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The Like economy: the social web in transition

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Introduction

Since the introduction of the Open Graph Facebook is increasingly expanding beyond the limits of its platform, offering devices that can make every website and every web user part of Facebook. CEO Mark Zuckerberg claims that the platform aims to “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). In a later interview, he takes the promise of sociality even further, claiming “If you look five years out, every industry is going to be rethought in a social way” (Gelles 2010). In this paper, we want to examine how Facebook creates a particular relationship between economic value and the social from a medium specific perspective by focusing on the role of social buttons. We will explore how the growing implementation of social buttons, counters and the Open Graph API create a performative infrastructure (Thrift 2005) which constantly materializes, measures and multiplies social interactivity and affective investments. Linking Facebook’s efforts to a historical perspective on the hit and link economy, we claim that what might be in the making is not only a social web, but a re-centralized, data intensive fabric - the Like economy.

While there has been considerable scholarship on user engagement in social media as forms of labor, as collective production or as exploitation (Terranova 2004, Beer and Burrows 2009, Fuchs 2010), this paper offers a medium specific perspective on Facebook. It suggests that Social Plugins and the Open Graph API create a data-intensive infrastructure that allows Facebook to transform any user affects and activity into comparable data that can be capitalized and multiplied. In what follows we will first trace the emergence of social buttons and counters in relation to the hit, link and finally Like economy. The second part will engage in detail with the technical features of the Like button, the Open Graph API and Social Plugins and the ways in which they organize data flows and social formations. Thereafter we will explore the dynamics of what we propose to be a Like economy, looking into the interrelation between measurement and intensification and the multiple modes of exchange. In a final step this emerging web economy shall be examined critically, drawing attention to visible and invisible exchanges as well as more problematic uses of the Like as emerging Web currency, leading to the question if it is a social web or a data rich web that is in the making.

1. Buttons, Counters, Web Economies

In a first step the paper will introduce the emergence of social buttons and counters in relation to different web economies. Facebook's Like button is one of many social buttons that have diffused across blogs, news websites, social media platforms and other types of websites. These buttons, also referred to as social bookmarking icons, allow users to share, recommend or bookmark a post or page across different social media platforms such as Facebook, Twitter, Digg, Reddit, Delicious and StumbleUpon. They often display a count of how many times the post or page has been shared, recommended, bookmarked or liked across the associated platform. In other words, buttons measure typical social web activities and transform them into web analytic metrics. At the same time these tweets, shares and likes create links back to the affiliated platforms and may be approached as new types of hyperlinks. It what follows the paper will introduce buttons and counters as part of web metrics which belong to particular web periods and economies, such as the hit, link and Like economy. Following a genealogical approach it shall be shown that these web economies are characterized by different actors and different modes of participation, while at the same time building upon and complicating each other.

1.1 The hit and link economy

The emergence of the social buttons and counters may be traced back to the mid 90s when web counters showing the number of visitors of a websites were a common sight. In the early days of the informational web the value of websites was determined by the number of hits as hit counts showed presence for the banner advertising to be sold (Rogers 2002). The term informational web is often used to describe the web as a publication medium for publishing content (Ross 2009) and is characterized by the linking of information (Wesh 2007). The number of hits was used as an early engagement metric, displaying a rough indication of the number of visitors of a website, derived from the number of computerized requests – hits – to retrieve the page. Hits became the standard for measuring website traffic (D'Alessio 1997) and served as a metric for web advertising in the hit economy, where websites would buy their way into the top of search engines or onto the front page of portal pages in order to receive more site impressions as banner advertising revolved around the number of hits a site received. In this informational web search engines act as main actors enabling users to navigate through information by ordering websites according to hit-based, and later link-based engagement metrics. The notion of the hit economy – and subsequently link economy – was introduced by Richard Rogers (2002) in the late 90s as a critical notion in response to a new type of economy that ran the web, the attention economy, – in which web sites are competing for attention and audiences – when noticing that search engines were changing the value of these web sites.

The exchange value of the informational web changed in the late 1990s when a new type of search engine, Google, shifted value determination of websites from pure hits to hits and links. Inspired by the academic citation index, Google introduced the link as a recommendation device on the web and turned it into the main relevance authority measure for ranking websites based on the number of inlinks and the quality of these inlinks. Google founders Sergey Brian and

Larry Page created the hyperlink analysis algorithm PageRank which calculates the relative importance and ranking of a page within a larger set of pages based on the number of inlinks to the page, and recursively the value of the pages linking to it. Therewith Google determined that not all links have equal value, as links from authoritative sources or 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 displayed their PageRank on their website with a PageRank button. A few years after the introduction of Google's PageRank algorithm, Jill Walker (2002) 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" (Walker 2002, 72). The algorithm established an economy governed by search engines who regulate the value of each link (ibid) and subsequently it led to the commodification of links as web objects that can be traded, sold or bought within the link economy.

The move from merely hitting to linking is a first step to include social validation and relational value to search engine algorithms. However, this social validation remains an expert system, as the value of an inlink is determined by the degree of the inlinker's authority. The blogosphere has played an important role in advancing the development of the link economy beyond an expert system. First it introduced a new metric to involve user engagement rather than expert validation by looking at the number of subscribers to a blog as a measure of involvement.¹ The number of subscribers who receive automatic update notifications through site feeds, displayed in subscriber counters, serves as a quality or engagement measure of blogs. This new measure has been feed back into the link economy as an additional, user-generated factor that contributes to the ranking of a website or blog (Bihun et al 2007). Second, the blogosphere gave rise to a recommendation culture in which bloggers are linking and recommending sources and are "freed from the 'tyranny of (old media) editors'" (Rogers 2005, 7) as the practice of linking is no longer exclusive to webmasters. Third, the blogosphere further opened up the act of linking by allowing users to place links in blog comments. This led to radical changes in the link economy as Google and other search engines decided through a mutual agreement that those links would not count in the link economy, therewith further complicating the idea that not all links have equal value by creating a different value for links even *within* websites. Blog comments were prone to spam because of their weak verification mechanisms and instead of having to deal with potential spam in their indexes, search engines decided to exclude these links from their sorting algorithms. By implementing a "nofollow" attribute on all links in blog comments these links have been stripped off their value for search engines.² Therewith, search engines decided that user-generated links in the commentspace did not count and kept holding on to the informational web as expert system.

1 Early blog indexing initiatives such as BlogHop experimented with offering pieces of code and buttons for blogs allowing visitors to vote for blogs as an additional user-generated ranking of blogs within the blogosphere.

2 The "nofollow" attribute is placed on all links within comments by default by most blog software.

1.2 The Like economy

According to social networking site Facebook “the informational Web is being eclipsed by the social Web” (Claburn 2009). In contrast to the informational web 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 & Tufeld 2010). It is characterized by the linking and socializing practices of web users (Wesh 2007) as opposed to a focus on links between websites. Key element of the social web are the links web users create with objects, but also the links they create between themselves.

The social web further developed the user-focused metrics and buttons introduced by the blogosphere and presented them to the entire web. It could even be argued that the social buttons took up the empty space created by search engines when they rendered the commentspace worthless through the nofollow attribute (Weltevrede 2011), as social media create distributed engagementspaces or commentspaces and allow for engaging with content outside of the website.³ Social buttons afford a number of pre-defined user activities (eg. voting, recommending, bookmarking, sharing, tweeting, liking) in relation to their associated social media platforms and the button counters show the total number of activities performed with the object through regulated interactivity. Content aggregation websites like Digg and Reddit, where users can vote stories up or down by ‘digging’ or ‘burying’ a story, popularized the acts of sharing and recommending. Initially, Digging was only possible within the Digg website itself and the introduction of a Digg button enabled users to rank any web content, externalizing the process of Digging. For publishers the social buttons enabled the cross-syndication of their stories across different platforms. Therewith, content aggregation sites like Digg marked a shift in the recommendation culture on the web. Instead of webmasters and bloggers linking to interesting and relevant stories, web users have been enabled to recommend stories with the social buttons.

Facebook launched their first sharing option in 2006, but back then it was only internal to the platform and required users to manually paste a link into a field on the My Shares page (Hughes 2006a). A few days after launching the internal share application Facebook externalized the act of sharing by creating a simple Facebook icon with a link that could be placed on any website. Since then, users could directly share web content with their Facebook contacts on any website featuring the share icon. Three years later in 2009 Facebook introduced an official share button including 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 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 (ibid).”

3 A pilot project on distributed comment spaces can be found here:
<https://wiki.digitalmethods.net/Dmi/DistributedCommentSpaces>

The Share button was introduced as a way of recommending content from all over the web to your friends on Facebook. What distinguishes the Share from other social bookmarking buttons is that recommendations made via a Digg or Reddit button are ranked on the platforms according to the number of votes and recommendations. Both ranks and numbers of votes are visible to all web users, while recommendations made via Facebook's Share button are only visible to the contacts of the sharing user. Shares are used for internal Facebook ranking mechanisms, for example the sorting algorithm of the News Feed, the so-called EdgeRank that ranks friends' activities according to the engagement they generate, the affinity between the friend and the user and their timeliness (Kincaid 2010). Yet, they do not add up to an universal Facebook rank, but to multiple personalized rankings and rather aim at eliciting further activities on the platform such as commenting and liking. In this context the Share counter was set up as a composite metric to capture the number of all activities related to the web content, such as comments or likes as responses to the shared link: "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."⁴

The Facebook Like was introduced as a shortcut to commenting. Initially imagined as Awesome button in 2007, the Like was introduced internally on Facebook in 2008 (Totsis 2010) 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 comments like "Awesome" 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 came with a counter that showed the total number of likes as well as the names of friends who clicked it. Just like the Share button the Like button is set up as a composite metric which shows the number of likes of a URL, the number of shares of a URL, the number of likes and comments on stories on Facebook about this URL and the number of inbox messages containing this URL as an attachment.⁵ With the inclusion of share functionality and metrics the Like button Facebook deprecated the Share button.

In April 2010 Facebook externalized the activity of liking by launching a Like button for the whole Internet at their F8 developers conference as part of the Facebook Open Graph. Since then, webmasters can use the Like button plugin to integrate the Facebook Like button on any website, therewith enabling users to like any object anywhere on the web. A year after its introduction over 2.5 million websites have integrated with Facebook by implementing Social Plugins – such as the Like button – and 10.000 new websites are being added every single day.⁶

4 <http://developers.facebook.com/docs/share/> (now redirecting to <http://developers.facebook.com/docs/reference/plugins/like/> since Facebook decided to deprecate the Share in favor of the Like)

5 <http://developers.facebook.com/docs/reference/plugins/like/>

6 <http://www.facebook.com/press/info.php?statistics>

Once a user clicks a Like it appears on the user's wall and in their friends' News Feed in the form of a link and the counter on the external website is incremented. These external counters show the number of likes, comments and shares as the Like is a container metric. While the Like features similarities with the link by creating connections between external websites and Facebook, it is at the same time more than that: it also documents the total activities such as commenting or liking performed in relation to the link. 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.

What differentiates the hit and link economy in the informational web from the emerging Like economy is the re-introduction of web users as key agents and the role of social relationships. Whereas in the informational web Google relies on the expert links from webmasters and bloggers to create a link economy and at the same time removes value from user recommended links in the comments, in the social web Facebook relies on user-generated links through Liking and sharing and on both webmasters and bloggers placing social plugins on their websites, therewith enabling the creation of the performative infrastructure (Thrift 2005) of the Like economy.

2. Devices to organize data and the social

The following section will explore this infrastructure in detail by focusing on the relationship between the Like button and the Open Graph API. Social buttons enable user-generated recommendations and allow for the cross-syndication of content across platforms. The flow of content enabled through these buttons is regulated by the associated platforms and is embedded in a larger assemblage of different actors involved in scalable formations. In what follows the paper will introduce the Like button as key device of the Like economy to organize both data and the social and will raise questions about the politics of data flows in the Like economy.

2.1 Data flows

In order to explore the data flows of the Like economy, the paper will have a closer look at the relation between the Link and the Like. While the activities of sharing and liking are technically considered a form of linking they differ from the traditional linking practices of webmasters and bloggers in two ways. First, as pre-configured links, second as the glue between websites, platform and users and third from open and visible circulation of data to limited visibilities of dataflows.

The link in the social button can be understood as a distinct type of hyperlink: a pre-configured link.⁷ Social activities make use of a link that has already been made by the platform providing the

⁷ Examples from pre-configured links in the social buttons on the Huffington Post:
FB Like

button and the link is sent to Facebook once the button is clicked. 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.

In the early informational web the act of linking was exclusively reserved to webmasters manually creating links between websites. As the webmaster of website A would link to website B the link would become visible on website A. The link between website A and B is publicly visible and openly accessible to be indexed by search engines with the purpose of being included in the link economy. Because links are native to the web – they are often referred to as the fabric of the web⁸ – they can be distributed cross platforms (Mendez 2010). The key difference in the Like economy is that website A is not linking to B but that website A is being linked to Facebook by users. Links are being channelled through and incorporated into the external platform where they can be quantified (how many people share/like this) and qualified (who shares/likes what, where and when). Instead of webmasters laying the fabric of the web as connections between websites, users are now actively contributing to create a fabric between Facebook and the web by generating links through sharing and liking. In the social web the social buttons create a shift from expert to user recommendations via social media platforms.

The Like button enables data flows between websites, users and Facebook, and so advances the platform into a central hub of social linking. Once a Like button is clicked, it initializes data flows into Facebook – connecting the activity of liking to individual user profiles, exposing the Like on their walls – and outside of Facebook - by feeding back further shares, comments and likes from within the Facebook into the Like counter. Therewith Like buttons are rendering Facebook's Walled Garden partially permeable. This permeability is controlled by the Open Graph Protocol, which carefully regulates the dataflows between different actors engaging with social plugins and Facebook. The Open Graph Protocol has been introduced in 2009 (Zuckerberg 2010) as Facebook's infrastructure to code and govern social activities and relations outside the platform. Following Alexander Galloway "Protocol is a universal description language for objects. Protocol is a language that regulates flow, directs netspace, codes relationships, and connects life-forms" (2004, 74). In this sense protocol not does not only regulate technology but also life and the body – or the social as it shall be shown in regard to Facebook.

```
<fb:like width="244" href="http%3A%2F%2Fwww.huffingtonpost.com%2Fmike-elt%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-elt/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-elt%2Frescued-chilean-miners-gr_b_763679.html&encoded_msg=Huffpost+-+" id="twit_chick" title="Share on Twitter" class="b_pixie">
```

⁸ The idea that links are the fabric of the web is often attributed to Tim Berners-Lee <http://www.openly.com/link.openly/etiquette.html>

The Open Graph API has been introduced as an extension of the so-called Social Graph into the entire web (Zuckerberg 2010). Facebook popularized the term Social Graph as “the idea that if you mapped out all the connections between people and the things they care about, it would form a graph that connects everyone together” (Zuckerberg 2010) and claimed that the social relations between users are its main asset. In science graph theory has been used to analyze relations between people (Hayes 2000) and has recently been applied to social networking sites to study “the global mapping of everybody and how they're related” (Fitzpatrick 2007). However, as Fitzpatrick states, there is no single social graph for the entire web as different sites map different connections between people and these social graphs often remain within Walled Gardens – referring here to social networking sites such as Facebook that require a login to access the platform and sometimes a mutual friendship to view and engage with profiles. The social graphs of different social media platform are created and are often governed by proprietary protocols, that define how users can create connections to each other or to web objects and that mainly disallow cross-platform connections. With the launch of the Open Graph Facebook aims to extent the Social Graph into the entire web, allowing users to connect all web activities to their Facebook profile and therewith aspires to become the main social graph of the web.

Key element of the Open Graph API is the Like button among other so-called Social Plugin that enable data flows between Facebook, its Social Graph and external websites. Besides the Like Button, the Social Plugins comprise applications such as the Facepile,⁹ which shows the profile pictures of friends who have engaged with the web content, the Activity Feed that lists friends' activities in detail, the Recommendations box which provides users with personalized content suggestions or the Live Stream that shows all Facebook activities related to a topic in real time. The idea behind these plugins is to connect web experience back to Facebook and to a users' network of friends, as these devices filter the web through the activities of one's Facebook friends. According to the CEO Zuckerberg, the aim of the aim of the Open Graph is that “all websites can work together to build a more comprehensive map of connections and create better, more social experiences for everyone” (Zuckerberg 2010). Sociality is no longer confined to the space of Facebook, but has become de-centralized by extending Facebook's key features to the entire web.

While the Open Graph enables the constant extension of data flows back into Facebook, it does not promote their full visibility. A majority of the data flows of the Social Plugins remain invisible, also to the actors that produce them. This especially applies to the Like Button. According to Roosendaal (2010) Like Buttons function as cookies that are activated as soon as a visitor opens a site it is implemented.¹⁰ From that moment, the button is tracing the visitor's browsing behaviour and automatically generating data for Facebook by connecting it with the individual Facebook profile. Being tracked by Facebook can only be prevented when a privacy-conscious user has disabled the use of cookies in their browser. Yet, this not only applies for Facebook users, the Like button cookie also traces non-users and adds the information as

⁹ <http://developers.facebook.com/docs/plugins/>

¹⁰ The same applies to Facebook Connect, an API that enables Facebook users to log into external websites by using their Facebook login: <http://developers.facebook.com/blog/post/108/>

anonymous data to the Facebook database. Therewith the Like button turns any web user into a potential Facebook user. It generates different data flows with various visibilities, enabling invisible data flows once the site is retrieved and partly visible data flows when the button is clicked, the counter is incremented and the activity is displayed on the user's wall.

To conclude, the Like Button and the Open Graph API function as a form of web glue linking web engagement, browsing data and user experience to a user's Facebook profile and thus create a fabric between the platform, users and the web. But whereas Facebook suggests that the Open Graph is interconnecting and personalizing the web, the next section will developed the argument that the Like economy is also both de- and re-centralized through social activities.

2.2. De- and recentralizing the web

The availability of Social Plugins and the Open Graph API creates an infrastructure in which both Facebook and external websites become less discrete and more relational. 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 Facebook on many profiles and news feeds. While commenting of web content was previously situated in an internal comment space, it is now distributed across social media platforms.¹¹ Within this process, the websites cannot be considered as discrete entities, but function as initializers for web engagement that can be linked to diverse (social media) spaces. But, at the same time, websites are shaped by the social activities they generate, as the engagement is defining what appears in button counters, which contacts are shown in the Facepile and what content is suggested in the Recommendations box or shown in the Live Streams. The more social plugins a website integrates, the more it opens up to be shaped by the activities of Facebook users.¹² Moreover, each user will experience such websites in a personalized way, as Social Plugins provide different recommendations or information about friends' activities. Whereas these are rather novel perspectives for the web, they are key characteristics of social media platforms (boyd 2010), which have little original content and are shaped by the cross-syndication of content, activity and information. In this sense, Facebook will be affected by the syndication of ever more external content which poses a frame for further social interactivity. The data flows of the Like economy make both Facebook and external websites more relational as activities in one space will affect the other space. It allows for a controlled opening of Facebook's Walled Garden in which the platform and the web have a performative impact on each other.

But especially Facebook's recent efforts to make all web experience more social, hence to connect all web experience to its platform, 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, mainly

11 <https://wiki.digitalmethods.net/Dmi/DistributedCommentSpaces>

12 As may be seen in the Huffington Post website which is making use of all Social Plugins; <http://www.huffingtonpost.com>.

being Facebook. The Social Plugins enable Facebook therewith to extend its data mining practices into the entire web. User engagement with Like or Share buttons or with links posted on Facebook walls make it possible for the company to collect data beyond the information each user is providing on their profile. While the Open Graph API allows for a partial opening of the Walled Garden, it is Facebook who controls the flows of data and who can connect web engagement with existing user profiles and the Social Graph. The platform has access to the entirety of data collected and it only grants limited visibility of data to the webmasters or users. Unlike the link economy where access to the currency of links is open, access to Likes is determined by Facebook, as it shall be discussed in the subsequent section. Moreover, it is also recentralizing linking practices as the preconfigured links embedded in social buttons direct back to Facebook as opposed to the mutual linking practices of the informational web, as noted before.

On top of that Facebook is actively seeking out to de- and recentralize more social activities that may be performed on the web, 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). The launch of Facebook Comments is an example of this expansion. Facebook Comments are part of Facebook Connect which “allows users to "connect" their Facebook identity, friends and privacy to any site”¹³ and enable users to use their Facebook profile to comment on external web content. Any activity with and links placed within Facebook Comments feed back into the Open Graph and contribute to the recentralization of external engagement spaces.

In its ambition to connect ever more social interactivity to the platform, Facebook launched The Send Button in April 2011 “a Social Plugin for Private Sharing” enabling users to share an object privately with friends in the form of a direct message (Parvand 2011). With it, Facebook entered a private sharing space previously belonging to e-mail which now also may be monitored and analyzed. Therewith the Open Graph contributes to a re-centralization of the fabric of the web in which flows of activities, affects and information are not exchanged between users and websites, but connect back to the platform as central hub.

2.3. Actors, visibility and temporality of Likes

In order to extend and maintain its growing and data-intensive infrastructure, the Like economy is based on the participation of a number of actors. This section will introduce the roles of these different actors and trace the ways they produce and get access to the data flows. It will revisit the claim that Facebook is promoting a simultaneous de- and re-centralization of the web by showing how the platform creates and controls the visibility of its data flows. The dynamics of the Like economy produce and are produced by a multiplicity of actors. The way the different actors are organized in particular formations or assemblages, so this section shall demonstrate, contributes to the productive capacities of the Like economy. Key issues when thinking about

13 <http://developers.facebook.com/blog/post/108>

actors are the degrees of visibility and invisibility of dataflows they produce and how this is related to the scaling of actors themselves and the different temporalities of the Like.

The main actor within the Like economy who is producing the devices for its infrastructure is – of course – Facebook. On the one hand Facebook allows for a controlled opening of its Walled Garden and thus for a de-centralization process, on the other hand all data flows feed back into the platform, get recentralized and redistributed. Besides Facebook as infrastructure provider, the Like economy is also build up by external webmasters who choose to implement Like Buttons, Social Plugins and Facebook Connect on their web pages. The webmasters decide to which degree they want to engage in the Open Graph, from the mere implementation of an external Like Button to the use of all available Social Plugins. In addition to the promise of increasing traffic and generating user engagement (Facebook and Media 2010), webmasters are provided with real time Like Button Analytics which give insights into anonymous data about their Likers, featuring frequency of Likes and demographic information (Himel 2011). Besides webmasters, further cooperating partners have particular access to Facebook data as a part of Instant Personalisation.¹⁴ This feature was introduced together with the Open Graph at the Facebook developers conference f8 in 2010. Instant Personalization enables extended data flows between Facebook and cooperating partners. Among these partners are Yelp, Tripadvisor, Bing, Scribd and Pandora who not only get access to anonymized data, but who offer users, provided they are logged on to Facebook, content based on their friend's preferences and activities (Sullivan 2010). Different than in the case of webmasters, these partner websites get access to Facebook data via so-called fire-hose deals and retrieve personal user data which users have made visible to everyone in their privacy settings (Haugen 2010). Part of these data are their names, gender, location, networks and names of friends. A further group who participates in the Like economy and its infrastructure are developers, as the Open Graph and Social Plugins are open to applications and games. Different than external webmasters or cooperating partners who maintain spaces outside the platform, app developers occupy spaces inside Facebook, so called Canvas Apps which they can develop themselves by engaging with the Facebook API.¹⁵ To get access to user data, apps need to get their permission via an access token,¹⁶ which quite often not only prompt users to give access to their private data, but also to the public data of their contacts or to publish on their wall. In this sense, app developers have more direct access to data flows within Facebook than webmasters as they can communicate to users directly and gain permission to data beyond privacy settings. Further agents to mention are external social media monitoring companies which attempt to trace and map user activity related to Facebook through automated or non-automated social media monitoring (Lury and Moor 2010). Social media tracking businesses also make use of the Facebook API to get access to any data users make publicly available in their privacy settings. Corporate tracking devices also start taking external Likes into

¹⁴ <http://www.facebook.com/instantpersonalization/>

¹⁵ <http://developers.facebook.com/docs/guides/canvas/>

¹⁶ <http://developers.facebook.com/docs/authentication/>

account as they are interested in exploring user engagement with web content in relation to particular topics.¹⁷

While Facebook, webmasters, developers and Instant Personalization partners are co-producers of the data-intensive infrastructure or web content as frame for user engagement, it is the user who produces the actual data flows of the Like economy. Through browsing the web, requesting pages with Like buttons, engaging with Social Plugins or interacting with friends within the platform, they create the intensities of this web economy. At the same time they contribute to the infrastructure as well, as each click on an external Like buttons creates a connection between the external page and Facebook and allows for dynamics of de- and re-centralization. In this sense, the Like economy produces a variety of actors while at the same time these actor produce this economy and its data flows themselves.

This double process becomes especially apparent when looking at the contributors that remain invisible. As noted before, the external Like button functions as a cookie which is activated through a site impression (Roosendaal 2010) and tracks the browsing behavior of both Facebook users and non-users. Therewith every web user becomes a potential Facebook user as a mere visit to an external page with a Like button activates data collection for the platform. The cookie introduces one of the many invisible forms of contribution to the Like economy. Facebook users also participate invisibly in the creation of data flows without actively providing information as their browsing behavior is tracked. The hits of both Facebook users and non-users are fed back to external webmasters in the Like Button Analytics, which shows the site impressions and calculates the convergence rate from expression to engagement with the button (Himel 2011). Moreover, the Like button also takes the reference to URLs in private messages into account, incrementing the counter whenever the link to particular web content is attached to a direct message. In this sense, neither are all contributors to the Like economy visible, nor is their contribution visible to themselves.

In order to explore the issue of visibility and invisibility of data further, the paper will have a closer look at how the Open Graph is organizing Facebook users into particular social formations. While the Like counter shows the anonymous number of all activities, detached from personal profiles and the Social Graph, the Facepile Plugin depicts only friends of users who have engaged with the specific web content and thus looks different for every visitor. Other plugins, such as the Recommendations box shows individual suggestions on the webpage and the Live Stream is displaying Facebook activities of all users in regard to one event or topic in real time. Even further formations are created once a user clicks on an external Like button and this activity is shown on their wall. Depending on their privacy settings, this activity is visible to everyone, to all friends or a selected group of friends. If a friend responds to the Like with a further like or comment, this activity is again made visible on the other person's wall to a different social formation. Each of these devices is assembling a particular formation, from selected friends, to the entire Facebook population. They are creating a variety of differently scaled social assemblages in the sense of DeLanda (2006a, 2006b), formations of users that are

¹⁷ Such as in the case of the Social Media Marketing Agency Radian 6
<http://www.radian6.com/blog/2010/10/radian6-and-listening-on-facebook/>

not stable but subject to change and characterized by relationality, from the anonymous mass of all Likers to selected engaged friends. The data flows between profiles, the exposure on walls and the privacy settings allow to scale these formations up to almost all web users or down to a selected few. The interrelation between profiles, news feeds, Social and Open Graph creates a multiplicity of assemblages of different scales in relation to the same web content. These scaled assemblages on the one hand reflect Facebook privacy settings through which users can regulate the visibility of their activities.

On the other hand they have to be considered as a productive element of the Like economy, as the exposure of external Like activities to networks of friends is supposed to generate even more engagement in the form of traffic, likes or comments (Facebook + Media 2010). Facebook is actively promoting this scaled exposure as the recommendation of a friend in contrast to the recommendation of experts or the crowd in the informational web. Likers, so Facebook argues in an article entitled “The value of a Liker” (Facebook + Media 2010), are more active and connected than the average Facebook user. Each click on a Like Button is supposed to lead to more traffic for and more engagement with web content, as friends of likers are likely to follow their contacts recommendation or will be affected by their friends. In this framework, Facebook is exploring the integration of Likes into search engine results with the Instant Personalization partner Bing (The Bing Team 2011). The Like activities of a user’s friends are added to the search results as forms of trusted recommendations as users are more likely to trust the advice of friends than of experts of the crowd (Sullivan 2010). The differently scaled assemblages are productive entities within the Like economy, capitalizing on the relations of proximity between users to multiply content engagement. In this sense, the Like economy no longer follows the wisdom of the crowd but the wisdom of the friend (Claburn 2009).

Social formations not only change in their quantitative scale from all users to few selected friends, but also in their quality, as the personal network of each user is considered to be more affected by the user’s behavior than the entire Facebook population. This quality can also be understood as relation of proximity or distance which refers to the degree one user can affect or influence the other (DeLanda 2002, Gerlitz 2009, Arvidsson 2011). Embedded in such assemblages of close proximity, the Like is set up as a decision maker and as a device to organize the web according to one friends’ recommendations. In this sense Bing claims in relation to its involvement with Facebook: “As people spend more time online and integrate their offline and online worlds, they will want their friends’ social activity and their social data to help them in making better decisions” (The Bing Team 2011). The productive capacities of such relations of proximity have recently been taken up by the introduction of the new Send Button, a Plugin that allows to send web content to selected contacts rather than turning it into a general wall post as the Like button does (Parvand 2011). This new plugin allows users to scale their own social assemblage for direct content sharing, while making it possible for Facebook to track this personalized sharing activities. The production of differently scaled assemblages of Facebook users can thus be considered outcome and driver of the data flows of the Like economy.

Yet, the scaling practices of the Open Graph are also connected to different degrees of visibility and invisibility of data, as discussed above. While the total number of anonymous Likes is available to everyone, only Facebook can connect these Likes to actual profiles while webmasters

and users cannot. Webmasters only receive anonymized data, developers can get access to personalized information with the access token and Instant Personalization partners get limited access to personal data. Users on the other hand are not provided with Facebook analytics¹⁸ and can only see the total number of Likes on a counter or how their friends engage with content in the Facepile or on the Facebook platform. Therewith, controlled and fragmented visibility for all actors is key element of the Like economy and its productivity.

While actors cannot see all activities and data they create, they also cannot access the ones they can see in the same way as the Like economy constructs multiple temporalities for different actors. Users, for instance, are not provided with instant ongoing access to their own liking activities outside Facebook. When they like pages within Facebook, this activity is added to their profile information page. But a click on an external Like Button, sharing a link or commenting on a friend's shared link is not necessarily stored in the profile, but part of the fleeting wall which shows activities in real time. The temporality of external likes or the engagement with them is ephemeral and short lived, as these activities are not assigned any memory. This is a different case in Twitter where tweets can be "favored" by users, the Twitter equivalent of affective investments. Such favoring activities are stored on the user profiles and the favorites each user receives are collected and ranked by services such as Favstar.¹⁹ In order to get permanent access to their liking activities, Facebook users have to use external services such as Likejournal,²⁰ a feature that enables users to store likes just as bookmarks or Memonic²¹ which allows to save any activities on Facebook. Each Like therewith has multiple temporalities for different actors. This exclusion of users from the past of their own liking activities, from their documentation and analysis, indicates that the Facebook Like is only partly used as ranking and sorting device, such as in the case of Recommendation plugins or by sorting the News Wall according to so called Top News, friend's activities that receive the most responses – the EdgeRank (Kincaid 2010). Rather, this set up of scaled social formations, limited visibility and fleeting temporality creates an affective infrastructure that is aimed at spontaneous engagement and affective investment.

At the same time, the engagement with the Like economy is not a discrete process. Each click on the Like Button is supposed to be exposed to a user's contacts and thus generate both traffic and more activities. In such framework, a Like is always more than one. The engagement with the Like economy is constructed as an ongoing process without beginning or end but with different paces and fragmented temporalities for different actors. The value of a single Like thus lies both in the present and in the future, in the +1 it adds to the Like counter and the number of x potential likes, comments or shares it might generate. In this sense, the Like economy creates a system in which surplus and value creation is increasingly situated in the future, in which "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

18 Therefore, a growing number of services is offering so called ego tracking and self quantification tools:
<https://www.twentyfeet.com/> and <http://quantifiedself.com>

19 <http://favstar.fm/>

20 <http://www.likejournal.com>

21 <http://www.memonic.com/tools/goodies/facebook>

that change” (Thrift 2008, 31). How these multiplying potentials are created by an interplay between metrification and intensification shall be addressed in the next section.

3. A web economy of quantification and intensification

3.1. Measurement and Intensification

So far it has become apparent that the social web Facebook attempts to create is not only directed at enabling social interactivity, but also at the production and circulation of data. Equally, the Open Graph is not only offering users a more social web experience but allows Facebook to improve its data mining practices beyond the platform itself. The so-called social experience the platform promises is mainly an informational one, allowing the users experience the web filtered through their friends’ recommendation and thus qualifying information via users’ networks: “What Zuckerberg is talking about is a new way of organizing and navigating information” (Gelles 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.

Therewith, Zuckerberg’s claim that in the future economies will be organized by the social, is rested on collapsing the social with the traceable. The social is becoming economically valuable not because it enables a better user experience, but because it enables data collection for user profiling and creates an environment in which this data is multiplied instantly. The Like button is creating an indexical relationship between user’s affective investments and the number on the Like counter. Moreover, Facebook is constantly trying to extend the possibilities to trace social interactivity as noted before. It is only the traceable social that matters to Facebook, as the still intensive, non-measurable, non-visible social is of no value for the company. The connection between economic value and the social in the case of Facebook is based on the ongoing measurement and calculation of the social interactivity which creates an infrastructure in which “knowledge and life become inextricable” (Thrift 2008, 30). In the following the paper will explore the Like Button as a device for metrification and intensification of the social.

The Like button poses the attempt to transform intensive (DeLanda 2002, Deleuze and Guattari 2004) and affective (Massumi 2002, Clough 2007) reactions to web content or other users’ activities which are in themselves difficult to measure, calculate or compare into quanta of numbers. According to Facebook, the button was introduced to replace short affective positive comments and make space for differentiated expressions in the comment space (Bosworth 2010). The button provides a one-click shortcut to express a variety of affective investments (Arvidsson 2011) or responses and therewith enables the extensification of previously intensive affective reactions. A variety of expression as a Like might comprise excitement, agreement, compassion, understanding or even ironic, parodist liking. Following DeLanda (2002), extensities describe measurable, countable, divisible and comparable properties while intensities are relational, refer to capacities and affective states of being which cannot be compared, divided or counted as such. By asking users to express a variety of affective reactions in the form of a click on a Like button,

it enables to transform them into a mere number on the Like counter and make them comparable and countable. Users can materialize their intensive reactions while Facebook can calculate and monitor them at the same time. To put it in Arvidsson's words, the buttons "allow for an objectification and valorization not of the time spent by users online, but of their ability to create webs of affective attachments around informational objects" (Arvidsson 2011, 16). While the Like Button enables this transformation of intensities into standardized quanta of data, the Open Graph API provides the infrastructure for the exchange of the new metric with multiple actors.

But these quanta are not just metrifications of intensities, they have intensive capacities themselves. As discussed in the previous section, Facebook is advertising the external Like Button as generator for traffic and engagement (Facebook + Media 2010). A click on the external Like button is likely to attract both more traffic from Facebook as well as more engagement in forms of further likes or comments. Each Like of a user poses an invitation or frame for action and reaction (Goffman 1974) for their friends. Facebook also creates an environment of expectation through its interface, as each reaction to a users' activity is announced with a little red notification flag on the top of the page. Having no notifications means that a user's activity did not enable any affective responses, while a high number of notifications indicates a high engagement. The same applies to external webmasters who can be affected by a low or high Like count as engagement metric. The number of Likes, notifications and reactions are no discrete, quantified entities but can affect users and webmasters just as qualitative comments can do. Such intermingling between quantification and qualification has been understood as qualculation by Nigel Thrift, "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 2008, 100). The numbers on a Like counter not only represent user engagement with web content, but can be considered performative or more than representational (Thrift 2008), both metrifying, measuring and producing engagement.

The dynamics of the Like economy are thus characterized by an interrelation between extensification and intensification. Both dynamics are key to this form of web economy, the metrification allows aggregating and comparing affective responses into valuable data and its intensive capacities are crucial to produce even more responses and affects in relation to the Social Graph. Within the Like economy, data and numbers are neither quantitative, nor qualitative, but have to be understood as potentially intensive in the sense of Simondon: "Beyond information as quantity and information as quality, there is what one could call information as intensity" (Simondon 2005, 242).

3.2. Exchange and surplus

Having outlined how the Like Button and the Open Graph create a relationship between social interactivity and economic value by collapsing the social with the traceable, this section will focus on the multiple modes of exchange and surplus that are produced. Facebook's Like economy can be understood as a form of free economy in the sense of Anderson (2009). Free business models do not charge for the products or goods they provide, but attempt to create benefits

from by-products or alternative revenue models. In the case of Facebook, the provision and use of the platform software is free for users, yet the company is generating growing financial revenue, around 2 billion \$ in 2010 (Womack 2010). While it is known that Facebook is generating its revenue through different forms of personalized advertising (Eldon 2010), this section claims that advertising revenue is only one among many forms of surplus generated in the Like economy and Facebook is only one agent among others to benefit from them.

Besides Facebook and its users, webmasters have been introduced as key agents of the Like economy. As users, webmasters are provided with free access to the Facebook infrastructure, the Open Graph API, Facebook Connect and Social Plugins. Therewith they enter into a complex relationship with Facebook. On the one hand, Facebook is providing webmasters with free plugins and access to data. According to Facebook, the Like button and the Social Plugins function as enablers of engagement, will support the cross-syndication of content, direct traffic from the platform and foster user engagement in the forms of comments, which are no longer limited to the webpage itself (Facebook + Media 2010). In addition Facebook is providing Like Button Analytics: data about page impressions, engagement and user demographics based on the Facebook database. As argued in previous sections, Facebook is partially opening its walled garden and enables controlled flows of data outside the platform for no charge. It is exchanging the buttons, plugins and analytics for real-estate on external websites.²² Social Plugins are treated as part of Facebook and in their implementation by webmasters “as if they were agreeing to give Facebook some real estate on their website” (Haugen 2010). More than that, Facebook claims that these plugins should be considered as its extension rather than a collaboration, maintaining the idea of Facebook as a walled garden: “While these buttons and boxes appear on other websites, the content populating them comes directly from Facebook. The plugins were designed so that the website you are visiting receives **none** of this information. These plugins should be seen as an extension of Facebook” (Haugen 2010).

While the provision of real estate produces personalized and social web activity, webmasters do not get access to the personalized data, as they neither see discussions of their content on Facebook nor get personal data through analytics. Although the Like Button enables for engagement with the web content across multiple spaces, these distributed comment spaces come with a limited visibility. The data flows webmasters receive are aggregated and anonymized, in the form of the total number on the Like counter or Like Button Analytics which calculate the button impressions and engagement (Himel 2011). In this relationship, the Like as a web currency is exchanged for external web real-estate, for content flows and extended possibilities of data collection.

Currently, the Like is advancing to become a direct form of exchange. Commercial pages increasingly offer access to content if users like their official Fanpage, therewith create a Likewall, which requires the exchange of affect for content (Robles 2011). Especially musicians for instance have started to announce video clips on their official website but refer back to Facebook where users first have to like a page to see the content. Third parties therewith ask for an exchange of affects and social relations, as each like is being exposed to the users' contacts, for

22 <http://developers.facebook.com/docs/reference/plugins/like/>

access to content. In the case of Twitter, exchanging a tweet for content has become a regular exchange practice and has led to the emergence of services like Pay with a Tweet.²³ Likes and tweets are considered valuable because of their intensive capacities to create more engagement or to affect the users' contacts. Each like functions as a recommendation to a scaled social formation and with the exchange of a like for access to content, users trade their affects and social relations. In this sense, users do not pay with a monetary currency, but with an affectual and social one, and direct financial value is assigned to such recommendations.

Users do not only sell their affects in the form of likes to pass the Likewall, likes are being sold themselves as well. An increasing number of Like resellers²⁴ are offering packages of "real" Likes, promising that they can motivate a particular number of existing Facebook users to engage with a third party page on Facebook. The purchased Likers can even be specified according to their demographic data. Fixed prices start from 57\$ per 1000 fans. Through buying Likes, third parties can acquire user affects and exposure to scaled social formations in exchange for money. The purpose behind buying affects can be multifold, from enhancing the engagement metric for internal purposes, to attracting further Facebook users as a high number of Likes suggests that the Page has proved engaging and to insert content into existing social networks. The actual cost of a single Like is relatively small and its value lies in its intensive capacities to generate more engagement.

External social media monitoring services also try to make use of the dynamics of the Like economy, developing applications on top of the Facebook API and retrieving publicly available data with their own tools. This data is mainly used for consumer research purposes, for trend analysis, but also to determine the reputational value of brands and analyze their financial potential (Lury and Moor 2010, Arvidsson 2011). Therewith, the participation of social media tracking agencies might seem limited to the mere usage of available data and the creation of an even more extended infrastructure of calculation. But their interest in particular forms of data, such as sentiment, the affective attitude of users to topics or content (Arvidsson 2011), can be considered to have an impact on Facebook's development as well, taking potential commercial interests in data into account when designing new features. In this sense the Like button can be understood as an answer to an increasing corporate interest in the detection and calculation of sentiment and the transformation of the Like into a composite metric as response to the demand of quantifying transactional data.

In the case of users, both web users and Facebook users, multiple forms of exchange can be noted. First of all, the Like economy is enabling them to connect web experience to their Facebook profile as potential central web ID, to use the entire web and its contents for profile construction and social interactivity with their friends. The content and data flows enabled by the Open Graph increase the frames for action within Facebook, as content cross-syndication is simplified and users can interact with web content on the platform. According to Facebook, the Open Graph also allows users to experience the web in relation to their friends' interests and activities. In return, users are prompted to transform their affective reactions into quanta of Likes

23 <http://www.paywithatweet.com>

24 Such as <http://buyfacebookinvites.com>, <http://www.buyrealfacebookfans.com> or <http://buyrealfbfans.net>.

which enter complex flows of data from which a variety of actors benefit. While some of these data flows are visible to users, such as the number of Likes or the use of profile data for personalized advertising, some forms of participations are not visible or widely known. Among the invisible forms of participation is the fact that external Like Buttons function as cookies which tracks both Facebook users and non-users. Further, users do not know when their friends agree to third party applications or games to access their private data and do not see which developer or tracking company does access it via the API. It is also not visible for users how Facebook and their partners use their personal data for personal advertising, data mining and clustering. Whilst user affects are transformed into valuable quanta that allow to render them into commodified entities, the different modes of surplus they might create for other actors remain largely invisible.

These multiple modes of exchange indicate that the Like economy is characterized by a heterarchy of values in the sense of David Stark (2009) with different actors are pursuing different forms of value. While users are understood to engage with the platform and its external plugins to socialize, enjoy and build their profile (boyd 2010), Facebook aims to generate both sociality and data, external webmasters aim to increase traffic, cross-syndication and engagement, apps often promote engagement with brands or aim at data mining, and tracking agencies focus on data mining only. These multiple purposes create a tension of values and are enabled by the interrelation between metrification and intensification. The Like as web currency therefore has to be understood as internally different and multiple, quantifying affect and social relations, but producing a multiplicity of surplus for different actors. Moreover, these forms of surplus often remain invisible for other actors, especially for users and not everyone can benefit from the multiple values of this web currency. It has been shown that different actors can make specific use of Likes and not all Likes are connected to personal profiles, exchange affects or social relations. The Like thus comes with multiple intensities that are created by the infrastructure of the Like economy.

4. Social web or data rich web?

Participatory web environments have often been discussed in a post-Marxist terminology of labor, production and user exploitation. The involvement of users in the production of social media platforms has been understood as a form social production (Arvidsson 2008, Gorbis 2010), as prosumption or working consumers/users (Fuchs 2010, Cova and Dalli 2009, Zwick et al 2008) or as free labor (Terranova 2004) in which consumer voluntarily engage in productive activities without financial reward. The main criticism is that users might be empowered to interact and produce valuable content through social media platforms but that only the platforms can monetize these activities and benefit from the financial surplus they generate (Scholz & Hartzog 2010, Gorbis 2011, Fuchs 2010). Yet, the claim to reward users financially has been discussed critically too. Facebook for instance has generated a profit of 355 \$ in 2010 which can be translated into an average micro-contribution of 0.7\$ per user, a sum, which makes claims about user exploitation problematic (Arvidsson and Colleoni 2011). Moreover, the limited access and control over user data has been a key issue of critique (Scholz and Hartzog 2010), even

though Facebook now allows its users to download their data and is opening its Walled Garden successively.²⁵

Many post-Marxist forms of critique focus on the relation between social media platforms and their users only and attempt to frame user participation as a form of labor. Throughout this paper a different perspective has been offered: We have introduced webmasters, collaborating partners and external developers as agents of the Like economy who both contribute to its pervasiveness by implementing Facebook features across the web but also benefit from the dynamics they create. Most importantly, the paper has introduced an analysis of the Like economy starting from the medium-specific devices of the Like Button, Social Plugins and the Open Graph. These devices contribute to a large extent to creating a particular relation between social interactivity and economic value in the case of the Like economy. Starting of from Zuckerberg's vision, that the so-called social will be the future organizing principle of economies, the paper has shown that Facebook is creating a productive relation between the social and economic value through collapsing the social with the traceable and with data collection. It has been argued that there are three key dynamics to this collapse. The first is the interplay between metrification and intensification of user affects through the Like Button and the Open Graph API. It enables the simultaneous materialization, measurement and multiplication of user affects. The second is the relation between visibility and invisibility of dataflows, their production and the surplus they generate and the ways in which Facebook is simultaneously de-and re-centralizing the web. Neither do all actors get access to the data flows they generate, nor are they always aware they are producing data at all. Finally, the Like economy is making use of the relations of proximity of their Social Graph, producing a multiplicity of differently scaled social assemblages, from the anonymized population of all likers, to the limited visibility of Likes to selected friends.

The so-called social Facebook is interested in and which circulates in multiple modes of exchange in the Like economy is twofold, referring to a combination of users' affective investments and social relations. The Like comprises both, as it enables affective responses to a web object and at exposes them to social assemblages in order to create further engagement. These dynamics are enabled through the data-intensive, performative infrastructure which has to be understood and analyzed as an agent as well, as it makes the connection between social interactivity and economic value possible. In this sense, what is in the making is not only a social web, but an economy of the social enabled through the Like button.

There are several issues that are problematic about this Like economy. The first issue is the visibility/invisibility of the transformation of social interactivity into data and its flows. As shown in regard to the external Like Buttons, not all data flows generated are visible, such as the monitoring of browsing behavior through cookies or the access given to friends' data via access tokens. More than that, the majority of actors cannot access the data they create themselves. Users are not provided with a collection of all objects they liked or interacted with and therefore their engagement data has a short lived temporality. Webmasters cannot see which Facebook users engaged with their content, nor can they monitor discussions of their content within Facebook. In order to get at least partial access to the data they produced themselves, users have

²⁵ <http://www.facebook.com/blog.php?post=434691727130>

to sign up to self-monitoring or ego-tracking software to gain insights in their own engagement metrics and therewith supply these tracking devices with their valuable data as well.

A second issue is the fact that the emerging use of the Like Button and the Open Graph API make it difficult not to be productive for Facebook or not to be social. As noted before, an increasing amount of companies, artists and musicians are prompting Facebook users to like their content before giving access to it. They are asking for affects and social recommendations in exchange for content, creating a Likewall that requires affective investments to unlock. This further excludes people who are not using Facebook themselves. Moreover, any web user potentially contributes to the Like economy by browsing the Internet and requesting pages with Like buttons. Unless these users have installed a special plugin that blocks the activities of the Like Button or disabled the use of cookies, they cannot *not* be part of the Like economy. The pervasive infrastructure of the Like economy makes it difficult for web users not to contribute as it can convert ever more web activities into data and therewith objects of exchange.

Instead of claiming that engagement with Facebook has to be understood as labor, we suggest that Facebook is creating an infrastructure that does not require forms of labor but can seamlessly transform everyday activities, affective responses and social interactivity into multiple forms of surplus value. It is creating a digital space of ongoing measurement and multiplication: “in recent years the activity of calculation has become so ubiquitous that it has entered a new phase, which I call ‘qualculation’, an activity arising out of the construction of new generative microworlds which allow many millions of calculations to continually be made in the background of any encounter” (Thrift 2007, 90). In such an economy, it is not user engagement that is turning into labor, but it is life itself, affects, social relations, experience which can be rendered and remediated into valuable, countable and exchangeable entities which ideally multiply themselves. Instead of thinking of this process as labor, we suggest to understand it as capitalization through mediation. Affect and social proximity are not valuable per se, as they are intensive, hard to measure and to compare. It is the media infrastructure of the Like economy that allows their transformation into quantified Likes which can then enter multiple forms of exchange.

- Please note that this paper is work in progress -

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