Mercea, D. & Yilmaz, K.E. (2017). Movement Social Learning on Twitter: The Case of the People's Assembly. The Sociological Review, doi: 10.1177/0038026117710536

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Original citation: Mercea, D. & Yilmaz, K.E. (2017). Movement Social Learning on Twitter: The Case of the People's Assembly. The Sociological Review, doi: 10.1177/0038026117710536

Permanent City Research Online URL: http://openaccess.city.ac.uk/17386/

Movement Social Learning on Twitter: The Case of the People's Assembly

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Abstract

The article examines the U.K. movement People's Assembly against Austerity. It probes the extent to which opposition to austerity expressed on Twitter contributes to building bridges among disparate social groups affected by austerity politics and to enabling their joint collective action. The study aims to add to the scholarship on anti-austerity protests since the credit crunch. Numerous of those protests have been accompanied by vibrant activity on social media. Rather than to propose yet another examination of participant mobilisation on social media, the analysis delineates and seeks to evidence a process of social learning among the social media following of a social movement. Relying on a combination of social network, semantic and discourse analysis, we discuss movement social learning as a diffusion process transpiring in the communication over an extended period of substantive and organisational issues, strategy and critical reflections that crystallised a cohesive in-group among the participant entities in the People's Assembly.

Key words: social movement, social learning, social media, austerity, protest, People's Assembly

This article attempts to deepen the study of learning in social movements through an examination of Twitter usage among affiliates of the UK-based The People's Assembly against Austerity. Movement learning is a somewhat neglected area of social movement scholarship (Rogers and Haggerty, 2013), arguably in large part due to a dominant focus on strategic interactions between movements and other actors engaged in contentious politics (Tilly and Tarrow, 2007). There are notable exceptions to this observation, illustratively, of research that has construed movements as sites of knowledge (Holford, 1995); or that has grappled with the use of narratives to formulate and enact strategies for social change (Polletta, 2006). Approaching social movements as enablers of learning acting as a conduit to the collective articulation of "shared concern" (Rogers and Haggerty, 2013: 202) opens up the possibility to shed further light on their ability to accommodate a juxtaposition of technologically-mediated networks of personal affinity and expression with modern organisational structures erected on membership and ideology (Bennett and Segerberg, 2013).

The People's Assembly against Austerity has sought to convene a wide cross-sectional opposition to austerity politics spanning a field from trade unions to student movements (Assembly, 2015). Foregoing research has alluded to a disconnection between trade-union and loosely organised anti-austerity protest personified by the 15M or the Occupy movements which have opposed public spending cut-backs in parallel rather than in tandem (Peterson et al., 2015). In the UK, specifically, the recent record of relations between trade unions and other civil society organisations has ranged from cooperation to indifference and even conflict (Heery et al., 2012). The aim of this research is to advance the study of informal learning on Twitter by moving from an assessment of individual outcomes such as movement, civic or political participation (Gleason, 2013) to an investigation into whether communication on Twitter can help bridge disparate groups called upon by a movement seeking to unite them behind a common cause.

To that end, the article concentrates on the concerns connecting affiliates of the People's Assembly on Twitter. Specifically, the article interrogates whether a critique of the austerity politics

of the U.K. government emerged on Twitter and contributed to bridging otherwise disparate social groups—from unionists to students—congregating under the umbrella of the People's Assembly; whether that critique was part of a process of movement social learning reinforcing an in-group identity and bolstering collective action. The next section explicates the decision to analyse the People's Assembly. A review of movement learning is followed by an analysis of cooperation between trade unions, autonomous movements and civil society organisations. Three hypotheses are advanced and are evaluated with a combination of social network, semantic and discourse analysis. Our findings suggest movement social learning transpired in the communication of substantive issues, organisation and strategy that together demarcated an in-group among the participant entities in the People's Assembly.

The People's Assembly: a meeting point for movements

The People's Assembly follows in the line of social movements defying austerity measures for almost a decade (della Porta, 2013). The movement comprises 'individual supporters, unions nationally and locally, anti-cuts campaigns, and other student, pensioner…women's, Black people's, youth and LGBT campaigning organisations'(Assembly, 2015). Reflecting its diverse base, the People's Assembly appeals to 'ordinary citizens' in the same vein as the 15M movement in Spain (Flesher Fominaya, 2015) did earlier in the decade. Equally, it aims to build bridges with trade unions similarly pursuing an anti-austerity agenda. In Spain, 15M and the trade-unions shared a concern with government austerity policies. This agenda, nevertheless, did not result in their coalescence but rather a parallel cohabitation likewise witnessed elsewhere in Europe (Peterson et al., 2015).

The People's Assembly sought to connect the two strands of anti-austerity protest. The Assembly was founded in 2013. Following the outright electoral victory of the austerity-minded Conservative (Tory) Party in the general elections of 7 May 2015, the Assembly orchestrated ad hoc demonstrations outside Downing Street that garnered media attention (Halliday, 2015).

Subsequently, it called for anti-austerity demonstrations throughout 2015 and in the following year. To contemplate the latitude for strengthening the connection of trade unions with various movement actors by the People's Assembly, we revisit both social movement theory and the history of union relations with other movements.

Making trade unionism and what Flesher Fominaya (2015) depicts as 'autonomous movements' in the like of 15M cooperate is a goal that resonates across time. It echoes erstwhile attempts to amalgamate the student and the trade union movements that rose against corporate capitalism in France, in May 1968 (Touraine, 1971). At that juncture, the process collapsed as the radical political transformation envisioned by the student movement ultimately failed to make inroads into the trade union movement that adopted a reformist agenda instead. The latter embraced collective bargaining over direct action leading to a noted disjuncture between the organised labour movement and *new* movements assembled through 'networks rooted in everyday life' (Melucci et al., 1989: 41) touching on other conflicts in late modern societies, eg the feminist, environmental, peace or the global justice movements.

Historically, trade-unionism has been predicated on the representation of interests on behalf of waged labour in an institutionalised conflict with capital (Offe and Wiesenthal, 1980). A rearrangement in patterns of labour and lifestyle wrought by globalisation, neoliberalism and deindustrialisation in advanced economies (Bennett, 2003; Giddens, 2013) has eroded union membership and thereby their influence (Luce, 2014). To mitigate this trend, both in the U.K. (Heery et al., 2012) and beyond (Luce, 2014), unions have sought to forge alliances with community and non-governmental organisations involved in other movements. At the same time, unions have looked at digital communication as an avenue whereby to regain lost ground. In the U.K., specifically, an increasingly decentralised labour movement has been able to boost worker mobilisation through Twitter (Dahlberg-Grundberg et al., 2016).

However, cooperation in the U.K. remained most likely among homologous organisations, trade unions and bodies representing the labour interests of specific groups such as disabled people. Cooperation on cross-cutting policy issues (eg to extend the formal labour market) at the national level involving the most important unions—the TUC, Unite and UNISON—was more prevalent than joint protests (eg against the discrimination of undocumented migrants, Heery et al., 2012: 151-152). When cooperation occurred, it was depicted principally as an outcome of efforts by 'bridge-builders'—actors who can mediate between trade unions and other movements—and the mutual development of a rallying discourse on shared concerns (Heery et al., 2012: 147).

Autonomous movements, on the other hand, are defined as 'movements organised in horizontal networks, underlain by principles of self-organisation, direct/participatory democracy, autonomy, diversity and direct action' (Flesher Fominaya, 2015: 145). Their declared autonomy characterises both the loose internal structure as well as their dissociation from political parties and trade unions. Despite shunning established political actors by appealing directly to 'ordinary citizens', they are a political vehicle (Peterson et al., 2015: 305) for a vast 'global informal working class' (Holst, 2011). The informal working class cuts across social divisions of age, gender, education, ethnicity and colour (Baptist, 2010) and unsettles the theoretical distinction between 'old' labour and 'new' movements championing identity politics and cultural recognition (Hall et al., 2011).

The collective action instigated by autonomous movements has been the fruit of 'collective learning' about shared concerns, worldviews, identities, a sense of solidarity and knowledge on how to mobilise to effect social change (McGregor, 2014). This outlook seems to have taken root through a combination of greater civic knowledge especially among younger generations (Galston, 2001), a penchant for involvement in activism intent on a more immediate enactment of social change on topical issues (eg environmental degradation, austerity, job security, social entitlements or immigration) and the leveraging of internet technologies to that end (Anduiza et al., 2014; Dalton, 2008) .

Movement social learning

The question of how civic knowledge is nurtured remains the subject of lively intellectual deliberation in the field of civic learning (Bennett et al., 2009; Biesta, 2014; Wells, 2014). Civic learning entails forming an appreciation of democratic citizenship. On the one hand, citizenship represents a 'willingness and ability to engage in public discourse and evaluate the performance of those in office' (Galston, 1991: 227). As such, it is often portrayed as the fruit of *socialisation* into democratic participation otherwise described as a process of 'learning necessary to become part of an existing sociopolitical order' (Biesta, 2014: 6).

Conversely, one may apprehend citizenship through *subjectification* or the act of grappling with the workings of democracy through practice. As Biesta (2014: 8) highlights, this is a modality of citizenship where one *is* a citizen as soon as she participates in the self-actualising process of aligning one's personal concerns with those of others in a collective search to satisfy public interests or to secure public goods. Enacted in social activism, volunteering or political consumerism, sustained through the exchange of civic information in loose networks (Bennett et al., 2009: 107), *actualising* citizenship is an ideal type that beckoned a redeployment of research into civic learning from its institutional to its social context. Social learning is the concept that exemplifies this shift.

Social learning occurs despite dissonant values, norms, beliefs or attitudes. The point of convergence for participants in social learning does not have to be a shared vision of the good society. Instead, it is the recognition that conflict is inherent to democracy (Mouffe, 2005). Consequently, rather than a suite of goal-oriented, problem-solving practices, social learning entails making concerns public as a way to begin to address the conflicts they encapsulate (Wildemeersch, 2014: 22). In the wake of the global financial crisis of 2008, concerns with tight fiscal discipline, limiting social investment or, contrariwise, a large injection of public money into the economy (Piketty, 2014) laid bare the fault lines of an enduring political conflict in contemporary democracy.

Social movements have a prized capacity to 'converge on areas of shared concern' (Rogers and Haggerty, 2013: 202) which is actuated through learning and directed towards action (Rogers and Haggerty, 2013: 210). In their study of *Frento Civico*, a Mexican movement fighting to protect the regional cultural patrimony of Cuernavaca, Rogers and Haggerty (2013) observed that *Frento Civico* engaged in learning covering five strategic aspects of collective action.

Firstly, the authors distinguished learning that covered the issues at the heart of a movement. This was achieved through the exchange of information of public interest pertinent to its cause deemed to ultimately be instrumental to mobilising for broad-based collective action. Secondly, there was learning about effective organisation encompassing interpersonal communication and media skills as well as an ability to foster inclusive shared identities and horizontal participation in internal and democratic decision-making. Thirdly, strategies for action were a key learning subject. Among them, non-violent direct action was unpacked both by reference to theory and through practical illustration. Fourthly, participants in learning activities nourished their group efficacy or the belief that a problem of mutual concern can be remedied through collective action (Stekelenburg and Klandermans, 2010: 182). Lastly, they nurtured the capacity for critical reflection by 'learning how to analyse, discuss, debate and move forward' the issues that concerned them (Rogers and Haggerty, 2013: 206). The latter included government policy or the critique of the political economy of the media to account for its partial reporting on the movement.

Most significantly, learning transpired not only within the movement but also between *Frento Civico* and other cognate movements, leading to cooperation and solidarity around their respective struggles (Rogers and Haggerty, 2013: 208). Taking note of the above, this study grapples with what we understand as *movement social learning* on Twitter. Of late, movement learning has begun to be documented on Twitter (Gleason, 2013). Followers of the #OWS (Occupy Wall Street) hashtag distributed user-generated content comprising a plurality of viewpoints on that movement. Conceived as informal learning, this was a 'process of knowledge construction' through the sharing

and intertextual reading of the distributed content (Gleason, 2013: 978). Gleason approximated learning as an artefact of the variety of content being shared, principally through hyperlinks (2013: 970), whilst the process of learning on Twitter was considered strictly at the level of the individual user. The charting of the steps individual users would take to retrieve and evaluate information about Occupy Wall Street exposed the issue of credibility of user-generated content (Gleason, 2013: 976). Conversely, this study contemplates learning as a social process effected with retweets.

Social learning is an outcome of a utility maximisation function. One embraces an innovation if she gains information from her network testifying to the utility of that innovation (DiMaggio and Garip, 2012: 96). DiMaggio and Garip contend that social learning is more likely the more information is shared and thereby validated by other ties in the network. On Twitter, this process of social diffusion is married to the practice of retweeting. Retweeting or the republication of a message (Murthy, 2013) can be a vehicle for displaying one's approval of another's opinions that also signals one's position as a listener who may be ready to further disseminate ideas encountered on Twitter, thereby increasing their visibility (Boyd et al., 2010; Meraz and Papacharissi, 2013).

Indeed, Stephansen and Couldry (2014: 1220) specifically characterised retweeting as the validation of someone's 'status as a source of knowledge'. Retweeting thus amounts to a practice of mutual learning predicated on the incentivisation of knowledge pooling among listening social contacts. Ultimately, and in the vein of Earl's (2010: 216) analysis, we contemplated movement social learning on Twitter as a process of innovation diffusion whereby the sharing and validation of information in retweet networks may contribute to transformative outcomes for social movements such as cooperation among theoretically disparate social movement actors. The research hypotheses outline the specific innovations we expected to transpire in the retweet network of the People's Assembly.

Research hypotheses

An enquiry into political homophily or the congregation around a common political outlook on Twitter (Yardi and Boyd, 2011) indicated that despite being exposed to a plurality of messages on their timelines, users holding similar views to each other will converge on a in-group identity articulated as distinction from a perceived hostile out-group. Similarly, an investigation into the use of the #JeNeSuisPasCharlie hashtag depicted the latter as a medium for self-identity by critical voices out to reframe a public debate around the fundamental values seen to be called into question by the attack on the French satirical publication in January 2015 (Giglietto and Lee, 2017). Both these studies suggest that an in-group identity takes shape in communication threads on Twitter as a distinction is drawn from an oppositional out-group. We therefore hypothesized that if disparate entities among the People's Assembly holding distinct values, norms or beliefs cooperated, they partook in the construction of an in-group identity by building social and discursive links evidencing their common concern with austerity policy (Hypothesis 1, H1). To use Earl's (Earl, 2010: 218) terminology, we expected that an in-group identity would emerge as various concerns with austerity would be circulated by entities in the People's Assembly retweet network. This would be a diffusion process previously characterised as a 'jump' by virtue of which an innovation is 'learned about and then adopted' (2010: 214).

Secondly, Meraz and Papacharissi (2013: 155) argued that retweets augment the significance of message content whilst at the same time imprinting an emotional character onto the news or opinions featured in a message. In other words, retweets exhibit affect or 'the capacity for sentimental arousal on the part of a message' (Hansen et al., 2011: 34). Consequently, we inferred that whilst a mutual concern with austerity would act as a rallying point for the in-group, an out-group would be singled out as the source of injustice wrought onto the in-group and would act as the focal point of bonding outward anger (Haslam, 2004: 213). Democratic governments and political parties have been the predominant target of anti-austerity protests (Peterson et al., 2015).

We consequently postulated that anger at government and political parties was a rallying sentiment in the People's Assembly retweet network (Hypothesis 2, H2).

Thirdly, on Twitter, the reporting of collective action—by mainstream or alternative media—together with conversations on topical political issues were found to be more frequent than messages concerning the organisation of action, onsite protest logistics or participant mobilisation among Occupy Wall Street, 15M and the Greek Aganaktismenoi protestors (Theocharis et al., 2015: 211-212). We thus envisaged that movement social learning by way of retweeting would pivot on the cardinal common issue of austerity and its critical analysis rather than on exchanges about organisation, strategy or the broaching of group efficacy (Hypothesis H3).

Data and methods

Methodologically, this article combines social network analysis with Latent Dirichlet Allocation (LDA), a natural language processing protocol for rendering topic models in semantic analysis. The resulting topics were parsed with discourse analysis. We probed social learning in the ego-network of the People's Assembly on Twitter (@pplsassembly) and the networks that formed around the hashtags for the protests instigated by the movement in the research period (#endausteritynow, #nomoreausterity, #JuneDemo, #takebackMCR, #freeeducation, #grantsnotdebt). The approach, previously shown to yield 'larger and more reciprocal networks' (D'heer et al., 2017), enabled us to tap both hashtagged and non-hashtagged communication associated with the People's Assembly. The range of demonstrations staged in the research period testified to the Assembly's aim to espouse the cause of the manifold groups—from students to casualised workers—affected by the government's austerity policy.

[Figure 1]

Using the TAGS application, we monitored the Twitter Search API for tweets associated with the People's Assembly for eight months between Thursday 7 May 2015, the date of the UK general elections and 20 January 2016, the date of a planned national student demonstration against the scrapping of student maintenance grants by the Conservative government. The Search API does not return a full complement of tweets at a given moment in time[1]. Instead, results are edited according to their relevance by Twitter's own algorithms (Driscoll and Walker, 2014). However, one advantage of using the Search API is that it performs historical searches that go up to seven days back in time (Burgess and Bruns, 2012). This is a valuable feature if, as in our case, one may not be able to begin following a protest hashtag in real-time from the very moment it was launched. This was one of the two methodological reasons we focused on the most prominent latent topics in the Twitter data corpus. We clarify the second reason below.

We extracted 199,440 retweets from the dataset made by 48,350 users and mapped the discursive communities they engendered. We use the term community in a narrow sense encountered in social network analysis. Accordingly, community designates social units that are 'densely connected groups of vertices, with only sparse connections between groups' (Newman, 2006: 8577). The detection of community structure can be described as an operation of ascertaining the presence or otherwise of subgroups in a network. The research does not commence from an a priori number of groups. Instead, it is premised on a 'minimum cut approach' of iteratively reducing the number of edges or ties between two groups (Newman, 2006: 8578). Yet, this is not a purely inductive technique but one that is based on a statistical estimation that the edges between groups are not present simply by chance. This is an assessment of network *modularity*, a measure of the number of edges within a group minus the number of expected edges that are placed at random in an equivalent network (Newman, 2006: 8578).

For the purpose of community detection, we transformed the dataset into an undirected retweet network. We used the R programming language and experimented with various off-the-

shelf community detection algorithms implemented in *igraph*, an R package designed for working with graphs. The fast greedy algorithm (Clauset et al., 2004) returned the highest modularity score of 0.5 which resulted in 24 retweet communities. In the ensuing examination, we expected communities of homogenous information to be connected by bridge-builders who are capable of 'translating information across groups' (Burt, 2004: 354), in this instance through retweets. In the analysis, we therefore pinpointed the user accounts with the highest betweenness centrality scores[2]. Betweenness centrality is a measure for ascertaining how often a node lies between two other nodes which are otherwise not connected to each other (Prell, 2012: 104).Next, we employed LDA to reveal the topics cutting across the retweet communities. LDA is an algorithm that retrieves word co-occurrences to produce a probabilistic distribution of observed terms or concepts that are linked into latent topics (Mohr et al., 2013) independently from any accounts by community members (Gross and Murthy, 2014: 42). To conduct the topic analysis, we prepared the text data with the Automap software package. We organised the messages bridging the communities into separate text files for each community link resulting in 169 files. We cleaned the data by applying the Automap predefined generalisation thesaurus for English (Carley et al., 2013a) to render a single working representation of terms contained in the corpus (eg United_States as the generalised concept for US, United States, United States of America). Next, we created a delete list with noise words such as conjunctions as well as Twitter punctuation (eg @, #). Lastly, we applied the KSTEM algorithm to the corpus to convert all words to their morphemes (Carley et al., 2013a: 11).

In the following step, the sister package for semantic analysis ORA was used to generate the LDA models. The software allows for the Beta (β) parameter to be controlled by the researcher. We set the parameter to 0.1, a low value, which has the effect of constraining the composition of a topic to only the most dominant terms. We performed 1,000 runs at a recommended step size of 100 for the purpose of increased accuracy (Carley et al., 2013b). The concepts present in the top ten topics are summarised in Table 1 below. The table is illustrative of the topics. It lists the terms that are probabilistically most closely associated with each topic (see Mohr et al., 2013). The decision to

restrict the number of topics was based on the insight that the accuracy of the probabilistic classification of tweets is indirectly proportionate to the number of topics (Hong and Davison, 2010: 85). Lastly, the LDA procedure does not automatically assign topic names. Instead, the topics were labelled by the authors and reflect their reading of the underpinning (or latent) relations between co-occurring terms.

We thereafter performed a discourse analysis of the ensuing topics (similarly, see Hong and Davison, 2010: 84). Discourse analysis approaches language as action or a 'way of doing things' (Wood and Kroger, 2000: 4-5). A particular type of action probed in discourse analysis is intertextuality. Taken simply as the 'presence of one text within another' (Labbé and Labbé, 2012), intertextuality is a linguistic device common in everyday language use that enables the author of a text—written or spoken—to forge new meaning by interconnecting terms from multiple texts. (Gee, 2011: 77). On Twitter, this may be done with inline metadata such as hashtags, retweets and the @character that designates an account name (Zappavigna, 2011: 790-791), be it of an individual or any other entity. We combined this qualitative reading of intertextuality with a network representation of the relationship between the LDA topics and the terms—including account names—they subsumed. Topics were rendered as nodes whose centrality in the network was a measure of involvement[3] (Prell, 2012: 98) with the topic. In the next section, we illustrate those interconnections with pertinent direct quotes (see Mohr et al., 2013).

Results

At the outset, we noted that bridge-builders represented a wide spectrum of social actors—from individuals to myriad activist groups, trade unions and left-leaning political parties, namely Labour and the Green Party (see Figure 2 and Appendix 1)[4]. We interpreted the finding as a corroboration of the supposition in H1 that there were multiple types of entities linked together in the People's

Assembly retweet network. Second, the most prominent topics cutting across the discursive communities in the network spanned a range of concerns (see Table 1).

[Figure 2 here]

To take them in turn, topics T4, T5 and T9 pertained to mobilisation, the organisation of collective action and onsite logistics. The topics were closely related. Significantly, they featured references to bridge builders among participant entities— eg representatives, branches and offices of the Labour and the Green parties, the TUC, Unite, the Public and Commercial Services Union (PCS), the Stop the War Coalition and local chapters of the People's Assembly—as well as to other participant entities in the Assembly's actions such as the Fire Brigade Union, the Essex Feminist Collective, the Brighton Anti-Fascists or the Trade Union and Socialist Coalition (TUSC).

[Table 2 here]

Present in T1, T2 and T4 were appeals to mobilisation, more generally in opposition to the Tory government (T1) and specifically in support of two major protest events, the June 20 National Demonstration (T2) and the Tory Annual Conference in Manchester (T4). In particular, T4 exhibited a range of entreaties to participate in the collective actions staged by the People's Assembly and cognate groups. The topic exemplified a communicative pattern of making protests visible whilst portraying them as interrelated and in need of mutual support by the constituent entities of the Assembly. A close reading of the retweets additionally unveiled a template for onsite organisation of participant entities into movement blocs (eg the Cultural, the Green, Queer, Justice or regional 'Blocs') that suggested a desire to display an internal cohesiveness of the Assembly for the purpose of joined-up collective action whilst preserving the diversity of the concerns with austerity the movement accommodated.

Mounting an opposition to austerity was a clarion call to which a gamut of organisations lent their name (see Figure 3 for a partial snapshot). As hypothesized in H1, opposition to austerity

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appeared as the most salient in-group marker. The word itself featured in five of the most prominent topics. Notably, austerity was juxtaposed to Tory policies (T1 to T4). The denouncement of the Tories as the artisans of austerity partially substantiated our second hypothesis (H2). It was not the political system *in toto* but specifically the Tory government and choices made by individual ministers—chief among whom was the Chancellor George Osborne—that reverberated in the People's Assembly's retweet network. Thus, whilst austerity was depicted as 'not economic necessity…it's a political choice that's killing 100[s]', it was contested on grounds that it constituted an ideological propensity rather than judicious economic judgment: 'Osborne has no mandate for austerity. He wants to shrink state not cut deficit'.

[Figure 3 here]

Indeed, responsibility for the fallout from public spending curbs was laid squarely on the Tories, unambiguously designated as the out-group: 'Tory austerity is destroying our services. Hurting our kids | Join the march #EndAusterityNow LDN 20 June #JuneDemo'. Lastly, following a linguistic study of political community on Twitter (Zappavigna, 2011: 794) designating verbs as a primary vehicle for 'enacting experience', we noted that the verb 'get' in topics T1, 2 and 4 helped communicate a shared sense of purpose to oppose Tory austerity: 'Tories getting the welcome they deserve by @Dis_Ppl_Protest amazing people #TakeBackMCR #IDSmurders @tweep1'[5].

Topics T1, T2 and T7 added a further dimension to collective identity that appeared to evidence a process of social learning not solely about the issues that bound the manifold groups within the People's Assembly around a common anti-austerity agenda but also about the merit of displaying a sense of solidarity to boost group efficacy: 'RT @ tweep2: A quarter of a million people marched today!! Solidarity with each and everyone of them! #EndAusterityNow #London'. An emphasis on solidarity, albeit in support of refugees, was again expounded in topic T6. Topic T6 comprised information about the substantive issue—the refugee crisis in Europe; about mobilisation into the anti-racist bloc at the 20 June National Demo and the Manchester Tory conference and the

critical voices who rebuffed the government's response to the crisis, eg the NUS, NUT, Unison, PCS, the Stop the War Coalition or the Green Party. Retweets captured a show of unity among the latter organisations who individually professed their support for refugees.

Next, topic T3 bore out our supposition that critical analysis would figure distinctly in the communication under scrutiny (H3). Its manifest encapsulation was the appeal to democratically voice opposition to austerity. The retweeted appeal was originally made by the People's Assembly 'RT @pplsassembly:.@michaelsheen: we must use our democratic right to make our voices heard'. T6 presented a further illustration of how critical discourse was constructed. Such discourse would highlight the issue at stake, for instance the refugee crisis, attributing responsibility for it to the government, drawing attention to the coalition opposing the government, to ultimately designate austerity as the primary cause for an unsatisfactory response by the government: 'Sam Fairbarn @pplsassembly slams the govt for scapegoating refugees for the economic crisis #refugeeswelcome'. Importantly, however, in the case of T6 as well as all the other topics, a critical analysis was not accompanied by prompts to discuss or debate issues. Instead, the retweets seemed to be an opportunity to expose and acknowledge the detrimental impact on austerity and a resolve to oppose it.

Topics T5 and T9 were associated with the 20 June March and Rally (see Figure 1). Alongside an inducement to participation in the event and an indication of its main thrust to oppose austerity likewise found in topic T4, these two topics encompassed information relevant to both action coordination and onsite logistics. These were details about participant actors, the nature and location of actions feeding into the 20 June March:

'RT @ShahrarAli: March #EndAusterityNow #GreenBloc about to begin @Amelia_Womack @natalieben @ShahrarAli @TheGreenParty @LonGreenParty'.

'RT @fbunational: Route announced for @pplsassembly demo. http://t.co/hTjW3qeo32 Join the #FBU there'.

While much of the content under topic T5 was a reportage of the Green Party's involvement in the march, topic T9 drew attention to the live coverage of the event by Occupy London: 'RT @pplsassembly: Livestream here from @OccupyLondon. Thank you!'. Both topics illuminated the organisation of the Assembly. They foregrounded two participant entities, the Green Party and Occupy London, respectively, highlighting their input in the June 20 protest event, namely the livestreaming by Occupy London; the contribution of the Green Party to the speaker line-up and its involvement in the movement blocs, respectively.

Topics 8 and 10, finally, testified to the disgruntlement with the implementation of austerity measures in higher education. They captured the protests against the planned government scrappage of student maintenance grants and the continued rise in tuition fees. In each case, a description of the issues was accompanied by specifics on individual protest actions staged by the Assembly as well as the names of individuals (eg George Aylett, a young Labour activist) or organisations (Rtuknews, the Russia Today news channel) who reported on the unfolding demonstrations. The presence of individual or organisational names was a recurrent feature in topics T2, T3, T5 and T7.

> 'RT @RTUKnews: Students protest in London's Westminster against rising tuition fees and cuts to grants #GrantsNotDebt'.

> 'RT @GeorgeAylett: 10,000 students have taken to the streets to call for #GrantsNotDebt. Let's invest in the future: End tuition fees'.

On top of insights into the issue of austerity in higher education, and a description of the protests against it, Topic 8 made visible first a critique of the issue and latterly a preoccupation with strategy, specifically to do with activist responses to police action. Retweets indicated that the police were taking a confrontational stance at the National Demonstration Against Fees and Cuts whilst most of the protestors were acting to avoid a face-off:

'RT @Harryslaststand: Today's generation of students are worth more than zero hour contracts, student debt and few affordable housing choices'.

'RT @JMorganTHE: Loads of police just rushed in. Students shouting 'avoid the kettle' and most have moved on #GrantsNotDebt'.

Moreover, in both T8 and T10 there was recurring information pertinent to participant mobilisation juxtaposed with reporting on the enactment of collective action. Therefore, in contrast to the initial suppositions formulated in H3, the examination of the latent topics revealed that the entire range of aforementioned aspects of collective action figured in the top retweet topics. A close inspection of the topic network shed further light on social learning. On the one hand, the network graph in Figure 4 illustrates the connections among the retweet topics. The topics covering the student marches (T8 and T10) linked into topic 7 which encapsulated a call for solidarity across protest causes. In turn, Topic 7 was connected to Topic 6. Both referenced marches as a form of collective action embraced to protest discrete causes, namely the opposition to tuition fees and solidarity with refugees, respectively. Marches and demonstrations appeared as the predominant forms of collective action staged by the Assembly.

On the other hand, the topics connected distinct protest events. Whilst the June March was referenced in topics T4 and T5, T6 and T9, the same topics linked into the Tory Party conference protest (T1,2,3) and the student marches (T8,10). These connections were made through the reproduction of references to identity (voicing solidarity and opposition to austerity), strategy (to deal with the police, to mobilise participants), the organisation of collective action (marches, demonstrations and sub-unitary participant blocs) and critical reflection (on Tory policies). The references illustrated how intertextual links between topics spanned a period extending over multiple events thereby alluding to a chronological dimension of social learning.

Discussion and conclusions

This article scrutinised movement social learning on Twitter. Previously conceived as a vehicle for the social validation of information, we examined retweeting as a practice potentially conducive to social learning. We submitted that an ability of disparate movement actors to create intertextual links among their manifold concerns with austerity would provide a communicative basis for affiliation and social learning.

We showed that an array of entities—from trade unions to activist groups and individual users—acted as bridge-builders making connections amongst participants in the People's Assembly. In addition, retweeting was a vessel for the display of bonding affect. The TUC retweeted messages about the student protests; student unions retweeted posts about the Green Party; Occupy London retweeted the junior doctor's strike; Occupy Manchester retweeted content addressed to the TUC celebrating the long history of the trade union movement in the UK. Retweeting thereby aided in the reinforcement of a loose anti-austerity in-group. Austerity appeared as the keystone issue on which participant entities coalesced in protest. It represented an unmistakable condition conducive to cooperation towards collective action not only by homologous (eg various unions) but also by heterologous entities such as protest groups like the Disabled People Against Cuts or Stop the War Coalition (cf. Heery et al., 2012).

Responsibility for austerity was placed squarely on the Conservative Party and Government. Austerity was depicted as a clear-cut ideological product of the Conservatives who were a catalysing out-group threat to be counterweighed through collective action. These findings seemed to corroborate H1 and H2 by highlighting that anti-Tory austerity was a common denominator among the participant entities in the People's Assembly which the latter could use to sensitize each other to their more specific concerns. In other words, a common oppositional agenda to Tory austerity constituted the basis for voicing grievances—both shared and distinctive (eg against rises in tuition fees, or the stigmatisation of refugees)—and for attempts to build solidarity among discrete groups

(eg T7). Whilst many modern organisations including trade unions and political parties acted as bridge-builders, they did not appear to impose a monolithic interpretation of concerns, demands or strategies on other participant entities (cf. Bennett and Segerberg, 2013:74). Ultimately, our textual analysis seemed to corroborate the suggestion by Zappavigna (2011, p. 804) that affinity on Twitter is evidenced not only in social connections but also in the negotiation of meaning among them, in this case of austerity.

All the modalities of movement learning reviewed at the outset were encountered in the communication in the Assembly's retweet network. First, there was a notable preoccupation with pressing the issue that cemented the opposition—Tory austerity—and its critique. The espousal of such criticality amounted to an 'affective endorsement of the movement' (Papacharissi, 2016: 316) by its constituent entities. Moreover, organisation and participant mobilisation in the collective actions staged by the People's Assembly were at the forefront of the content circulated in the retweet network. Strategies for onsite action, eg for responding to police actions, were put forward in the ten most prominent topics. Information regarding the nature and location of actions subsumed to the Assembly's protests exemplified a possibility for the 'coordination of concrete political protest activities such as protest marches' (Theocharis et al., 2015: 211) that retweets materialised. The referencing of organisational interconnections between participant entities and their contributions to collective action as well as to specific action strategies evinced that group efficacy was fostered and validated with retweets.

The significance of the findings pertaining to movement social learning is threefold. First, we have stressed that social learning is entwined with identity-building. An encompassing movement against Tory austerity was made visible through the naming of participant entities and the arrayal of issues that flowed into the overarching theme of austerity. Visibility was not a mere performance of an activist identity (Milan, 2015). Instead, it signalled symbolic membership of an activist in-group. Second, movement social learning among the discursive Twitter communities of the Assembly

comprehended making public multiple discrete concerns with austerity which were attended by a critique of the Tory government. Equally, we would argue that the circulation of information regarding organisation, group efficacy or shared strategy helped actualise the Assembly as a social movement gathering entities ranging from the most important U.K. trade unions to student groups, local activist chapters and individual activists. Thirdly, we observed how such links extended across discrete protest events staged by the Assembly suggesting that jumps in social learning may be both semantic and chronological.

We would caution that this study is a proof-of-concept of movement social learning conceived as a diffusion process on Twitter. A technological affordance such as retweeting may have its counterpart on other social media. However, any parallels between affordances have to be set against an analysis of techno-cultural specificities particular to any platform (Hinton and Hjorth, 2013). In addition, analyses of the Twitter Search API point to higher network clustering and a greater prominence of central users than in the Streaming API or GNIP Powertrack data (Driscoll and Walker, 2014).

This investigation surveyed the most central and closely connected retweet network of the People's Assembly. For that reason, we do not make a claim to representativity. Nonetheless, we have shown that movement social learning did take place among disparate, albeit central, entities in the retweet network. Lastly, social movements will make strategic decisions about their choice of means of communication (Treré, 2015). This investigation is silent about such choices. Further research may illuminate by means of in-depth interviews the perceptions on inter-organisational cooperation of Twitter bridge-builders, provide an assessment of their contribution to it and situate Twitter in the communication ecology of a social movement.

Table 1: 10 Level Topic Model of People's Assembly Corpus. Top ten words in each topic.

Topic	T1: Unite against Tory Austerity	T2: Rage against the Tories @ Annual Conference	T3:Voicing Opposition@ Annual Conference	T4:Protest Mobilisation @ National Demo (June 20)	T5: Onsite Collective Action (The Green Party)	T6: Support for Refugees	T7: Solidarity across Causes	T8: The Student Marches	T9: Onsite Collective Action (Occupy)	T10: Cancel Tuition Fees
Term	Tory .030	Tweep1 .051	The45storm .019	Pplsassembly .104	March .028	Demo .039	March .037	Student .037	Occupy london .037	Student .022
	Manchester .017	Tory .036	Tory .016	People .014	Join .019	Say .030	Protest .035	Grant .021	Live .032	Rtuknews .014
	Join .017	Manchester .028	Have .013	Tory .013	Natalieben .017	Antiracism day .023	People .019	Tory .016	Demo .019	Photo .013
	Austerity .017	JeremyCorby4pm .019	Dis_ppl_ protest .008	June .011	Green .014	Join .011	London .018	Education .010	March .018	Marcus chown .012
	Conference .015	Get .014	Watch .007	Demo .011	Thegreen party .014	Jeremy .009	Today .015	Scrap .009	Austerity .014	Georgeaylett .011
	Demo .014	Tweep3 .012	Now .007	Austerity .009	June .010	Refugee .008	Cut .011	Maintenance .009	Owenjones84 .010	Austerity .011
	Get .011	People .011	Protest .006	Get .008	Austerity .009	Cabinet million .006	Solidarity .009	Demo .008	Join .010	Billion .010
	Party .010	Party .011	Conference .005	Join .007	Rally .008	Bloc .006	Make .008	Go .008	Out .010	Tuition .009
	Against .009	Egg .010	Tax .005	Against .007	Bloc .007	Migrant .006	Against .008	Police .008	Listen .009	Against .009
	See .007	Jolyonrubs .010	Say .005	Support .007	Dominichurst .007	March .006	Student .008	Harry slaststand .008	Saturday .009	Fee .009

Figure 1: People's Assembly Event Timeline: May 2015- January 2016

National Day of Action on Saturday 30 May to preface 20 June demonstration, 30/05/2015

National Demonstration Against Fees and Cuts, 04/11/2015

#GrantsNotDebt: student protest against scrapping of maintenance grants, 19/01/2016

Protest on 23 May in Piccadilly Gardens, Manchester, 23/05/2015

National Demonstration, Bank of England and March to Parliament, 20/06/2015

TAKE BACK MANCHESTER ! Protest the Tory Party Conference, 03/10/2015

Stand Up to Racism, Anti-racism Day, 19/03/2016

Crowds protest the Queen's Speech at Downing Street, 26/05/2015
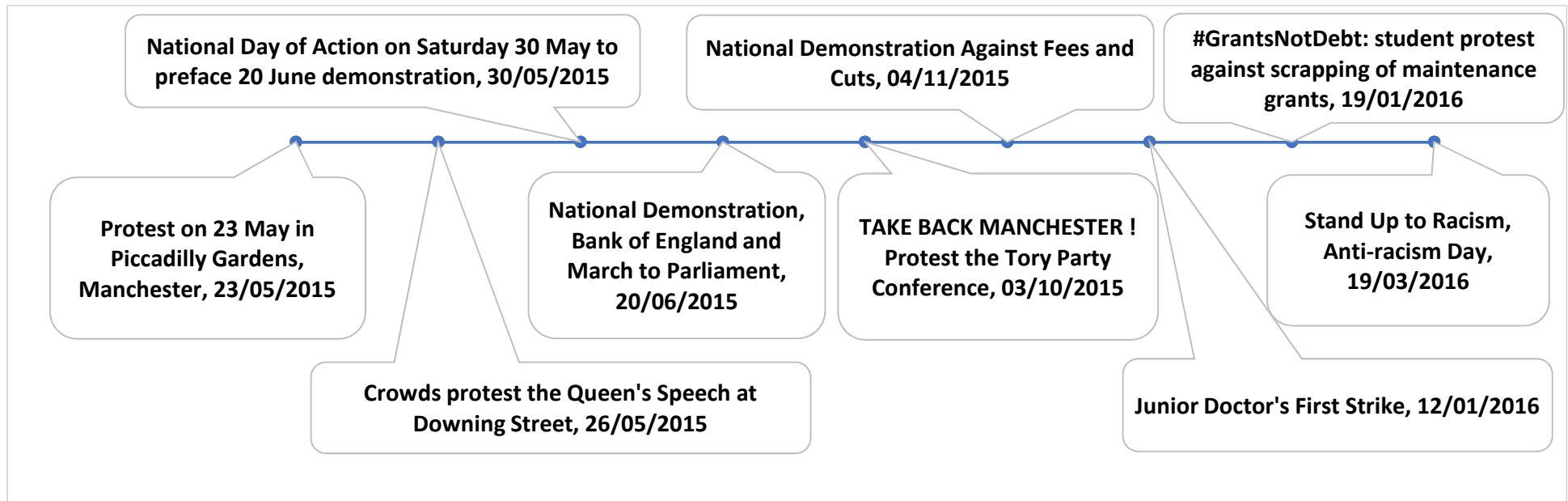
Junior Doctor's First Strike, 12/01/2016

Figure 2: Undirected Graph of The Principal Bridge Builders (node size and hot-cold colour gradient according to betweenness centrality)
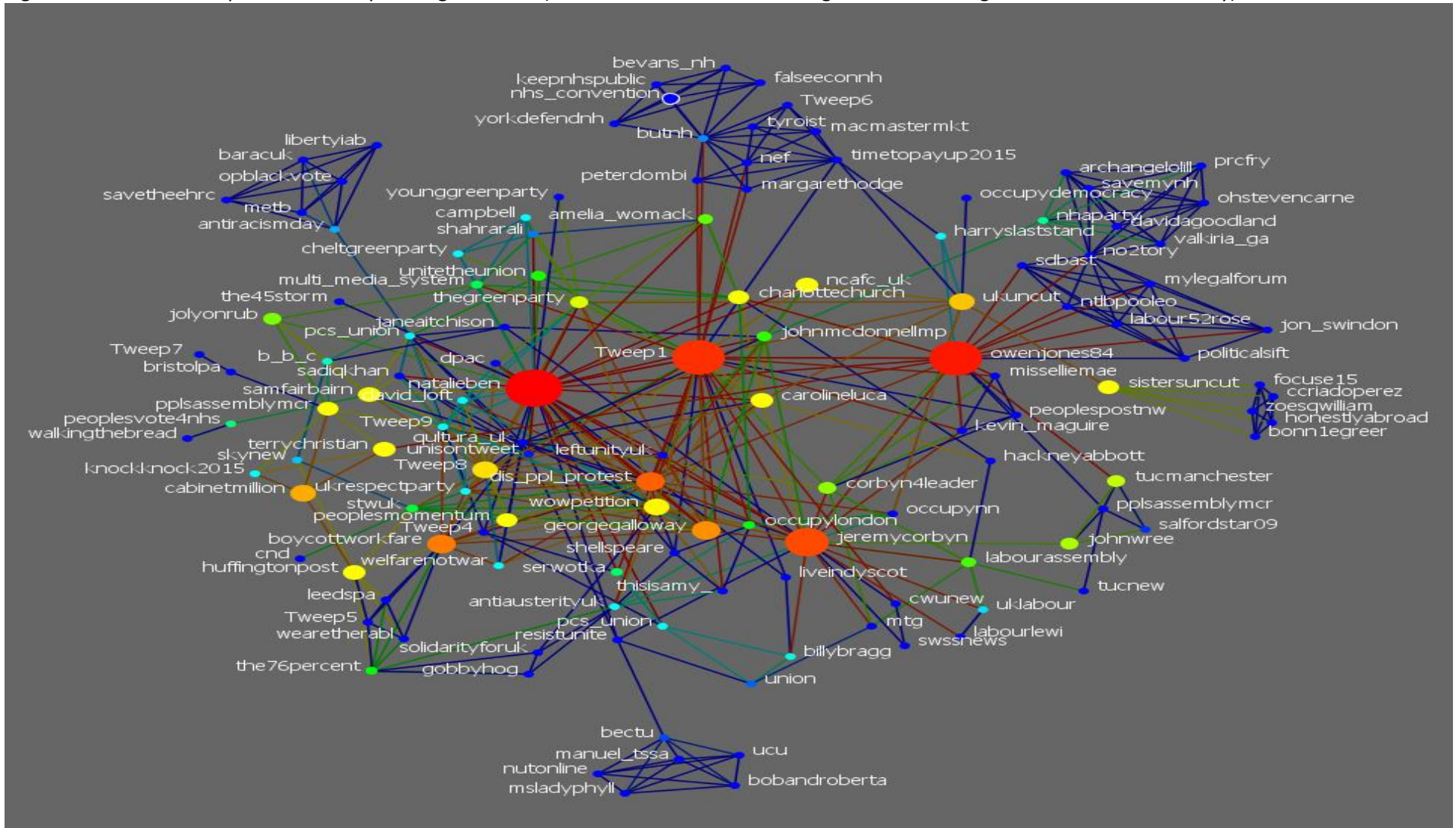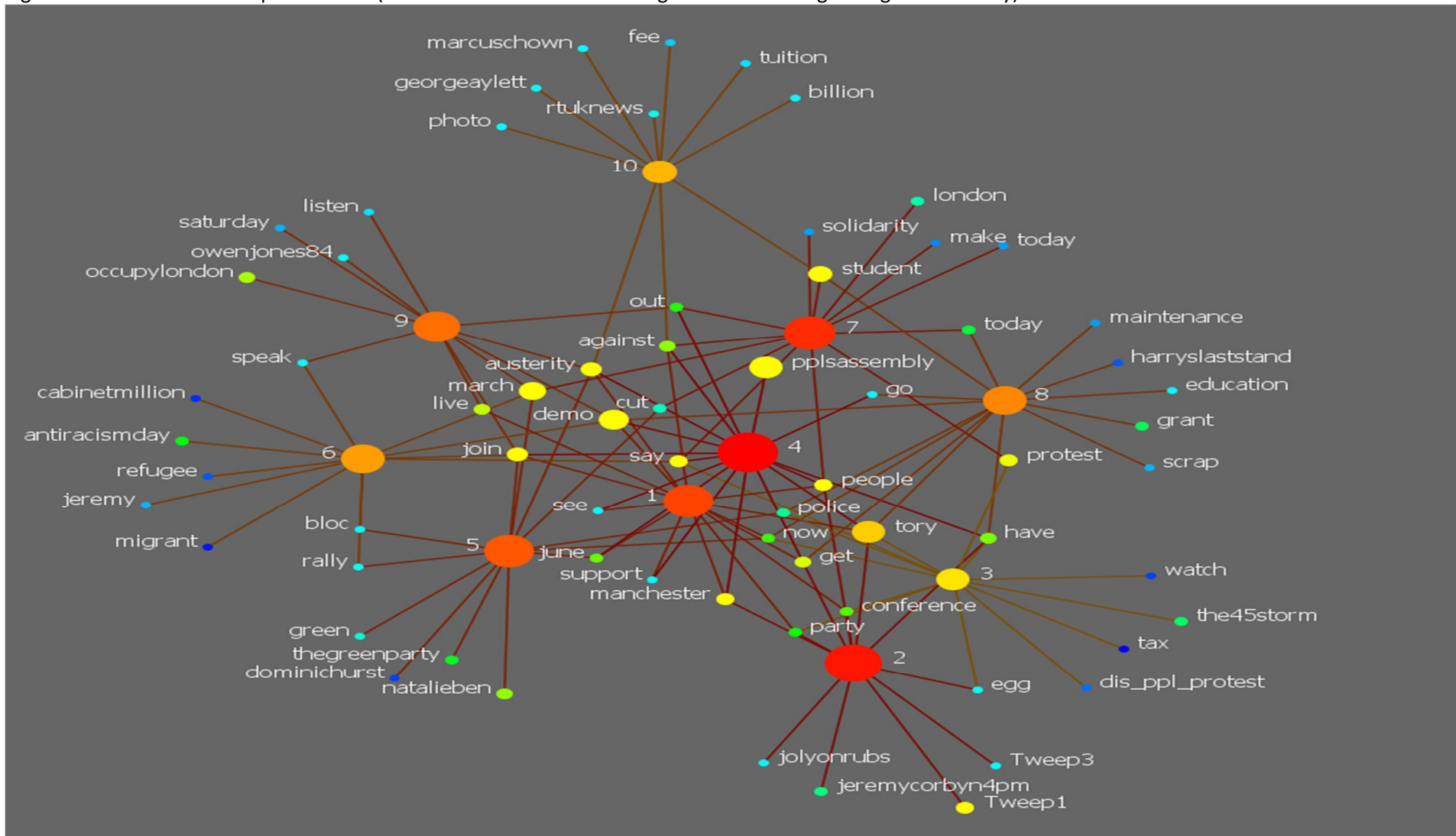
Figure 3: Undirected LDA Topic Network (node size and hot-cold colour gradient according to degree centrality)

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[1] The limited resources available for this project precluded us from building a more exhaustive by purchasing commercially mined GNIP Powertrack data.

[2] The @pplsassembly account was excluded from this analysis.

[3]To this end, we measured the degree centrality of the topics which is 'the number of immediate contacts an actor has in a network' (Prell, 2012:97).

[4]We checked that all these accounts belonged to actual individuals, groups or organisation. They were, for example, individuals such as @tweep1 who described himself as an artist; @natalieben, the account of Natalie Bennett former leader of the Green Party; @dis_ppl_protest, the account of the cause group Disabled People Against Cuts; @owenjones84, the account of Guardian columnist Owen Jones, @pcs_union, the account of civil and public servants' union.

[5] We anonymised the Twitter handles of all private individuals who did not overtly associate with any groups or organisations.