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## **The Like economy – Social buttons and the data-intensive web**

Carolin Gerlitz and Anne Helmond, University of Amsterdam

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### **Abstract**

The paper examines Facebook's ambition to extend into the entire web by focusing on social buttons, developing a medium-specific platform critique. It contextualises the rise of buttons and counters as metrics for user engagement of different web economies to show that Facebook is not only creating a social web but a data-intensive fabric - the Like economy. The implementation of Like buttons enables data flows between the platform and external websites that enter multiple processes of exchange and contributes to a simultaneous de- and recentralisation of the web, advancing Facebook as the central hub. The Like economy instantly metrifies user engagement and affects into numbers on button counters, which can be traded but also potentially multiplied and scaled up. Whereas Facebook promotes social buttons as enablers of a more social web experience, its infrastructure collapses the social with the traceable and points to Facebook's limits of sociality.

**Keywords:** Social Web, Facebook, Social Buttons, Like economy, web analytics, metrification, affect, medium-specificity, digital methods, platform studies

## Introduction

Since April 2010, Facebook has increasingly expanded beyond the limits of its platform, offering devices that can turn any website and any web user into a part of its platform. The first step towards this expansion was the introduction of the Open Graph which allows external websites to link to the platform and its social connections through external Like and Share buttons. The possibilities to connect one's Facebook profile to web objects have even been more expanded after the last F8 developer conference in September 2011 with the introduction of Facebook actions and objects. Now developers can create apps and buttons that allow users to perform any custom action on any web object. The idea behind this expansion is to enable more social web engagement, as Facebook CEO Mark Zuckerberg suggests: 'making it so all websites can work together to build a more comprehensive map of connections and create better, more social experiences for everyone' (2010). In a later interview, he takes the promise of sociality even further, claiming that 'If you look five years out, every industry is going to be rethought in a social way' (Gelles, 2010).

In this paper we have examined Facebook's expansion into the web from a medium-specific perspective, that is 'to follow the medium' and to take its ontological distinctiveness (Rogers, 2012) seriously by focusing on the role of social buttons and their increasing implementation. By tracing the buttons and the data flows they enable, we show how Facebook uses a rhetoric of sociality and connectivity to create an infrastructure in which social interactivity and user affects are instantly turned into valuable consumer data. Linking Facebook's efforts to a historical perspective on the hit and link economy, we claim that what is in the making is not only a social web, but a recentralised, data intensive fabric - the Like economy. In this Like economy,

the social is collapsed with the traceable, as user affects and interactions are instantly measured for data mining purposes and multiplied in order to generate more traffic and engagement.

In what follows we first address the emergence of social buttons in relation to specific web economies, introducing the technical specificity of the Like button, the Open Graph and Social Plugins. We trace how these features create both data flows between Facebook and external sites and contribute to a simultaneous de- and recentralisation of the web, advancing Facebook as the central hub. Further, we address the capacity of the Like button to instantly metrify and intensify user affects – turning them into numbers on the Like counter that can potentially be multiplied and scaled up. Finally, we conclude by arguing that Facebook’s social web is creating an infrastructure of re-centralised data mining and draws attention to the limits of sociality in the context of the Like economy.

### **1. The Informational web: The Hit and Link economy**

The Facebook Like button is one of the many social buttons, also referred to as social bookmarking icons, that have proliferated across the web. These buttons allow users to share, recommend, like or bookmark content, posts and pages across various social media platforms such as Facebook, Twitter, Digg, Reddit, Delicious, StumbleUpon and Google+. They often come with a counter showing how many times the objects have been shared, recommended, liked or bookmarked across associated platforms. The emergence of these social buttons and counters can be traced back to the mid 1990s when hit counters showing the number of visitors of a website were common. In the following section, a genealogical account will introduce buttons and counters as

metrics of user engagement specific to different web periods and web economies.

In the early days of the informational web, the number of hits was deployed as one of the first metrics to measure user engagement with a website (D'Alessio, 1997). The concept of the informational web is used to describe the web as a medium for publishing content (Ross, 2009), characterised by the linking of information (Wesh, 2007). Hit counters displayed a rough indication of the number of visitors to a website, derived from the number of computerised requests – hits – to retrieve the page. Despite this rudimentary quality, hits became the standard for measuring website traffic (D'Alessio, 1997). Hits advanced to a central indicator for user engagement and soon served as a key metric for web advertising: the more hits a page retrieved, the more interesting it became for placing banner adverts. The increasing centrality of the hit and its exchange value was conceptualised in the notion of the 'hit economy' (Rogers, 2002: 196). While hits cannot be bought or exchanged directly, websites would buy their way into the top of search engines or onto the front page of portal pages in order to attract more hits and so be of more interest to advertisers (Rogers, 2002: 197).

The key metric of the informational web changed in the late 1990s when a new type of search engine, Google, shifted the value determination of websites from pure hits to hits and links, adding a qualitative dimension. Inspired by the academic citation index, Google introduced the link as a recommendation unit on the web and turned it into the main relevance measure for ranking websites (Page et al., 1998). Google founders Sergey Brin 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. Google so determined that not all links have equal value, as links from authoritative sources or links from sources receiving many inlinks are adding more weight to the algorithm (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. The algorithm established an economy governed by search engines that regulate the value of each link (Walker, 2002). In order to increase their PageRank, websites engage in mutual linking practices, but the central role of the link also gave rise to so-called black markets of links where reciprocal links are traded in order to improve a site's ranking. These markets and link farms create linking schemes between a number of websites and so thrive on artificial linking dynamics - which are considered bad linking practices by search engines and are increasingly penalised. But they also contribute to a commodification of links as web objects that can be traded, sold or bought within the 'link economy' (Rogers, 2002; Walker, 2002).

The move from merely hitting to linking is a first step to including social validation and relational value in search engine algorithms. However, this social validation largely remains an expert system, since 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 link economy beyond an expert system. First, the blogosphere re-introduced the notion of user engagement from the hit economy by taking the number of subscribers who receive automatic update notifications through site feeds and blog subscriptions as a quality measure of blogs. 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), thus making

the practice of linking 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 has led to radical changes in the link economy as Google and other search engines decided by mutual agreement with blog software providers that those links would not count in the link economy (Cutts and Shellen, 2005), assigning different weight to links even *within* websites. As blog comments are prone to spam, search engines decided to exclude user generated links from sorting algorithm and kept holding on to the informational web as expert system.

## **2. The social web: The Like economy**

The social web further developed user-focused web metrics introduced by the blogosphere and presented them to the entire web. The term social web is used to describe the shift from a web based on information provision and an expert-system to a participatory and collaborative production of content and its cross-syndication across the web (Beer 2009). Different from experts creating links between webpages in the informational web, the social web forms a set of relations created by users linking to multiple web objects such as pictures, status updates, profiles or people (Appelquist et al., 2010). Social buttons are a key feature of the social web and have profoundly reconfigured the practices of hitting and linking. They also enable new dynamics of exchange, which shall be conceptualised as the Like economy.

Social buttons emerged around 2005/06 when content aggregation websites such as Digg and Reddit popularised the acts of sharing and recommending content from across the web by creating a button that can be placed on any website enabling users to submit or vote for a post on the related platform. Implemented by webmasters

across the web, the buttons afford a number of predefined user activities (e.g. voting, recommending, bookmarking, sharing, tweeting, liking) in relation to their associated social media platforms. The related button counters show the total number of predefined activities performed on the object. For publishers the social buttons enable the cross-syndication of their stories across various platforms. Instead of webmasters creating an expert system of links between web content, the buttons enable users to participate in the recommendation culture on the web.

Facebook introduced social buttons with the launch of the share icon in 2006 as a way of sharing content from all over the web with one's contacts in order to invoke further social activities on the platform such as resharing, commenting and later liking (Kinsey, 2009). The icon was complemented with a counter in 2009, featuring the number of shares generated and tracking the popularity of an item on the web. Liking and the accompanying Like button were introduced in 2009 and were presented as a shortcut to commenting in order to replace short affective statements like 'Awesome' and 'Congrats!' (Pearlman, 2009). It was put forward as a social activity that can be performed on most shared objects within Facebook, such as status updates, photos, links or comments. Liking was initially only available within the platform and came with a counter showing the total number of likes as well as the names of friends who clicked it. In 2010, Facebook introduced an external Like button, which can be implemented by any web master on any website, and potentially makes all web content likeable. According to Facebook, more than 7 million apps and websites are integrated with the platform and more than 2 billion posts are liked and commented on per day (Facebook Statistics, 2011). With the increasing popularity of the Like button, browser plugins such as the official Like button add-on for Google



Chrome have been developed, enabling users to like any web content regardless of the presence of a Like button (Siegler, 2011). But the Like button not only captures actual likes, it is – just as the Share button – set up as a composite metric which aggregates all activities performed on an object: the number of both likes and shares of a object, such as an URL, likes and comments on stories within Facebook about this object and the number of inbox messages containing this object as an attachment.

The Like button is build on top of both links and hits, while adding an affective dimension to them. It can be understood as a so-called preconfigured link, as a click on the button automatically creates a hyperlink between external web content and the platform. By removing the need to manually copy and paste a URL to share, sharing is simplified and opened up to users rather than being exclusive to webmasters, producing a new infrastructure of ‘light‘ and ‘user-generated linking’. Yet, what is being created is more than just a link, as the Like presents the shared content as a positive, affective recommendation and enables data flows from the platform to the external website, incrementing the Like counter and providing Facebook Analytics, see below. Each like is supposed to generate further engagement but also traffic to the external websites - therewith also qualifying hits coming from Facebook as recommendation traffic. In this sense, Facebook has decided to promote the ‘like’ over the ‘share’ as both provide the same functionality, but the Like button features content as recommendation rather than a neutral ‘share’ - creating positive links and positive engagement.

The Like and the Share buttons are part of Facebook’s Open Graph API, which aims to connect Facebook’s social graph with the entire web. The social graph refers to the connections users create between each other and poses the term Facebook

uses to refer to the social network enabled through its platform (Facebook Developers, 2011). Facebook's social graph is regulated by the Open Graph Protocol, which defines how users can create connections with each other or with web objects. Although it is presented as an open infrastructure, Facebook controls the protocol and uses proprietary API calls to send and retrieve data and objects from and to Facebook's database. The connection between social and Open Graph is mainly established through so-called Social Plugins that enable data flows between Facebook, its social graph and external websites. Among the Social Plugins are the Like button, but also devices such as the Activity Feed featuring all public Facebook activities related to a topic or the comment box that links external comments to Facebook profiles. All plugins aim at enabling users to experience the web in relation to Facebook features, to connect any content or activity to their profiles and to see what other friends have engaged with.

These devices create an infrastructure in which web users can engage with potentially all web content outside of the platform through Facebook-based activities such as liking, sharing or commenting, setting off a number of data flows and exchange dynamics. Once Facebook users click on Like or Share button on an external website, this activity is documented on their Facebook walls and appears in their contacts' news feeds and/or tickers, while incrementing the Like button counter. The external web content now becomes available for further liking and commenting within the Facebook platform, generating additional data flows back to external counters. More anonymised data is flowing from Facebook to webmasters in the form of Facebook Analytics which shows button impressions outside and inside the platform, clicks but also anonymised, basic demographic data of likers such as age,

gender and location.

But not all contributors and contributions are visible. According to Roosendaal the Like button functions as a cookie that is activated once a visitor opens a site with an implemented Like button (2010). From that moment on, the button is tracing the visitor's browsing behaviour and is automatically generating data for Facebook by connecting it to the individual Facebook profiles. Being tracked by Facebook through such cookies can only be prevented by disabling the use of cookies in the browser options or by installing a browser add-on that disables third-party tracking such as Disconnect or Ghostery. However, this does not only apply to Facebook users, the Like button cookie also traces non-users and adds the information as anonymous data to the Facebook database. While the browsing data is said to be solely used by Facebook to enhance its user patterning, Like button impressions are fed back to webmasters through Facebook Analytics. Therewith the Like button turns any web user into a potential Facebook user, as each user may unknowingly contribute to the production of valuable browsing data for the platform.

At its 2011 F8 developer conference, Facebook has expanded the possibilities of content sharing and invisible participation even further, most notably through the aforementioned Facebook custom actions. When creating an app, developers are prompted to define verbs that are shown as user actions and to specify the object on which these actions can be performed. Instead of being confined to 'like' external web content, users can now 'read', 'watch', 'discuss' or perform other actions. While this extension of the Open Graph allows Facebook users to perform any action on any object, it also comes with the highly controversial feature of frictionless sharing that automatically posts such activities to the ticker, once users have signed up for an app

(MacManus, 2011). Thereby Facebook's actions and the new apps differ from the Like button in many ways. Whereas the button requires an active click to share content, the new actions enable automatic engagement with and sharing of content. Also, while recommendations via a Like direct users to websites outside of Facebook, the new actions only refer to Facebook-internal app content, making users remain within the platform.

The Open Graph and the external Like buttons create a data-intensive infrastructure which is characterised by multiple processes of exchange that create surplus value for a number of actors. Webmasters are granting Facebook real on their web pages estate – by integrating an iFrame displaying the button – in exchange for user engagement, platform traffic and user data through Facebook Analytics. Users are trading their data and affects to enable social interaction with other users and to perform their online identity. Facebook is opening its walled garden in a controlled way, letting carefully selected user data flow outside of the platform in order to maximise data flows inside the platform.

But also third party actors increasingly participate in the Like economy. Companies and artists have started setting up so-called Likewalls – trading access to content for a click on the Like of their Facebook Fan page. In order to increase user engagement, companies can purchase Likers in packages of 1k-100k from around \$50. Such Like farms – named after the link farms of the link economy – supposedly provide likes from real profiles that help to communicate Facebook pages to their network of friends. The Like is advancing into a key currency in the emerging Like economy, allowing for the exchange of multiple entities such as affects, data, traffic, web space and of course money.

The Like economy thus builds on key features of previous web economies such as the hit and the link economy, but introduces a number of changes, most notably the re-introduction of web users as main agents and the affective qualification of hitting and linking. In the informational web, Google has relied on expert links from webmasters and bloggers to create a link economy and at the same time has removed value from user links in the comments, whereas in the social web Facebook relies on user-generated links through liking and sharing. In addition, the platform is based and dependent on both webmasters and bloggers placing social plugins on their websites to create the infrastructure of the Like economy. At the same time Facebook also qualifies hits and links as affective recommendations and data-rich activities, as the plugins enable multiple data flows in the back-end. The Like combines both hits and links and creates a web economy in which a click on a button generates surplus for a wide number of actors.

### **3. The de- and recentralization of the web – The ecology of the Like economy**

To explore how the multiple processes of exchange are enabled and how the creation of surplus for the various actors is regulated, we will now look into the specific ecology of the Like economy. Facebook has been discussed and criticised as a walled garden, as a closed infrastructure, limiting connectivity to the web and only promoting sharing within the network itself (Berners-Lee, 2010). However, with the introduction of Social Plugins and the Open Graph, Facebook's activities such as liking, commenting and sharing are no longer confined to the space of Facebook but they foster the cross-syndication of content into the platform and enable partial data flows outside of Facebook. While the introduction of the Open Graph led to a partial

opening of the walled garden, the introduction of Facebook's new Open Graph actions and frictionless sharing are considered a counter-movement: incorporating even more activities happening outside of the platform and at the same time encapsulating them into the platform instead of creating controlled outflows of data (Sabbagh, 2011).

The increasing integration of social buttons into websites and the use of Like button browser plugins renders both the sites and Facebook more open and less fixed. Engagement with web content is not confined to designated comment spaces, but takes place across a wide range of platforms and within Facebook across many profiles and news feeds. Within this process, external websites cannot be considered as discrete entities, but function as initialisers for web engagement. The more social plugins a website integrates, the more it opens itself up to being shaped by the activities of Facebook users. Users will also experience such websites in a personalised way, as Social Plugins provide recommendations based on the user's contacts and features the engagement of friends with the website. Whereas these are rather novel perspectives for the web, they are key characteristics of social media platforms, which have little original content and are shaped by cross-syndication practices (boyd, 2010). The data flows of the Like economy and its cross-syndication of content make both Facebook and external websites more relational as activities in one space will affect the other. This partial opening of the walled garden is also an incentive for webmasters to participate in the Like economy since the social buttons provide a new way to get engagement with and traffic to their content. In the informational web, with its hit and link economy, website traffic is driven by portals, search engines or referrals from other websites whereas in the social web traffic

increasingly comes from social media platforms where content is shared and has the potential of being reshared in a new circle of contacts.

While these dynamics can be understood as a decentralisation of both Facebook and external websites, as their key features and their contents are distributed across a wide range of sites, profiles, feeds and tickers, at the same time all links and data-flows go directly back to Facebook. Especially Facebook's efforts to make each and every web experience more social, hence connecting all web experience to its platform, indicates a simultaneous rewiring of the web. Social buttons recentralise linking practices as they instantly direct back to the platform as opposed to the reciprocal linking practices of webmasters. The Like economy is creating a fabric of the web – an underlying infrastructure – in which Facebook is increasingly advancing as the central hub of both linking and data flows, regulating to which extent other actors are allowed to participate and benefit.

The introduction of Open Graph actions and frictionless sharing adds another quality to the dynamics of recentralisation. First of all, these features integrate external content even stronger into the platform, as engagement with the web and mobile services is now promoted via apps rather than external buttons which refer users to content within the platform as opposed to linking to external websites. Facebook's actions allow to differentiate the possibilities of engaging with content. Users no longer just have to like or to share, but can materialise multiple actions by using related apps and thus feed back more profile data into the platform. Moreover, the new apps are not limited to web-native content such as websites and blogposts, but are open to all possible objects. Hence, data collection from users can be multiplied far beyond the potentials of the Like button.

This process is accelerated through frictionless sharing which connects any action performed with the app instantly to user profiles and posts it to the ticker. Data collection is thus no longer dependent on rather conscious acts of sharing or liking, but enables instant and scalable monitoring of its users, recentralising data mining even further (MacManus, 2011).

A number of actors are contributing to the creation of this fabric of the web, but not all are given full access to the data they produce themselves. In the case of external Likes, data flows are first of all directed to Facebook and are then fed back in a highly controlled way to other actors involved. Until late 2011, users' Likes and Shares were merely posted on their walls and not saved centrally. This has changed with the introduction of the Timeline, the successor of the Facebook profile wall, which allows to arrange one's Facebook activities per year or month, enabling users to turn their profile into a lifetime diary. Instead of just listing likes and shares in an endless stream, Timeline summarises them in monthly or annual reports. However, users still cannot directly search and use their Likes as bookmarking system and Likes partially remain their status as fleeting objects for spontaneous engagement. Webmasters, who grant Facebook space on their websites by implementing buttons, also cannot directly see how their content is being discussed inside the platform. Facebook only enables very controlled flows of data back to webmasters in their analytics, such as the impressions and referrals of their content in the news feed, ticker and timeline and basic, anonymised demographic user data.

In order to extend its data mining and to become the central hub of social linking – which refers to linking practices enabled through social buttons, Facebook is reversely dependent on the dynamics of decentralisation as discussed above. Only



because the platform can expand some of its key features into the entire web and decentralise web content and the discussion thereof, it can also recentralise and monetise the created data flows and links, as they all direct back to Facebook. The dynamics of de- and recentralisation are not only interconnected, they also are a prerequisite for the Like economy. They enable Facebook to maximise its data mining activities while at the same time keeping control over the key entities of exchange – data, links, traffic and – as will be shown in the following section – user affects.

#### **4. A web economy of metrification and intensification**

The social web that Facebook attempts to create is not only directed at enabling social interactivity, but also at the production and circulation of data. Improving the ‘social experience’ of the web functions as a vehicle for other objectives such as widening data mining practices and profiling users. We will now explore how the Like economy is creating a data-intensive infrastructure in which social interactivity and engagement with web content is instantly turned into standardised and quantified metrics and at the same time multiplied and intensified.

The Like button transforms users’ affective, spontaneous responses to web content into quanta of numbers on the Like counter. It provides a one-click shortcut to express a variety of affective responses such as excitement, agreement, compassion, understanding, but also ironic and parodist liking. Such affects (Massumi, 2002) are not measurable, countable and comparable as such, but are rather intensive in the sense of DeLanda (2006), referring to transforming states of being. By asking users to express various affective reactions to web content in the form of a click on a Like button, these intensities can be transformed into a mere number on the Like counter

and made comparable. Users can materialise their affective responses while Facebook can count and monitor them at the same time.

While the Like button collapses a variety of mainly positive affective responses, the Like counter combines even further activities such as commenting, sending and sharing into the same metric, since the like is designed as a composite metric as described above. These different forms of engagement with web content are regulated in the Open Graph protocol, which enables particular reactions and activities rather than others. Following Galloway, protocol might not directly produce actions but sets out the conditions and dispositions for actors to act and interact (2004). In this sense, social buttons both prestructure and enable the possibilities of expressing affective responses to or engaging with web content, while at the same time measuring and aggregating them. Additionally, as Like buttons also function as cookies, they instantly collect data about button impressions and browsing behaviour which further qualify content engagement.

The generated data flows are used in a twofold way. Firstly, to enrich Facebook's database and to cluster users for personalised advertising as discussed before. Secondly, to show users what their contacts have liked or have engaged with on the web as recommendations within the platform. On top of that the data is also used in social plugins on external websites in order to foster even more engagement and constantly generate more user data.

The quanta of data produced are not just metrifications of intensities, they also have intensive capacities themselves. Facebook advertises the external Like button as generator of traffic and engagement (Facebook + Media, 2010). Likers, the platform argues, are more connected and active than average Facebook users. 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' recommendations or will be influenced by what their friends like. With social plugins, Facebook is enabling the systematic exposure of web engagement to a users' network of friends: they can immediately see which contacts have engaged with the page and the content they have recommended or discussed. In order to reach potential likers and to create ongoing liking dynamics, Facebook is recommending the implementation of several plugins that directly show the activities of a user's contacts (Facebook + Media, 2010). Each like can potentially generate more likes, shares and comments when exposed to a particular social formation of Facebook friends and can therefore be considered as scalable. In this way, the Like button not only enables the materialisation and metrification of affective responses - it is designed to intensify them as well.

This process of intensification is based on the creation of differently scaled social formations to which acts of liking, sharing and commenting are being exposed. While the Like counter shows the anonymous number of all likers and sharers, detached from personal profiles, the majority of social plugins only depict the activities of a users' contact and thus will look different for each visitor. Depending on their Facebook privacy settings, the activity of liking may be visible to everyone, to all friends or a selected group of friends and is further distributed across their timeline, the news feed and their ticker, creating threefold impression statistics for webmasters. If a friend responds to a like with another like or a comment, this activity is again made visible in new spaces, creating ever more social formations. Each device of the Like economy is creating differently scaled social assemblages in

DeLanda's sense (2006), formations of users that are not stable but subject to change. The data flows between profiles, the exposure on walls and the privacy settings allow to scale up these formations to almost every web user or scale down to a selected few Facebook friends. The engagement with web content within Facebook is thus not only decentralised across a variety of news walls and tickers, but is also spread across a multiplicity of social formations of different scales. Facebook actively encourages users to control the content they are exposed to: users can now subscribe or unsubscribe to activities of their friends or other public profiles, choosing between all- and top stories. In addition to that, Facebook has introduced the close friends list whose activities are featured more prominently, weighting particular friends stronger than others. This weighting also feeds back into the increasingly differentiated news feed, which consists of top stories, regular stories and the fast changing ticker. What appears in these spaces is regulated by the Graph Rank, an algorithm that gives prominence to activities of selected contacts or subscriptions that have generated many activities in order to multiply this engagement even further.

Such dynamics of intensification show that engagement with the Like economy is designed as an ongoing and potentially scalable process. In this framework, a like is always more than one. The value of a single like 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 later. If a like has to be understood as  $\geq 1$ , the Like economy creates a system in which surplus and value creation is gradually situated in the future. The Like button on the one hand metrifies a number of affective responses into a comparable metric, but the Open Graph exposes these quanta of data to carefully selected social formations in which they are supposed to be contagious, to

evoke further likes or shares. The infrastructure of the Like economy therewith creates a particular relation between individual user activities and referent social formations in which liking becomes scalable and quantification becomes productive or more than representational (Thrift 2008). Different from in the informational web which was structured by the universal Google's PageRank algorithm, Facebook is not aiming for such universal ranking through liking. It is creating multiple rankings and a recommendation system based on weighted personal contacts, in which users do not have to search for content, but content is presented to them.

Yet, it is not only user affects which are being scaled and intensified, the Like economy also contributes to an increasing cross-syndication of content. As mentioned above, with each like or share, web content is being syndicated to different news feeds, topstories, tickers and user walls within the platform. As discussed in regard to the decentralisation of web content and its engagement, the potential scalability of liking also renders cross-syndication more scalable. Unlike the concept of the informational web, which follows the idea that content is being produced in order to be found, in the social web content is created to be shared, distributed and cross-syndicated.

The relationship between economic value and the social in the case of Facebook is based on the ongoing measurement, calculation and scalability of affect and interactivity. It is only the traceable social that matters to Facebook, as the still intensive, non-measurable, non-visible social is of no actual value for the company: it can neither enter data mining processes nor be scaled up further. Therewith, Zuckerberg's claim that in the future economies will be organised by the social, is rested on collapsing the social with the quantifiable and traceable. Being social online

means being traced and contributing to value creation for multiple actors like Facebook and external webmasters.

The ongoing measurement of affect and engagement is directed at creating a system of recommendation, which projects what users might like based on their friend's preferences. Just as the social is collapsed with the traceable, the metrifying capacities of the Like button are inextricable from their intensifying capacities. Within the Like economy, data and numbers have both performative and productive capacities, they can generate user affects, enact more activities and thus multiply themselves. To put it with Simondon: 'Beyond information as quantity and information as quality, there is what one could call information as intensity' (cited in Venn, 2010: 146). These dynamics are enabled through the medium-specific infrastructure of the Like economy, which has to be understood and analysed as an agent as well, as it makes the connection between social interactivity and economic value possible.

## **5. The limits of sociality in Facebook's social web**

Corporate interest in social interactivity and user affects, as well as the collapse of the social into the traceable, are not new to Facebook, but have to be understood in the trajectory of post-Fordist economies, corporate interest in transactional online data as well as attempts to objectify consumer affects (Arvidsson, 2011). Post-Fordist and knowledge intensive economies have witnessed an increasing blurring of life and labour, of social interactivity and the production of value. In the informational web, user preferences and basic activities could be read from server log files, used to derive engagement measures such as hits and time spent on a page. With the rise of the

social web, companies realised that everyday online activities provide a rich source of information about user preferences, activities and affects that had previously only been available through market research techniques – so-called transactional data. An increasing range of social media monitoring services is currently tracking and analysing user behaviour online, instantly turning social activity and web engagement into different quanta of data (Lury and Moor, 2010). Special attention is being paid to sentiment, the positive, negative or neutral relation users have to topics or web objects in order to forecast potential consumption (Arvidsson, 2011). In this sense, Facebook's endeavours are not new and have to be accounted for in the context of corporate social media monitoring. However, the Like economy creates an infrastructure that not only allows to mine transactional data instantly but also to multiply it.

Throughout the paper we have approached this development from a medium-specific perspective by discussing how web native devices such as social buttons and the Open Graph have contributed to this collapse of the social and the traceable. Comparing the emerging Like economy with the hit and link economy, we have explored how the launch of social buttons has reintroduced the role of users in organising web content and the fabric of the web – and how the infrastructure of the Open Graph has turned user affects and engagement into both data and objects of exchange. Starting from Zuckerberg's vision, in which the so-called social will be the future organising principle of economies, we have shown that in the case of Facebook this has been accomplished by collapsing the social with the quantifiable and traceable. Being social online means producing surplus value for Facebook. We have presented a twofold analysis of the Like economy. First, by showing how it is creating a particular

fabric of the web through social buttons, in which the platform and external websites are at the same time de- and recentralised. Decentralised, as the Like economy fosters increasing data flows and cross-syndication of content. Re-centralised, as the fabric of the web is no longer created between webmasters, but always links back to Facebook who also regulates the access to the created data flows for the different actors involved. Second, by following the medium-specific perspective further, we have drawn attention to the capacity of the Like button to both metrify and intensify user affect and engagement. It can be argued that the Like economy is creating a digital space of ongoing measurement and multiplication of user affect and interactivity.

User engagement online has so far often been discussed in a post-Marxist terminology of labour, production and user exploitation. The involvement of web users in the production of social media platforms has been understood as a form of social production (Scholz and Hartzog, 2010), as prosumption or working consumers/users (Fuchs, 2010) or as free labour (Terranova, 2004) in which consumers voluntarily engage in productive activities without financial reward. The medium specific perspective offers a complementary account, drawing attention to the role of devices. Instead of thinking of user engagement as labour, we have suggested that the Like button and the Open Graph constantly turn life itself, including affects and social relations, into countable and exchangeable entities of data which ideally multiply themselves. Affect and social proximity are not valuable per se, as they are intensive, hard to measure and to compare. It is the medium-specific infrastructure of the Like economy that allows their transformation into quantified likes, which can then enter multiple forms of exchange: from producing data for user mining and patterning, to creating recommendation traffic from Facebook, getting access to Like



button statistics or moving behind the Likewall.

To conclude, we will return to Zuckerberg's vision that in the future, the social will become the key organising principle of economies. Facebook is claiming to integrate more social activities into its platform, as former employee Matt Cohler explains: 'Facebook has always thought that anything that is social in the world should be social online' (Gelles, 2010) – a claim that becomes particularly vivid in relation to the new apps which allow for the documentation of any potential action.

But there are limits to Facebook's enclosure of sociality, most notably in the current absence of the widely requested Dislike button as a critical counterpart to the Like button. Despite increasing user demand, Facebook has not shown any intentions to implement a Dislike button feature. Although such a button might comply with corporate interest in both positive and negative sentiment and might – just as the Like button – simultaneously metrify and intensify negative affective responses, Facebook abstains from its implementation. The platform officially claims that a one-click solution for negative affect might lead to insensitive use (Sawens, 2010). Disliking has further been blocked from becoming part of the action apps, making sure developers will not introduce the Dislike feature indirectly.

Yet, the decision to abstain from 'disliking' also bears economic dimensions as traffic and engagement generated through Like buttons can be considered as positive impressions and activities. Clicks on the Like button function as recommendations of external web content and thus are likely to create further positive reactions or site impressions, all adding to the external Like counter as measure of positive or at least neutral engagement. Opening up the possibility of a one-click solution for critique or controversial linking could potentially create negative traffic,

which cannot be collapsed in the composite Like counter and might not be desired by webmasters. The Like economy is facilitating a web of positive sentiment in which users are constantly prompted to like, enjoy, recommend and buy as opposed to discuss or critique - making all forms of engagement more comparable but also more sellable to web masters, brands and advertisers who are less interested in getting critical or negative referral traffic from Facebook. The Open Graph protocol prestructures the metrification and intensification of recommendations while critiquing and disliking remain rather intensive and non-measurable. Hence, while Facebook claims that it aims to turn any social engagement into a part of its platform, the absence of negative affects has until the autumn of 2011 marked the limits of Facebook's understanding of sociality. The introduction of the activity apps has complicated the affective space of Facebook, allowing for differentiated and even negative activities in relation to web objects, such as to hate, disagree and criticise - while the action "dislike" remains blocked. Yet, such activities cannot be performed on potentially any web objects, as liking allows, but are limited to the objects defined by the developers.

The Like economy has thus created an infrastructure that comes across as facilitating a more social web experience, but it only enables particular forms of social engagement and affective responses through its protocol, collapsing the social with the traceable and marketable and filtering it for positive affects.

## **Notes**

1. 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 commentspaces and allow for engaging with content outside of the website.

## References

- Appelquist D, Brickley D, Carvahlo M, et al. (2010) A Standards-based, Open and Privacy-aware Social Web. *W3C Incubator Group Report*. Available at: <http://www.w3.org/2005/Incubator/socialweb/XGR-socialweb-20101206/> (accessed 18 October 2011).
- Arvidsson A (2011) General Sentiment - How Value and Affect Converge in the Information Economy. *Social Science Research network*. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1815031](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1815031) (accessed 18 October 2011).
- Beer D (2009) Power through the algorithm? Participatory web cultures and the technological unconscious. *New Media & Society* 11(6): 985-1002.
- Berners-Lee T (2010) Long Live the Web: A Call for Continued Open Standards and Neutrality. *Scientific American*. Available at: <http://www.scientificamerican.com/article.cfm?id=long-live-the-web&print=true> (accessed 4 May 2011).
- boyd d (2010) Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications. In: Papacharissi Z (ed) *Networked Self: Identity, Community, and Culture on Social Network Sites*. New York: Routledge, 39-58.
- Cutts M and Shellen J (2005) Preventing comment spam. *The Official Google Blog*, 18 January. Available at: <http://googleblog.blogspot.com/2005/01/preventing-comment-spam.html> (accessed 4 May 2011).
- D'Alessio D (1997) Use of the World Wide Web in the 1996 US election. *Electoral Studies* 16(4): 489-500.
- DeLanda M (2006) *New Philosophy of Society: Assemblage Theory and Social Complexity*. London: Continuum.
- Facebook + Media (2010) The Value of a Liker. Available at: [https://www.facebook.com/note.php?note\\_id=150630338305797](https://www.facebook.com/note.php?note_id=150630338305797) (accessed 17 October 2011).
- Facebook Developers (2011) *Graph API*. Available at: <https://developers.facebook.com/docs/reference/api/> (accessed 17 October 2011).
- Facebook Statistics (2011) Available at: <https://www.facebook.com/press/info.php?statistics>

- (accessed 17 October 2011).
- Fuchs C (2010) Labor in Informational Capitalism and on the Internet. *The Information Society* 26(3): 179-196.
- Galloway A (2004) *Protocol: How Control Exists after Decentralization*. Cambridge, MA: The MIT Press.
- Gelles D (2010) Facebook's grand plan for the future. *FT Magazine*, 3 December. Available at: <http://www.ft.com/intl/cms/s/2/57933bb8-fcd9-11df-ae2d-00144feab49a.html#axzz1ayaHS1Vs> (accessed 15 October 2011).
- Gibson D, Kleinberg J and Raghavan P (1998) Inferring Web Communities From Link Topology. *HYPertext '98. Proceedings Of the Ninth ACM Conference On Hypertext and Hypermedia: Links, Objects, Time and Space*: 225–234.
- Kinsey M (2009) Keeping Count Of Sharing Across the Web. *The Facebook Blog*, 26 October. Available at: <http://blog.facebook.com/blog.php?post=165161437130> (accessed 16 January 2011).
- Lury C and Moor L (2010) Brand Valuation and Topological Culture. In: Aronczyk M and Powers D (eds) *Blowing up the Brand*. New York: Peter Lang, 29-52.
- MacManus R (2011) The Pros & Cons of Frictionless Sharing. *ReadWriteWeb*. 28 September. Available at: [http://www.readwriteweb.com/archives/frictionless\\_sharing\\_pros\\_cons.php](http://www.readwriteweb.com/archives/frictionless_sharing_pros_cons.php) (accessed 12 October 2011).
- Massumi B (2002) *Parables for the Virtual: Movement, Affect, Sensation*. Durham, N.C: Duke University Press Books.
- Page L, Brin S, Motwani R and Winograd T (1999) The PageRank citation ranking: Bringing order to the web. *Stanford InfoLab*. Available at: <http://ilpubs.stanford.edu:8090/422> (accessed 16 October 2011).
- Pearlman L (2009) I Like This. *The Facebook Blog*, 10 February. Available at: <http://blog.facebook.com/blog.php?post=53024537130> (accessed 16 January 2011).
- Rogers R (2002) Operating Issue Networks On The Web. *Science as Culture* 11(2): 191-213.
- Rogers R (2005) Old and New Media: Competition and Political Space. *Theory & Event* 8(2).
- Rogers R (2012 forthcoming) *Digital Methods*. Cambridge, MA: MIT Press.
- Roosendaal A (2010) Facebook Tracks and Traces Everyone: Like This! *Social Science Research network*. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1717563](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1717563) (accessed 16 January 2011).
- Ross J (2009) John Hagel on The Social Web. *O'Reilly Radar*, 24 October. Available at: <http://radar.oreilly.com/2009/10/john-hagel-on-the-social-web.html> (accessed 5 May

2011).

- Sabbagh D (2011) Google evangelist warns Facebook could be the next AOL or IBM. *The Guardian*, 21 September. Available at: <http://www.guardian.co.uk/technology/2011/sep/21/google-facebook-vint-cerf> (accessed 18 October 2011).
- Sawens P (2010) Facebook Dislike Button: Why it Will Never Happen. *The Next Web*, 10 October. Available at: <http://thenextweb.com/socialmedia/2010/10/10/facebook-dislike-button-why-it-will-never-happen> (accessed 18 October 2011).
- Scholz T and Hartzog P ((n.d.)) Toward a critique of the social web. *Re-public: re-imagining democracy*. Available at: <http://www.re-public.gr/en/?p=201> (accessed 18 October 2011).
- Siegler MG (2011) Facebook Also Quietly Rolled Out A Like Button Chrome Extension. *Techcrunch*, 1 September. Available at: <http://techcrunch.com/2011/09/01/facebook-chrome-like-button/> (accessed 16 October 2011).
- Terranova T (2004) *Network Culture: Politics for the Information Age*. London: Pluto Press.
- Thrift N (2008) *Non-Representational Theory: Space, Politics, Affect*. London: Routledge.
- Venn C (2010) Individuation, Relationality, Affect: Rethinking the Human in Relation to the Living. *Body & Society* 16(1): 129 -161.
- Walker J (2002) Links and Power: The Political Economy Of Linking On the Web. *HYPertext '02. Proceedings Of the Thirteenth ACM Conference On Hypertext and Hypermedia: 72–73*.
- Wesh M (2007) Information R/evolution. *YouTube*. Available at: <http://www.youtube.com/watch?v=-4CV05HyAbM> (accessed 4 May 2011).
- Weltevrede E (2011) Conference panel discussion. Digital Methods Initiative Winter Conference 2011, University of Amsterdam.
- Zuckerberg M (2011) Building the Social Web Together. *The Facebook blog*, 21 April. Available at: <https://blog.facebook.com/blog.php?post=383404517130> (accessed 16 October 2011).