Game or measurement?

Algorithmic transparency and the Klout score

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ABSTRACT

Klout [1] is an Internet service that claims to measure an individual's influence by aggregating information from a variety of social media platforms. We briefly examine Klout's approach to measuring influence and argue that the Klout score's lack of algorithmic transparency undermines its status as a trustworthy metric. We further argue that Klout and similar services "gamify" the notion of influence in ways that encourage competitive behavior among users in ways which are detrimental to the quality of measurement in a scientific sense, instead encouraging a gamified notion of influence. We conclude that only an approach to measurement that is based on transparency has a real chance of gaining trust, and that only a widely trusted metric may serve as a reliable indicator of influence. Beyond the case of Klout, context, theoretical soundness, algorithmic transparency, and user agency are general issues that must be dealt with for any entity attempting to measure influence in online social networks.

Keywords

Klout, Social Media, Influence Measurement

1. INTRODUCTION

A flurry of news articles have recently explicated the importance of Klout scores as a point of judgment in cases ranging from access to VIP areas of a club to job offers from potential employers [2, 7, 11]. This to be expected – what is the utility of a service that purports to definitively measure influence unless these scores are employed beyond Klout's domain as a proxy for social media authority? While this is perhaps not surprising, it is problematic, and Klout exemplifies many of the issues that arise when relying on metrics provided by a commercial third party, and belies a grow-

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[1] http://www.klout.com

ing dependence on such metrics both within and outside of academia [5].

2. INFLUENCE AS CONTEXT-DEPENDENT AND MUTABLE

Individuals, communities, and publics interacting online do not form a homogenous whole. It is essential for researchers to keep in mind that context matters, and that what applies to one set of people may not apply to another. As an example, [8] noted distinct audience practices surrounding different influential Twitter accounts in Tunisia and Egypt in 2011. Even the most exhaustive works surrounding social media influence research stops short of claiming causality or predictive power, despite the strong indications they find [5, 1]. Influence is a profoundly contextually-bounded notion – what defines it in one community may differ drastically from another community's definition. Klout's approach to influence assumes an ability to reduce the contextual complexity provided by seemingly unambiguous signals (retweets, likes, follower/friend-relations among users) into a one-dimensional, 0-100 index score [3]. While this totalization is of obvious importance when seeking to establish a commercial standard, it simplifies the meaning of these signs and inevitably raises questions of agency and legitimacy.

3. LEGITIMATELY MEASURING INFLUENCE?

Successful operationalization of influence is a precondition to proposing a scientifically sound measurement – what makes someone influential to whom has to be systematically described before it can be quantified. Another condition is that what is being measured should not be influenced by the process of measurement, i.e. it should be observed under natural conditions. Finally, subjectivity must be addressed: Who is measuring? Who is being measured? What is the purpose of the measurement and what potential for misuse exists? While counting the number of cookies in a jar can be regarded as value-neutral in the sense of being reproducible, reliable and not bound to a single context of analysis or intention, measuring influence immediately raises questions of how the particular judgment was reached. The Klout score renders the context of analysis irrelevant and encourages systematic comparisons of scores among users – a defining, game-like feature of the platform. The score and the subjective quality of influence thus lose sight of one an-

other and the score becomes an entity of its own, more akin to a currency than to a metric.

4. ALGORITHMIC TRANSPARENCY

A major component to the legitimacy of analytical methods is the degree to which they are accessible for scrutiny and reproduction. In the case of Google, the analytic methods it developed were laid out in general terms in conjunction with its operationalization [9, 4]. While PageRank has certainly changed drastically in the intervening decade owing to the various business directions the service has gone in, it seems that the initial transparency of the algorithm paved the way for users to establish a relationship of trust to the search engine. For obvious competitive reasons, not all startups are in a position to publish white papers documenting their algorithms to the general public. But disclosing the details of their system would be especially relevant for a service that measures something as subjective and mutable as influence, a parameter that relies on widespread acceptance to be considered authoritative. Furthermore, transparency is not a switch – it is a gradient. Though Klout may be at risk by disclosing a trade secret in the short run, moving towards a more transparent model in the long term would underpin Klout′s status as a reliable metric. In the contemporary model, without generalized knowledge about the system, it is impossible to trust Klout, leaving room for speculation about the soundness of their approach, and academics relying on it are on very shaky grounds [10].

5. USER AGENCY BEYOND THE SCORE

Because the kind of measurement delivered by Klout is so obviously not value-neutral, it is crucial to provide users with a meaningful form of agency beyond seeking to raise their score to ever-higher levels. While many users certainly wouldn′t use all the bells and whistles available to modify what defines influence in their niche, those who do will be given a much better metric. Necessarily, this eliminates the universal relative comparison of scores, which does nothing to improve analytical knowledge and everything to encourage competition. In many ways, Klout has already jumped the analytical shark by shifting their service away from the core metrics available for several years and towards a much more gamified experience via achievements (awards for various activities on the site) and perks (cross-promotional events with partner goods and services) [6]. In doing this, Klout effectively de-emphasizes the importance of its analytics service, and cheapens the value such a system could have for its users.

6. REFERENCES

[1] E. Bakshy, J. M. Hofman, W. A. Mason, and D. J. Watts. Everyone′s an Influencer: Quantifying Influence on Twitter. Hong Kong, China, February 9-12 2011. WSDM′11.

[2] A. Blow. Can your Klout score land you a job? http://www.usatodayeducate.com/staging/index.php/career/can-your-klout-score-land-you-a-job, April 25 2012.

[3] d. boyd, S. Golder, and G. Lotan. Tweet, Tweet, Retweet: Conversational Aspects of Retweeting on Twitter. In *System Sciences (HICSS), 2010 43rd Hawaii International Conference on*, pages 1–10, January 2010.

[4] S. Brin and L. Page. The Anatomy of a Large-Scale Hypertextual Web Search Engine. In *Seventh International World-Wide Web Conference (WWW 1998)*, 1998.

[5] M. Cha, H. Haddadi, F. Benevenuto, and K. P. Gummadi. Measuring User Influence in Twitter: The Million Follower Fallacy. pages 10–17, Washington, DC, May 23-26 2010. Proceedings of the Fourth International AAAI Conference on Weblogs and Social Media.

[6] S. Deterding, D. Dixon, R. Khaled, and L. Nacke. From Game Design Elements to Gamefulness: Defining "Gamification". Tampere, Finland, September 28-30 2011. MindTrekâĂŹ11.

[7] B. Landman. Are You a V.I.P.? Check Your Klout Score. http://www.nytimes.com/2011/11/20/fashion/klout-scores-sort-out-social-media-stars.html, November 18 2011.

[8] G. Lotan, E. Graeff, M. Ananny, D. Gaffney, I. Pearce, and danah boyd. The Revolutions Were Tweeted: Information Flows during the 2011 Tunisian and Egyptian Revolutions. *International Journal of Communications*, 5:1375–1405, 2011.

[9] L. Page, S. Brin, R. Motwani, and T. Winograd. The PageRank Citation Ranking: Bringing Order to the Web. Technical Report 1999-66, November 1999.

[10] D. Quercia, J. Ellis, L. Capra, and J. Crowcroft. In the Mood for Being Influential on Twitter. Boston, MA, USA, October 9-11 2011. In proceeding of: PASSAT/SocialCom 2011, Privacy, Security, Risk and Trust (PASSAT), 2011 IEEE Third International Conference on and 2011 IEEE Third International Confernece on Social Computing (SocialCom).

[11] S. Stevenson. What Your Klout Score Really Means. http://www.wired.com/epicenter/2012/04/ff_klout/all/1, April 24 2012.