or "a specific request from the user of a Web browser to view the contents of the selected document" (D'Alessio 1997:498). The hit was used as an early engagement measure and became *the* standard for measuring website traffic in the mid 1990s (idem). The hit served as a metric for web advertising in the *hit economy* where websites would buy their way into the top of search engines in order to receive more hits:

> "Preferred placement is a term employed by search engine companies for boosting sites in query returns. Organisations pay engine companies to have their sites placed higher in search engine returns, in order to receive more hits. When they add up, hits count. In the hit economy, organisations hope to gain banner advertising revenue and demonstrable net presence. Hit counts show presence. They indicate measures of site popularity and reliability" (Rogers 2002: 197).

The web counter is a sign of the hit economy in displaying the number of hits as a very rudimentary[4] indication of engagement with a website.

The link economy (PageRank counters)

In the late 1990s a new type of search engine, Google, shifted value determination of websites from 'hits' to links. Inspired by the academic citation index search engine Google introduced the link as a relevance and

4 The hit is a very rudimentary measure because "hits do not correspond in any direct fashion to the number of pages viewed or number of visitors to a site. For example, if a viewer downloads a Web page with three graphics, the Web log file will show four hits: one for the Web page and one for each of the three graphics." (Ferrini & Mohr 2009:124)

authority measure. Google founders Sergey Brin and Larry Page created a hyperlink analysis algorithm named PageRank that calculates the ranking of a web page by looking at the links it receives. It established that not all links have equal value, as links from authoritative sources and links from sources receiving many inlinks have a higher value (Gibson et al 1998). A high PageRank became a quality indicator of a website and many websites have displayed their PageRank on their website with a PageRank button. A few years after the introduction of Google's PageRank algorithm, Walker critically examines how the algorithm caused a great shift in the way search engines rank content and make it accessible by "using *links* as the primary method of determining the value and thereby the deserved visibility of a website" (p. 72).

Shifting attention away from merely hitting to linking is a first step to include social validation and relational value to search engine algorithms. Yet, the social validation remains an expert system, as the value of an inlink is determined by the degree of the inlinker's authority. The PageRank algorithm established an economy governed by search engines who regulate the value of each link (Walker 2002). Subsequently it led to the commodification of links as web objects that can be traded, sold or bought within the *link economy*. Eleven years after the introduction of the PageRank algorithm Jeff Jarvis describes how this link economy is well established on the web with Google as the main economic agent at its center (2009: 28).

It was the blogosphere that introduced a metric which started to involve user engagement rather than expert validation. Blogs created a new type of metric that shows the number of blog subscribers as a measure of engagement. The counters display how many people are subscribed to receiving update notifications through e-mail or (RSS) feeds. The amount of subscribers serves as a quality or engagement measure of blogs. It feeds back into the link economy as an additional, user generated factor that contributes to the ranking of a website or blog (Bihun et al).

The Like economy (social counters)

The social web further developed the user-focused metric and introduced it to the entire web. Within the social web we can distinguish another type of counter: the social buttons which display the interactivity with the object[5]. The buttons allow for a number of pre-defined user activities (eg. liking, sharing, tweeting) with the object in relation to social media platforms. The first social counters were found on social bookmarking sites like Delicious for storing links and on content aggregation websites like Digg and Reddit where users can vote stories up or down. Initially the ranking and displayed ranking count were internal to these platforms.

5 Any web object that has a URL (Uniform Resource Locator) or more specifically a URI (Uniform Resource Identifier). An object can be a video, photo, website, webpage, blog, blogpost, etc.

You could only “Digg” a story and see the number of Diggs on the Digg website itself. The introduction of a button that could be placed on any website externalized the process of Digging and its count. Publishers placed these buttons on their websites to syndicate their stories across different platforms. Content aggregation sites like Digg marked a shift in content recommendation on the web. Instead of webmasters linking to interesting and relevant stories, regular web users were now linking and recommending stories through the act of sharing. In 2006 Facebook jumped on the share-bandwagon because “Ever since this whole Internet thing got started, people have been sharing stuff left and right.” In their first implementation of share an item could be shared on Facebook by pasting a link into a field on the My Shares page (Hughes 2006a). Sharing could initially only be done from inside the platform. Only a few days later they externalized sharing with the creation of a simple link with a Facebook icon that could be placed on any website to enable direct sharing (Hughes 2006b). Sharing could now be done from outside the platform and no longer required the manual copy-pasting of a link into the platform. Three years later Facebook introduced an official button with a counter to “enrich” the experience of sharing, to track the popularity of an item on the web and to invoke other social activities on the Facebook platform (Kinsey 2009):

> Start conversations with your friends in just a few clicks whenever you see a Facebook Share button, and see their reactions through comments in your News Feed. The Share button enables you to take content from across the Web and share it with your friends on Facebook, where it can be re-shared over and over so the best and most interesting items get noticed by the people you care about (idem).

The share button evokes further social activities inside the platform such as commenting and liking. Therefore, the share counter was set up as a container metric to capture the number of shares and all further activities they initiated such as the comments or internal likes: “The box_count and button_count options displays a count of the total number of times the page was shared on Facebook, how many comments were added to the story shared on Facebook, and how many times friends Liked the shared story” (Facebook Developers: Share).

Liking was introduced internally on Facebook as a quick and easy way to show your friends that you like the content they share. It was put forward as a social activity that can be performed on a shared object within Facebook to replace short affective positive comments like “Awesome”[6] and “Congrats!”: “The aggregation of the sentiment "I like this" makes room in the comments section for longer accolades. [...] We think of the new "Like" feature to be the stars, and the comments to be the review” (Pearlman 2009). The Like button was initially only available within Facebook and it allowed users to like almost all storied on their network's news feeds. It came with a counter that showed the total number of likes as well as the names of friends who clicked it. In April 2010 Facebook externalized the activity of liking by launching a Like button

6 In a detailed history of the Like button it is described as a way of ranking and as a way to display an affective, positive emotion, first as a project codenamed "Props" and later as the Awesome button with would become the Like button.(Bosworth 2010).

for the whole internet at their F8 developers conference. Through the Like button plugin webmasters could add the Like button to their websites and enabled the liking of any object anywhere on the web. The Like would appear on the user's newsfeed and the counter would be incremented. The counter shows the number of likes, comments and shares as the Like is a container metric.

The buttons were introduced to enable sharing directly from within the content website, removing the steps of copying the URL, opening the platform website and pasting the URL there. What differentiates these social buttons from the previously described counters is that they are linked with external platforms where the content is shared. They allow for the cross-syndication and sharing of content across social media. Every platform has their own buttons, created by either the platform itself or by third-party services, which can lead to a (cluttered) array of buttons on webpages (see illustration 1)[7].

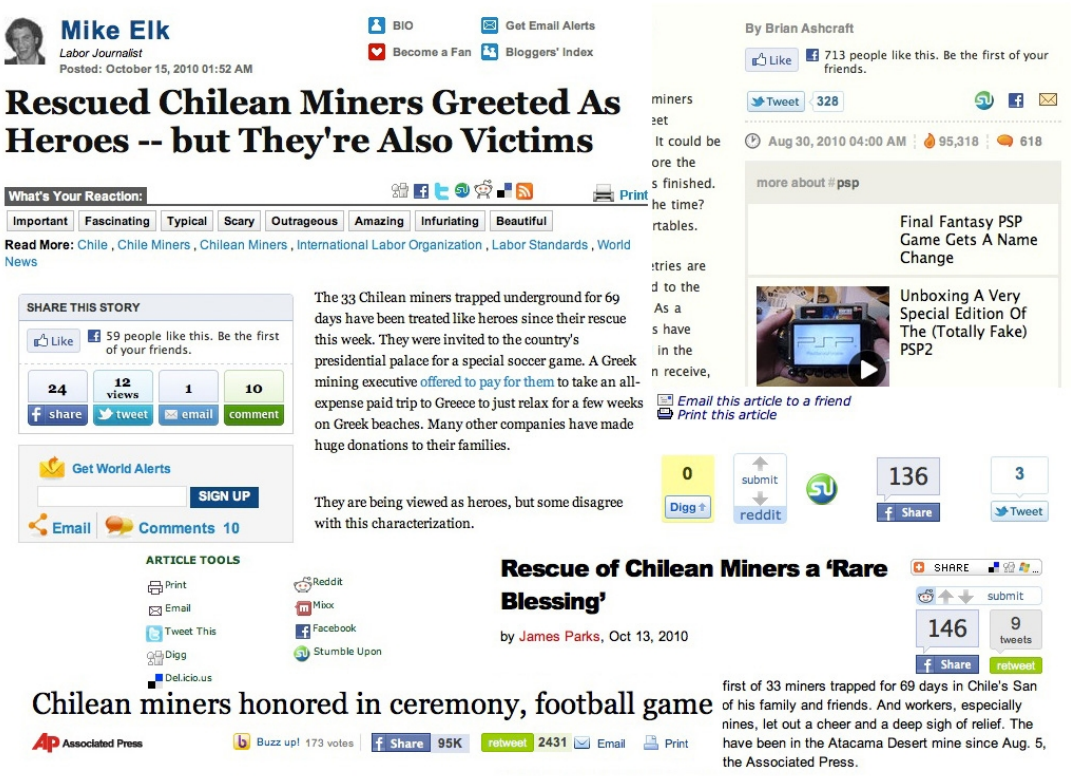

Illustration 1: Social buttons across various websites

7 In 2006 the first "all-in-one" sharing service launched, AddThis, which describes itself as "the first service to provide a generic gateway for collecting and distributing many different types of content. AddThis acts as a bridge between the web publisher, the web user, and the social media services" (Banks Valentine 2006). It soon became the #1 sharing service because it integrated all major platforms in one single button which removed the need for a cluttered array of buttons. By acting as an intermediator AddThis is able to gather statistics on what is being shared, how many times and where. By implementing a ShareThis button on their website webmasters can access these statistics for their own website to see which items are shared often in order to optimize their content for their visitors.

The social counters displays the total number of people who have shared the page or post on the associated platform. As sharing can be done either from inside the platform or outside the platform on a website with a button, the counter shows the total of the internally and externally performed activity. The Facebook Share and Like buttons pose an exception as they are container metrics and incorporate a wider range of activities which shall be addressed next.

Use of social buttons: sharing and liking

This paper specifically focuses on the social activities of the platforms Twitter and Facebook as they account for the major part of sharing traffic (AddThis 2010). When looking at their technical configuration we can differentiate two types of social buttons: the share button and the Like button. When a user clicks on a share button (in this case a Facebook share or tweet button), they are usually confronted with a pop-up window that displays a description of the post and a link to the post. Depending on the platform users can add comments before sharing the post. After clicking share/post, a description, optional comments and link to the post are posted to the platform. The visibility of links shared on Twitter and Facebook is different. On Twitter, the tweet containing the (shortened) shared URL is posted in the user's timeline. Links shared on Twitter are openly accessible and are visible without being logged into Twitter.[8] On Facebook, the shared link is posted on the user's Wall which is only visible within Facebook. One has to be logged into Facebook to see shared links and their visibility may be further restricted to friends only or friends of friends, depending on the user's privacy settings. Sharing is enabled on the website itself through the overlay of a platform related pop-up,[9] the 'Share Box,' so that the user never has to leave the website. If the share button contains a counter the number will be increased after sharing the post.Whereas sharing happens via pop-ups, liking is done on the page itself through a single click on the Like button. Once the button is clicked, the user receives feedback from the button[10] while the link of the liked page or object is being sent to the user's news feed in the background. Liking can be considered a further enrichment of the previous sharing feature as it creates qualitative “I like this” links between the pages and users and captures the users' affective reaction to a page.

8 Twitter offers the possibility to create a profile private, but relatively few users make use of this feature.
9 Sometimes sharing is not done in a pop-up but on a next page, after which the user will be brought back to the content page.
10 It either shows “You liked/recommended x” and/or it shows how many people have liked the item. On some pages it is also possible to add comments to the liked object in the prompted “What's on your mind?” box.

With the introduction of a universal Like button Facebook started to deprecate its share button[11] and collapsed the share and like counts "so that the count represents total interactions with the URL" (Zee 2010). The like count also became a container metric for all Facebook activities displaying likes (including likes from outside the platform) shares and comments. The like counter shows the total Facebook activities with the URL as a measure of engagement. The button is not only enabling a user-generated value (made visible in the counter) but also a platform linking mechanism. The buttons provide the glue between website and the social media platforms as will be discussed in the section on the fabric of the web. It can be argued that liking produces a particular form of linking which differ significantly from traditional linking practices of webmasters and shall be discussed in the next section. Through the act of liking Facebook users are validating and linking content on the web, an act previously exclusive to webmasters and establishing what may be considered an emerging Like economy.

Button presence

The presence of social buttons might be considered as an indicator of the importance webmasters assign to the social activities of sharing and liking. Therefore we are interested in the penetration of share, Like and tweet buttons on the web. Webservice BuiltWith tracks technology usage on websites, including third party widgets such as Like, share and tweet buttons.[12] When exploring the presence of Like and share buttons, the generic sharing button provided by AddThis has the highest button presence, present in 5,72% of the top 10,000 websites as of 12 January 2011[13]. It is followed by Facebook Like with 4,92 %, Facebook Sharer 1,9%, Twitter widget 1,76%, ShareThis 1,47% and Twitter button 1,38%. In what follows we want to discuss these figures in relation to the results of our empirical study. For that purpose we will first provide an overview of the scope and methodology of our empirical research.

This paper is based on an empirical study that explores the distribution of social buttons and the activities they generate in relation to social issues[14][15]. The study asks how social activities are related to the hit

11 "We don't recommend the Share button for new developers. If you aren't already using the Share button, we recommend you migrate to the Like button and Open Graph protocol instead of Share for sharing pages from your website. The Like button is simpler to user and is the recommended solution moving forward." (Facebook Developers)

12 http://trends.builtwith.com/widgets

13 based on Quantcast's top million ranking websites

14 The project builds on top two pilot studies which were conducted during and shortly after the Digital Methods Summer School 2010 which can be found here: http://wiki.digitalmethods.net/Dmi/WebCurrencies and here: http://wiki.digitalmethods.net/Dmi/WebCurrencies2

15 In a first version of the study we retrieved data for a variety of social media platforms including Delicious, Digg, Reddit, Hackernews and Friendfeed via the Backtype Tool. Due to very low number across these metrics we decided to focus on the most prominent metrics only, those of Facebook and Twitter and to explore the emerging Like economy.

and link and what contributes to high numbers in social counters. Special attention shall be paid to the impact of social issues and the technicity of the web. Therefore, we have studied button presence and engagement in relation to six timely issues from a variety of categories, which generated considerate social media engagement during 2010[16]:

1. "BP Oil Spill" (environment)
2. “Ground Zero Mosque” (politics)
3. "Rally to Restore Sanity” (politics/entertainment)
4. “Tea Party” (politics)
5. “Chilean Miners” (disaster)
6. "Lady Gaga" "Meat dress" (entertainment)

For each of these issues we retrieved the top 100 Google results by using the Google Scraper[17] from the Digital Methods Initiative tools. We decided to generate our sample of websites via the informational web as this web is more issue based than the social web, which is focused on personal networks. For each of these websites the presence of a Like, share[18] or Tweet button, and whether or not it included a counter, was checked manually. We retrieved the number of Facebook Likes, Facebook Shares and Facebook comments for each URL by using the BackType Stats tool[19] and the number of tweets using the Digital Methods Retweet Ripper tool[20]. For a detailed study, we manually categorized the results per issue in regard to the media featured on the websites and their content. The data was generated between October and December 2010.

In a first analytical step we looked into the overall presence on these websites as will be described next (illustration 1), as well as in button presence per issue and button presence within particular categories of websites (which will be addressed in section four). We calculated the interrelation between button presence and value of activities in order to determine the impact of button presence. Furthermore, we explored which issues are particularly social by visualizing the social activities per issue (illustration 3). To analyze these findings in detail, we differentiated social activities per issue in relation to media formats and website content.

16 Several of the selected issues are featured in the trending topics of Facebook and Twitter for 2010: http://blog.facebook.com/blog.php?post=466369142130; http://blog.twitter.com/2010/12/hindsight2010-top-trends-on-twitter.html

17 http://tools.issuecrawler.net/beta/scrapeGoogle/ (based on Google.com)

18 Facebook Share or generic share button that allows sharing to Facebook

19 http://tools.digitalmethods.net/beta/backtype/ (based on backtype.com: “Enter a URL to see its social impact”)

20 http://tools.issuecrawler.net/beta/twitter/nrRetweets.php (based on Topsy.com - real-time search & Twitter Trackbacks)

Button presence

From our total URL sample we removed URLs from same source in the same page configuration, as they will show the same buttons, which left us with 420 URLs. In this sample the penetration of social buttons is as follows:

41% of all webpages have a Like button (of which 95% show a counter)

64% of all webpages have a share button (of which 8% show a counter)

68% of all webpages have a tweet button (of which 47% show a counter).

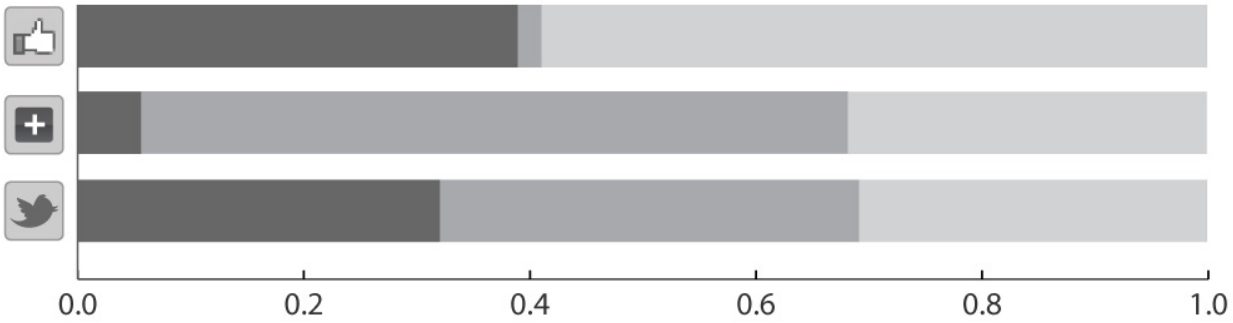

Illustration 2: Overall button presence (medium grey) and counter presence (dark grey) across all issues

In our sample the tweet button is the most present, followed by the share and Like button. Almost all Like buttons show a counter due to the button's default settings[21]. About half of the tweet buttons show a counter[22] while only a very low amount of share buttons show a count because of the generic sharing buttons like AddThis and ShareThis that do not show a count. Only the Facebook Share can display a count which is either the 'actual' share number or the totality of Facebook activities which makes it a messy counter. The number of shares and likes in the counters are often the same due to Facebook's effort to merge both counters. Despite Facebook's attempt to deprecate the share and merge it with the Like button, we found that the share is still more dominant than the Like. This is caused by the popularity of the generic sharing service AddThis which uses the traditional Facebook sharing mechanism over the like by default.

When looking at the button presence within each issue (illustration 2), the majority of the issues show a similar distribution of Like, share and tweet buttons as presented in illustration 1. The only exception is the Tea Party, which has significantly less buttons and even less counters. The question arises if the low

21 http://developers.facebook.com/docs/reference/plugins/like

22 The two most widely used Twitter buttons are the Tweetmeme button, which always shows a counter, and the official Twitter button which may be configured to display no counter.

button presence in this case functions as an indicator of a less social or less engaging space and shall be followed throughout the paper.

The social buttons distinguishes themselves from previous web buttons and counters due to their specific configuration. In this new type of configuration the button serves as both a user-generated value and as a platform linking mechanism. The button is linked with an external (social media) platform where a link to the website is put when the button is clicked. The button serves as a type of web glue between the page the button is located on and a social media platform. We will look into how social activities relate to traditional linking practices, what type of link is being created through these buttons, and how the social activities of sharing and liking relate to the hit and link economy.

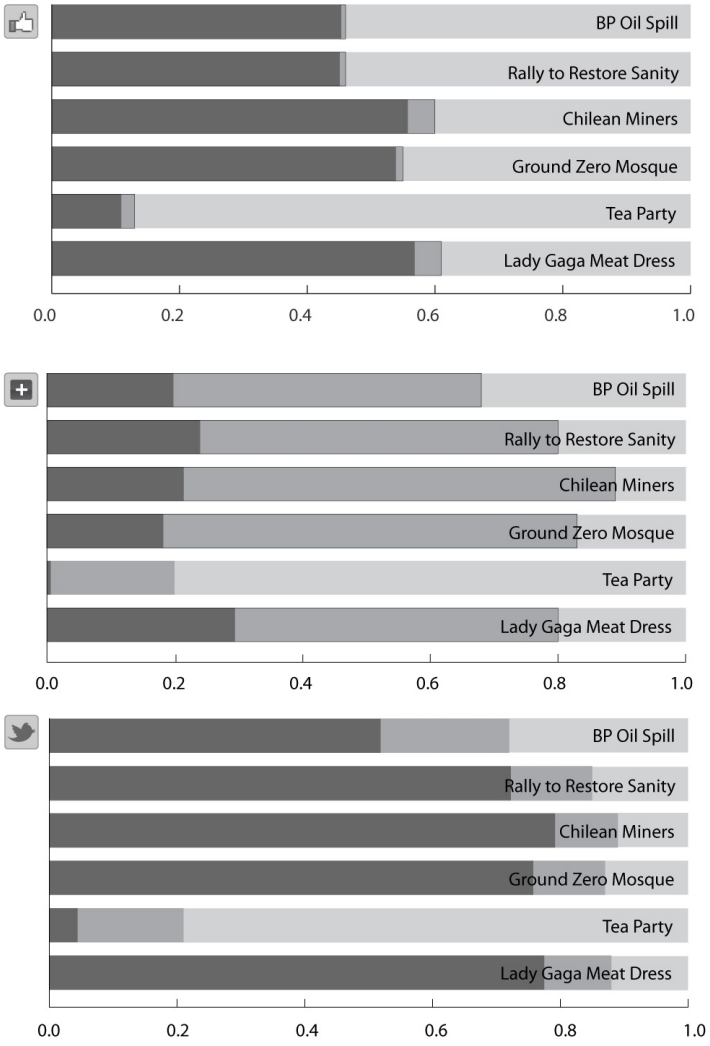

Illustration 3: Button and counter presence per issue

2. Relation to link

The process of linking through the acts of sharing and liking is very different from the traditional linking practices of webmasters and bloggers. In the traditional model the webmaster of website A links to website B where the link is made visible on website A. In the act of sharing the link is not being generated by the webmaster of website A but by the visitor/user from website A. It is *a user-generated link* enabled by buttons on website A. The second important distinction is that website A is not linking to B but that website A is being linked to on *platform* X. Links are being channeled through and incorporated on external platforms where they can be quantified (how many people share/like this) and qualified (who shares/likes what, where and when). This new way of linking is a form of light-linking, as it does not require the manual labor of creating a link. On top of that this link is initially invisible because it is already embedded in the button.

Preconfigured links

The social buttons were introduced to make it easier to share content across the web without having to copy and paste a URL and move between content and sharing platform. The link is embedded in the code of the button[23] which allows for direct linking without having to copy the URL. Social activities make use of a link that has already been made by the service providing the button, often the externally associated platform itself. The link in the social button can be understood as a distinct type of hyperlink: a pre-configured link - or as suggested before, as link-light. As the share and tweet require more effort than the Like they create different associations and levels of engagement. The Like is creating a link in the background and may be seen a link that indicates an affective response and not so much an intentional relationship.

23 Examples from pre-configured links in the social buttons on the Huffington Post:

FB Like

```
<fb:like width="244" href="http%3A%2F%2Fwww.huffingtonpost.com%2Fmike-elk%2Frescued-chilean-
miners-gr_b_763679.html" class="mostpop_entry_like" action="like" show_faces="false"
font="lucida grande" locale="en_US"></fb:like>
```

FB Share

```
<a title="Share on Facebook" target="chicklet" class="b_pixie icon-facebook" id="fb_chick"
href="http://www.facebook.com/sharer.php?u=http://www.huffingtonpost.com/mike-elk/rescued-
chilean-miners-gr_b_763679.html&amp;title=Mike%20Elk: Rescued%20Chilean%20Miners%20Greeted
%20As%20Heroes%20--%20but%20They%27re%20Also%20Victims">
```

Twitter

```
<a target="chicklet" href="/send/twitter_window.php?encoded_permalink=http%3A%2F
%2Fwww.huffingtonpost.com%2Fmike-elk%2Frescued-chilean-miners-
gr_b_763679.html&encoded_msg=Huffpost+-+" id="twit_chick" title="Share on Twitter"
class="b_pixie">
```

Revisiting the hit and link economy

The social buttons relate to both the hit and link economy through their user-generated values and linking mechanisms. They build on the previous web economies, yet at the same time add a differentiation. The Like relates to the hit as the button registers a 'hit' in the form of a click after which the number in the counter is incremented. However, not every single 'hit' is being counted, instead only intentional affective reactions are counted. The Like also relates to the link as liking a website automatically creates a link between the user and the site on Facebook which is fed into the user's News Feed. But the Like also introduces a significant difference to the link as it adds a social value to it. Facebook sees the Like as a very specific type of link and at their F8 developers conference “Facebook announced Likes as a form of "social links" -- better than a link because it's related to a specific user” (Cashmore 2010). Liking can therefore be understood as a qualification of the link by adding it to the user's profile, making it more personal and social (by fostering more Facebook activities). Returning to the Like as a container metric which also includes shares and comments, the Like is both more than a hit and more than a link.

As discussed in section one, the Like economy further changes whose links do matter. Whereas in the informational web links were created by webmasters and sorted according to Google’s PageRank, in the social web links are created by users who at the same time add value to them through liking and commenting. In the link economy Google values links by using and expert or 'authoritative' qualification while Facebook validates links through the qualification in the social. What is at stake here is not only who creates links on the web but also how and by whom these links are qualified.

Finally, the Like economy changes the visibility of links. The link economy is based on webmasters creating links that are publicly available on the web and crawled, indexed and ranked by several economic agents like Google, Bing and Yahoo! However, what differentiates the Like economy from the link economy is that the links created through liking are not openly available but instead all routed through the Facebook platform. This means that the main economic agent in the Like economy is Facebook which will be discussed in section four. In what follows, we aim to discuss these changes in detail by engaging with our empirical findings and by critically examining the so called social value of the social buttons.

3. Engaging issues and media formats

From the very beginning Facebook has presented social dynamics as key driver of activities such as liking, sharing and commenting. It has introduced the social plugins as a possibility to make the web experience in general more social as content can easily be shared with one's network (Haugen 2010). The company stresses how the plugins enable users to create connections to pages they appreciate and to filter their web experience through their friends' preferences. The value of Like buttons and the users who engage with them has been advertised as making use of existing social dynamics, as the so called "Likers" are connected to 2.4 more people than the average Facebook user and click on 5.3 more external websites (Facebook and Media 2010). A similar perspective has been key to sociological studies of social media activities as in the work of Adam Arvidsson (2009). Following a digital methods approach (Rogers 2009) this paper shifts attention away from studying the likers, sharers and tweeters and their social dynamics, but poses questions about the relation between the issue and social activities as well as their technicity. In what follows we will explore which issue generates what kind of social activities and investigate, whether particular issues, web content or media are especially likeable or tweetable.

As introduced in section one, each issue is characterized by a different distribution of social activities (illustration 4 and 5). Despite diverging results, all issues generate between 6 to 30 times more Facebook activities than tweets. The significant difference between Facebook and tweeting activities suggests Facebook's predominance in producing social media engagement, a trend that resembles Facebook's lead in overall sharing activities on the web (AddThis 2010). The high results in Facebook activities might be similar across issues, but their internal composition of likes, shares and comments is not, as illustration 5 indicates. Most significantly, comments dominate the composition of the Like, a finding that might come as a surprise as most websites offer their own comment spaces and comments require both more effort and involvement. The most comment-intensive issue is Lady Gaga Meat Dress, followed by BP Oil Spill, Ground Zero Mosque and Tea Party.

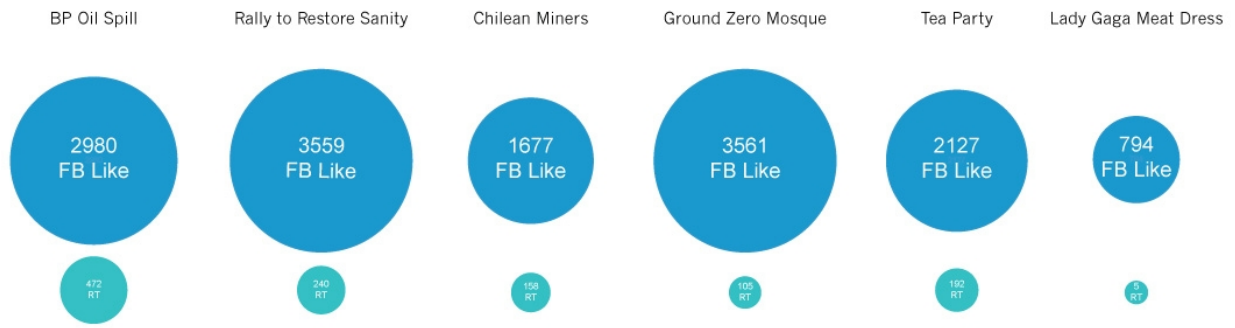

Illustration 4: Average social activities per issue

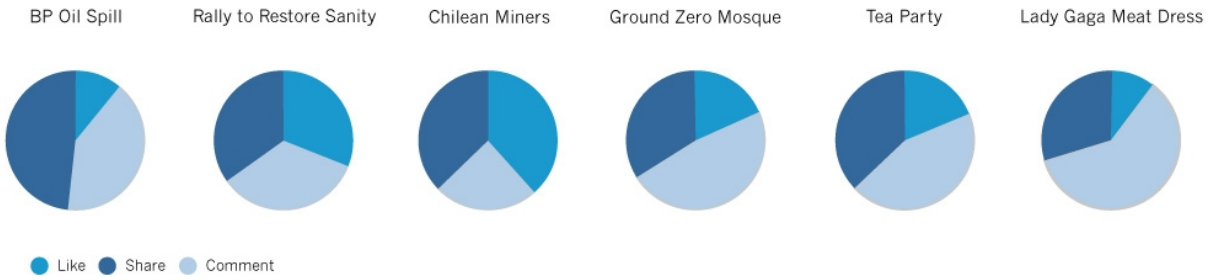

Illustration 5: Like distribution per issue

Media engagement

Within many issues, pages that feature audio-visual media content generate the highest number of social activities. [24] Especially pages with live streams, photo-editorials[25] or videos create more activities compared to informational articles without media content. The issue Ground Zero Mosque poses the only exception, as only articles with videos receive more likes and slightly more tweets compared to regular articles, whereas articles with pictures generate less activities.[26] These diverging results might be linked to the fact that most issues are actual events that benefit from visual documentation, except of Ground Zero Mosque which is a political and cultural controversy and therewith less dependent on visual documentation than discussion, negotiation and the presentation of different arguments.

Content engagement

The number of activities in relation to the content further suggests that controversial debates function as facilitators of social activities. In regard to Lady Gaga Meat Dress, the majority of activities occur on websites which address or open up a controversial discussion of her styling choice, followed by websites featuring Gaga's explanation of why she decided to wear a dress made of meat or feature an analysis of its potential

24 In the space of the BP Oilspill, websites featuring photos (19551 Likes in average, 3248 tweets) or video livestreams (11360 Likes, 1061 tweets) outnumber general articles (1148 Likes, 194 tweets) or issue overviews (441 Likes, 103 tweets). The same applies to the Rally to Restore Sanity, where websites featuring pictures or documenting the visual aesthetics of the event achieve the highest social activities (22456 Likes, 1082 tweets), followed by life video streams (13487 Likes, 1803 tweets), event pages and general articles (1164 Likes, 67 tweets). Also in the case of the Chilean miners, the category photo is most engaging (5571 Likes, 1319 tweets), but here the articles (1557 Likes, 108 tweets) outnumber the websites with live video streams (603 likes, 27 tweets). In the case of Lady Gaga Meat Dress, the most activities have been generated by articles featuring several pictures (234 overall Likes and 184 tweets), as compared to articles with videos (99 Likes and 62 tweets) or articles without media (37 Likes and 24 tweets).

25 For example: The Big Picture - News Stories in Photographs from the Boston Globe. http://www.boston.com/bigpicture/

26 The underlying figures are: Articles with videos 7756 Likes, 138 tweets, informational articles 2240 Likes, 96 tweets, articles with photos 1881 Likes, 118 tweets, all numbers are averages per page.

meaning[27]. Taking the high number of Facebook comments into account, this suggests that the comment space is indeed a negotiation space and that issues which evoke controversial reactions such as the Meat Dress, but also the Ground Zero Mosque and the Tea Party do not generate many likes (as positive affective responses) but rather differentiated comments. This finding supports Facebook's claim that the Like is a shortcut to emphatic, affective comments such as "Awesome" or "Great" and therefore leaves the comment space for differentiated engagement, as addressed in section one (Pearlman 2009). The case of the Tea Party, which has already been discussed as potentially less social space due to its low distribution of social buttons, sees the least activities generated on websites of the Tea Party member organizations[28]. News and media contributions to the issue generate 10 times more Facebook activities than the member organizations and critical contributions even 30 times more, which suggests that the low sociability of the issue is generated by the un-engaging space of Tea Party members.

Issues, but also media formats and perspectives offered on the issues, can thus be understood as productive entities in creating social activities. Yet, sharing, liking and tweeting also contribute to the formation and production of the issues themselves. Websites, social buttons, social media platforms as well as issues and social activities therefore form a productive assemblage in the sense of DeLanda (2002, 2006a) and Deleuze and Guattari (2004) in which each entity has an impact on each other. In the next section, we will discuss the role and organization of technicity and the fabric of the web within this assemblage.

27 Websites featuring controversial discussion: 3337 average Likes, 169 tweets. Websites featuring Gaga's explanation: 1180 Likes, 69 tweets. Websites featuring analysis and discussions of the potential meanings: 1047 Likes, 104 tweets. The least engaging websites are general articles informing about the meat dress incident as well as articles discussing style or food concerned issues

28 Tea party member organizations: 402 Likes, 129 tweets. News and media articles: 4774 Likes, 241 tweets. Critical contributions: 12531 Likes, 743 tweets.

4. Technicity of sociality and the fabric of the web

As introduced above, social activities are predominantly fostered by buttons and counters, but the like, share and tweet can also be generated independent of the button by just posting links or liking on the platforms directly. The following section will explore social activities from a medium specific perspective focusing on their technicity and the organization of the fabric of the web. Previous results have shown that button presence within the analyzed issues is far higher than general trends on the web[29]. Therewith the question emerges, to which extent the presence of a button contributes to a higher number of social activities – or not. There is a general tendency that pages with buttons produce 100 % more activities than the ones without buttons. The only exception is the BP Oil Spill issue as it generates almost 90% more likes, shares and tweets on pages without buttons.[30]

As outlined in section one, the Tea Party space has significantly less buttons than the other issues. When moving from overall button presence to button presence within specific categories of websites, the Tea Party member organization websites stand out with a very low overall button presence of only 2.3% of pages with Like buttons and 7% pages with share and/or tweet buttons[31]. The findings suggest that the member space is designed for distributing information and not so much not for sharing it across the web and generating direct feedback, response and interactivity – and therefore generates much less activity than the other issues.

Facebook as the fabric of the web

Within the informational web, connections between websites are based on linking practices. Even though Google has deeply impacted linking behavior as its ranking algorithms gave rise to strategic linking practices, the search engine was not involved in creating the interconnections between websites, the so called fabric of the web. To explore the question how connections between websites are organized in the social web, we will discuss the framework of the Open Graph as a successor of the Social Graph in which the Like button was

29 On general button presence on the web: http://trends.builtwith.com/widgets/Facebook-Like

30 This general but not clear trend might have several reasons. First of all, especially news websites publish their articles both on their official website, but also on their Facebook page, thus making it possible to generate social activities on the platform directly on top of the activities enabled on the official website. Secondly, particularly engaged users can easily share and tweet websites by posting them directly to the platforms, generating further re-tweets or re-shares as well as comments. Buttons can thus be considered as important, but not as required driver of social activities.

31 News/media websites have a rather high distribution of buttons (28% have like buttons, 24 % have share buttons and 52% have tweet buttons).

introduced as enabler for a more social experience of the web. With the Social Graph Facebook claims that the company's main assets are the connections between users that create social networks and flows of information. But the Social Graph restrained the network and the information flows to the space of Facebook. Therefore the company decided to increasingly extend the graph to the entire web and enable cross syndication of information, web experience and network connections. A key step to include all web experiences into Facebook and connect them to a user's social network was the introduction of the Like Button and the Open Graph in April 2010 (Zuckerberg 2010). As introduced in section one, the Open Graph allows for feeding web experience into the Facebook profile, as well as to experience the web filtered through the recommendations and activities of the own network. Crucial elements are a number of social plugins[32] which allow for the cross-syndication of social activities. These plugins include the Like button, a login button that enables users to connect to other websites with their Facebook account, a recommendation plugin for external websites which shows personalized recommendations and highlights content that received the most social activities, the Facepile plugin that shows the profile pictures of friends or users that have liked the page or website, and finally the Live Stream for displaying user activities in relation to events or issues in real-time.

According to the Facebook CEO Zuckerberg, the company is "making it so all websites can work together to build a more comprehensive map of connections and create better, more social experiences for everyone" (Zuckerberg 2010). Sociality online is no longer confined to the space of Facebook, but de-centralized by extending Facebook's key features to the entire web. With these feedback loops of information, the social buttons not only create interactivity and sociality, but function as a web glue that not only organized but actually turns into the fabric of the web. (Gelles 2010). Whereas Facebook suggests that the Open Graph is interconnecting and personalizing the web, the argument developed here is that the web is both de- and re-centralized through social activities.

Decentralization

The decentralizing impacts of social buttons are manifold. The increasing integration of social buttons on websites renders the sites both more open and less fixed. The buttons enable the distribution of content and comments across a wide range of platforms and within these platforms on many profiles, news feeds or timelines. Within this process, the websites are no discrete entities, but function as initializers of diverse activities that happen across diverse (social media) spaces. But, at the same time, websites are shaped by the

32 http://developers.facebook.com/plugins

social activities they generate, as the social engagement is defining what appears in social button counters, the recommendation plugins, in the live streams or in the comments. The more social plugins a website integrates, the more it opens up to be shaped by the activities of Facebook or Twitter users[33]. Whereas these are rather novel perspectives for the web, they are key characteristics of social media platforms (Boyd 2010), which have no original content and are shaped by the cross-syndication of content, activity and information. In the framework of the Open Graph, Facebook and the web enter a productive relationship in which both have a performative impact on each other.

Recentralization

But especially Facebook's recent efforts to create the Open Graph indicates a simultaneous rewiring and recentralization of the web. Whereas the informational web was organized through links between websites, the social web is characterized by links preconfigured and mediated by various platforms. In section one, Facebook has already been discussed as emerging glue of the web. Besides, platforms also collect information about user engagement with the web, especially Facebook is extending its data mining practices rapidly with the Open Graph. User engagement with Like or Share buttons or with links posted on Facebook walls allows the company to collect data that exceeds the information each user is providing on their profile and thus contributes to a re-centralization of the fabric of the web and of the flows of information and affective association.

As a recent paper by Arnold Roosendaal (2010) shows, this process of re-centralisation is not even dependent on using the social buttons, as Facebook plugins and buttons function may as cookies. They allow to trace browsing behavior when a Facebook user opens a website that features a Like button or includes Facebook Connect. Once the cookie is set up, it provides Facebook with every page the user visits until the cookie is deleted. No matter if Facebook users decide to use these buttons, their web behavior can be traced and connected to their profile[34]. Roosendal further shows that the cookies can also trace non-Facebook users.

33 An example of this process is the news-blog Huffington Post (http://www.huffingtonpost.com/) which has included all social plug-ins provided by Facebook. The blog provides article suggestions based number of Facebook Likes rather than on hits, hence includes them into their internal ranking algorithms. Each article features all social buttons including counters in a highly prominent forms including Facebook's Facepile. Beneath articles, live streams from Twitter show the ongoing discussion of issues addressed in the article on the social media platform. Commenting is available via either Facebook or Twitter profiles or individual comments can directly be shared on a wide range of social platforms. Engaging with Huffington Post articles through social activities thus not only brings the social platforms, but also the Huffington Post platform into being, has an impact on the position of articles in recommendation banners and thus has an prodctive impact on the page itself.

34 The only way to prevent Facebook from doing so is installing a plugin: The Antisocial plugin which "limits websites from embedding Facebook content, thereby preventing Facebook from tracking your browsing habits. It also bans 3rd party Facebook applications outright, thereby reducing the possibility of your information from being leaked." https://addons.mozilla.org/en-US/firefox/addon/162098/ The only escape from the Like button is a very web and tech savvy solution.

Even though Facebook cannot connect this data to individual profiles and directly use it for personally targeted advertising, it enriches the database and contributes to processes of pattern calculation. Therewith, potentially every web user becomes a Facebook user as their web behavior can now be traced across spaces.

Whereas Facebook suggests that the Open Graph enables personalized connectivity online and illustrates this with a flat network model (Zuckerberg 2010), the company is advancing to become the most prominent social activity platform and therewith re-centralising the fabric of the web both spatiality and in terms of information collection. The connection between monitoring social activities and browsing behavior suggests that what might be in the making is a Like Economy rather than just "building the social web together" (Zuckerberg 2010). Facebook uses its Like button to create a fabric that connects the web to the platform, makes every web user a potential Facebook user and engages everyone in the emerging Like economy.

5. The social

In a recent Financial Times interview, Facebook founder Zuckerberg considers the so-called social as the most promising organizing principle of the economy: "If you look five years out, every industry is going to be rethought in a social way"(Gelles 2010). A similar argument has been made by Adam Arvidsson who claims that economic value is increasingly connected to the quality of social connections, the so called philia, that companies manage to create between their consumers or to their products (2009). In what follows we will critically engage with this idea of the social and discuss what kind of social liking, sharing and tweeting create and how it is organized.

The informational social

Our main claim is that the sociality Facebook enables with its Open Graph is not only defining social relationships, but is concerned with the validation of information through personal networks. Key element of the Open Graph is the launch of Instant Personalization[35], a collaboration with search engines and informational sites such as Bing, TripAdvisor, Yelp or Scribd, that have started to include users' Facebook network preferences into their search results. The so-called social experience they promise is mainly an informational one, allowing the user to use their friends' recommendation as a filter to explore the web and

35 http://www.facebook.com/instantpersonalization/

thus qualifying information via users' networks, as argued in section one. The Facepile and recommendation plugin follow the same principle as they are focused on showing what one's friends do, like, share and therewith turn from the wisdom of the crowd to the wisdom of the friend (Claburn 2010). In this context, Facebook is less concerned with enabling social relations but driven by the idea of an informational social, as Gelles suggest: "What Zuckerberg is talking about is a new way of organizing and navigating information" (2010). A similar qualification is happening in relation to the hit via the Like button. While the hit was merely counting the number of visitors without being able to tell anything about the visitor's attitude or affective reaction to a website, the Like button adds quality to this quantitative metric while at the same time functioning like a hit counter through embedded cookies.

Facebook, but also Twitter and other social media platforms allow for channeling social dynamics into technicity based and countable activities such as tweeting, liking, sharing or commenting. The technicity of platforms and plugins makes it possible to transform intensive affective responses and social dynamics which are in themselves rather difficult to measure into button-based activities which allow for extensifying them, turning them into countable and comparable values in the sense of DeLanda (2006). Whereas users' affective responses, their agreement, excitement or involvement have happened unnoticed and unmeasured in everyday life before, the Like button makes it possible to turn the intensive reactions into extensive activities and information. This ubiquitous calculation of qualities has been understood as qualculation by Nigel Thrift, as "an increasing tendency to frame number as quality, in the sense that calculations are so numerous and so pervasive that they show up as forces rather than discrete operations" (Thrift 2007, 100).

The traceable social

Facebook is unlikely to stop with the current possibilities of extensification of the social, as former employee Matt Cohler explains: "Facebook has always thought that anything that is social in the world should be social online (…). Anything where people ask their friends to help them make decisions – whether it's food or movies or travel – could be transformed online by social" (Gelles 2010). As a part of this drive to make the entire web social, Facebook is not only turning the social into information, but increasingly collapsing the social with the traceable as the still intensive, non-measurable, non-visible social is of no value for the company. Both dynamics imply each other, as to make the social informational, it has to be possible to trace it, to turn it into comparable metrics. But the social that is emerging here only allows for particular affects and activities – in the case of Facebook, the affects are limited to positive ones as Facebook has not signaled any

interest to set up anything like the dislike button. If the social becomes so closely connected to the informational and the traceable, what is considered social dynamics on the web is increasingly defined by the platforms which generate economic value through this social.

Personalization

This organization of the social is, as indicated before, closely linked to an increasing personalization of the web. On a broad level, sharing, liking and tweeting websites allows to connect web activity to existing Facebook or Twitter profiles. Via Facebook Connect, but also within Facebook itself, commenting is not an entirely anonymous activity, but potentially personal and thus accountable. With its efforts to create the Open Graph, but also by functioning as a container login for multiple websites, Facebook has increasingly turned its profiles into web-IDs which allow connecting multiple activities to one profile. Whereas other online ID projects such as OpenID or Microsoft's Passport could not achieve user acceptance, Facebook has indirectly turned into one of the web's most central IDs (Gelles 2010)[36]. But Facebook's personalization is not only based on individual user behavior – an approach currently followed by Google – it is taking the user's network into account.

Anonymity

While network-based personalization of social activities is a key element of the experience, anonymity also plays a crucial role, for instance in relation to button counters. Especially the Like button almost always comes with a counter as shown in section one. The counters produce a sheer, quantified number of general engagement, they are considered social, yet they are stripped down of the personal[37]. Even though not personalized, the high counter presence indicates that this metric of the mass, the general affective engagement, contributes to the so-called social experience of the web. Having zeros in your social button counters suggests that a website has not engaged or affected its visitors. Therewith, the social buttons create a fabric of both more personalized and more anonymized sociality, a mixture of the recommendation of the crowd and the recommendation of the friend. Interestingly, Facebook only focuses on the personalized element of this development, stressing the impact of personal recommendation on web traffic generation:

36 This development is even facilitated by the introduction of the @facebook.com email address.

37 In the case of Facebook, the individual user cannot get access to all profiles that clicked the Like button, in the case of Twitter, this is possible via search tools such as Topsy http://topsy.com/.

"Publishers have also told us that people on their sites are more engaged and stay longer when their real identity and real friends are driving the experience through social plugins" (Zuckerberg 2010).

Scalable social formations

The interrelation between the personalized and the anonymous suggests that there are different social formations at stake when engaging with social buttons. There is the anonymous mass of all likers, sharers and tweeters. There are some friends' faces that might appear in the Facepile next to a button, or a shared link in one's timeline. A tweet about a webpage that is being retweeted with different comments, the comment on a friend's wall who is responding to a shared link or the information that several friends have liked a particular website. Social activities do not only create *the* social, they create a multiplicity of different social formations.

In the case of Facebook, these social formations are mainly defined by the users' network and their privacy settings. Being able to see a user's social activities depends on if their privacy settings allow everyone, friends of friends, friends only, or selected groups of friends to see their posts or news feed. When commenting or liking content shared by friends, the visibility of that activity and thus the social formation they are exposed to are dependent on the friend's privacy settings, as discussed in section one. Privacy regulations allow users to scale the sociality they produce in the sense of DeLanda (2006b), from carefully selected formations of few friends to the entire population of Facebook. Yet, the social formations not only change in number, but also in their qualitative formation. Some formations might be more affected by a user's activities, such as their close friends while other formations are more likely to engage with buttons as Facebook suggests (Zuckerberg 2010) [38]. In order to be both personalized and anonymous, multiple social formations are produced through social activities.

38 Likers, so Zuckerberg claims (2010) are multipliers, particular users that have "2.4x the amount of friends than that of a typical Facebook user", "click on 5.3x more links to external sites" and are thus characterized as more active and more social. Facebook considers this as valuable, as it suggests external websites that the people who will engage with the social buttons will share their social activities with larger social assemblages and thus increase the impact of their social activity. Hence, the value of a Like, a share and a retweet are connected to the size and quality of the social assemblage they enter, the bigger and the more interested in social activities, the more value does Facebook assign to a Like.

6. Perspective of a Like economy

In the following we will discuss what forms of value are produced in the emerging Like economy. The paper has introduced particular social buttons as an effort of platforms – especially of Facebook – to render web experience more social and thus to qualify the link and the hit by connecting it to existing profiles and their personal networks. In this framework, Facebook emerges as a key agent, generating the most social activities and keeping them internal to the platform. Through an empirical study of social button engagement in relation to six issues we developed the hypothesis that the so-called social activities are not only driven by social dynamics, but are the outcome of a productive assemblage of the issue, the media content, the social, technicity and the fabric of the web. Based on the centrality and impact of the Like button, we have suggested that there is an emerging Like economy which might not replace, but definitely reconfigure the hit and the link economy.

Multiple forms of value creation

After exploring how the Like economy is organizing and organized by issues, sociality and through the fabric of the web, the question arises what forms of value are created within this productive assemblage. First of all, the social buttons allow for transforming intensive social and affective dynamics into comparable metrics and thus add a social and personal qualification to the hit economy. Social, as the activities are being shared in social networks and personal, as web activity is connected to actual profiles rather than being anonymous. According to Facebook, these processes enable the social indexing of the web as opposed to an expert indexing of the link economy. Yet, these social indices have a limited visibility which focus on the personal network, as they appear on friends' walls, in Facepiles or recommendation plug-ins, but are not used for ranking algorithms on social platforms themselves. Even when integrated by Instant Personalization partners, only information from a user's network is taken into account, not the overall social activities generated by all Facebook members. Whereas the informational web is taking the total aggregate of indexed sites into account, the social web only ranks in relation to a user's network. Hence, the informational web is characterized by one fixed ranking, whereas the social web has multiple, dynamic rankings which are only visible to an individual user.

Besides generating personalized network value, social activities also contribute to the content validation of websites. Especially if websites include button counters, the display of the number of likes, shares or tweets received indicates how engaging and affecting the web content is for web users. The counter renders

the social activity into a currency of a high, sheer number, no longer personalized but still suggesting to be a social engagement metric.

As it has been shown, the social value created by the buttons is connected to an informational value. The buttons allow for new modes of transactional user data collection, both in regard to the population of Facebook and all web users. Through cookies and button engagement, Facebook can extend its user database with web activities and content engagement outside the platform. This Facebook user data is enriched by the anonymous data of web users without a Facebook profile, an addition that enables even better patterning and prediction of interests. Besides Facebook, external social media research companies also make use of the transactional user data (Lury and Moor 2009). Especially within marketing contexts, social media activities are carefully tracked, monitored and analyzed, either by algorithms or by human researchers with the help of tools[39]. Hence, taking the idea further that social media activities function as the currency of the Like economy, it is a currency of high numbers which is both social and informational. Moreover, this currency is also highly ubiquitous and technical, as the Open Social Graph creates an infrastructure in which all web behavior contributes to Facebook data mining practices. No matter if a web users decides to engage with Facebook or not, the technicity of the social buttons makes web users participants in the Like economy, constantly producing valuable user data and contributing to social indexing without even knowing.

Social activities as exchange value

Social media activities should not only be considered as currencies in an abstract sense as they are already in use as direct economic exchange mechanisms. Especially in the creative industries, web users can buy content like books, music and video files through tweets. The digital agency Innovative Thunder for instance is selling an e-book on digital marketing for a tweet ('Pay with a tweet')[40] in order to promote social activities as exchange mechanisms and has "sold" more than 150.000 books so far.[41]

The economic impact and exchange value of social media activities further becomes apparent by companies' efforts to increase their social media metrics and online engagement through strategic planting of stories, applications and campaigns that are aimed at driving up user engagement. But user involvement can also be simply bought. In the case of Facebook, companies can buy different amounts of likers via specialized

39 An overview of current marketing oriented social media research activities can be found on: http://measurementcamp.wikidot.com/.

40 http://www.ohmygodwhathappened.com/index.html

41 Similar developments can be found on the locative service Foursquare, where frequent visitors of places, so called mayors are offered discounts or receive free products, such as in the case of Starbucks.

services such as Buy Real Facebook Fans, Usocial, Fanpagehookup, Socialkick or Fanbullet[42]. The current price for 1000 likes starts at $57[43] but can go for $119[44]. Companies can choose between random or so-called targeted fans, selected through their location, interests or age. Similar developments can be monitored on social bookmarking sites, where social media agencies pay people to promote issues and thus increase the number of inlinks and hits to particular websites, hence connecting to the link and hit economy (Mills 2006).

Orientation towards the future

To conclude we would like to argue that the emerging Like economy is characterized by a double orientation towards the future. First of all, the generated user data is used for personalized advertising and recommendation - based on the assumption that if one's network likes or shares content, oneself is more likely to like as well. Knowing a network's preferences thus enables Facebook to generate patterns and to predict a user's future interests and activities. Secondly, the idea of the Open Graph is build on the assumption that the recommendation within a personal network, the wisdom of the friends, is far stronger than a non-personal recommendation, the wisdom of the crowd and that there is inherent value in the social. What is most valuable in this context is that each engagement can potentially create more engagement, each Like of a Facebook user is meant to produce more likes of their Facebook friends, a shared URL is meant to produce comments and likes, a comment is meant to produce a response, a tweet to produce a retweet. The value of social media activities is both situated in the present and in the futures, in the actual button count and in potential more counts. To put it in Nigel Thrift words: "value increasingly arises not from what is but from what is not yet but can potentially become, that is from the pull of the future, and from the new distributions of the sensible that can arise from that change" (Thrift 2007, 31). By building on the combined dynamics of the hit, link, like and share, the emerging Like economy is creating a fabric of the web that capitalizes on the value of any potential social activities.

42 An overview of Fan and Like-selling services can be found here: http://www.quickonlinetips.com/archives/2010/09/buy-facebook-fans-friends-likes/

43 http://www.buyrealfacebookfans.com/

44 http://buy-fbfans.com/

Acknowledgments

Thanks to Erik Borra from the Digital Methods Initiative, University of Amsterdam for building tools for our research.

References

Addthis, 'Sharing Trends in 2010', AddThis Blog, 29 December 2010 <http://www.addthis.com/blog/2010/12/29/sharing-trends-in-2010/> [accessed 16 January 2011].

Arvidsson, Adam, 'The Ethical Economy: Towards a Post-capitalist theory Of Value', *Capital & Class*, 33:1 (Spring 2009), 13 -29.

Bihun, Andriy, Jason Goldman, Alex Khesin, Vinod Marur, Eduardo Morales, and Jeff Eduardo, 'United States Patent Application: 0070061297', 2007.

Banks Valentine, Mike, 'Facilitating Social Media Optimization (SMO)', Facilitating Social Media Optimization (SMO), 11 October 2006 <http://www.webpronews.com/expertarticles/2006/10/11/facilitating-social-media-optimization-smo> [accessed 15 January 2011].

Bosworth, Andrew, 'What's the History Of the Awesome Button (that Eventually Became the Like Button) On Facebook?', Quora, 5 October 2010 <http://www.quora.com/Facebook-company/Whats-the-history-of-the-Awesome-Button-that-eventually-became-the-Like-button-on-Facebook> [accessed 15 January 2011].

Boyd, Danah, 'Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications.' in: Papacharissi, Zizi, ed. *A Networked Self: Identity, Community, and Culture On Social Network Sites.* London: Taylor & Francis, 2010: 39-58.

Cashmore, Pete, 'Facebook "Likes" World Domination', Mashable, 19 April 2010 <http://mashable.com/2010/04/19/facebook-like-launch/> [accessed 15 January 2011].

Cashmore, Pete, 'Google's Nightmare: Facebook "Like" Replaces Links', CNN.com, 29 April 2010 <http://edition.cnn.com/2010/TECH/04/29/cashmore.google.facebook/index.html> [accessed 15 January 2011].

Claburn, Thomas, 'Web 2.0 Summit: Facebook Bets On Wisdom Of Friends', InformationWeek, 21 October 2009 <http://www.informationweek.com/news/internet/web2.0/showArticle.jhtml?articleID=220900041> [accessed 15 January 2011].

D'Alessio. 'Use of the World Wide Web in the 1996 US election.' *Electoral Studies* (1997) vol. 16 (4) pp. 489-500

DeLanda, Manuel. *Intensive science and virtual philosophy*. London: Continuum, 2002.

DeLanda, Manuel, *A new philosophy of society. Assemblage Theory and Social Complexity*. London: Continuum, 2006a.

DeLanda, Manuel, 'Deleuzian Social Ontology and Assemblage Theory.' 2006b. In: Fuglsang, M. and Sorensen, B.M. *Deleuze and the Social*. Edinburgh: Edinburgh University Press, 250-267.

Deleuze, G. and Guattari, F. *A thousand plateaus: capitalism and schizophrenia*. London: Continuum, 2004.

Facebook and Media, 'The Value of a Liker,' 29 September 2010, <http://www.facebook.com/notes/facebook-media/value-of-a-liker/150630338305797> [accessed 13 January 2011].

Facebook Developers, 'Facebook Share', <http://developers.facebook.com/docs/share> [accessed 15 January 2011].

Ferrini, A., and J. J Mohr, 'Uses, Limitations, and Trends In Web Analytics', *Handbook Of Research On Web Log Analysis*, 2009, 122-140.

Gelles, David, 'Facebook's Grand Plan For the Future', *Financial Times Magazine*, 3 December 2010. <http://www.ft.com/cms/s/2/57933bb8-fcd9-11df-ae2d-00144feab49a.html> [accessed 15 January 2011].

Gibson, D., J. Kleinberg, and P. Raghavan, 'Inferring Web Communities From Link Topology', in: *Proceedings Of the Ninth ACM Conference On Hypertext and Hypermedia: Links, Objects, Time and Space* (1998): 225–234.

Google. Google Corporate Information. <http://www.google.com/corporate/> [accessed 13 January 2011].

Halpin, Harry, and Mischa Tuffield, 'A Standards-based, Open and Privacy-aware Social Web', W3C Incubator Group Report, 6 December 2010 <http://www.w3.org/2005/Incubator/socialweb/XGR-socialweb-20101206/> [accessed 15 January 2011].

Halstead, Nick, 'Tweetmeme Launch', Tweetmeme Launch, 28 January 2008 <http://blog.tweetmeme.com/2008/01/28/tweetmeme-launch/> [accessed 15 January 2011].

Haugen, Austin, 'Answers To Your Questions On Personalized Web Tools', The Facebook Blog, 26 April 2010 <http://blog.facebook.com/blog.php?post=384733792130> [accessed 15 January 2011].

Hughes, Chris, 'Sharing Is Daring', The Facebook Blog, 27 October 2006a <http://blog.facebook.com/blog.php?post=2214737130> [accessed 15 January 2011].

Hughes, Chris, 'Share Is Everywhere', The Facebook Blog, 31 October 2006b <http://blog.facebook.com/blog.php?post=2215537130> [accessed 15 January 2011].

Jarvis, Jeff. *What Would Google Do?* New York: Harperluxe, 2009.

Kinsey, Mark, 'Keeping Count Of Sharing Across the Web', The Facebook Blog, 26 October 2009 <http://blog.facebook.com/blog.php?post=165161437130> [accessed 16 January 2011].

Lury, C., and L. Moor, 'Brand Valuation and Topological Culture', in: M. Aronczyk and D. Powers, eds. *Blowing Up the Brand* (New York: Peter Lang Publishing, 2010), pp. 22-52.

Mills, Elinor. 'The Big Digg Rig', CNET News, 4 December 2006 <http://news.cnet.com/The-big-Digg-rig/2100-1025_3-6140293.html> [accessed 5 December 2010].

Pearlman, Leah, 'I Like This', The Facebook Blog, 10 February 2009 <http://blog.facebook.com/blog.php?post=53024537130> [accessed 16 January 2011].

Rogers, Richard. 'Operating Issue Networks On The Web.' *Science as Culture* (2002) vol. 11 (2) pp. 191-213

Ross, Joshua-Michéle. 'John Hagel on The Social Web.' O'Reilly Radar 24 Oct 2009. [accessed 15 January 2011].

Siegler, Mg, 'I Think Facebook Just Seized Control Of The Internet', TechCrunch, 21 April 2010 <http://techcrunch.com/2010/04/21/facebook/> [accessed 15 January 2011].

Thrift, N. J, *Non-representational theory: Space, Politics, Affect.* London: Routledge, 2007.

Walker, J., 'Links and Power: The Political Economy Of Linking On the Web', in *Proceedings Of the Thirteenth ACM Conference On Hypertext and Hypermedia* (presented at the HYPERTEXT '02. ACM Hypertext conference, Baltimore, 2002), p. 72–73.

Web Analytics Association, 'About Us', <http://www.webanalyticsassociation.org/?page=aboutus> [accessed 15 January 2011].

Wesh, Mike, Information R/evolution, 2007 <http://www.youtube.com/watch?v=-4CV05HyAbM> [accessed 2011].

Zuckerberg, Mark, 'Building the Social Web Together', The Facebook Blog, 2010 <http://blog.facebook.com/blog.php?post=383404517130> [accessed 15 January 2011].