

# Union use of social media: a study of the University and College Union on Twitter

Andy Hodder and David Houghton

*The importance of the Internet to trade unionism has not gone unnoticed by academics, and while many have perceived the need for unions to engage in social media, there has not been any study of how unions use social media. This paper provides a systematic examination of union social media use in terms of method, scope and content. The University and College Union (UCU) Twitter account was used as a case study. Tweets (n = 1,615) were collected over a four-month period (January 1–April 30, 2014) from the official UCU account with followers (n = 12,301) also categorised to determine who is listening. Findings are discussed with reference to earlier debates on union use of the Internet. We find that while UCU has moved with technological developments by using Twitter, the content of the union's messages remain in line with traditional union communication, and the engagement opportunities of social media are underutilised.*

**Keywords:** social media, trade union, mobilisation theory, trade union communications, Web 2.0, Twitter.

## Introduction

Following an extensive period of union decline, British unions have had to reassess their agenda to maintain levels of organisation. Alongside the union renewal debate, a body of literature emerged looking at the role the Internet can play in trade unionism (Diamond and Freeman, 2002; Greene *et al.*, 2003; Freeman, 2005). The pace of online technological evolution requires an understanding of its current capabilities to determine what such new technology can offer unions (Howcroft and Taylor, 2014: 2–3).

While recent work has established the views of trade unionists towards social media (e.g. Panagiotopoulos, 2012; Panagiotopoulos and Barnett, 2015; Upchurch and Grassman, 2015), there has not yet been any investigation into how unions use social media. This paper makes an important contribution to the literature by providing the first systematic examination of union use of social media in terms of scope and content. Specifically, we adopt a case study approach to the University and College Union's (UCU) use of Twitter. We consider the content of communication in the context of mobilisation theory, and investigate the sender, message and receiver of UCU tweets.

---

□ Andy Hodder (a.j.hodder@bham.ac.uk) is a Lecturer in Employment Relations at Birmingham Business School, University of Birmingham. He has conducted research on trade union organizing in the civil service and the relationship between young workers and trade unions in the UK. David Houghton (d.j.houghton@bham.ac.uk) is a Lecturer in Marketing at Birmingham Business School, University of Birmingham, UK. His research focuses on applications of technology for marketing and personal relationships.

Twitter is one of the most popular social media platforms, boasting the ninth most Internet traffic globally (Alexa, 2014). In September 2014, Twitter had 284 million monthly active users who posted over 500 million tweets per day, with 80 per cent of active Twitter accounts being accessed from mobile devices (Twitter, 2014). Moreover, Twitter data are publicly accessible, thus available to anybody with access to the Internet, unlike other social media platforms where a user account and established connection with another user are necessary.

The remainder of the paper is structured as follows. The next section outlines the extant literature on union communications, their use of the Internet and the opportunities afforded by social media. The background for the study is then provided before a consideration of the methods. The findings are then discussed before the conclusions are presented in the final section.

## Review of the literature

Studying union communication can indicate how unions 'use communication as a product and, concurrently, how communication contributes to the process of organizing workers' (Botan and Frey, 1983: 237). Traditional forms of union communication are branch newsletters and union journals, and the relevance of these is undoubted. Yet with the advent of the Internet, unions have taken advantage of technological developments to utilise new forms of communication. In this section, we consider the literature on union use of Web 1.0 before examining the importance of these debates for the current world of Web 2.0, specifically social media. Despite unions' initial slow response to advances in technology, the use of the Internet by UK unions grew rapidly in the 2000s and quickly became part of union strategy.

Following Upchurch and Grassman (2015), we note that the extant literature on union use of Web 1.0 centred around debates on optimistic and pessimistic opinions about the possibilities for the Internet to enable union renewal. The optimistic thesis was first proposed by Lee (1996), who advocated the ways in which the Internet would enable union renewal, and this point was developed further by Diamond and Freeman (2002) and Freeman (2005). Freeman and Rogers (2002) even suggested that a model of 'open source unionism' may exist in the future. Central to this was the role the Internet could play in transforming internal union democracy through the concept of 'distributed discourse'. Hogan and Greene (2002: 62) argued that technological developments 'clearly have the potential to refashion union democracy, reducing the distance between the bureaucracy and the rank and file that is so harshly criticised'. This enables a 'distributed discourse' (Clegg, 2002; Grieco, 2002; Carter *et al.*, 2003; Hogan *et al.*, 2010) through the flattening of union structures, providing a more 'distributed control over means of communication' (Greene *et al.*, 2003: 285). However, it should be noted that the Internet 'can be used by pre-existing technological and organisational elites both within and beyond leadership structures to close down or restrict discussions' (Martinez Lucio *et al.*, 2009: 117). Therefore proponents of the 'pessimistic' thesis were much more neutral with regard to the potential for the Internet to contribute to renewal, advocating the 'need to avoid the binary contrast between "bureaucracy" and the "internet"' (Martinez Lucio, 2003: 338). Instead, a number of inter-related factors concerned with notions of identity, existing cultures of communication and democratic processes were identified to show the complex realities of union use of the Internet (see Martinez Lucio, 2003; Martinez Lucio and Walker, 2005; Martinez Lucio *et al.*, 2009).

Separate to the distributed discourse debate, it is important to consider 'accelerated pluralism' (Bimber, 1998; Upchurch and Grassman, 2015: 5). This concept centres on the argument that 'the Internet may enhance revitalisation of trade unions through "mobilisation" effects' (Upchurch and Grassman, 2015: 5). In order to consider how mobilisation may occur requires an examination of message content (Dee, 1968). Outlining the future prospects of strategic union action, Hyman (2007: 206) described the main issues as 'ideas, language and mobilisation', going on to state that the 'battle of

ideas is also a battle of words' (207). Building on the social movement literature, and in particular the work of Tilly (1978), McAdam (1988) and Gamson (1992; 1995), Kelly (1998) introduced the concept of mobilisation theory into industrial relations, suggesting that the desire for unionism arises from employees who perceive that they are being treated unjustly. Employees must then attribute blame for the injustice to an agency (i.e. the employer or the state) and finally have a sense of efficacy—the belief that something can be achieved from collective organisation and action. Central to this is the requirement for a visible collective organisation that is able to provide resources sufficient for such action, with a leadership both able and willing to mobilise members. In the context of union communication, the union in question would act as the visible, collective organisation. In reference to mobilisation theory, Hyman (2007: 207) stated the importance of 'effective linguistic means of "framing" worker issues when communicating the union message. However, Hyman went on to suggest that 'the vocabularies of motive which legitimated traditional trade union action have an archaic ring today' (2007: 207).

The web, its functions and adoption have fundamentally changed in the shift from Web 1.0 to Web 2.0. Arguably, the technology behind communication in Web 2.0 existed in the previous era (Kim *et al.*, 2009). Under Web 1.0, it was possible for messages to be sent on a one-to-one, one-to-many or many-to-many basis using email, discussion boards and instant messengers. These same functions are exemplified by Web 2.0 platforms such as Twitter, Facebook and YouTube. The defining functions of Web 2.0 are its facilitation of interaction, critical mass and accessibility, underlined by more affordable, faster Internet connections across the Globe and the seeming transparency and speed at which messages can be transmitted (Shirky, 2011). Indeed, social media (a popular form of Web 2.0 technology) are now ubiquitous. Having developed predominantly in the early to mid-2000s (Boyd and Ellison, 2008), social media have evolved on both desktop web browser-based platforms and smartphones. It has been suggested that social media do 'not have a single pre-ordained outcome' (Shirky, 2011: 29) and that 'highly visible users determine what gets amplified and what does not' (Fuchs, 2014: 192). Unions have started to adopt social media, including social networking sites such as Facebook and microblogging services such as Twitter. A micro-blog is an 'Internet-based service in which: (1) users have a public profile where they broadcast short public messages/updates [...] (2) messages become publicly aggregated together across users; and (3) users can decide whose messages they wish to receive, but not necessarily who can receive their messages' (Murthy, 2013: 10).

Thus, it is important to consider the relevance of the theoretical debates which referred to union use of Web 1.0. It is clear that Web 2.0's ability to encourage user-generated content for redistribution exemplifies notions of distributed discourse. However, for example, while Twitter largely facilitates interaction and conversation between users, it still enables a union to control what message is coming from an account, and to monitor and control the content of such communication. Therefore, the way in which social media platforms are used by unions can reinforce the power and authority of union leadership. Indeed, Fitzgerald *et al.* (2012: 95) note that 'unions have advanced greatly in their ability to engage with the Internet and created centrally controlled spaces for intra- and extra-union communications'. Union presence on social media can therefore present the 'official' view of the union, much in the same way a union's website is the 'prominent public shop-window of the organization' (Bibby in Freeman, 2005: 167). We also acknowledge the criticisms levelled at mobilisation theory in conjunction with democracy, unions and Web 1.0 (Hogan and Greene, 2002). However, we argue that it is necessary to examine the content of union communication in the era of Web 2.0 to see if unions still communicate in the traditional manner using the central tenets of mobilisation theory. Indeed, in this context, it is important to consider the potential impact of 'accelerated pluralism' as '[t]he implication is that if trade unions utilise social media to identify and isolate the employer as the source of grievance, than the prospects of collective mobilisation and identification with the union are enhanced' (Upchurch and Grassman, 2015: 5). Thus, it is necessary to inves-

tigate in a social media context how message transmission is conducted in-line with mobilisation theory, and to consider whether conversational opportunities are being leveraged by unions.

Despite the need for unions to take more control over their communication power (Geelan, 2013), research into union use of social media has largely been restricted to surveys of union members and officials about the potential benefits and limitations of using such technologies. For example, Panagiotopoulos (2012) examines how members of a Greek union perceive union use of social media, and found that the majority of members were willing to interact with the union through social media channels outside of working hours. Moreover, he expresses the need for unions to pay attention to social media audiences and develop the communication accordingly, yet did not investigate the social media audience of the Greek union studied. Panagiotopoulos and Barnett (2015) surveyed union members and officials across UNI Global union regarding their union's use of social media. The authors suggest that union social media use gives the wider public 'more opportunities to come across union positions and possibly engage with them' (ibid: 18), and showed a moderate uptake of micro-blogging services like Twitter (19). Again, the authors did not analyse message content communicated through social media platforms.

Fowler and Hagar (2013) examined unions and social media in the Canadian context and in relation to Twitter concluded that union tweets must be 'dynamic and engaging and must actively seek to encourage responses from followers' (223), confirming the view of Pinnock (2005) regarding the impact of concise messages. Additionally, the importance of hashtags to monitor online participation in discussions was noted. Hashtags allow users 'to link a tweet to a particular topic, effectively a "bottom-up" curation of tweets around a particular topic into a single stream of data' (Tinati *et al.*, 2014: 668). Upchurch and Grassman's (2015) recent work differs in its use of documentary evidence and interviews to illustrate how union activity on social media can be used to discipline employees. While useful to the debate, the works of both Fowler and Hagar and Upchurch and Grassman do not systematically examine precisely how social media are utilised by unions. Attempts have been made to document the presence of unions on social media platforms such as Facebook and Twitter (see Hodder, 2015), but call for greater information regarding message content, and a detailed examination of message recipients.

Table 1 examines the frequency at which the top 11 Trades Union Congress-affiliated unions are using Twitter, demonstrating the varying degree to which unions are using Twitter and that the number of people following union accounts has little resemblance

Table 1: Social media penetration by unions May 1, 2014

Union	Tweets	Following	Followers	Membership
Unite	10,449	813	26,995	1,310,649
UNISON	11,834	1,974	23,559	1,266,711
GMB	1,452	0	4,471	617,064
USDAW	877	34	2,051	433,402
NUT	7,177	2,026	21,705	330,719
NASUWT	4,990	1,994	13,601	293,024
PCS	11,626	866	15,525	247,345
CWU	6,174	717	4,478	201,729
ATL	2,738	427	4,651	127,899
Prospect	2,671	660	2,646	116,911
UCU	6,057	344	12,301	113,227

Twitter data: authors; Union membership January 2014: TUC, 2015: 34–35.

to membership figures. A detailed examination of union followers on Twitter may go some way to understanding the potential for unions to organise and mobilise through social media.

In summary, although unions have adopted new platforms of communication as technology has evolved from Web 1.0 to Web 2.0, it is not known whether the content of communication has modernised accordingly. We argue that while union use of social media is still constrained by the same features that limited the power of Web 1.0 for renewal, there is increased potential for Web 2.0 to mobilise workers through the concept of 'accelerated pluralism' (Bimber, 1998). Thus, it is important to analyse the pattern of union communication through social media to see if the approach follows the principles of mobilisation theory (Kelly, 1998). Therefore, we address the following research questions:

1. Is the content of the message in line with mobilisation theory?
2. What is being said by trade unions on social media?
3. Who are the audience?

## Context

UCU organises academic and academic-related staff in the further and higher education sectors of the UK. As of January 2014, UCU had a membership of 113,227 (TUC, 2015: 35). Increasingly, universities are operating as businesses, which has led to a growth in the 'inevitable tensions between the market driven "missions" and the desire by staff to preserve a degree of professional autonomy and some control over the nature and mix of their work' (Kline, 2009: 25). Consequently, there have been an increasing number of national disputes between the union and the Universities and Colleges Employers Association (UCEA) on issues of pay and pensions. The research presented here was conducted against the backdrop of a pay dispute related to the 2013 pay offer. The union balloted members for industrial action in autumn 2013, and one-day strikes were held in October and November. Two-hour strikes were held on January 23, 2014, January 28, 2014 and February 10, 2014, and there was a one-day strike on February 06, 2014 alongside other unions in the HE sector. The dispute continued until May 2014.

## Methods

Twitter was selected as the social media platform for this investigation due to its provision for short (140-character) text-based updates (although pictures, videos and URLs can be used) and its wider adoption as a news and micro-blogging service where users and organisations push updates and interact with one another. Tweets from the UCU Twitter account (@UCU) between January 1, 2014 and April 30, 2014 were collected, including all posts by UCU and tweets that UCU had 'retweeted'. Tweets ( $n = 1,615$ ) were arranged chronologically then categorised as to whether they were an *original* tweet (a tweet composed and posted by UCU), a *retweet* (a tweet written by another user that UCU has re-posted for its followers to view) or a *conversation* tweet (a tweet specifically directed to another user that encourages reciprocity). This period included four instances of strike action (see above), which demonstrates UCU's social media usage during normal and high periods of activity.

Data regarding the followers of the UCU account (users who elect to connect with the UCU Twitter account and receive updates in their own Twitter feed) were collected to establish to whom UCU were tweeting. Data were collected on May 1, 2014 when the UCU account had 12,301 followers.

To address the first research question, all tweets composed by UCU (*original* tweets;  $n = 581$ ) were analysed using a prescriptive framework to determine whether their content was in line with the 'linguistic framing' (Hyman, 2007: 207) required to assist with the mobilisation of workers (Kelly, 1998). Thus, tweets were coded as either: framing of an injustice; attribution of blame for the injustice; evidence of action; or

Table 2: Original tweets and mobilisation theory

Mobilisation stage	N	%
Framing	136	23.41
Attribution	62	10.67
Action	161	27.71
Other	222	38.21
Total	581	100.00

Source: authors.

other (tweets outside of the central tenets of mobilisation theory) (see Table 2). Retweets were excluded as UCU did not originally generate the content of those messages, and conversation tweets were excluded because they represent half of a bi-directional dialogue not representative of UCU communication via Twitter. The authors analysed all applicable tweets together, resulting in 100 per cent agreement of categorisation.

To address the second research question, all tweets ( $n = 1,615$ ) were analysed using King's (1998) template analysis. Initial codes were developed before conducting analysis, and modified during the process of enquiry. The authors analysed the first 200 tweets together to ensure that any disagreements over the initial categories were addressed. The remaining tweets ( $n = 1,415$ ) were then analysed by both coders individually. Agreement was strong after this phase of the analysis ( $\alpha = 0.807$ ). Any disagreement in the tweet classification was then revisited and discussed until agreement was reached and nine categories were established (Table 3).

Followers of the UCU account ( $n = 12,301$ ) were analysed to address our final research question. Coding of the user account biographies was conducted in the same manner as the full tweet data set, and resulted in 11 categories of audience (Table 6). Social media audiences are made up of different sub-groups, each of whom has different expectations over posted messages (Marder *et al.*, 2012). Thus, it is essential to understand the audience of communication. Selvin (1963: 92) raised the issue in terms of traditional union media and the message recipients, and Panagiotopoulos (2012) makes the same point in relation to social media. With over 12,000 individual followers, understanding the interpretation of any posted messages by UCU is unworkable and, as such, falls beyond the scope of this paper.

Some ethical concern exists surrounding research conducted in our own profession, but it has been suggested that for the researcher, 'the closeness to the research subjects increased their understanding . . . thus, the "inside" researcher has some advantages; knowledge of the context of the research, awareness of the micro-politics of the environment and easy access to the subjects' (McCarthy, 2009: 114). UCU's Twitter account is not private, so tweets and the tweets of those engaging with UCU are easily and readily accessible to anybody with an Internet connection. Therefore, we have opted not to quote tweets by individual users, as identification could result in their association with industrial action (or lack of association with industrial action depending on one's inclination) and has the potential for any employing institution to look upon the individual more or less favourably as a result. Thus, we only quote tweets composed by UCU nationally, other sections of UCU (branch or committee), other unions or members of the press (e.g. those who would legitimately expect their tweets to be public). In all other instances, we describe the tweet categories or an individual tweet without using words from the tweet or identifying any associated institutions that would make possible data aggregation, and thus user identification. We acknowledge this limitation, but are committed to the privacy of the individuals and groups within our public data-set.

Table 3: Tweets by category and tweet type

Category	Tweet type	N	% of Category	N	% of Total tweets
Recruitment	Original	0	0.00	4	0.25
	Retweet	3	75.00		
	Conversation	1	25.00		
Campaigning	Original	95	66.43	143	8.85
	Retweet	45	31.47		
	Conversation	3	2.10		
External campaigning	Original	1	50.00	2	0.12
	Retweet	1	50.00		
	Conversation	0	0.00		
Strike building	Original	102	45.95	222	13.75
	Retweet	120	54.05		
	Conversation	0	0.00		
Strike action	Original	95	15.60	609	37.71
	Retweet	506	83.09		
	Conversation	8	1.31		
Solidarity	Original	12	5.22	230	14.24
	Retweet	212	92.17		
	Conversation	6	2.61		
Engagement	Original	8	7.41	108	6.69
	Retweet	38	35.19		
	Conversation	62	57.41		
News	Original	183	62.46	293	18.14
	Retweet	109	37.20		
	Conversation	1	0.34		
Other	Original	4	100.00	4	0.25
	Retweet	0	0.00		
	Conversation	0	0.00		
Total				1,615	100.00

Source: authors.

## Findings

### Mobilisation theory

Of the *original* tweets from the UCU account ( $n = 581$ ), 61.79 per cent ( $n = 359$ ) fitted the elements of mobilisation theory. Categorisation is presented in Table 2.

Of the original tweets, 23.41 per cent ( $n = 136$ ) were phrased in a way likely to generate a sense of injustice among UCU members. Tweets in this category focussed around the ongoing HE pay dispute, and multiple tweets referred to pay of Vice-Chancellors (VCs), compared with other staff. For example, the following tweet '*One-fifth of university heads enjoy pay rise of at least 10%, as staff get real-terms pay cut: <http://www.ucu.org.uk/7021#fairpayinhe>*' directly compared pay rises between staff groups in the HE sector, whereas this example, '*UK academic pay is significantly below that in USA, Canada, Australia: [http://fairpay.web.ucu.org.uk/2014/02/05/uk-academic-staff-doing-more-for-less-every-day/...](http://fairpay.web.ucu.org.uk/2014/02/05/uk-academic-staff-doing-more-for-less-every-day/)*' was tweeted four times, and compared pay internationally in the HE sector. Other examples reported on the progress of negotiations, but were carefully phrased, such as the following tweet '*Employers recognise falling pay, but no offer made during latest talks <http://bit.ly/1dCQNYq>*'. Tweets did not focus solely on the HE dispute, however, as examples were found explaining the

case for fair pay in FE, for example 'FE needs a pay rise [http://fairpay.web.ucu.org.uk/2014/03/20/fe-needs-a-pay-rise/#.UysUAl\\_2rTc.twitter](http://fairpay.web.ucu.org.uk/2014/03/20/fe-needs-a-pay-rise/#.UysUAl_2rTc.twitter) ... #fairpayinFE'.

Tweets in the 'Attribution' category again focussed on the ongoing dispute, but centred on the actions and behaviour of university leaders. The following tweet is an example of common messages being sent, which stated 'How bullying VCs helped build for today's walkouts: blog post—<http://bit.ly/1inzH1J> #fairpayinHE #bullyingVCs'. UCU tweeted (and repeated) a number of anonymous quotes from members to further show dissatisfaction and attribution of blame for the situation facing members. This point is best exemplified by the following tweets, the first stating 'I cannot believe what my uni is doing. I'll be supporting the strike. It is bullying plain and simple'. #bullyingVCs #fairpayinhe', while another conveyed a sense of anger, 'I'm so angry that I guarantee my participation in all 2 hour strikes and any marking boycott the union calls.' #bullyingVCs #fairpayinhe'. These tweets were used to demonstrate a sense of mobilisation, with the following tweet 'I've joined @ucu in response of the email from my HR director and replied to complain about threatening tone' #bullyingVCs #fairpayinhe' further supporting this point.

The fact that tweets detailing evidence of 'Action' was the biggest category is perhaps unsurprising given that strike action occurred during the period investigated. Tweets demonstrated both 'real' and virtual evidence of action. For example, the tweet 'Timeline filling up with solidarity and strike reports! Wow. #fairpayinHE' shows the extent to which UCU used Twitter during the dispute, and the following tweet is an example of how the union collated evidence of action 'follow all this mornings action on our live blog <http://fairpay.web.ucu.org.uk/2014/02/07/he-two-hour-strike-10-february-2014/> ... #fairpayinHE'. In addition to reports of strike activity, tweets provided updates of forthcoming negotiations through tweets such as '2% pay offer for HE staff put to UCU members <http://bit.ly/1mlqOp0>'. On occasion, tweets detailed evidence of activity outside of the dispute, such as lobbying activities, for example 'UCU joins lobby of parliament on 2 April <http://bit.ly/1hUWOyp>'.

The final category, 'other', contained the remaining tweets from UCU's account that did not fit with the central tenets of mobilisation theory, and were similar in nature to a number of tweets from the 'News' category described below, for example 'BBC News—Decline of overseas students at England's universities <http://bbc.in/1pKBz3J>'. Tweets in this category also provided answers to questions from other users on matters unrelated to the pay dispute.

### What is said?: tweets and hashtags

All tweets ( $n = 1,615$ ) were categorised into the following nine categories: *Recruitment*, tweets that encouraged people to join UCU; *UCU Campaigning*, tweets that promoted awareness of UCU's campaigning activities; *External Campaigning*, tweets that promoted awareness of the campaigning activities of the wider trade union movement; *Strike Building*, tweets that encouraged participation in, and raised awareness of, industrial action; *Strike Action*, tweets that detailed strike action; *Solidarity*, tweets that displayed solidarity both to and from UCU; *Engagement*, tweets that demonstrated interaction between UCU and other Twitter users; *News*, tweets reporting news, both internal to UCU and external relating to wider FE and HE issues; and, *Other*, which contained all other tweets.

Additionally, individual hashtags were identified by the frequency of their use in the tweets. A total of 1,293 hashtags were used across the data-set. Table 4 shows the frequencies of hashtags mentioned >20 times. Notable hashtags within each tweet category are discussed throughout.

### Recruitment

While the recruitment category contains only four tweets, it demonstrates the lack of Twitter use by UCU for this purpose. Typical recruitment tweets are best exemplified

Table 4: Hashtag frequencies across all tweet categories

Hashtag	N	%
#fairpayinhe	816	63.11
#BullyingVCs	69	5.34
#ucu	52	4.02
#solidarity	43	3.33
#keconf	20	1.54
Others (<20 mentions)	293	22.66
Total	1,293	100

Source: authors.

by the following tweet, '[@User] you can join online at our website now and take strike action with us. Simple!' which was posted specifically in conversation with a Twitter user to encourage them to join the union.

### UCU campaigning

Tweets in this category comprised ongoing campaigns reports. As the data were collected during a period of dispute, tweets tended to focus on this specific campaign. For example, the following tweet related to a poll conducted by *The Guardian* (retweeted by UCU) highlighting the importance of the pay campaign and the support action had from online readers: 'Should lecturers engage in a marking boycott? 76% say YES in our poll so far, cast your vote here >> [#highered](http://gu.com/p/3mzej/tw)'. An interesting approach UCU adopted was to tweet to those affected by industrial action—students—explaining the reason, purpose and necessity of such action. One such tweet stated 'Apologies to all students facing yet more disruption. We ask that you read this and write to your VC <http://fairpay.web.ucu.org.uk/2014/02/04/a-new-briefing-on-the-he-dispute-for-students/#.UviW3Yg9oCp>. Twitter . . . #fairpayinHE'.

Other examples showed UCU reporting on activity relating to wider lobbying at the UK Houses of Parliament, 'Very busy in Parliament's Central Lobby as UCU members meet with their MPs for the #uculobby'. These tweets showed the issues of wider importance to the union's membership beyond the ongoing pay dispute. Additionally, UCU frequently retweeted posts that linked current issues to wider cultural references, or current Twitter trends, often containing humour. For example, a parody of Monty Python's *The Life of Brian*, 'What Have the Romans Ever Done For Us?' had been tweeted by users in a video entitled, 'What Have the Unions Ever Done For Us?', which listed union successes. Links to the profession were also made around Valentine's Day, when a Twitter trend for academic valentine's poems was hijacked by users writing similar style poems about the pay dispute, which UCU often retweeted.

### External campaigning

Although only two tweets exist in this category, it showed UCU's support of campaigns from the wider union movement where there was relevance to its own industrial issues. For example, the topic of the following tweet 'UCU supports TUC's campaign to stop private firms cashing in on public education: <http://www.ucu.org.uk/6997>' clearly has resonance with the UCU membership. The other tweet in this category was a retweet of a rhetorical question about the benefits won by unions over the years, such as sick pay and holiday pay, and linked the tweet to strike action being taken on the day it was posted using the hashtag #tubestrike. The lack of tweets in this category is surprising as unions are often vocal in support of campaigns across the labour movement.

However, we found that rather than referring to specific campaigns, many of these tweets related to messages of solidarity (discussed below).

### Strike building

This category contained tweets referring to the build-up of strike activity at both a national and local level. An advantage of Twitter observed in this category was the ability of users to highlight their planned participation in strike action. This is of particular importance for a workforce that does not have common, set hours or a physical place of work when they are not teaching or attending meetings. As such, this added to the greater sense of action conducted, as traditionally these individuals may not be observed on the picket lines and thus their participation in action overlooked.

Over half the tweets in this category were retweets ( $n = 120$ ) commenting on the purpose of the strike, notifying followers of the reason(s) why they were taking part. The feeling of being bullied by university VCs was heavily discussed, with 31 tweets using the hashtag '#BullyingVCs'. Example tweets include, 'Why casualised staff should support UCU's industrial action in HE <http://bit.ly/1cklhgY>', emphasising the importance of the industrial action, and a number of tweets which identified the imminent action, such as the following: 'Just 10 mins till our stoppage. If you're at work prepare to leave. If not, don't go in! (Till 11) #fairpayinHE'. This category showed a noticeable increase in the use of the '#fairpayinHE' hashtag, mentioned 128 times, representing 15.69 per cent of its total usage.

A range of activities was evident in preparation for strike activity with a number of tweets centred on the preparation of food. People were bringing cakes and tea to picket lines and, in some cases, humorously identified as a 'Frying Picket'; food was cooked on the picket line using portable cooking appliances.

### Strike action

The overall majority of tweets collected occurred around the four instances of strike action. Tweets were coded as posted during a 'strike' period if the tweet occurred on the day before, of and after strike action (regardless of whether such action was for an entire day or for two hours). Tweets from all other dates were categorised as 'non-strike' periods. Table 5 shows the type of tweets for non-strike periods and for strike periods overall.

Of the total tweets collected, 71.52 per cent ( $n = 1,155$ ) were posted during strike periods and 28.48 per cent ( $n = 460$ ) during non-strike periods, suggesting UCU is considerably more active on Twitter during strike periods. During non-strike periods, original tweets represented 58.04 per cent ( $n = 267/460$ ), and 31.52 per cent ( $n = 145/460$ ) were retweets. During strike periods, UCU retweeted more often (76.97 per cent;

Table 5: Tweet types for strike and non-strike periods overall

Category	Tweet type	<i>n</i>	% of Period tweets	<i>N</i>	% of Total tweets
Non-strike period	Original	267	58.04	460	28.48
	Retweet	145	31.52		
	Conversation	48	10.43		
Strike period	Original	233	20.17	1,155	71.52
	Retweet	889	76.97		
	Conversation	33	2.86		
Total				1,615	100.00

Source: authors.

$n = 889/1,155$ ), showing higher levels of interaction with other users. A similar number of original tweets were posted cf. non-strike periods, but represented a smaller proportion of strike period tweets (20.17 per cent;  $n = 233/1,155$ ).

Tweets were sent to indicate when strike action began, but also when members should return to work, coordinating the different picket lines and those working from home who had 'downed tools' in their own way. For example UCU tweeted, 'EVERYONE OUT! (or not in.) #fairpayinHE', at commencement of the industrial action and, 'OK, EVERYONE IN. Tools up and back to work unless you're out for the day. Thanks to all of you hardy strikers #fairpayinHE #bullyingVCs'.

Tweets in this category mainly discussed the dispute and the reasons for UCU taking industrial action. This discussion was heavily linked to the hashtags '#BullyingVCs' ( $n = 27$ ) and '#FairPayinHE' ( $n = 447$ ), with tweets often relating to the frivolous spending of VCs while staff face a real-term salary cut. The tweets regularly detailed anger towards VCs and institutions for the treatment of all staff, with UCU retweeting the following which stated 'Striking 9–11 for #FairPayInHE Fair pay AND conditions for all of us, hourly paid, fixed term, pt time, full time, permanent, porter to professor!'. UCU was particularly engaging with the Times Higher Education's request via Twitter for details on those VCs earning more than £100,000 per annum. In these tweets, the language became increasingly subversive towards institutions, VCs and UCEA, especially regarding pay deductions for participation in the strike action.

Photographs and videos were also posted showing picket line activity, including contemporary dances, and humour formed a large component of these tweets. Other tweets during the activity reported how members were enduring the conditions with hot food and drink supplies from members and non-members, adding to the collective sense that Twitter use helped amplify activity to other members nationally, rather than being limited to seeing only proximal activity.

### Solidarity

This category refers to messages of solidarity sent to UCU (and retweeted by the account) and from UCU to other unions undertaking action, often using the hashtag '#solidarity' ( $n = 28$ ). Examples of solidarity messages received by UCU can be shown through the following retweet of a message from the Public and Commercial Services union which stated 'PCS backs today's HE pay strike, Mark Serwotka: For vast majority of people life is harder @EISUnion @unisontweets @unitetheunion @ucu'. Such tweets show the importance placed on solidarity by the union, which is not surprising. Examples of messages of support sent by UCU to other unions such as the National Union of Teachers (NUT) show a different type of solidarity message. In most cases, these tweets prompted a message of thanks from the respective union. Example tweets include a retweet from the NUT, 'Thanks to @ucu for their msg of support: "Enough really is enough now and it is time for fair pay for teachers and lecturers" #M26'.

Support from people outside of the education sector was also evident in member-reported tweets about offline activity, for example, tweets described Royal Mail vans turning away from picket lines in order to show support, and members of the public tooting their horns when driving past. One organisation even claimed it shut down its Twitter account during UCU strike hours in support of the industrial action, saying, 'We're shutting down today in support of @UNISONinHE, @UCU and @Unitetheunion strike action for #FairPayinHE <http://www.fairpayinhe.org.uk>'.

### Engagement

Tweets considered to be examples of engagement included many that cannot be quoted without identifying the user(s). Tweets typically involved UCU responding to questions about employment issues, disputes and action more generally. Others included interactions with newspapers to help further the main issue of the day, for example, '@timeshighered Following pay docking threats, we're asking for examples of excess

from VCs and unis. Can we find 100k?<http://fairpay.web.ucu.org.uk/2014/01/27/ucu-call-for-evidence-university-excess/>, and '@GdnHigherEd Yes and those "make it" are badly paid and on insecure contracts. Check out our timeline for lots of testimony. #fairpayinHE'. These tweets are clearly examples of UCU trying to build wider support for their cause during this period, and UCU would often tweet a response to an individual reporter, for example, '@MorganTHE @UCEA1 It's our ultimate sanction, used only because of UCEA's intransigence. Good luck on getting a Twitter response though'. This last example also demonstrates UCU's desire to engage with UCEA via Twitter by mentioning their account in the message text. Further evidence was found of individual users sending UCU relevant information and UCU replying to thank the user.

### News

Tweets in this category often utilised (online) newspaper articles, as well as newspaper reports on issues generally of relevance to further and higher education. Examples of newspaper retweets include '*Snooping on students' digital footprints won't improve their experience says president of @UCU, Simon Renton* [#Moocs](http://gu.com/p/3np75/tw)', a retweet from the Guardian Education Twitter account. Examples of original UCU tweets included comments on relevant issues of the day and can be best exemplified by the following tweet, stating '*UCU—University and College Union—UCU responds to Michael Gove's speech* [http://www.ucu.org.uk/6947#Uu\\_DSLHwG1I](http://www.ucu.org.uk/6947#Uu_DSLHwG1I).Twitter . . .'. Tweets also pertained to issues that go beyond UCU to academia more widely, e.g. '*Why the REF matters to students* <http://bit.ly/1qi46ji>', an original UCU tweet that appeared eight times during the data collection period.

Additional tweets in this category demonstrated updates from conferences on the importance of education for society, for example discussing the importance of education for prison inmates. Further tweets reported news about recently deceased public figures with links to the trade union movement such as Tony Benn and Bob Crow. This category accounted for 18.14 per cent of all tweets.

### Other

This final category collates otherwise uncategorised tweets and represents interactions with UCU that are outside the scope of UCU's normal Twitter use. Examples include the following original tweets by UCU, '*Oops. Power failure at head office = no landlines. Time for a shout out to mobile technology!*' and '*I suppose an English football club spamming our web inbox is a novelty*'. These tweets were all in good humour, and their low number ( $n = 4$ ) shows their infrequent nature.

### Who is listening?

Coding resulted in 11 categories (see Table 6). Users who identified themselves to multiple categories were classified according to the most relevant to the union. For example, a user self-identifying as a 'parent and academic' would be categorised as an academic because academics would be of greater relevance to UCU. Where the categories were deemed equally relevant, such as 'academic and trade unionist', the first mentioned category was used, adopting the stance that the most prominent to the user would be the first mentioned.

Very few users self-identified as UCU members or officials (0.42 per cent), and a small number of users (0.80 per cent) were accounts in the name of UCU Branches or Committees, such as UCU Academic Related (@UCU\_ARPS). We were only able to identify 18.53 per cent (2,279) of users as academic/academic related—presumably one of the main target groups for UCU—although the category represented the third largest audience. This category included doctoral students, support staff and librarians. Despite a number of tweets being directed at students (described above), only 3.39 per cent identified as students, and a similar number (3.88 per cent) were run by student

Table 6: Follower categories

Follower category	N	%
UCU members/officials	52	0.42
UCU branches/committees	99	0.80
Academic/academic-related staff (incl. doctoral students)	2,279	18.53
Students (excl. doctoral)	417	3.39
Student organisations	477	3.88
Trade union related (non-UCU)	870	7.07
Press (non-student)	288	2.34
Politician/councillor	211	1.72
Organisations	2,292	18.63
Universities/colleges	321	2.61
Other	4,995	40.61
Total	12,301	100.00

Source: authors.

organisations including student unions and student press, such as Brighton SU (@SUBrighton), A number of accounts identified as union accounts or individuals identifying as a member/official of another union, including PCS (@pcs\_union), and were categorised as Trade Union Related. Only 2.34 per cent identified as journalists or press organisations, and included accounts such as BBC Radio 4 Today (@BBCr4today) and The Independent (@Independent). An even smaller number of followers identified as politicians or councillors. A large number of accounts (18.63 per cent) identified as companies or organisations unrelated to UCU such as a Taxi Company in Yorkshire (@amazoncars) and a condom company (@cheekycondoms). Surprisingly, there were only a small number of accounts (2.61 per cent) that identified as universities and colleges, such as Keele University (@KeeleUniversity) and City of Glasgow College (@CofGcollege). Despite being subject to direct tweets from UCU, as noted above, the employers' association UCEA does not follow the UCU Twitter account. The largest category was 'Other', comprising accounts with no self-identification provided or an identification deemed irrelevant to the union/professional field (e.g. 'football fan').

## Discussion and conclusion

This paper contributes to the extant literature investigating union use of social media by examining the content of union messages sent from UCU, and through providing a detailed analysis of the union's audience. We now discuss each of the three research questions in turn. In addressing the first research question, accelerated pluralism suggested that the Internet could lead to union renewal through "mobilisation" effects' (Upchurch and Grassman, 2015: 5). How unions communicate their message is crucial to determining their success at mobilisation (Botan and Frey, 1983), and we therefore considered whether the content of UCU communication sent through Twitter utilised the central tenets of mobilisation theory (Kelly, 1998). Hyman (2007) commented on the importance of language used when communicating a union's message, and we found that although UCU is using a modern platform to communicate, the content of the majority of tweets (61.79 per cent) remains in the traditional style of unions. Furthermore, the majority of retweets during strike periods can arguably be considered evidence of mobilisation, as UCU is utilising others' posts to highlight a greater sense of action. Thus, the union's use of Twitter confirms that messages fit the 'linguistic framing' (Hyman, 2007: 207) required for mobilisation of workers.

In addressing the second research question, we categorised tweets posted by the union, and a number of points can be made here. An initial observation is that the categories which emerged from our data are in line with typologies of communication used by political organisations and wider social movements in terms of information provision, campaigning, building links with other organisations and promoting participation (see Foot and Schneider, 2006; Stein, 2009). Despite this, there were some surprising results. For example, only 0.25 per cent of tweets fitted the category of recruitment. This was unexpected, as previous research has indicated the potential for unions to use social media platforms for recruitment and renewal (Panagiotopoulos and Barnett, 2015). However, this finding resonates with issues of recruitment via Twitter identified by Hodder (2015) and the observation made by Aalto-Matturi (2005: 479) that people need to actively self-seek information online, and therefore, Twitter is perhaps not the best tool for recruitment.

It was unsurprising that a large proportion of tweets (60.43 per cent combined) related to campaigning, strike building and strike action as 'social media can, given a good organization, high interest and a lot of resources, serve as protest-co-ordination and organization tools' (Fuchs, 2014: 186). Specifically referring to strikes, given the negative portrayal of trade union action in traditional media (Manning, 1998), UCU has clearly taken the opportunity to use their Twitter page to promote evidence of their actions. During strike periods, the union is more active on Twitter, and posted more retweets in an attempt to demonstrate some form of controlled interaction with followers (Fowler and Hagar, 2013).

Given that social media platforms are said to increase opportunity for interaction and engagement between users (Boyd and Ellison, 2008), we would have expected to find more than 108 tweets in the Engagement category (representing only 6.69 per cent of all tweets during the data period). This paper analyses tweets sent by the official account of the national union, and as such, we are unable to fully comment on the existence of distributed discourse in UCU's use of social media. As noted above, Web 2.0 technologies theoretically enable distributed discourse to exist; however, unions can use the technology to stifle debate in a manner similar to the points made about Web 1.0 (Martinez Lucio, 2003; Martinez Lucio and Walker, 2005; Martinez Lucio *et al.*, 2009). In support of this, we note the lack of conversation tweets sent by the union (4.77 per cent of all tweets). The main conduit of *engagement*, the *raison d'être* of social media for organisations, was via retweets (64.02 per cent), which utilised others' posts, whereas their own tweets were somewhat uni-directional. Hashtags are another feature of Twitter designed to increase interaction around a specific topic or theme (Tinati *et al.*, 2014: 668). UCU used a large number of hashtags ( $n = 1,293$ ), yet 63.11 per cent of these were #fairpayinhe. We note here that not all posts to the hashtag were collected in our dataset and are therefore unable to comment further about the impact of the hashtags used by the union on broader engagement.

During non-strike periods (i.e. periods of normal tweet activity), the union uses social media as an online noticeboard to *disseminate* information, much in the same way as unions first used websites (Freeman, 2005). This is perhaps not surprising as Fuchs (2014: 193) found that the majority of political postings on Twitter were information based, and that 'Twitter communication mostly consists of one-way comments'. Thus, the News category accounted for 18.14 per cent of all tweets.

Returning to the final research question, of the 12,301 followers, 40.76 per cent ( $n = 5,014$ ) were categorised into groups relevant to the union. As mentioned earlier, the level of engagement of UCU with followers via Twitter is minimal, with little interaction beyond retweeting. It is evident that very few users self-identified as members or officials (0.42 per cent), which in some ways is unsurprising as academics have been argued to 'view themselves as "professionals" who are "above" engagement in industrial action' (Willmott, 1995: 1002). However, this is in sharp contrast to the volume of tweets whereby users identified themselves taking strike action described above. Additionally, a surprisingly small number of accounts identified as students and student organisations (7.27 per cent) given the number of tweets aimed at generating student support for UCU action. Furthermore, very few (2.61 per cent) followers could

be identified as a university or college, which, given the sector the union organises, was unexpected.

More broadly, there were five important issues identified when coding audience members. First, users can actively select the 'self' they wish to present in social media, so any individuals may choose not to self-classify, or write a personal 'bio', or may self-identify with a different persona (Bullingham and Vasconcelos, 2013). For example, a user may be a union member, but not identify as one online, selecting to present themselves as an academic. This issue has been discussed by Moore and Taylor (2013), who noted the use of avatars and pseudonyms by Internet users for their account details makes it difficult to identify the reality of their identification. Table 6 shows that we were unable to categorise 40.61 per cent of users for this reason. Second, users may have multiple accounts, so where multiple users may be expected to be reached, in reality, only one user is reached. For example, some academics have a separate work and personal account, but both accounts follow UCU. Third, a number of accounts were no longer active, a problem acknowledged more widely by Twitter (Elder, 2013). Often, users of such accounts have not deleted them despite long periods of inactivity, and without a consistent indicator of inactive accounts, they could not be reliably removed before classification. Fourth, very few individuals identified themselves by demographic variables; thus, descriptive results of such data cannot be presented. Finally, it is possible that some users have followed UCU on Twitter but do not actually use social media often—indeed, it is impossible to say how many followers actually read messages posted by the union. These five issues draw us to one conclusion: The classification of audience members can only be a rough representation of the true audience, the validity of which is only improved through consistent, relevant coding.

In conclusion, we have presented one of the first detailed examinations of union use of social media in the UK and found that while UCU is using Twitter, it is not utilising the full potential offered by Web 2.0. However, further research is needed to continue this line of investigation. Our data only looked at messages from the official UCU account, and we are therefore unable to comment about the role of distributed discourse in the social media era. Clearly, future research is needed in this area to examine messages to and from a union's account. In a similar vein, it would be useful to analyse the extent to which hashtags lead to wider levels of engagement with unions, by analysing all posts containing specific hashtags posted from any account. While we considered the extent to which the content of UCU's messages were in-line with mobilisation theory, future research could also consider the potential for counter mobilisations by employers using the same technological platforms (see Upchurch and Grassman, 2015).

It is also necessary to widen this research to include other unions as we cannot assume UCU's usage to be representative. For example, do professional unions use Twitter more than others? To what extent do unions engage with young workers through social media? How does union use of social media differ for other technological platforms (i.e. Facebook, YouTube)? It would be useful to investigate in more detail the extent to which social media audiences actively engage with union posts. Thus, we present these issues as the beginning of a research agenda to build upon our findings in this paper. Despite these questions, we complement the work of Panagiotopoulos (2012) and Panagiotopoulos and Barnett (2015), and make a considerable contribution to understanding how trade unions use social media.

### Acknowledgements

Both authors made equal contributions to this article. We are grateful to Steve Brammer, Paul Edwards, John Kelly, Phil Taylor (editor) and the two anonymous referees for their helpful comments on earlier versions of this article.

### References

- Aalto-Matturi, S. (2005), 'The Internet: The New Workers' Hall the Internet and New Opportunities for the Finnish Trade Union Movement', *Working USA* 8, 4, 469–481.

- Alexa (2014), 'The top 500 sites on the web', <http://www.alexa.com/topsites> (accessed 2 December 2014).
- Bimber, B. (1998), 'The Internet and Political Transformation: Populism, Community and Accelerated Pluralism', *Polity* **31**, 1, 133–160.
- Botan, C. and L. Frey (1983), 'Do Workers Trust Labor Unions and Their Messages?' *Communication Monographs* **50**, 233–244.
- Boyd, D. and N. Ellison (2008), 'Social Network Sites: Definition, History, and Scholarship', *Journal of Computer-Mediated Communication* **13**, 1, 210–230.
- Bullingham, L. and A. Vasconcelos (2013), '“The Presentation of Self in the Online World”: Goffman and the Study of Online Identities', *Journal of Information Science* **39**, 1, 101–112.
- Carter, C., S. Clegg, J. Hogan and S. Kornberger (2003), 'The Polyphonic Spree: The Case of the Liverpool Dockers', *Industrial Relations Journal* **34**, 4, 290–304.
- Clegg, S. (2002), 'Why Distributed Discourse Matters', in L. Holmes, D. Hosking and M. Grieco (eds), *Organising in the Information Age: Distributed Technology, Distributed Leadership, Distributed Identity, Distributed Discourse* (Aldershot: Ashgate), pp. 4–12.
- Dee, J. (1968), 'Communication Needs of the Active Union Member', *The Journal of Communication* **18**, 65–72.
- Diamond, W. and R. Freeman (2002), 'Will Unionism Prosper in Cyberspace? The Promise of the Internet for Employee Organization', *British Journal of Industrial Relations* **40**, 3, 569–596.
- Elder, J. (2013), 'Twitter Contends with Bogus Accounts', *The Wall Street Journal XXXI*, 211, 25. Europe Edition, November 26, 2013.
- Fitzgerald, I., J. Hardy and M. Martinez Lucio (2012), 'The Internet, Employment and Polish Migrant Workers: Communication, Activism and Competition in the New Organisational Spaces', *New Technology, Work and Employment* **27**, 2, 93–105.
- Foot, K. and S. Schneider (2006), *Web Campaigning* (Cambridge: MIT Press).
- Fowler, T. and D. Hagar (2013), '“Liking” Your Union: Unions and New Social Media during Election Campaigns', *Labor Studies Journal* **38**, 3, 201–228.
- Freeman, R. (2005), 'From the Webbs to the Web: The Contribution of the Internet to Reviving Union Fortunes', in S. Fernie and D. Metcalf (eds), *Trade Unions: Resurgence or Demise?* (London: Routledge), pp. 162–184.
- Freeman, R. and J. Rogers (2002), 'Open Source Unionism', *Working USA* **5**, 4, 8–40.
- Fuchs, C. (2014), *Social Media: A Critical Introduction* (London: Sage).
- Gamson, W. (1992), *Talking Politics* (Cambridge: Cambridge University Press).
- Gamson, W. (1995), 'Constructing Social Protest', in H. Johnston and B. Klandermans (eds), *Social Movements and Culture* (London: UCL Press), pp. 85–106.
- Geelan, T. (2013), 'Responses of Trade Union Confederations to the Youth Employment Crisis', *Transfer* **19**, 3, 399–413.
- Greene, A., J. Hogan and M. Grieco (2003), 'Commentary: E-Collectivism and Distributed Discourse: New Opportunities for Trade Union Democracy', *Industrial Relations Journal* **34**, 4, 282–289.
- Grieco, M. (2002), 'Introduction', in L. Holmes, D. Hosking and M. Grieco (eds), *Organising in the Information Age: Distributed Technology, Distributed Leadership, Distributed Identity, Distributed Discourse* (Aldershot: Ashgate), pp. 1–3.
- Hodder, A. (2015), '“Old Dusty Men”? Young People and Trade Unions In The UK', in A. Hodder and L. Kretsos (eds.), *Young Workers and Trade Unions: A Global View* (Basingstoke: Palgrave Macmillan), pp. 142–176.
- Hogan, J. and A. Greene (2002), 'E-Collectivism: On-Line Action and On-Line Mobilisation', in L. Holmes, D. Hosking and M. Grieco (eds), *Organising in the Information Age: Distributed Technology, Distributed Leadership, Distributed Identity, Distributed Discourse* (Aldershot: Ashgate), pp. 57–79.
- Hogan, J., P. Nolan and M. Grieco (2010), 'Unions, Technologies of Coordination, and the Changing Contours of Globally Distributed Power', *Labor History* **51**, 1, 29–40.
- Howcroft, D. and P. Taylor (2014), '“Plus Ça Change, Plus La Meme Chose?”—Researching and Theorising the “New” New Technologies', *New Technology, Work and Employment* **29**, 1, 1–8.
- Hyman, R. (2007), 'How Can Trade Unions Act Strategically?' *Transfer* **13**, 2, 193–210.
- Kelly, J. (1998), *Rethinking Industrial Relations* (London: Routledge).
- Kim, D., K. Yue, S. Hall and T. Gates (2009), 'Global Diffusion of the Internet XV: Web 2.0 Technologies, Principles, and Applications: A Conceptual Framework from Technology Push and Demand Pull Perspective', *Communications of the Association for Information Systems* **24**, 1, 657–673.
- King, N. (1998), 'Template Analysis', in G. Symon and C. Cassell (eds), *Qualitative Methods and Analysis in Organisational Research* (London: Sage), pp. 118–134.

- Kline, R. (2009), 'The Impact of Marketisation on Industrial Relations in Higher Education', in R. Darlington (ed.), *What's the Point of Industrial Relations?* (Manchester: British Universities Industrial Relations Association), pp. 21–30.
- Lee, E. (1996), *The Labour Movement and the Internet: The New Internationalism?* (London: Pluto Press).
- Manning, P. (1998), *Spinning for Labour: Trade Unions and the New Media Environment* (Aldershot: Ashgate).
- Marder, B., A. Joinson and A. Shankar (2012), 'Every Post You Make, Every Pic You Take, I'll Be Watching You: Behind Social Spheres on Facebook', *Proceedings of the 45th Hawaii International Conference on Systems Sciences*, Maui, Hawaii, USA.
- Martinez Lucio, M. (2003), 'New Communication Systems and Trade Union Politics: A Case Study of Spanish Trade Unions and the Role of the Internet', *Industrial Relations Journal* **34**, 4, 334–347.
- Martinez Lucio, M. and S. Walker (2005), 'The Networked Union? The Internet as a Challenge to Trade Union Identity and Roles', *Critical Perspectives on International Business* **1**, 2/3, 137–154.
- Martinez Lucio, M., S. Walker and P. Trevorrow (2009), 'Making Networks and (Re)Making Trade Union Bureaucracy: A European-Wide Case Study of Trade Union Engagement with the Internet and Networking', *New Technology, Work and Employment* **24**, 2, 115–130.
- McAdam, D. (1988), 'Micromobilization Contexts and Recruitment to Activism', *International Social Movement Research* **1**, 125–154.
- McCarthy, N. (2009), 'Union Organising in a Recognised Environment—A Case Study of Mobilisation', in G. Gall (ed.), *Union Revitalisation in Advanced Economies* (Basingstoke: Palgrave Macmillan), pp. 107–130.
- Moore, S. and P. Taylor (2013), *Cabin Crew Confidential—an analysis of real time postings in the BA dispute 2009–11*, Paper presented at 63<sup>rd</sup> Annual British Universities Industrial Relations Association Conference, University of Strathclyde, 27<sup>th</sup>–29<sup>th</sup> June 2013.
- Murthy, D. (2013), *Twitter: Social Communication in the Twitter Age* (Cambridge: Polity).
- Panagiotopoulos, P. (2012), 'Towards Unions 2.0: Rethinking the Audience of Social Media Engagement', *New Technology, Work and Employment* **27**, 3, 172–192.
- Panagiotopoulos, P. and J. Barnett (2015), 'Social Media in Union Communications: An International Study with UNI Global Union Affiliates', *British Journal of Industrial Relations* **53**, 3, 508–532.
- Pinnock, S. (2005), 'Organizing Virtual Environments: National Union Deployment of the Blog and New Cyber Strategies', *Working USA* **8**, 4, 457–468.
- Selvin, D. (1963), 'Communications in Trade Unions: A Study of Union Journals', *British Journal of Industrial Relations* **1**, 1, 73–93.
- Shirky, C. (2011), 'The Political Power of Social Media', *Foreign Affairs* **90**, 1, 28–41.
- Stein, L. (2009), 'Social Movement Web Use in Theory and Practice: A Content Analysis of US Movement Websites', *New Media and Society* **11**, 5, 749–771.
- Tilly, C. (1978), *From Mobilization to Revolution* (New York: McGraw-Hill).
- Tinati, R., S. Halford, L. Carr and C. Pope (2014), 'Big Data: Methodological Challenges and Approaches for Sociological Analysis', *Sociology* **48**, 4, 663–681.
- TUC (2015), *TUC Directory 2015* (London: Trades Union Congress).
- Twitter (2014), 'About [Twitter]', <https://about.twitter.com/company> (accessed 2 December 2014).
- Upchurch, M. and F. Grassman (2015), 'Striking with Social Media: The Contested (Online) Terrain of Workplace Conflict', *Organization Online* first 19th August 2015; 1–18. doi: 10.1177/1350508415598248
- Willmott, H. (1995), 'Managing the Academics: Commodification and Control in the Development of University Education in the UK', *Human Relations* **48**, 9, 993–1027.