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Carolin Gerlitz & Celia Lury

Routledge
Taylor & Francis Group

RESEARCH ARTICLE

Social media and self-evaluating assemblages: on numbers, orderings and values

Carolin Gerlitz[a]* and Celia Lury[b]

[a]University of Amsterdam, Department of Media Studies, Amsterdam, Netherlands; [b]Warwick University, Centre for Interdisciplinary Methodologies, Coventry, United Kingdom

This paper takes tools of self-valuation in social media as an empirical focus. By way of a case-study of Klout, an influential measure of influence, we suggest that the forms of reactivity and self-fulfilling prophecy that have been identified as a problem with some forms of measurement are actually an intentional effect of such tools: that is, the measurements that such tools produce are not designed to capture a separate reality, but are deliberately employed to modify the activity that they themselves invite. In other words, they expect and exploit reactivity. We suggest that such media are indicative of the rise in what might be called *participative metrics of value*. We further suggest that the capacity to evaluate and modify the self that Klout affords is intricately tied up with the agency and (self-)valuation of Klout as a tool itself. An intermediate layer of the argument is that this tying up is achieved through the production of numbers as specific kinds of 'enumerated entities'. We use this term to draw attention to the ways in which numbers are never simply abstractions, but always have specific material-semiotic properties. In this case, we show that these properties are tied to the use of media-specific operations, and that these properties, including those of inclusion and belonging, inform how Klout participates in particular kinds of ordering and valuation. We thus explore the interlinked movement of numbers, media, and value in social media as a kind of dynamic assemblage.

Keywords: assemblage; ordering; participation; rankings; social media metrics; value

Introduction: mapping the field

In this paper we focus on devices that allow individuals to value their own activity in social media.[1] We start with a brief overview of this emerging field, and then go on to describe one example in detail: Klout, a measure of influence. We propose that the forms of reactivity and self-fulfilling prophecy that have been identified as a problem with some forms of measurement (Power 1997; Espeland and Sauder 2007; Strathern 1992) are actually an intentional effect of such devices; that is, the measurements they produce are not designed to capture a separate reality, but rather are deliberately designed to modify the activity that they themselves invite. They expect and exploit reactivity. Indeed, it is for this reason that we suggest that these tools provide not simply measures of participation but rather participative metrics of value. In doing so, we take particular inspiration from current debates on the reactivity and performativity of measures and rankings (Espeland and Sauder 2007; Callon 2009) and add to this an interest in medium-specific operations (Esposito 2004) and participation.

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*Corresponding author: Email: c.gerlitz@uva.nl

Rather than providing a complete overview of these devices, we start by discussing a variety of examples to show something of the range of ways in which data-aggregating services use, process, and present user social media data in numbers. At a very general level, what these services have in common is that they organize and re-present the personal user data generated by individuals in different social media platforms: that is, they carry out various kinds of measurement and valuation of individual user activity and interactivity, including measuring social impact, reputation, and influence. As we will show, the majority of existing devices have at their core the creation of a composite number (Guyer 2010) that functions *as a score*, that is, a number made to keep a tally, produced through various kinds of calculations, making use of different kinds and orders of data, including metadata, such as time-stamps or location-based data, and having complex temporal and spatial dimensions.

Tweetstats,[2] for instance, is a platform for Twitter statistics, and visualizes user activity over time, producing curves of tweet activity over the previous month, aggregates of tweets according to weekdays or hours during the day, and a calculation of the user's percentage of replies and retweets, in relation to other users. Additionally, the service offers the individual a number of tag cloud visualizations of their activity depicting most-used hashtags, @reply recipients, and uses key words to capture the topics addressed by the user. Like many other services, Tweetstats generates its data by focusing on the activities enabled by protocols specific to a particular platform, in this case tweets, retweets, @replies, and hashtags. Other services – such as TwentyFeet[3] and Tweetreach[4] – use aggregations of data to explore relations between users, networks of connectivity, and the reach of activities *across* platforms.[5] TwentyFeet, for example, describes itself as an 'ego-tracking device' and monitors the number of platform connections to aggregate users' activities, status updates, and stream posts and creates a curve by showing their change over time.

In relation to measures of abstract values such as reputation, influence, and conversation, the number or score typically brings together aggregates of an individual's activities with weighted calculations of the response rates from their connections. A further, important characteristic is that the number is explicitly represented as subject to continuous change. TwentyFeet, for example, calculates numbers for projected responses and changes in friend/follower counts. These projections are emailed to users at weekly intervals along with comparisons of actual figures with previous predictions, and a statement: 'Your response rate changed slightly/significantly'. A similar 'prediction' or projection service is offered by Twittercounter,[6] an open aggregation service offering a variety of Twitter statistics, including comparisons between individual users, and a forecast of how many days are left until an individual user reaches a particular number of followers.

This time-sensitive presentation of predictive calculations and the comparison of user activities with their predictive metrics have the effect of creating a shared climate of orientation towards the future and an expectation of continuing interaction among users. Indeed, it is through the ways in which such calculations create climates of futurity that the numbers become less *scores* than anticipated *targets*: that is, through the provision of an individualized, time-sensitive relation to a number, users are inclined towards the future (sometimes literally positioned on a curve), with the implicit invitation to carry out further social media activity to maintain or increase their activity so as to achieve (or exceed) a specific number. Another example is Crowdbooster,[7] which makes use of a style of visualization that not only invites the individual to increase their activity but also to do so in particular ways: it visualizes the response rate to tweets by turning individual tweets into bubbles on a grid, indicating the number of retweets and the number of potential impressions of each tweet on the axis. The presentation of data in this way allows users to study which of

their tweets have resonated more and which less, providing them with information that allows them to participate in social media strategically in order to increase their reach.

A range of other companies offer similar services, including, for example, Kred,[8] an open service providing a general score of influence between 1 and 1000 and an unlimited outreach or exposure rank. In contrast to some other services, Kred allows the user to introduce off-line achievements to complement their Kred score, including university degrees, frequent flyer status, and memberships in accredited clubs and sports, among other activities. In order to motivate the user to act upon their score, Kred continually offers 'fresh' content based on the individual's previous activity; this enables users to increase their scores through network building and topic engagement. PeerIndex[9] is another example that offers a general influence score, this time between 0 and 100, as well as three sub-metrics. This service puts special emphasis on topic engagement through the use of the so-called Topic Fingerprint grid, while Twitalyzer[10] shows its own score next to a user's Kred (and Klout) Score and offers six complementary metrics, namely engagement, influence, clout, generosity (the number of retweets), velocity or frequency, and signal, the use of URLs, hashtags, and mentions in tweets. This breakdown correlates with the different aggregates that feed into its own impact metric. This tool thus makes visible the categories of its calculation, whilst keeping the actual algorithm undisclosed.

A further set of self-evaluation devices enables the user to create and showcase 'collections' of their own data. For example, since 2010, Facebook users can download their profile as a zip-archive of all data visible on their profile page, including all wall activities, pictures, events, notes, and maps. The data come in HTML format and can be queried and processed further.[11] The web service Archivedbook,[12] which offers the user an interface to explore their profile history, is limited to what is already visible on the actual profile, but, unlike Facebook, allows the user to sort status updates, wall posts, events, check-ins, links, and pictures according to new criteria such as newest/oldest-first, most commented, and most liked. This feature enables the user to sort their own data, but does not provide the capacity for the user to make other aggregates, comparisons, or calculative functions. A different data set is archived by Likejournal,[13] a device that seeks to repurpose the content-sharing activities of Facebook's like and share button in the fashion of a social book-making service so that individual users can store and organize their shared objects. Users can also follow other people's liking activities, creating a social network based on the data produced on another platform.

A different set of services – examples include Touchgraph[14] and the Friendwheel[15] – provides network visualizations. The majority of these devices follow a graph approach, turning contacts into nodes and creating connections or edges based on friendship or other criteria, often also clustering the connections according to location or other kinds of networks. Many put special emphasis on pictures and offer photo-based networks, making the assumption that the co-presence of users in the same photo is an indicator of a close relation. Tools like the Vasande Visualiser[16] offer a filter to sort graphs based on profile information such as male/female or single/in a relationship. Similar services are available for Twitter, such as Mentionmap,[17] a tool that maps connections based on inter-activity, assigning common topics to interacting users and not mere follower relations.

A final cluster of tools builds on social media's potential for curation and 'storification' (the clustering of streams into topics as 'stories').[18] One of the best-known of these services is Paper.li[19] for Twitter which automatically turns followed tweets referring to predefined topics into a newspaper format, notifying the users whose tweets are featured in the paper. Keepstream,[20] on the other hand, focuses on saving tweets based on topics, hashtags, or lists in order to allow the user to publish them in other spaces such as blogs or personal

websites, so combining archiving with curation. Storification of one's own tweets is possible with Twylah,[21] which automatically detects topics, sorts tweets into clusters, and displays them in a Tumblr-inspired format with the objective of making tweets available to a wider public that is not active on Twitter. Other storification tools such as Trunk.ly[22] and Storify[23] focus on networking, allowing users to build communities based on their activities in Twitter outside of Twitter.

To sum up this provisional mapping then: the growing number of self-evaluation tools in social media is tied to the increasing proliferation of social media platforms and the interfaces their standardized data collections offer for third-party services to take up the numbers of tweets, likes, shares, or status updates and bring them into new contexts. They typically build on top of data produced through activities specific to social media platforms and variously use algorithms, graphs, and network visualizations, as well as the clustering of topics, to offer a different experience of data to users than that offered by platforms alone. Crucially, for our argument here, the presentation of measures of activity that they provide do not simply describe but invite further activity by offering users opportunities for self-valuation. The numbers they offer to individual users for this purpose are both scores and (moving) targets. Their presentation is typically designed to incite the user to participate more and differently in social media, creating what Espeland and Sauder describe as reactive measures (2007): 'Because people are reflexive beings who continually monitor and interpret the world and adjust their actions accordingly, measures are re-active. Measures elicit responses from people who intervene in the objects they measure' (2007, 1). Having provided this brief survey, we now move into a more detailed study of the influence metric, Klout, to develop our analysis of the relations between numbering practices, valuation, and media.

Ranking influence: the Klout Score

Klout is both the name of a company and the name the company gives to its measure of influence. At the time of writing, Klout is probably the most-used metric of influence in social media, a term that it defines as an individual's ability 'to drive action'. Like the other services discussed above, Klout takes records of activities pre-structured by a number of social media platforms, including tweets, retweets, and replies on Twitter, comments, wall posts, and likes on Facebook, and comments, re-shares and +1 s on Google+ as data (Klout 2012), and puts these continuously updated data-points in various kinds of recursive relations with each other to calculate a Klout Score for each Klout user. The Score is a (whole) number between 1 and 100.

> The science behind the Score examines more than 400 variables on multiple social networks beyond your number of followers and friends. It looks at who is engaging with your content and who they are sharing it with. […] The majority of the signals used to calculate the Klout Score are derived from combinations of attributes, such as the ratio of reactions you generate compared to the amount of content you share. For example, generating 100 retweets from 10 tweets will contribute more to your Score than generating 100 retweets from 1,000 tweets. We also consider factors such as how selective the people who interact with your content are. The more a person likes and retweets in a given day, the less each of those individual interactions contributes to another person's score. Additionally, we value the engagement you drive from unique individuals. One hundred retweets from 100 different people contribute more to your Score than do 100 retweets from a single person. (Klout 2012)

Although the actual algorithm that produces the Klout Score is a proprietary secret, the calculation of influence is represented by the company as a democratizing move:

> For centuries, influence had been in the hands of a few. Social media has allowed anyone to drive action to those around them, democratizing influence. Klout measures this influence across several social networks and shows users how they impact the people connected to them. (Klout 2012)

In giving everyone a single number to represent influence, however, Klout is assisting the democratization of influence in a particular way: it is containing the measure of an individual's influence to a constantly changing, ordered position within a finite set or sequence of ordinal numbers. The Klout Score is a single number in a sequential ordering of discrete numbers[24] that is continually updated:

> In most instances, your influence should not radically change from one day to the next. The Klout Score is based on a rolling 90-day window, with recent activity being weighted more than older activity. Being inactive over the weekend or taking a short break won't have a major impact on your Score, but if you're inactive for longer periods your Score will decrease gradually. (Klout 2012)

At the same time as acting as a tracking device, each individual Klout Score also stands in an ordered relation to other individual users' scores, and thus facilitates a process of comparison, or ranking, in which each individual may compare their score with those of others and/or with their own previous score. In her discussion of rankings, Jane Guyer addresses the social implications of ranking as a process of schismogenesis, a term she takes from Gregory Bateson, and which refers to the creation of divisions. She writes:

> Between moments[25] when the process stops for the ratings to move in, all participants relate to one another continuously and competitively. The results seem very close to what Bateson (1958 [1936]) called 'schismogenesis': the continual reproduction, confirmation and intensification of difference, which is then ritually marked when the process itself is momentarily suspended, as if for collective contemplation and affirmation. (Guyer 2010, 4)

In Guyer's terms, the numbers produced by Klout as individual scores feed a ranking that simultaneously creates relations of equivalence and difference between social media users, connecting them to each other as observers and influencers of each other, and whilst demarcating differences between them by locating them in relation to each other in terms of relative position. The participation of individuals in this dynamic representation of the social relation of comparison is intensified by the so-called K+ function, a feature that allows individuals to nominate other users as influential in relation to algorithmically determined topics. The number of times an individual is able to use this feature in a day is itself a function of how often they are nominated by others. To put it with Espeland and Sauder, these reactive dynamics are both 'creating and obscuring relations among entities' (2007, 16).

A further point to note is that this potential for numerical differentiation is contained within the range 1–100. The absence of a zero means that no user will be exposed as having no influence: as the company proudly says, 'Everyone has Klout'. The absence of negative numbers indicates that Klout imagines influence only as a productive capacity:

> You are never penalized for connecting or engaging with someone with a low Klout Score. In fact, you are helping build their Klout Score. The more influential you are, the greater impact you have. All engagement positively contributes to your Score. (Klout 2012)

In such an ordering, it might appear that the position of each individual's score is defined by a distance from the numerical start and end-points (1 and 100) that can be

measured in terms of discrete, uniform steps. But this is not the case. From a mathematical point of view, however, this does *not* mean that the number that signifies an individual's Score is not supported by a system of distributed and well-ordered value. Key to Klout, as to many ordinal chains, are the non-uniform yet rigorously defined 'distances' or 'intervals' between each step: it is the (algorithmic) organization of these intervals that creates the distinctive interplay between equivalence and difference in the rankings.

In the case of Klout, the distances between numbers grow exponentially the higher the position or the rank. Klout observes: 'The average Klout Score is not 50; instead, it is around 20. The Score becomes exponentially harder to increase as you move up the scale. For instance, it is much harder to move from a 70 to a 75 than from a 20 to a 25' (Klout 2012). This kind of exponential ordinality is not uncommon in contemporary rankings; as Guyer observes, 'In many cases, intervals diminish radically going down the scale, both in real terms and in proportion to their next positions' (Guyer 2010, 3). In an earlier version of Klout, only a teenage pop singer ever received a Klout Score of 100; in the current version (at the time we are writing) this singer scores 92, while Barack Obama scores 99. This change in score is in part because Klout now gives greater weight to so-called off-line influence.[26] But the more important point we wish to make is that the 'distance' between each number in the Klout ordinal scale is always changing as each individual user's score is connected to the achievements of the referent population of all Klout users, whose size, composition, and activity is itself constantly changing. In the Klout scale, intervals are thus neither uniform nor fixed; they are constantly altering, stretching and bending, according both to the proprietary algorithm[27] and to changes in user activities. To use a formulation from Manuel DeLanda, ordinal series in cases such as Klout 'behave more like topological spaces, where we can rigorously establish that a point is nearby another, but not by exactly how much (given that their separation might be stretched or compressed)' (2002, 82).

The implications for valuation in such topological orderings are by no means self-evident; it is difficult – from the 'outside', without the advantage of knowing the proprietary algorithm – to compare two scores in such an ordinal sequence, even though that is what the user is consistently encouraged to do. Neither is it clear what the significance of representative measures such as averages and so on might be, both because the intervals are not uniform and because the (changing) magnitude and composition of the referent population are not made visible. However, this topological ordering and the opacity of the intervals between individual user scores in Klout does not seem to undermine the opportunities for valuation afforded by this measure, but to afford new ones. How this is so is the focus of the next section of the paper.

Valuing values

To consider the opportunities for valuation, let us first explore further the capacities of the topological ordering that Klout undertakes by considering the medium(-specificity) of the operations at issue. In this way we address numbers as enumerated entities (Verran 2010) rather than abstract cyphers. The critic Elena Esposito (2004) describes the work of mediation in terms of Luhmann's distinction of medium/form, drawing attention to the ways in which the granular elements of a medium take on different forms in response to the relations created between them. As she puts it, in the medium of language: 'The elements are the single words that in the medium have no connection to one another and gain sense only in the context of the sentences coupling them tighter' (Esposito 2004). In the case of the social media we are describing here, the elements are the data-points,[28]

the likes, shares, retweets, etc., which are, in the medium-specific operations of search, sort, store, share, count, and algorithmic processing, brought into multiple and dynamic relations with each other. To this understanding of the medium/form distinction, we would add the notion of (the fantasy of) a pure middle that is to be found in the work of Walter Benjamin, who proposes that a 'pure middle' would be one whose middleness is not defined with respect to determinable end-points, but is, rather, an infinite and infinitely divisible space. Of this space, the critic Peter Fenves writes:

> Nothing can withstand this space *intact*: infinite divisibility is the 'law' of this space, which, however, cannot be posited as a law, since this division is never governed by an identifiable rule. The 'law' of this space, the rule by which its infinite divisibility is articulated, must likewise be infinitely co-divisible: in German, *mit-teilbar*, which is to say, 'communicable'. (Fenves 2002, 255)

Clearly, the pure middle is an abstraction, but the introduction of abstraction into social life by way of media-specific operations is precisely what is of interest to us here for the opportunities it provides for making relations between ordering and valuation.

To return to Klout, it might seem, given that the Klout Score is a number between 1 and 100, that middleness could be defined with respect to the determinable end-points 1 and 100. And yes, these are end-points, numerical end-points to the range within which any individual score may be positioned. But these end-points do not restrict or close the range of the Klout Score in terms of the operation of the medium/form distinction we are using. As noted above, the Klout algorithm for scoring is put into operation in relation to a population of users that is not closed, but is rather constantly changing, both in number and in its internal relations, determined in part by the activity of the user population and in part by Klout. For example, among the constantly proliferating middles that arise in relation to the constantly changing activities of a finite yet unbounded population of users, there are the middles that come with Klout's multiple stagings of temporal intervals.[29] None of these middles may be absolutely pure in the sense Fenves describes (above). Nevertheless, since neither the number of elements in their medium nor the number of temporal intervals into which they are made to enter are fixed or final but rather are constantly changing, it is as if they were.

Indeed it is for this reason that the Klout Score of 100 is more accurately described as a maximal rather than a maximum number (that is, it is more accurately described as the element in a topologically ordered set of scores that is followed by no other rather than as the highest or largest). What this means is that it is not the value of a 'most influential' or 'best' that is determined by Klout *in advance* of participation by users but the limit of (a mix of) characteristics of influence that are constantly changing in an ordered relation to the participation of a constantly changing number of users. Yet while not a fixed or absolute best, a maximal rather than a maximum value, 100 is still a score in relation to which all other scores could be better. The consequence of this, we suggest, is that Klout does not motivate individuals in relation to a goal of having 'the most' influence, being *best* at influencing others *where what the value of that influence might be is defined in advance of participation*, but rather of being – comparatively – *better:* a measure of influence that invites participation. Moreover, the value of that comparison (the 'what' the individual user is encouraged to be better 'at') is itself in process[30]; it is continually transformed by who participates, what activities they carry out, how that participation is recognized by Klout, and how it is returned to users for further activity, for bettering. The processual nature of this relational interdependence of valuation and value is, we suggest, a consequence of the

prevalence of relative rather than absolute, open rather than closed, internal rather than external, modes of relating, such that the relations between the one and the many, the part and the whole, are continually being readjusted. It is this, we suggest, that makes Klout not simply a measure of participation but a participative measure.

In this regard, it is important to note that Klout does not merely measure influence in such a way as to motivate individual users to participate more so as to do better comparatively in relation to others. It also – since it is not (only) a force for democracy but also a commercial enterprise – aims to deploy its measure of the influence of individuals in social media so as to drive its *own* action. Importantly then, the circuits of reactivity established by Klout are not confined to those users whose activities are being measured, but also include the various third parties that have come to deploy Klout Scores in other activities, including activities whose measure of value is not – or not only – influence. Here we observe that Klout has made its users' scores available to third parties since the launch of the company in 2008 via the Klout API: recent reports by the company indicate that their API calls have grown from 10.5 billion to 30 billion a month and that they have more than 2000 regular 'partners'.[31]

These partners deploy Klout Scores in a range of activities and for a variety of purposes. Social media clients such as Seesmic, CoTweet, or Hootsuite integrate Klout scores into their own platforms, to cite one example, allowing users of social media to filter platform engagement through yet another form of mediation. In other uses, hotel chains use Klout Scores to determine upgrade rates, event organizers give individuals preferential access to parties based on their Klout Score, and customer relations systems such as Salesforce. com and Radian 6 deploy the scores to decide how fast to reply to consumer requests – based on the assumption that users with a high Klout Score will influence more people when talking about a positive or negative experience than those with a low score. Klout Scores are also reportedly taken into account in the evaluation of job applications for digital economy and tech-industry positions (Stevenson 2012), including positions in the social media sector. In a further step, following investment in Klout by Microsoft in 2012, the company Klout began to co-operate with the search engine Bing which now integrates Klout information into its search results for 'high-profile professionals and socially active influencers'.[32] What these various uses of Klout Scores suggest to us is that, while Klout evaluates the influence of individuals as the 'ability to drive action', it also operates by putting its measure of influence in relation to other (commercial and promotional) activities, with the result that its own influence is determined by how it measures the influence of others. As not simply a measure of participation but a participative measure, the Klout Score is thus not so much a descriptive metric, as a productive entity or inventive frontier to speak once again with Helen Verran (2010), co-producing what it attempts to measure whilst establishing its relevance – or rather its poly- or multivalence – in a variety of new contexts (Marres 2011).

Measuring participation: participative measures

As the middle of many middles, Klout thrives on its incompleteness, its organization of open-ended processes of inclusion, and its capacity to create ever more relations and re-aggregations of data-points, just as it is re-aggregated into new contexts itself.[33] How it does this is of interest in so far as it may shed some light on emerging processes of valuation. One aspect we have already noted is the 'ongoingness' of the activity of valuation; another is the way in which the object of this ongoing activity – the value of influence – is itself put into stop-start motion; and a third is the reliance of the activity of valuation

on forms of participation.[34] In this final section, we will focus on how participation is organized by Klout in ways that contribute to processes of valuation. Operating as both a measure of participation and a participative measure, Klout is organized so as to motivate individual users of social media to continue or increase their participation in ways that are valuable for those individuals whilst also organizing that participation so that it can be rendered valuable for Klout and its third parties. Valuation and participation, we argue, are inextricably tied together in the rankings produced by Klout.

The very term 'participation' is worth reflecting on. An alternative term we might have used in our analysis is 'performance' or 'performativity'. We might have said that Klout is a measure of performance, and it is itself performative (Mackenzie, Muniesa, and Siu 2007). What the notion of participation offers, in addition to an understanding of performativity in terms of reactivity, however, is a focus on issues of inclusion and belonging. Given our emphasis on the implications of such measures for how comparison as a social relation is presented in terms of 'being better', this approach is important because it may extend both Espeland and Sauder's analysis of reactive measures and Guyer's discussion of historical changes in the organization of ranking for the making of social hierarchies.

So far our analysis suggests that the effect of Klout as a ranking mechanism is to promote the desire to 'be better' in an abstract, deracinated way – since what counts as best is not given in advance by way of external reference but is, rather, produced in a participative fashion in the reflexive (and continually changing) process of being or getting better. In other words, having the most influence, getting or being better than others comes before – is better than – being the best. However, as we have also shown, the value that Klout produces is not completely detached from specific activities in this process of bettering: rather, the social relations of having more influence, being 'better than', and judgements about what counts as best or most influential are rigorously and differentially fed back to that individual in terms of their relations to others, typically in terms of how he or she connects (and, by implication, could connect better) to some but not other individuals. And that participation is also valued and valuable in particular ways by and for others. Our use of the term participation seeks to recognize this, and to consider how this co-articulation of value and valuation is organized in terms of inclusion and belonging, the relational properties that determine how users participate.

So let us provide a description of the opportunities for participation provided by Klout – which means returning to the middles that Klout produces as place-holders in which individuals may be included, and to which they may feel a sense of attachment and perhaps even belonging. When we first started looking at Klout in 2010, the company also produced, alongside the individualized Klout Score, a multidimensional grid that placed users into clusters of social media 'styles', organized alongside criteria such as focused versus broad, casual versus consistent, listening versus participating, and sharing versus creating. Among the 16 possible style clusters, the 'Observer' designated the lower left corner as the position of a passive user, not creating any original content, while the 'Celebrity' occupied the orthogonal corner, indicating constant, broad, and active engagement in social media. The use of a grid to visualize scores did not set up a linear trajectory for the individual towards the 'Celebrity' cluster but allowed for directed movement towards a range of positions distinguished by more than one axis, including for example the 'Specialist', characterized by focused and consistent engagement in a delineated topic area. In this way the grid can be seen to have opened up multiple middles and potential directions of movement for the individual user. Such middles made it possible for a user to identify with a cluster and a variety of possible connections with others. In short, whilst users were directed towards particular ways of participating in social media (so as to improve

their Scores), they were also offered distinct categories for self-recognition, identification, and belonging.

In 2012, however, the grid disappeared, as did the previously existing sub-scores. In their place have come 'Your Moments', which now sits alongside the already existing 'Topics' and 'Perks'. The 'Your Moments' section of a Klout user's page highlights the content – across posts, tweets, and images – that has gained the most responses for that individual, and features some of the users in the individual's network who acted upon this content, along with those users' Klout Scores.

> Moments help you discover how your content has influenced the people in your networks, and how that content improved your Klout Score. (Klout 2012)

'Your Moments' thus creates a timeline of an individual user's activities, sorted by actions and responses received: it invites – and provides resources for – individuals to develop a strategic relation to content production and interaction with other users. This invitation to participate is further extended by the identification of 'Topics' for each user, that is, clusters of activity that Klout identifies as being the ones in relation to which the activity of individuals is most influential.

> Topics represent your passions and areas of expertise. Klout suggests topics for you based on your content that receives the most engagement from others. You or anyone on Klout can add topics to your profile to better reflect who you are and what you talk about. (Klout 2012)

The final way in which individuals are motivated to participate is by the award of Klout Perks.

> Klout Perks are rewards given to you from brands in recognition of your influence. They are based on your Klout Score, topics and location. (Klout 2012)

These awards have an explicitly commercial valence and have a form that is clearly determined by third parties who want their products to be promoted by topic experts. Examples publicized by Klout include:

> Influencers were handed the keys to a Chevrolet Volt for three days and were told to have fun. They did.
> Influencers were given a new phone to try out the Windows Phone mobile OS, plus three months service.
> For Small Business Saturday, American Express gave influencers $25 gift cards to help grow local businesses.
> Seattle's Convention and Visitors Bureau gave influencers, plus one guest, a two-day, expenses-paid trip to Seattle.

In the current version of Klout then, it seems as if the modes of participation offered to individual users do not offer much room to individuals for belonging in the sense of either offering possible categories for self-recognition or ways to connect to others with the same or different scores. By providing the user with a Klout Score in the way we have described, only minimal space is made for inclusion or 'occupation', let alone belonging or 'assembly' (this becomes a further way to think about the limits of the assemblage we have been describing). It seems to us that, through its adoption of the data formats of Moments, Topics, and Perks, Klout organizes the distinction between inclusion and belonging in

particular ways. Specifically, while Klout provides the individual user with the basis for a sense of ownership of a Score and even incentives to connect with others, thus *including* the individual in its participative metric, it does not do so on the basis of identification or belonging. Rather, it re-presents the inclusion in social media (the presentation of data-points) to individual users in terms that are highly compatible with the market as represented by third parties.

The limited terms of the participation offered by Klout may be traced back in part to the tendency to give priority to internal references in its measurement procedures: users do not belong to certain Klout cohorts defined through ranks, styles, or topics, but may be included into them. However, it is where and how the line between inclusion and belonging is drawn that is fundamental to Klout's own success. To make clear the significance of the drawing of this line, we turn to the work of Adrian Mackenzie on the relational database, who remarks: 'No-one belongs to a database as an element, but many aspects of contemporary lives are included as parts of databases' (Mackenzie 2011, 12). Making use of the language of set theory appropriated by Badiou, he says, 'there are always more parts than elements' (Badiou 2008, 157). And certainly, in the case of Klout, there are always more data-points than there are users producing data-points. This situation is sometimes described as an excess of inclusion over belonging, or the excess of presentation over representation. It is this presentational excess – which we suggest is to be found in the many middles of mediation,[35] the calculative spaces that are produced by the many relations each data-point can be made to enter into – that is the source of Klout's distinctive mode of valuation.

This mode, as we have seen, makes use of the capacity of social media platforms to render online sociality into standardized data formats in such a way as to allow data arising from the use of pre-structured, medium-specific activities such as liking, posting, sharing, tweeting, digging, or giving a +1 to enter into new relations with each other, with Klout and with the third parties that deploy Klout Scores. That Klout is able to make these relations is, we have suggested, a consequence of how mediation – the operation of medium-specificity or the difference medium/form – produces data-points rather than individuals, such that these data-points can be put into multiple, partial relations with each other, with the result that inclusion and belonging need not be rendered coextensive, but can, rather, be intensively differentiated.[36] There is economic (and political) interest in this differentiation because it is believed that there is 'more/different' value in operating the line of non-equivalence between inclusion and belonging than in making them equivalent. It is this activity that produces the inventive frontier of which we spoke earlier as a boundary between economy and society in relation to which there is no fixed inside or outside, or at least no *single* fixed inside and outside.

This is, of course, a frontier that is not of interest to Klout alone. Such activities – of partial relating or differentiating – are of interest both inside and outside the economy in so far as they open up new spaces of valuation, specifically, spaces of poly- or multivalence (Marres 2011). The multivalence of these spaces emerges from the organization of the excess of presentation (data-points) over representation (categories). Manovich (2008) suggests that the value of using numbers in the making of these spaces (of multivalence) is that numbers allow discrete categories (words) to be replaced by continuous description (curves). He is specifically talking here about the use of numbers to analyse cultural artefacts, but it seems clear that the current speculation about the potential of big data to transform social science stems in part from the view that, at the very least, words and numbers, discreteness and continuity, can be put into new, more variable relations with the use of contemporary data-processing techniques. In the case of Klout, we have suggested that this development can be understood in terms of the making of participative

middles that afford differentiated possibilities for not simply reactivity but for participation, by drawing lines – establishing differential relations – between inclusion and belonging.

In this regard, it is worth positioning Klout within a more general move from rating to ranking[37] (although this is not to say that the two cannot coexist as principles of evaluation; Espeland and Sauder 2007). Put very crudely, in practices of rating an entity may have more or less of some value as measured by means of a form of representation, independently of how any other entity is valued, while in (topological cases of) ranking, the value of one entity is relative to the value of other entities being measured, and the measurement of all their values is done, not by way of representational measures, but by (non-representational) measures of the relations of continuity that may be established between the entities being measured.[38] Whilst the notion of reactivity allows us to show that such rankings are tied up with what they seek to measure, our focus on the excess of inclusion over belonging brings to attention the capacities of rankings to allow activities to be organized in terms of multi-valence. In this way, we suggest, topological processes of ranking have the potential to open up opportunities both for new forms of control and exploitation, and for other modes of valuation, including those aligned with the market.

Finally, while observing the overriding focus on compatibility with – and perhaps enhancement of – the market in the case of Klout, we wish to note that we do not believe that this compatibility with market forms of inclusion and belonging is an inevitable outcome of the organization of participation by way of numbers. Rather, we have demonstrated that metrics have the potential to open up multiple dimensions or axes of valuation (see also Marres 2011; Vaughan-Nichols 2011). Even in the case of Klout, it is by way of its transformation of one measure of participation on one social media platform into another *through the organization and preservation of the topological properties of ordinal ranking* that Klout is able to both create and legitimate a value (influence) that emerges in processes of continuous redefinition. These processes of redefinition need not only be organized in relation to the market.

Conclusion

In this paper, we have looked at Klout as an example of a tool for self-valuation in social media. We have sought to show how the evaluation of the self by individuals in social media is linked to the capacity of the tools to give value to themselves. In doing this, we have focused on the role of numbering practices, and looked in particular at the capacities of numbers produced as specific kinds of enumerated entities in processes of mediation. We showed that the enumerated number that is the Klout Score emerges as the outcome of constant dis-aggregation and re-aggregation of data in ways that are specific to (digital) media. Our argument has been that while the presentation of these processes as a single number within an ordinal scale of 1–100 creates an impression of transparency and orderedness, it also transforms the process of valuation in so far as it makes what is valued the outcome of recursive processes of valuation, the multivalence of which in turn depends on the limits of inclusion and belonging that organize the open-ended participation of those individuals whose activities are the object of valuation. That this is not (entirely) a closed circuit is both the promise and the challenge of this form of valuation.

Notes

1. Such devices are a subset of tools that allow online users to make sense of their activities or to access data they produce in different media.

2. http://tweetstats.com
3. http://www.twentyfeet.com
4. http://tweetreach.com/
5. The free version of the service allows implementation of a Twitter and Facebook profile, whilst additional platforms need to be paid for.
6. http://twittercounter.com
7. http://crowdbooster.com
8. http://kred.ly
9. http://www.peerindex.com
10. http://twitalyzer.com
11. The downloadable data are limited to what was already visible on the individual's profile; data relating to activities performed and content shared outside the profile, for instance by posting on a friend's wall, sharing a video in a group, or creating an event in the past, are not included.
12. http://archivedbook.com
13. http://www.likejournal.com
14. http://www.touchgraph.com/facebook
15. http://apps.facebook.com/friendwheel
16. http://vansande.org/facebook/visualiser
17. http://mentionmapp.com
18. Before the introduction of the Facebook Timeline at the end of 2011, individual user profile walls used to be organized as an ephemeral stream of activities in reverse chronological order. Timeline, however, is based on ideas of life-story-telling and self-curation, so Facebook claims, and provides monthly and annual summaries featuring the number of new friends, liked pages, or application engagement, clustering connected activities into stories. It invites the user to add events from before they started using Facebook, and allows the user to edit existing events.
19. http://paper.li
20. http://keepstream.com
21. http://www.twylah.com
22. http://trunk.ly
23. http://storify.com
24. 'In the ordinal view, number is thought as a link in a chain, it is an element of a total order' (Badiou 2008, 31). It is an ordering in which 'every link of the chain follows ("follows" meaning: comes just after or is next to or is in the neighbourhood in a relation of order) only one other, [and is] well determined (it is the minimal element of what remains)' (Badiou 2008, 53).
25. As we will see, 'moments' also have a special significance for Klout.
26. Off-line influence is measured by consulting Bing and Wikipedia.
27. The experimental character of the algorithm became visible when Klout altered its algorithm at the end of October 2011, a decision which resulted in significant changes to many user scores (Gillin 2011). The sudden drop of scores among very active social media platform users led to a heated discussion about the use and value of such influence rankings and a Twitter campaign against Klout.
28. The elements themselves are produced as enumerated entities; that is, they emerge from a set of automated activities in platforms that render social life in numeric form (Langlois and Elmer 2013).
29. Such stagings are, perhaps, one characteristic of the infinitely divisible finitude of the 'real-time' continuum.
30. An image which captures this relation of being better *at* something in relation to your relative position *in* a population is 'Study for Theory of Boundaries (At/In)', 1969, by Mel Bochner, discussed in the Introduction.
31. http://corp.klout.com/blog/2012/05/more-ways-to-use-your-klout/
32. http://corp.klout.com/blog/2013/03/klout-bing-instagram/
33. Mackenzie understands this incompleteness, with Badiou, in terms of set theory: 'Yet, this aggregation is driven by something missing. It is this incompleteness, the constitutive incompleteness crystallized in the generic set, that Badiou's set-based thinking of the multiple seeks to enunciate' (Mackenzie 2011, 18).

34. This window is displayed as a line chart on the Klout dashboard – the personal homepage of the user. Accompanying figures show the lowest and highest score during this interval, as well as the most current change in score, along with the statement: 'Your score went up/went down by X'.
35. To speak with Esposito, 'media are only potentialities, and their fundamental function is to make contingent something that was formerly indispensable' (2004).
36. That there is considerable uncertainty as to how this value may best be identified is evident when looking at the new generation of comparative social media metrics (Botsman 2012). Many of these metrics deploy ranking systems built into platforms, such as user reviews on Ebay or on Airbnb, to create cross-platform reputation metrics, but the emphasis is on evaluating the trustworthiness of such valuation practices across platforms, as in the case of Trust-Cloud, TrustRank, or WhyTrusted. These services aim to make the reputation rankings produced in one platform portable outside the specific platform. Here, the focus of the measure is not so much, or not only, on the ability to drive action, but on the reliability of recommendations. Such measures are being taken into account in estimates of risk by credit service agencies (Botsman 2012).
37. Rating and ranking are sometimes used interchangeably, and there seem to be no widely accepted definitions that allow them to be differentiated. The contrast put forward here should be understood in this context.
38. These relations of continuity do not presume a space of equivalence, but preserve some kinds of invariance in spaces of multivalence.

Notes on contributor

Celia Lury is Professor and Director of the Centre for Interdisciplinary Methodologies at the University of Warwick. She is currently an ESRC Professorial Fellow, on a project titled 'Order and Continuity: Methods for Enacting Change in a Topological Society'. This is looking at how change is produced in social processes of ordering and continuity of transformation, and what the implications of this might be for processes of social differentiation and inequality. Recent publications include: *Inventive Methods: The Happening of the Social* (co-edited with Nina Wakeford, Routledge 2012).

Carolyn Gerlitz is an Assistant Professor in New Media & Digital Culture, University of Amsterdam. Her research explores the various intersections between new media and economic sociology, with a specific interest in brands, digital (social) research, topology, measurement, numeracy, social media, platform studies, and issue mapping online.

References

Badiou, A. 2008. *Number and number*. Cambridge: Polity.
Botsman, R. 2012. Welcome to the New Reputation Economy. *Wired*, 20 August 2012. http://www.wired.co.uk/magazine/archive/2012/09/features/welcome-to-the-new-reputation-economy.
Callon, M., Lascoumes, P., and Barthe, Y. (2009). *Acting in an uncertain world: an essay on technical democracy*. Cambridhe, MA: MIT Press.
DeLanda, M. 2002. Intensive Science and Virtual Philosophy, London: Continuum.
Espeland, W., and M. Sauder. 2007. Rankings and reactivity: How public measures recreate social worlds. *American Journal of Sociology* 113, no. 1: 1–40.
Esposito, E. 2004. The arts of contingency. *Critical Inquiry* 31, no. 1: 7–25.
Fenves, P. 2002. *Arresting language: From Leibniz to Benjamin*. Palo Alto: Stanford University Press.
Gillin, P. 2011. The trouble with Klout. http://gillin.com/blog/2011/09/the-trouble-with-klout.
Guyer, J.I. 2010. The eruption of tradition? On ordinality and calculation. *Anthropological Theory* 10, no. 1: 1–9.
Klout. 2012. www.klout.com.
Mackenzie, A. 2011. More parts than elements. How data-bases multiply. *Environment and Planning D: Society and Space* 30, no. 2: 335–50.
Mackenzie, D., F. Muniesa, and L. Siu, eds. 2007. *Do economists make markets? On the performativity of economics*. Princeton: Princeton University Press.
Manovich, L. 2008. *NURBS theory | conceptualizing cultural processes: from discrete categories to continuous curves*. Available online: http://lab.softwarestudies.com/2008/12/theory-for-nurbs-era-from-timelines-and.html

Marres, N. 2011. The costs of public involvement. Everyday devices of carbon accounting and the materialisation of participation. *Economy and Society* 40, no. 4: 510–33.

Power, M. 1997. *The audit society: Rituals of verification*. Oxford: Oxford University Press.

Stevenson, S. 2012. What your Klout score really means. *Wired*, 24 April 2012. http://www.wired.com/business/2012/04/ff_klout.

Strathern, M., ed. 1992. *Audit cultures: Anthropological studies in accountability, ethics and the academy*. London: Routledge.

Vaughan-Nichols, S.J. 2011. Klout craziness. *ZDNet*, 30 November 2011. http://www.zdnet.com/blog/networking/klout-craziness/1688?tag=content;siu-container.

Verran, H. 2010. Number as an inventive frontier in knowing and working Australia's water resources. *Anthropological Theory* 10, no. 1–2: 171–8.