

Spring 3-19-2013

Social Media Monitoring visualisation: What do we have to look for?

Christopher Hackett

The University of Salford, C.A.Hackett@salford.ac.uk

Gordon Fletcher

University of Salford, G.Fletcher@salford.ac.uk

Aleksej Heinze

University of Salford, A.Heinze@salford.ac.uk

Follow this and additional works at: <http://aisel.aisnet.org/ukais2013>

Recommended Citation

Hackett, Christopher; Fletcher, Gordon; and Heinze, Aleksej, "Social Media Monitoring visualisation: What do we have to look for?" (2013). *UK Academy for Information Systems Conference Proceedings 2013*. 49.
<http://aisel.aisnet.org/ukais2013/49>

This material is brought to you by the UK Academy for Information Systems at AIS Electronic Library (AISeL). It has been accepted for inclusion in UK Academy for Information Systems Conference Proceedings 2013 by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Social Media Monitoring visualisation: What do we have to look for?

Christopher Hackett

*Centre for Digital Business, Salford Business School,
The University of Salford, UK
Email: C.A.Hackett@salford.ac.uk*

Gordon Fletcher

*Centre for Digital Business, Salford Business School,
The University of Salford, UK
Email: G.Fletcher@salford.ac.uk*

Aleksej Heinze

*Centre for Digital Business, Salford Business School,
The University of Salford, Manchester, UK
Email: A.Heinze@salford.ac.uk*

Abstract

The need for accurate and readily understandable social media monitoring is an issue faced by any organisation irrespective of their size or current levels of engagement with social media. It is increasingly a truism of social media that if an organisation does not set out to manage and build their profile positively then someone else will build it anyway in whatever form they care to shape.

This short paper examines the visual representation of the impact of Facebook liking activity. The emphasis is on the reverse and negative effects of the less commonly reported effects of decay rates or 'unliking'. By employing visualisations through this paper it is also an exploration of the mechanisms by which social media monitoring can become an integral aspect of management information reporting and decision making. The overall question posed by this work is what aspects of social media monitoring can provide clear benefits to an organisation and ultimately what social media objectives create genuine value for an organisation?

Keywords: Social media monitoring tools, Visualisation techniques, Facebook strategy

1.0 “You are gaining likes but have you retained existing likes?”

In academic research (Taylor et al. 2011) business management (Zarella 2012) and the mass media (Walsh 2012) much prominence is attached to the total number of ‘likes’, or previously ‘fans’, that a brand's *Facebook* page has attracted. A brand can invest a great deal of time and human resources to increase the number of likes that a page has and there are numerous methods that can be employed to achieve this effectively. The general commercial drivers for the activity beyond a rise in brand status is the hope that an increase in page ‘likes’ will result in gaining content distribution reach to each of these now identifiable fans. However, this amorphous goal is itself a reflection of the general lack of maturity that still exists within social media marketing (Hand and Ching 2011). There is, for example, recognition that campaigns must have measurable objectives (Mangolda and Fauldsb 2009). However, it remains questionable as to whether aiming to gain likes and then measuring the difference before and after the campaign creates tangible value for the organisation. In other words, do the objectives match the needs of the organisation?

In contrast to the well documented drive towards gaining likes less attention has been given to the reverse action of “unliking”. Unliking is the process of removing a “like” connection between a user and a brand's *Facebook* page. The underlying reasons a user may decide to remove this connection is beyond the scope of this short paper. However, personal communication suggests that the range of reasons can vary significantly but it is important to recognise that unliking is a response to a brand that goes beyond simple indifference and is an active indication of dissatisfaction with a brand where previously there was support. We know anecdotally from the “Disappearing Romney” microsite that people actively unlike public *Facebook* pages and this can bring about a negative change in the overall like count. There is however very little written academically or commercially about this phenomenon, its meaning or proven strategies to respond to these user actions.

Examining the information *Facebook* page owners have access to through the Insights API we can begin to better understand the behaviour patterns of total ‘likes’ and decipher the relationship that these have to brand success. If we position an increase in ‘likes’ in terms of an efficiency of effort then it follows that it is important to assess any lost effort. Lost effort can be attributed to many outlets, the most frequent - and

the experience of all marketing campaigns - being the lack of response to a call to action. However, more interestingly we can monitor the unliking of a *Facebook* page.

(1)

$$New\ Total\ Likes = Existing\ Likes + \sum_{t = start\ date}^{end\ date} New\ Likes_t - Unlikes_t$$

However, the formula given in (1) fails to take into account the technical behavior of the *Facebook* platform when accounts are removed from the social network either for being a ‘fake’ account or because the user has simply deactivated their account. There is therefore an unknown but observable change beyond the data provided by *Facebook* through the Insights API regarding user activity. This observable change is described in formula (2) and is incorporated into (3) in order to correct (1).

(2)

$$Other_Change = \sum_{t = start\ date}^{end\ date} Likes\ Added_t - Likes\ Removed_t$$

(3)

New Total Likes

= *Existing Likes*

$$+ \sum_{t = start\ date}^{end\ date} (New\ Likes_t - Removed\ Likes_t) + Other_Change_t$$

The nature of the values that are contained within *Other_Change* means that it is inherently biased towards a negative value; after all it would be improbable that genuine spam accounts would be reactivated by *Facebook* administrators whereas those in other situations have an uncertain degree of probability towards their accounts being reactivated.

2.0 Liking and Unliking patterns

At any point in time the removal of likes can be regarded as an erosion in brand value. In the case of Mitt Romney’s *Facebook* presence this is observed through the overall total number of likes decreasing (disappearingromney.com). This observed effect is extreme and arguably this scale of the reversal in likes is a very rare occurrence.

However, and in contrast, for the commercial pages from which we gathered data, the effect was represented as a slow gradual undermining of the total likes being accumulated by the page. The effect is observed superficially solely as a flattened increase in the total number of likes. Without awareness of the influence of unliking on the total number of likes the initial assumption of management may be to regard a campaign as simply being less successful. However, we argue that the erosion of likes brought by unliking masks a more complex campaign interaction that cannot be readily reduced to the binary of success or failure.

It is problematic for any organisation to assume that page 'likes' act cumulatively. This thinking process should be carefully reconsidered as it obscures a number of important observations;

a) Attraction and retention of fans is the basic building block of a successful social presence not simply attraction. This subtle but important difference means that key performance indicators (KPIs) which simply target attraction (e.g. the generation of 'New Likes') are potentially flawed if they are not complemented by at least one KPI that attends to the retention of 'Existing Likes'.

b) The change of total number of likes may be incorrectly attributed to a simplistic model where the likes that are acquired are then kept indefinitely. This naively assumes a steady state sense of positive feeling towards a brand.

Studying unliking behaviour on *Facebook* pages is correctly difficult without a page owner's consent. To better understand the effect of 'like' erosion we approached three *Facebook* page administrators for inclusion in our analysis. For the purposes of this paper we have taken steps to maintain the anonymity of the organisations involved as the pattern and traits of unliking potentially can reveal commercially sensitive intelligence. However, Table 1 provides the basic summary characteristics for the only page that we currently have permission to expose to wider scrutiny. The pages were drawn from a range of industry sectors with varying scales of activities and campaigns having been directed at the pages. In effect, and purposely, there was no direct association between any of the pages but each revealed the same broad tendencies and patterns of activity that define the phenomena of unliking. After been granted permission to access each page we downloaded administrator Insights data for

a period of 12 months. The start and end dates for each time series used for analysis was the same across all three *Facebook* pages but are withheld to further protect the page’s anonymity.

	Page A
Language	English
Country	UK
Fans at Year 0	600-650
Fans at Year 1	900-950

Table 1: Summary of one *Facebook* page studied

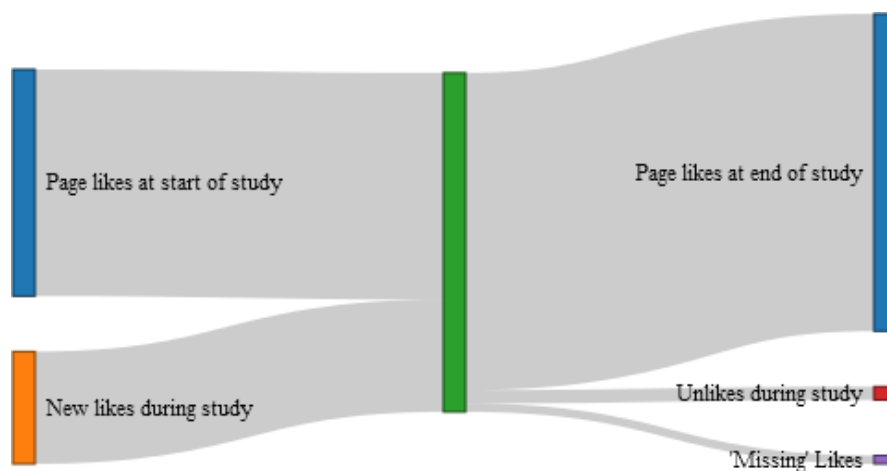


Figure 1: Sankey diagram showing transition of likes for Page A during period of study

Table 1 reveals a consistent upward trend for fans during the period of examination. A conclusion that, in isolation, a page administrator would readily identify and duly report uncritically as management information. This ignores the more complex behaviour outlined in Figure 1 and identified from analysis of Page A liking activity. Analysis of “New likes during study” would endeavour to distinguish ‘natural’ increases from the effects of campaign activity. However, significant intelligence can be gained from equal attention to identification of the source of “Unlikes during study” and whether they came from a ‘natural’ erosion of the “Page likes at start of study”, are a negative reaction by previous fans to a new campaign or are the immediate counter-response of unliking after being “New likes during study”. This latter prospect bears some similarity with the “Bounce rate” or “Goal funnel dropout” found in Google Analytics in which new fans reverse their decision very soon after making a positive commitment. Identifying the period of time that has elapsed

between individual liking and unliking activity would bring additional nuances to further research in this area. Further insight to the interrelationship between liking and unliking and their meanings requires the input of additional sources of data. In some cases additional social media services such as Twitter and the separate datasets their reporting tools provide enable a degree of confirmation and triangulation with the experiences observed through Facebook.

3.0 Future work

While it is beyond the scope of this short paper there is a need for further research into the drivers behind ‘like erosion’. This work will be of use for social media campaign managers by providing them with the understanding and parameters to enable a maximising of the Return On Investment (ROI) on their assets. Knowing the total number of followers with an interest in a product, service or brand is an existing metric founded on the positive responses received to a campaign. However, even this value must account for existing likes where the response to a new campaign has been either neutral or positive. Each brand and sector will possess ‘natural’ rates of like activity that occur irrespective of any campaign activities. Taking these observations further by introducing understanding of unliking behaviour can add additional insight by associating the triggers that have provoked a negative response from both existing and new likes. Measuring liking and unliking activity together with appreciate of natural rates of increase and erosion provides indications of negative, neutral and positive responses as indicated in Table 2. This is in contrast to current reporting practice in which only the first measure of New Likes is considered.

	New Likes	Existing Likes	'Natural' Background Activity
Positive Response (Like)	Yes	Indefinite	Recognised % of all liking
Neutral Response	No	Indefinite	Indefinite
Negative Response (Unlike)	No	Yes	Recognised % of all unliking

Table 2: Full scope of campaign monitoring possible by considering liking and unliking activity

Our study looked at *Facebook* pages for brands targeting United Kingdom based markets and exclusively using English. Expanding beyond these constraints will offer

further insight into the varying impact of culture differences and attitudes. Focusing research attention on specific industry sectors will also assist in identifying natural erosion rates for *Facebook* unliking activity and the expected like to unlike bounce rate. Incorporating timeframes between liking and unliking will also assist in the identification of the average lifespan of a like across sectors. Introducing this viewpoint would assist in changing the perspective of social media campaign management from the perspective that a 'like' is for life to the more realistic understanding that a 'like' has a lifespan and that eventually all likes become unlikes or at the very least the value of all likes fades over time.

Acknowledgements

This project is one of the outputs from the Knowledge Transfer Partnership (KTP) project between Fast Web Media (www.fastwebmedia.com) and Digital Business Centre at Salford Business School (www.salford.ac.uk/business-school), University of Salford. The project is possible through joint funding from the Technology Strategy Board (TSB) and the Economic and Social Research Council (ESRC).

References

Hand, L. C. and B. D. Ching (2011). "'You Have One Friend Request' An Exploration of Power and Citizen Engagement in Local Governments' Use of Social Media." Administrative Theory & Praxis **33**(3): 362 - 382

Mangolda, W. G. and D. J. Fauldsb (2009). "Social media: The new hybrid element of the promotion mix." Business Horizons **52**(4): 357–365.

Minqing, H. and B. Liu (2004). Mining and summarizing customer reviews. Tenth ACM SIGKDD international conference on Knowledge discovery and data mining, New York, ACM.

Taylor, D. G., J. E. Lewin, et al. (2011). "Friends, fans, and followers: do ads work on social networks? How gender and age shape receptivity." Journal of Advertising Research **51**(1): 258 - 275.

Walsh, K. (2012) Big brands sprint for gold on Twitter and Facebook. The Sunday Times

Zarella, D. (2012) How to Calculate the Value of a Like.