Social media and the dynamics of public opinion: New avenues for research

Workshop Outline

Outline of topic:	Ever since the term 'CNN effect' was coined to capture the impact of a 24-hour news cycle, it has been clear that public opinion was subject to constant potential influence and flux. Even before then, those seeking to trace campaign effects in elections had acknowledged that daily surveys were needed if the dynamics of public opinion were to be explained as well as observed. It may be very hard to tell which moves *first* out of elite behaviour, media messages and public opinion, but it is easy to see that all three move *fast*.

Sadly, survey research, the traditional method of charting public sentiment, is slow. It is also expensive, and getting more so as coverage and response rates decline. While the arrival of online surveys has improved speed, flexibility and cost-effectiveness, opinions can rarely be measured continuously but only at fixed and relatively broad intervals, limiting responsiveness to key or unexpected events. Survey data are also manufactured data. Our assessment of the public mood is constrained by our questionnaires, with little room for respondents to spontaneously express their opinions and views. These limitations have restricted our knowledge of the dynamics of public opinion.

There is now an alternative. The advent of the Internet, and social media and weblogs in particular, have not only transformed political communication by providing new means for party campaigning, elite communication and citizen participation. They are also an important new outlet for the expression and reporting of public attitudes. As such, they are a major source of data for public opinion researchers. This workshop is about understanding that source, exploiting it as far as possible, and recognising its limits.

The potential benefits of 'big data' from micro-blogs and social media are enormous. Measurement is continuous and instantaneous, providing a live monitor of public mood that can be tracked through a presidential debate, an election campaign, a foreign policy crisis, or a full parliamentary term. Respondents need not be persuaded or paid but participate voluntarily. And data from Twitter, Facebook, and so on are genuinely observational and non-reactive rather than manufactured, capturing the shades and flavours of public opinion. No surprise, then, that a 'big data bandwagon' has gathered pace. And a central purpose of this workshop is to attract those aboard that bandwagon so that they can exchange findings, insights into the nature and dynamics of public opinion, and ideas about confronting the methodological challenges of this innovative approach.

By taking public opinion as the object of study and social media as the source of data, we provide a clear focus for the workshop. But both key terms can and should be interpreted broadly, and we invite papers in which public opinion might be a dependent variable, and independent variable, a target for measurement or a concept for theorising. 'Big data' lend themselves particularly well for measuring opinion dynamics but we are also interested in more 'cross-sectional' research questions – for example, about who expresses opinions on-line and how the nature and direction of this expression differs from that via other means.

Another key purpose of the workshop is to form a collective assessment of whether the bandwagon mentioned earlier is heading in the right direction. Much of the work so far has lacked the rigour – both theoretical and methodological – developed over decades of 'traditional' public opinion research. By bringing together those with backgrounds in political communication, political psychology, survey methodology and computer science, the workshop will not only provide participants with expert advice from outside their own sub-disciplinary 'comfort zone' but also foster networks whose combined skills enable more ambitious and rigorous research.

As such, the workshop will generate methodological and practical as well as substantive academic outputs. On the substantive side, we envisage an edited volume or special issue which will collect the insights into public opinion gauged from diverse studies of 'big' social |

	media data. On the methodological side, we envisage the discussion, development and testing of new approaches which draw on more established tools of methodology to validate and improve the quality of big data. These approaches will be reported in a symposium submitted to a leading journal of political methodology.

Relation to existing research:	The potential of Web 2.0 is not a new concern for political researchers. Several questions about social media in particular have received plenty of attention: are they substituting old methods of campaigning (Towner, 2012; Lev-On, 2011)? Have they bridged demographic divides in political involvement (e.g. Gibson et al., 2008; Morozov, 2011)? Do they facilitate the kind of popular uprisings seen in the Arab Spring (e.g. Howard and Hussain, 2011)? However, the focus has thus been on social media as a means for political communication and engagement (e.g. Livne et al., 2011) with limited attention being paid to the expression of mass opinion via social media. The internet as a source of public opinion data remains largely overlooked. The early exceptions fell into two main categories, both concerning only a specific sub-category of public opinion. The first of these is electoral choice. There was a flurry of excitement when Twitter and Facebook activity proved accurate in predicting vote shares (Williams and Gulati, 2008; Tumasjan et al., 2010). However, that excitement subsided when forecasting performance proved patchy (Gayo-Avello, 2013; Goldstein and Rainey, 2010). The second is public priorities, with mentions on social media (Vargo et al., 2014; Hosch-Dayican et al., 2013) being used to gauge the salience of an issue on the public's agenda. In each case, however, methods based solely on counting social media posts – or the mention of key terms in those posts – give a thin and potentially misleading account of public opinion. Electoral forecasters, for example, will be much more successful if armed with information on the tone as well as the volume of social media commentary on parties or candidates (Chung and Mustafaraj, 2011; Tjong and Bos, 2012; Ceron et al., 2015). Attention has therefore more recently turned to methods of analysing the content of micro-blog posts. These analyses are quantitative and largely automated, inevitably, given the sheer scale of big data', but the market-leading approaches combine human coding of a sample of material so that a specific rather than a generic dictionary can be used (e.g. Hopkins and King, 2010). So far, these dictionaries have been largely confined to measuring positive and negative sentiment but there is scope for other more refined classifications (e.g. Roberts et al., 2014). And, while applications to public opinion (as opposed to legislative speechmaking or party manifestos) remain comparatively rare, there are exceptions (e.g. O'Connor et al., 2010; Clark et al., 2014; Milner and Tingley, 2015) of exactly the kind that we would welcome to this workshop. Indeed, a key purpose of the event is to chart progress so far and identify the most fruitful territory for further research. This kind of research has the potential to make a major contribution to a range of literatures on opinion dynamics. Two examples are studies of the policy mood and of agenda-setting. Thus far, measures of the policy mood (Stimson, 1991) have been restricted to using survey questions which, especially on secondary issues or dimensions, can be few and far between (e.g. Carrubba, 2001; Wilcox and Norrander, 2002; Brulle et al., 2012). Yet social media data offer that possibility, heralded above, of a live monitor of public mood that can be applied to any area of policy. Meanwhile, these data enable us to pinpoint those moments of change in public priorities and preferences and to link these to changes in 'old' media content and in elite communications. This can go a long way to resolving the causal inference problems that have bedevilled studies of agenda-setting (Brandenburg and van Egmond, 2012). By inviting papers that use new media to track opinion dynamics, our workshop responds directly to Grimmer's (2015) call for combining data scientists' technical skills with political scientists' concern for causal inference. The arrival of 'big data' does not render survey methods redundant, of course, and combinations of the two would make an important contribution to the workshop (Couper, 2013; Kreuter and Peng, 2013). These may be about using survey data to validate

	measures extracted from social media (Hosch-Dayican et al., 2013), or comparing the socio-demographic characteristics of social media users and the population as a whole (Mislove et al. 2011), or attempts to transfer probability sampling methods to the web (Valliant and Dever 2011, Vavreck and Rivers 2007). This kind of research is analogous to the extensive work examining whether the new tools of communication have remedied or simply reproduced inequalities in political engagement and participation (e.g. Kirk and Schill, 2011; Min, 2010). We know a fair amount about how those mobilised by social media compare with the population in terms of social profile. However, we know much less about how representative are the *opinions* expressed in social media – partly because of the lack of straightforward benchmarks. Papers addressing that issue would be very welcome. Social media has the potential not only to refresh the measurement of public opinion but also to revive debates about its meaning. When Blumer (1948) warned against the narrow definition of public opinion as a statistical aggregation of individuals, he noted instead that opinion emerges through social interactions in which some voices were louder than others and some had readier access to decision-makers than others. These are exactly the features of the expression and formation of mass opinion in social media. In other words, rather than needing statistical adjustment in order to capture public opinion, social media might be said rather to capture a broader definition of the concept (Anstead and O'Loughlin, 2010). Another example of using new data to illuminate classic theory is the study by Procter et al. (2013) of large-scale information dynamics during the 2011 riots in England, using Lazarsfeld's two-step model of communication. Papers exploring this kind of conceptual territory will harmonize empirical and methodological contributions by providing an overarching frame, and in turn extend the intellectual reach of the workshop.

Likely participants:	This workshop is for any scholars interested in what social media can tell us about public opinion – its origins, its nature, its dynamics and its influence. This encompasses political researchers in a range of traditions and sub-disciplines, including but not confined to political communications, political psychology, electoral behaviour, 'big data' methodology and survey research. We particularly welcome scholars working on the comparison between traditional sources of public opinion measurement and innovative forms of gauging public opinion via social media. We encourage contributions from PhD students and the workshop directors will seek funding to support young researchers' participation. This illustrates a broader quest for diversity and balance – in backgrounds, career stages, country of origin, and so on – in the list of participants. We have discussed the workshop with several leading scholars in this field, all of whom have signalled interest in participating. And we will seek to link up with related events, such as the upcoming Mannheim conference on big data in political science more broadly (http://www.bigdatapoliticalscience.net/).

Type of papers required:	We are interested in three broad types of papers for this workshop. First, we invite empirical papers that draw on new media and new technologies to capture the short-term dynamics of public opinion – and the causes and consequences of these dynamics. Second, we welcome methodological papers that address the many issues arising in seeking to translate these data sources into reliable and valid measures of public opinion. Third, we are interested in papers mapping the relevant theoretical or normative terrain, notably concerning the scope for new media to enhance – or to distort – processes of democratic deliberation, opinion formation and political representation. Within those categories, and as emphasised above, we seek diversity in method, geographical focus, and case selection, aiming to bring together researchers from all across this sub-field.

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