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# **Social Media in Union Communications: an International Study with UNI Global Union Affiliates**

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## **Abstract**

This article assesses the use of social media in union communications based on an international survey with 149 unions affiliated with UNI Global Union. High expectations of union modernisation, leadership and pressures from members are likely to drive the agenda of social media within unions. However, the actual use of different channels is based on organisational variables such as membership base and participation in communities of practice. Beliefs about the anticipated benefits and risks of social media were not found to be influential in these early assessments. Implications for union communication strategies are discussed.

## **1. Introduction**

The potential of information and communication technologies (ICT) to enhance trade union communications has generated global interest during recent decades. Since the emergence of the Internet, positive views highlight how online communications can become a force of change for unions (Lee 1997), while critics point out that the Internet is not inherently beneficial to unions as it might result in fragmentation of the labour movement (Chaison 2005). Empirical work has reported on strong beliefs among unionists about the benefits of ICT (Stevens and Greer 2005). This great potential is also evidenced by international initiatives such as the UnionBook, which

is a dedicated social network for unionists by LabouStart (2011), and the UNI Global Communicators Forum (2011).

The reality is that over the last years, the landscape of online communications has fundamentally changed. Along with the development of union websites, intranets and mailing lists, more recent channels now include a wide range of information sharing and online networking tools such as Twitter, Facebook, LinkedIn, blogs and video hosting sites (referred to as social media in this paper). These channels provide powerful means for diverse audiences to engage with union information and people; their main advantage seems to be the move towards more interactive communications (Pinnock 2005). In addition to the increasing use of social media in routine union communications, there have been cases where online networking enabled new forms of engagement. Such is the case of the virtual strike on Second Life in September 2007 organised by UNI Global against IBM in Italy (Blodgett and Tapia 2011). Therefore, the value proposition of social media for the labour movement merits further examination along more established communication channels.

This article aims to assess current progress and examine the dimensions of social media use in union communications. Previous studies of online union communications have either focused on single countries or did not take into account social media and other networking tools (e.g. Fiorito and Bass 2002; Ward and Lusoli 2003; Stevens and Greer 2005). Our knowledge of how unions are planning to use social media, what communication channels they prioritise and what factors affect their decisions to do so is limited. Furthermore, there are reasons to believe that the use of these tools is highly affected by several factors related to union characteristics, the context in which they operate and the underlying technology which tends to evolve rapidly (e.g. Diamond and Freeman 2002; Martinez Lucio and Walker 2005; Martinez Lucio *et al.* 2009).

Following a review of the literature in Section 2, the papers reports on the findings of an international survey with 149 unions that are affiliated with UNI Global Union (methodology described in Section 3). Dimensions of social media use include several technological (e.g. perceived benefits and risks), organisational (e.g. density, membership base, resources, leadership) and environmental variables (e.g. pressures from members). The results shows that a wide range of channels for engagement and information sharing are used by unions across geographical contexts (Section 4). High expectations of union modernisation, leadership and pressures from members are likely to drive the agenda of social media within unions. However, the actual use of multiple channels is based on organisational characteristics such as resource availability and participation in communities of practice. Technological factors such as the perceived benefits and risk of social media seem to have secondary effects. Further to improving our understanding of unions' communications strategies, this study leads to implications for future research and practice which are discussed in Sections 5 and 6.

## 2. Background: ICT in union communications

Different concepts have been deployed to examine the merge of ICT and unionism such as the e-union (Diamond and Freeman 2002), e-voice (Stevens and Greer 2005), e-collectivism (Greene *et al.* 2003), unions 2.0 (Panagiotopoulos 2012) and e-communications (Kerr and Waddington 2013). These terms denote the transition from face-to-face interactions and printed media such as the union journal (Selvin 1963) to ICT-enabled forms.

One of most important motivations for the use of ICT is related to declining unionisation and loss of influence in traditional audiences of workers (Visser 2006; Slaughter 2007). Unions are advised to act strategically in order to leverage resources and support engagement models that extend beyond traditional membership; possibly models empowered by ICT (Hyman 2007). In this endeavour, creative modes of communication can help unions to frame and communicate their agenda beyond traditional boundaries (Lévesque and Murray 2010). An important example of how traditional boundaries can be extended is the 2005-2007 Your Rights at Work campaign organised by the Australian trade union movement against the conservative government's labour law WorkChoices (Wilson and Spies-Butcher 2011). The campaign integrated online means with traditional community engagement activities (over 170,000 subscribers to e-mail updates, 6,000 online donations and presence in major online networking sites) (Muir 2010).

More recently, online communications have been used for purposes such as membership engagement, reaching new audiences, promoting unions' positions, reducing costs, making union structures more responsive, organising collective action and strengthening transnational networking (e.g. Greene *et al.* 2003; Pulignano 2009; Whittall *et al.* 2009). Greene and Kirton (2003) specifically explore the potential to engage with "atypical" union members such as part-time, temporary or disabled workers. A more recent study of UNISON's virtual branches in the UK confirmed the importance of remote engagement for atypical members, although sustaining such initiatives requires considerable support and resources (Kerr, Waddington 2013).

As Kerr and Waddington (2013) note, online communication initiatives usually come along debates of renewal in union structures and democratic processes. Hence, the Internet cannot only be treated as an add-on that is likely to enhance communications, but also as an element of union transformation. For example, generational aspects might arise within unions as communication departments and younger officials can be more enthusiastic to support new initiatives than union leaders (Martinez Lucio and Walker 2005). These transformation processes are closely related to the historical and political traditions in which unions operate; such aspects have been elaborated on by Martinez Lucio (2003), using the national case study of Spanish unions, and Carter *et al.* (2003) with the case of the Liverpool Dockers.

At the overview level, previous studies have examined the impact of ICT on union communications (mainly websites and emails) and assessed the extent to which union transformation has been taking place. Fiorito *et al.* (2002) and Fiorito and Bass (2002) associated

the use of ICT with union performance outcomes. Findings were positive for union organising measures (e.g. annual change in union membership), while union characteristics and environmental variables were found to be strongly related to ICT use. Similarly, Greer's (2002) content analysis of USA union websites identified a focus on information provision about collective bargaining with limited opportunities for engagement. Increased leadership in the allocation of ICT resources and improved communication with the public were speculated to be important trends. Between 2001 and 2005, Stevens and Greer (2005) found that unions were rapidly increasing the amount of content offered on their websites while becoming more cautious about the exposure of critical information. Many of the functions of union websites assessed by these studies are now quite standard, even if unions might struggle to implement them or update information regularly.

Ward and Lusoli (2003) identified considerable variance in how British trade unions were using the Internet. Developments were rather slow and members not always interested in online opportunities for engagement. Without strong leadership, initiatives were unlikely to take place. However, when ICT were seen as a resource with clear added value, they were treated more effectively. Diamond and Freeman's (2002) comparative study of how unions in the UK and the USA use the Internet identified great potential to improve services and attract members. Diamond and Freeman (2002) very importantly note that, if unions do not do not seize these opportunities, other Internet-based forms of organisation might offer services such as information on labour laws, salaries, job training, career advice or even conflict resolution.

Indeed, a few years on from this observation, the emergence of social media has led to reconsiderations about the proposition of unions on the web and even the nature of union membership itself. No only these services are offered by websites or other Internet-based organisations, but also via online networking between professionals on an ad hoc basis. Bryson *et al.* (2010) note that, unlike unions, online social networks such as Facebook managed to attract millions of active members in short times. Workers use social media and their networking features to voice concerns about issues of working life, connect with colleagues and organise their own activities. In fact, union members in the USA were found to be more intense users of ICT than non-members (Masters *et al.* 2010). A study with Greek trade unions members in the banking sector showed that Internet experiences can explain to a large extent union members' attitudes towards online engagement (Panagiotopoulos 2012). Traditional levels of union loyalty might even be secondary compared to familiarity with online means.

Overall, despite the availability and wide use of social media, current work has not assessed how unions use social media and the factors that affect such decisions. Furthermore, there is reason to believe that unions might have to rethink their web presence as membership organisations and networks of professionals. Guidelines for union campaigning and social media engagement underline the importance of audience awareness, informed channel selection, consistency and monitoring (White 2010; 2012). Which unions are more likely to prioritise social media and with what objectives? For example, will unions move towards professional networks such as LinkedIn and Twitter, use photo and video sharing applications or attempt to retain communication in

more closed environments (intranets, websites)? The paper focuses on two main questions: (1) how are unions using social media and (2) which dimensions affect unions' decisions to use new communication channels and build a social media active union.

### **3. Research methodology**

This study is based on a survey completed by UNI Global Union affiliates in February/March 2012. As an international union federation, UNI Global brings together 900 unions in 140 countries and diverse sectors of the economy (e.g. finance, commerce, media, cleaning and tourism). UNI Global affiliates include the United Food & Commercial Workers International Union in the USA, the Finance Sector Union of Australia, as well as Prospect, UNISON, Unite, the Communication Workers' Union and organisations from the UK.

UNI Global's prominent initiatives to promote the globalisation of the labour movement have been traditionally empowered by the use of global communication means such as websites, mailing lists and social media (Hogan *et al.* 2010). Since 2007, influential in this effort has been the UNI Global's Communicators Forum (2011), which is an international community of practice<sup>1</sup> that encourages sharing of unionism experiences in the field of communications. Further to statistical analyses, the findings of the survey were extensively discussed by members of this community, which provided critical feedback and thoughts for further development.

#### *3.1. Survey administration*

An invitation to an online questionnaire was sent in February 2012 to all UNI Global affiliates, followed by a reminder a few weeks later (up to 870 valid invitations are estimated to have been delivered). Prior to the invitation, the questionnaire was pilot tested with a group of union communicators to ensure content validity and appropriate wording of questions. This stage led to several changes to ensure that respondents would be familiar with all questions included.

The questionnaire was accessed by 210 respondents with 149 full responses being usable for the analysis. The rest of those responses were either incomplete or duplicates from the same organisation. Respondents were explicitly instructed that the questionnaire had to be filled in only by the most appropriate person in each organisation. Incomplete responses mostly came from visitors who scanned the questionnaire and then decided to pass it on to a colleague for completion. Most of the survey respondents came from communications departments or press offices (31.9%), followed by international officers (29.8%), union organisers (8.5%), general secretary (8.5%) and others such as elected officials. The overall response rate was around 20%, which is typical for surveys with union officials (e.g. Hertenstein and Chaplan 2005), as well as online surveys in general (Evans and Mathur 2005; Barrios *et al.* 2011).

The choice of UNI Global affiliates provided access to a population of unions that cover all geographical regions and service sectors of the economy. The approximately 870 unions invited to participate include organisations with wide range of density, membership base and resources; although an accurate statistical description of the population was not available, diversity in all organisational variables was reflected in the results (Section 4). Further to statistical analyses, the survey findings were extensively discussed with members of this community, which provided critical feedback and thoughts for further development.

### *3.2. Conceptual model based on Technology – Organisation – Environment*

The use of new technologies by organisations is likely to be influenced by a variety of factors that extend beyond their expected financial or efficiency value (e.g. Teo et al. 2003). The design of the survey used in this study was based on an adaptation of the Technology-Organisation-Environment (TOE) framework developed by Tornatzky and Fleischer (1990). TOE identifies technology, organisation and environment as the three broad dimensions that can affect decisions by organisations to adopt technological innovations. This exploratory framework has been widely used in studies of ICT adoption (e.g. Zhu et al. 2004; Mishra et al. 2007), particularly when the use of new technologies by organisations is shaped by different levels of context (e.g. organisation, industry, national).

The choice of TOE proposes the use of variables from these three layers of context and is directly motivated by previous studies which found strong relationships between the use of ICT and union organisational and environmental variables (Fiorito et al. 2000b; Fiorito et al. 2000a; 2002; Fiorito and Bass 2002; Greer 2002; Ward and Lusoli 2003; Stevens and Greer 2005). Online communications are likely to be influenced by variables such as union size but might also have novel effects since, for example, the use of social media does not require investing in a fixed infrastructural cost (Fiorito et al. 2000b). Furthermore, the choice of TOE allows introducing variables that: (1) can explain the reasons why a particular technology is desirable or not and (2) model environmental relationships between unions and other organisations or individuals (e.g. “if unions using social media are perceived as successful by their members”).

Technological context relates to the characteristics of technology itself, for example, the anticipated benefits from using it. With regard to social media for unions, there are both expected benefits and risks. Potential benefits were identified from the literature and verified during the pilot phase of the questionnaire (content validity). Nine statements were grouped in the construct *Benefits* and respondents were asked to indicate the extent to which they agree with them. The statements included beliefs about attracting new members, promoting the union’s positions, reducing communication costs and others (see table 4). *Benefits* was modelled as a formative construct following recommendation from previous studies (Khalifa and Davidson 2006). This is because the nine items selected represent distinct aspects of perceived benefits; hence they define and not reflect the variable. In terms of *Risk*, four statements were selected about how social media can expose the identity of members, bring negative publicity, damage

the union's profile and help employers monitor the union's activities. *Risk* was treated as a reflective variable because these four statements might not capture all possible dimensions of risk, but are indicative of the general level of concern about the use of social media.

Organisational context includes variables that are specific to each organisation, for example, management structures, resources and size. In union communications, organisational variables have been consistently found to be significant, particularly leadership and resources (Fiorito *et al.* 2002; Ward and Lusoli 2003; Stevens and Greer 2005). Variables modelled the union's *Age* (how many years ago it was founded), number of people employed by the union (*Staff*), level of *Density* in the primary sector and how many workers the union represents (*Members*). *Resource availability* was modelled as a separate construct using four statements (see table 4). Another important variable here was leadership, which is a broader element of union democracy that can highly impact perceptions about a union's ability to communicate (Levi *et al.* 2009). *Leadership* was modelled using five statements asking respondents to indicate if the union leaders believe that social media are important and whether they have established particular goals and tasks for using them (see table 4).

Environmental context refers to the environment in which the organisation operates and shapes options about new technologies, for example, external stakeholders and professional associations. Studies of ICT adoption usually refer to such influences from the environment as institutional effects, which can outline the relevance of new technologies even independently of their particular features to some extent (Teo *et al.* 2003; Mignerat and Rivard 2009). Institutional effects are deeply rooted in pressures faced by organisations to conform to acceptable practices and gain legitimacy (DiMaggio and Powell 1983; Meyer and Rowan 1991)<sup>2</sup>. Influences from the environment regarding social media in unions were expected to be significant. The variable labelled *Institutional enablers* was reflected from six items, which asked respondents to indicate the extent to which they agree that there are pressures from members to use social media, pressures from other unions that have been successful in using them and if unions are expected to use them in general (see table 4). Another influence examined separately was participation in Communities of Practice (CoP) where social media are a topic of interest (*Participation in CoP*).

The two dependent variables used to model union communications were labelled as Channels and Strategy. For Channels, respondents were asked to indicate which online communication channels their union was using from a range of different choices (e.g. Facebook groups, Twitter, blogs), including the option to indicate alternative ones. This range of options was added to form the formative variable Channels that represents the variety of channels used (see table 2). The second dependent variable Strategy was formed based on three statements to assess the extent to which respondents felt that their union was considering, was likely to or was expecting to become a social media active union within a year's time (see table 4). These three statements were adapted from a similar construct developed by Khalifa and Davidson (2006) and preferred over a single item construct.



Figure 1 shows the conceptual model used for the survey design, which includes the variables for each of the three TOE dimensions, as well as two dependent variables for union communications.

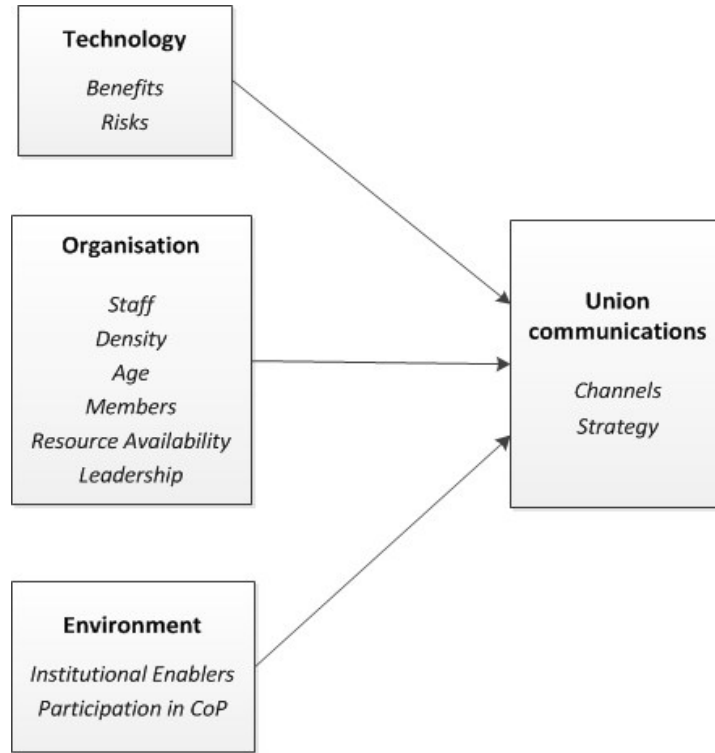


Figure 1: Conceptual model based on the Technology – Organisation – Environment framework.

#### 4. Survey findings

Unions from Europe were the majority of respondents with 44.3%. This was followed by Asia (16.1%), Africa (9.4%), North America (8.7%), Oceania (6.7%) and South America (5.4%). Most frequent countries of origin for respondents were Australia (7) Sweden (7), Malaysia (6), Switzerland (6), USA (6), Canada (5) and Finland (5). Most common sectors of representation for unions were (multiple answers possible): Finance (34.9%), Telecom (24.2%), Commerce (23.5%), Post/Logistics (22.8%), Cleaning/Security (20.8%), IT/Services (19.5%), Media, Entertainment & Arts (18.1%), Graphical/Packaging (12.7%) and Tourism (12.7%).

Table 1 shows the profile of respondents in terms of people employed by the union, density rates, history and members. The survey sample includes a combination of unions with diverse *Staff*, *Density* and *Members*. About two thirds of the unions were founded over 20 years ago or earlier, which was mainly affected by unions from Europe.

Table 1: Profile of respondents.

<b>Question</b>	<b>Options</b>	<b>Answers</b>
How many people (or full-time equivalent) are employed by your union?	Up to 15	32.1%
	15 to 30	12.1%
	30 to 50	8.6%
	50 to 100	9.3%
	100 to 150	7.1%
	150 to 200	6.4%
	Over 200	24.3%
Estimate the level of density in the primary sector(s), employer or total area where you operate, i.e. what percentage of potential union members are actually members of the union?	Up to 10 %	10.5%
	10-25%	16.1%
	25-40%	16.1%
	40-65%	15.4%
	65-80%	23.1%
	Over 80%	18.9%
How many years ago was your union founded?	Less than 5	2.0%
	From 5 to 10	7.4%
	From 10 to 15	9.5%
	From 15 to 20	8.8%
	From 20 to 50	28.4%
	Over 50	43.9%
How many workers does your union represent?	Up to 1,000	11%
	1,000 to 5,000	20%
	5,000 to 20,000	16%
	20,000 to 50,000	13%
	50,000 to 100,000	11%
	100,000 to 1,000,000	18%
	Over 1,000,000	9%

#### 4.1. Communication channels and engagement audiences

Respondents were asked to indicate the channels that their union is using to interact with members apart from a website. A list of 14 options was provided, which started from email lists, intranets and then included social media options such as live streaming, virtual environments, microblogging and networking groups. Unions used a mean of 5 of those options with the maximum being 13 and the standard deviation 3.

Table 2 shows that the most popular channel is email lists (94%) followed by Facebook groups (almost 70%). With the exceptions of virtual environments, UnionBook and streaming/podcasting, an important mass of users between 20% and 45% can be noted for the rest of the options. About 11% of respondents indicated that they have adopted additional tools, which included: online survey hosting systems, wikis, digital magazines, online collaboration platforms, the enterprise social network Yammer, social media management dashboards such as Hootsuite, online campaigning tools, as well as a range of general purpose social networks in local countries and languages.

Table 2: Use of communication channels.

<b>Option</b>	<b>Used by</b>
Email lists	94.0%
Website subscription tools (RSS feeds)	43.0%
Skype or other conferencing tools	24.8%
Blogs	29.5%
Second Life or other virtual environments	4.7%
Facebook groups or pages	69.8%
Forums, chat or discussion groups not hosted within social networks	28.2%
Twitter or other microblogging services	42.3%
UnionBook or other specialised social networks for unionists	17.4%
LinkedIn or other social networks for professionals	20.1%
Flickr or other photo sharing websites	30.2%
YouTube or other video sharing websites	45.0%
Live streaming or podcasting	14.8%
Online access to internal network (intranet)	44.3%

T-tests between users and non-users of these different channels revealed a clear positive influence of four variables: *Members*, *Staff*, *Age* and *Participation in CoP*. Differences in these four variables were significant for users of RSS, blogs, Facebook, Twitter, LinkedIn, Flickr, YouTube, Streaming and Intranets (significance levels were usually for  $p < 0.01$ ). *Resource availability* and *Leadership* had small positive effects for LinkedIn, Flickr and YouTube. UnionBook was the only channel that differed from all the others. Users of UnionBook or other specialised social networks for unionists had lower *Density* ( $p < 0.05$ ) and perceived considerably less *Risk* from the use of social media ( $p < 0.01$ ).

With regard to the audience of online communications, respondents identified union members (91.3%) and potential union members as important (54.4%). These were followed by union staff (51%), other unions (45.6%), media (44.3%), employers (43%), the general public (36.9%), government (20.1%) and other non-governmental organisations (16.1%). Table 3 shows that, as expected, websites are the most popular online source of information about unions (78.6%), but it is interesting to see that Facebook (12.2%), UnionBook (6.9%) and Twitter (2.3%) were also indicated as such. About 45% of the unions have a website for over 9 years, but almost 12% have no website at all. About 40% of union websites provide information in more than one language.

Two-tailed correlations show that earlier adopters of union websites have positive relationships with *Staff* and *Members* (both for  $p < 0.05$ ). Those who consider the website not to be the main source of information come from unions with less *Members* and *Age* (both for  $p < 0.01$ ). Unions that identify more groups as their main audience tend to use a wider variety of channels to reach them ( $p < 0.01$ ).

Table 3: Information about websites and sources.

Question	Options	Answers
How long has your organisation had a website?	Less than 1 years	3.5%
	1 to 3 years	6.9%
	3 to 5 years	11.1%
	5 to 7 years	13.2%
	7 to 9 years	8.3%
	Over 9 years	45.1%
	No website	11.8%
In how many languages is information on your website available?	One	59.5%
	Two	27.8%
	Three	7.9%
	Four	1.6%
	Five or more	2.3%

What is the most popular online source of information about your union?	Website	78.6%
	Twitter	2.3%
	Facebook	12.2%
	UnionBook	6.9%

#### 4.2. Dimensions of social media use

Table 4 shows items for composite constructs including their mean and standard deviation (all measured on a 5-point Likert scale from 1 “strongly disagree” to 5 “strongly agree”). Table 5 shows the validity measures for reflective constructs. Internal consistency was assessed through Cronbach’s alpha, with values higher than 0.60 being acceptable for exploratory research (Straub *et al.* 2004). For construct validity, a Principal Component Analysis with Varimax rotation<sup>3</sup> revealed that items ResourceAv4, Leadership1 and Leadership4 cross-loaded on different constructs above the cut-off value of 0.40. Hence, they were dropped from the analysis. Items Influence3 and Risk4 loaded on *Institutional enablers* and *Risk* slightly below 0.60 but were included in the analysis. The rest of the items loaded properly on intended constructs without cross-loadings (discriminant validity) and with Eigenvalues above 1 (convergent validity).

Respondents were quite supportive of the benefits of social media, the most important of which were identified as the potential to promote the unions’ positions in society (Benefits2), approach younger members (Benefits3), improve communication with members outside office hours (Benefits7) and attract new members (Benefits1). In terms of *Risk*, respondents expressed mixed concerns about issues of identity exposure, ability of employers to monitor the union’s activities and negative publicity.

*Resource availability* was the construct with the highest standard deviation as respondents had diverse opinions as to whether social media are considered a priority that draws sufficient resources in their union. On average, views were quite positive about these statements. The five constructs measuring *Leadership* provided interesting findings. While both communication departments (Leadership1) and union leaders believe social media are important (Leadership3), communications officers feel stronger about this statement. This comes along an apparent gap in leadership from theory to practice as not all leaders have established particular goals and tasks for using social media (Leadership5), no matter how supportive they might be. Similar to *Resource availability*, standard deviations for *Leadership* items were high.

Table 4: Items for constructs including descriptive statistics. All measured on a 5-point Likert scale from 1 “strongly disagree” to 5 “strongly agree”. Those marked with \*\*\* were dropped from the analysis due to cross-loadings.

<b>Construct</b>	<b>Questions</b>	<b>Mean</b>	<b>Standard Deviation</b>
<p><i>Benefits</i></p> <p>There are certain beliefs about the potential benefits of using social media for unions. Please indicate the extent to which you agree with the following: Social media can help...</p>	Attract new members into our union. (Benefits1)	4.05	0.73
	Promote our union's positions. (Benefits2)	4.32	0.63
	Approach younger members. (Benefits3)	4.27	0.69
	Reduce communication costs. (Benefits4)	3.80	1.02
	Our leaders appear more friendly and interactive. (Benefits5)	3.75	0.73
	Increase the transparency and openness of our union. (Benefits6)	3.99	0.77
	Improve communication with members outside office hours. (Benefits7)	4.10	0.70
	Increase participation in industrial actions. (Benefits8)	3.79	0.81
	Increase participation in social events. (Benefits9)	3.94	0.68
<p><i>Risk</i></p> <p>The use of social media by unions is also associated with certain risks. Please indicate the extent to which you agree with the following: Social media tools....</p>	Can bring negative publicity to our union. (Risk1)	3.11	0.99
	Can be dangerous for our members in terms of exposing their identity and union beliefs to employers. (Risk2)	3.11	1.01
	Can help employers monitor and even block union activities. (Risk3)	3.22	0.99
	Can threaten the traditional profile of our union. (Risk4)	2.61	1.03
<p><i>Resource Availability</i></p> <p>Using social media requires certain resources, skills and expertise. Please indicate the extent to which you agree with the following: In our union....</p>	We have the resources required to develop our social media ideas. (ResourceAv1)	3.37	1.05
	We have all the support needed in terms of skilled personnel to use social media tools. (ResourceAv2)	3.19	1.08
	Effective use of social media is well within our control. (ResourceAv3)	3.23	0.95
	Social media are considered a priority given our budget and time constrains. (ResourceAv4) ***	3.09	1.04

<b>Construct</b>	<b>Questions</b>	<b>Mean</b>	<b>Standard Deviation</b>
<p><i>Leadership</i></p> <p>Please indicate the extent to which you agree with the following statements with regard to how the leadership of your union perceives social media:</p>	Our communications department believes social media is an important tool for our union. (Leadership1) ***	4.17	0.79
	Our union has formulated a strategy concerning the use of social media. (Leadership2)	3.38	0.96
	Our leadership believes that social media can have important benefits for our union. (Leadership3)	3.76	0.92
	Our leadership believes that social media can damage the traditional profile of our organization. (Leadership4) ***	2.59	0.96
	Our leadership has established particular goals and tasks for using social media. (Leadership5)	3.12	0.99
<p><i>Institutional enablers</i></p> <p>In their decisions to use social media, unions come across influences from different sources. Please indicate the extent to which you agree with the following:</p>	Our fellow unions that use social media have benefited greatly. (Enabler1)	3.51	0.75
	Our fellow unions that use social media are perceived favourably by their members. (Enabler2)	3.51	0.68
	The union movement is interested in social media. (Enabler3)	3.83	0.74
	Our members believe that we should use social media. (Enabler4)	3.93	0.57
	Members that are crucial to us encourage us to use social media. (Enabler5)	3.65	0.79
	In our society, unions are expected to modernize themselves and social media can be useful in this direction. (Enabler6)	4.23	0.57
<p><i>Strategy</i></p> <p>Please indicate the extent to which the following statements describe the strategic orientation of your union with regard to social media:</p>	We are considering to become a social media active union in a year's time. (Strategy1)	3.50	1.01
	We are likely to become a social media active union in a year's time. (Strategy2)	3.43	0.91
	We expect to become a social media active union in a year's time. (Strategy3)	3.64	0.95

*Institutional enablers* provided important results as well. Expectations for union modernisation (Enabler6), pressures from members (Enabler4) and general interest of the union movement (Enabler3) were all strongly supported by respondents. Pressures from other unions that have possibly benefited from social media are regarded as influential, but not to the same extent. *Participation in CoP* was medium among respondents with about one third stating that their

organisation participates in networks or communities that have an interest in the use of social media. The most popular choice was the UNI Global Communicators Forum, followed by many other options such as the Labour New Media BootCamp and the TUC Communicators Network.

Table 5: Descriptive statistics for constructs including reliability measures for reflective variables.

<b>Construct</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Range of factor loadings</b>	<b>Cronbach's alpha</b>
<i>Risk</i>	2.99	0.71	0.59 - 0.76	0.67
<i>Resource Availability</i>	3.27	0.88	0.78 - 0.83	0.82
<i>Leadership</i>	3.41	0.81	0.73 - 0.80	0.79
<i>Institutional enablers</i>	3.78	0.47	0.51 - 0.74	0.76
<i>Strategy</i>	3.50	0.86	0.80 - 0.90	0.88
<i>Benefits</i>	3.99	0.50	-	-

Table 6 shows the correlations between the independent variables. Correlations are up to 0.50 in absolute values, which indicates that indeed they measure sufficiently distinct concepts (no high collinearity). There are certain anticipated strong correlations between variables that represent union characteristics, for example, the positive correlation between *Staff* and *Members*. Other correlations were less expected. *Risk* is positively correlated with *Staff* and *Density* which possibly shows that established unions in their primary sectors of representation might perceive higher risks from using social media. *Institutional enablers* have a strong positive relationship with *Benefits* and *Leadership*; the latter was also strongly correlated with *Resource availability*.

Table 7 shows the correlations between the two dependent variables and the independent variables. *Channels* and *Strategy* have a medium positive correlation of 0.182 ( $p < 0.05$ ). The first important observation is that *Benefits* and *Risk*, the two variables that represent the technology dimension, have no correlation with the dependent variables. Hence, the expected benefits and risks of social media do not much affect decisions to use multiple channels and develop a strategy for a social media active union. *Channels* have a strong positive relationship with almost all the organisational and environmental variables, particularly *Members* and *Participation in CoP*. However, statements about *Strategy* are only related to *Resource availability*, *Leadership* and *Institutional enablers*. Variables that directly measure the size and history of unions (*Staff*, *Age*, *Members* and *Density*) do not affect perceptions about how social media active the union is.



Table 6: Two-tailed Pearson correlations between independent variables, \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , range from 126 to 148 (pair wise deletion for missing data).

	Members	Participation in CoP	Age	Staff	Density	Benefits	Risk	Resource availability	Institutional enablers
Participation in CoP	0.23***	1							
Age	0.15*	0.06	1						
Staff	0.53***	0.07	0.02	1					
Density	-0.20**	-0.01	0.06	0.08	1				
Benefits	0.03	0.03	-0.18**	0.12	0.02	1			
Risk	-0.04	0.08	0.02	0.24***	0.19**	0.05	1		
Resource Availability	0.05	0.15	0.28***	0.08	0.01	-0.03	-0.12	1	
Institutional enablers	0.02	0.11	-0.06	0.06	-0.04	0.49***	-0.09	0.15*	1
Leadership	-0.09	0.01	0.15*	-0.02	0.03	0.10	-0.04	0.45***	0.37***

Table 8 shows two multivariate regression models, one for each dependent variable, *Channels* and *Strategy*, with both models being significant for  $p < 0.01$  and  $p < 0.05$  respectively. *Members* are a very strong predictor of *Channels* ( $p < 0.01$ ) followed by *Participation in CoP* ( $p < 0.05$ ). *Institutional enablers* are the strongest predictor for *Strategy* ( $p < 0.05$ ), followed by *Leadership* ( $p < 0.10$ ). The total effect of predictor variables is 40.4% for *Channels* and only 11.2% for *Strategy*. Alternative stepwise regression models resulted in slightly higher adjusted R square for *Channels* (41.3%) when *Members*, *Leadership* and *Participation in CoP* were used as predictor variables. The improvement was higher for *Strategy* (14.9%) when *Institutional enablers* and *Leadership* were used as predictor variables.

Table 7: Two-tailed Pearson correlations between dependent and independent variables, \*p<0.10, \*\* p<0.05, \*\*\* p<0.01, range from 116 to 148 (pair wise deletion for missing data).

	Participation in CoP	Age	Staff	Density	Members	Benefits	Risk	Resource Availability	Institutional enablers	Leadership
Channels	0.37***	0.22***	0.27***	-0.07	0.50***	0.06	-0.09	0.20**	0.19**	0.18**
Strategy	0.01	0.03	-0.08	0.04	0.03	0.15	-0.03	0.18**	0.33***	0.36***

Table 8: Regressions with standardised coefficients (t and F values flagged significant at \*p<0.10, \*\*p<0.05 and \*\*\*p<0.01).

	Channels	Strategy
Benefits	-0.081	0.054
Risk	-0.112	0.010
Staff	0.106	-0.186
Density	0.005	0.099
Age	0.022	0.019
Members	0.496***	0.120
Resource Availability	-0.016	0.055
Leadership	0.210**	0.200*
Institutional enablers	0.120	0.280**
Participation in CoP	0.192**	-0.061
<b>R square</b>	0.455	0.196
<b>Adjusted R square</b>	0.404	0.112
<b>F</b>	8.860***	2.323**

### *4.3. Additional comments and feedback*

Respondents were asked to provide additional comments about their experiences with online communications and social media. About 40 comments were received which mainly fit into four categories. First, many noted that: (1) the potential of social media for union modernisation cannot be ignored and (2) the impact of social media has been substantial on reducing geographical fragmentation and accelerating mobilisation efforts. Someone explicitly mentioned that being resistant to using social media is like “having doubts about the phone”. Closely related was the second category of comments, which stated that generational aspects have a prominent effect both among union staff and members: younger people are much more enthusiastic about online forms of communication.

Third, respondents commented that one of the main issues that hinder the use of social media is openness of communication structures. Leaders are not eager to allow a large number of union employees to produce union information on a regular basis. Also, leaders might wrongly associate social media with older forms of communication or perceive social media as suitable only for leisure activities. This is closely linked with several concerns that personal contact in the workplace appears to be historically established in the union life and cannot be substituted. Privacy and exposure issues were also mentioned along with the need to demonstrate a careful attitude when using social media for any activity.

Finally, many comments were received about the need for support and possible ways forward. More support is required to understand the relevance of social media in union activities and adapt to the use of multiple channels. This is especially important for union campaigns that seek to reach a large number of people beyond the membership base. One respondent stated that the union’s website should serve as the point of information for the general public with deeper relationships being established on social networking groups. Another area where need for support was identified was lack of ICT literacy, skills, resources and capacity to use social media. For example, concerns were expressed that social media might be time consuming since people will expect answers from the union on a “24/7” basis.

## **5. Discussion**

Based on the paper’s two main questions, the discussion focuses on how unions use social media (5.1) and then comments on the findings related to the dimensions of social media use (5.2). This is approached within the broader debate of union renewal and ICT. Motivated by the survey findings, two further themes are discussed about social media’s effects on the role of unions as networks of professionals (5.3) and social movements (5.4).

### *5.1. Channel and audience diversity*

The survey shows that, moving now beyond websites, the pursuit of more interactive communications seems to be a complicated task in progress in many unions internationally. The use of a wider variety of information channels with engagement features seem to suggest that top-down structures of communication could be more decentralised. Union websites do not only reach a small audience of mainly union members as Ward and Lusoli (2003) had found. According to the survey, union members, media, governments, employers, other organisations and the broader public have more opportunities to come across unions' positions and possibly engage with them. With unions trying to gain more members and influence in society, engagement might have to take place at multiple spaces and involve more audiences. In certain cases, the union website is not even regarded as the main point of information on the web (22% of survey respondents).

Therefore, unions that are able to navigate through different channels and audiences can raise much more effective support for their activities. An integrative communication strategy requires informed choices of using different channels so that activities remain relevant and consistent. The many available options contribute to plurality when sufficient commitment is demonstrated and the inherent features of tools are understood and exploited. For example, Pinnock (2005) discussed the usefulness of being able to downsize the union message before Twitter's widespread use proved how much can fit into its 140 characters per message. Unions that have a clear idea of how social media activities can happen are more likely to balance high expectations of responsiveness by their members. This is not always the case in practice as respondents to the survey were hesitant to agree that particular goals and tasks for using social media have been specified; even in unions with available resources where social media are prioritised.

### *5.2. Social media dimensions and union renewal*

Over 10 years ago, Diamond and Freeman (2002) questioned whether unions were seizing the opportunity of new technologies. As union websites have become more standard, the availability of social media poses similar questions and remains closely related to aspects of union renewal (Martinez Lucio 2003; Kerr and Waddington 2013). Overall, the uptake of Internet tools by unions participating in the study suggests that there might be improvements in engagement in some parts. Renewal through ICT might be taking place more rapidly in countries such as Brazil or Australia where social networking is growing rapidly and unions are seeking alternative ways to increase their influence. Unions in Europe, even if usually well-established and adequately resourced, do not always have the same urgency to promote new forms of engagement (as reflected in the survey and further comments received).

The desire of union communicators and leaders to engage in social media activities is much driven by beliefs that unions have to appear more interactive to the audiences with which they interact. Beliefs about the importance of social media do not necessarily translate to good

practice. Mainly unions with a wider membership base, available staff and resources have more opportunities to participate in communities of practice, realise the relevance of social media and experiment with more channels. These findings clearly confirm earlier predictions that union communications on the web would be determined by size characteristics and the ability to allocate resources (Greer 2002; Ward and Lusoli 2003; Stevens and Greer 2005). The anticipated benefits and risks of using social media are not in question but have limited effects in such decisions according to the relationships shown in the survey with the dependent variables.

Regardless of union size variables, it is not surprising to see that when social media are seen as a resource with clear value, they are treated more strategically by union leaders (Ward and Lusoli 2003). Leadership defines the appropriateness of social media as an innovation and determines the mobilisation of necessary resources. The sooner union leaders define this relevance and guide developments the better unions will be able to act strategically. If union leaders are not as enthusiastic about or even explicitly hinder social media activities, other union officers might act entrepreneurially to promote initiatives even with a view to increase their own sphere of influence. While this has been predicted by previous studies (Ward and Lusoli 2003; Martinez Lucio and Walker 2005), the opportunities for more flexible forms of communication now allow everyone to use social networking groups, Twitter or blogs for such purposes. As much as these means might permit distributed discourses and contribute to more polyphonic unions (Greene *et al.* 2003; Carter *et al.* 2003), they are also used to demand transparency and even challenge the decisions of union leaders.

### *5.3. Unions as networks of professionals*

If social media are allowing more union officials and members to voice their concerns, are they making unions more inclusive? Social media certainly facilitate opportunities for the self-organising of workers as in many professions a great proportion of activity is now happening on the web. Barriers to online professional networking have been significantly lowered with sites such as LinkedIn and Facebook acting as professional networks. Blogging and microblogging applications provide the opportunity for real-time content around the whole range of professional issues. The survey shows low to medium uptake of networking tools such as LinkedIn (20.1%), blogging (29.5%) and microblogging (Twitter) (42.3%). The higher use of Facebook groups and pages (69.8%) shows that unions have embarked more on the social aspects of networking or are finding that this is what their audience is willing to support.

As a result, networking in the workplace and relevant discussions might be happening to a large extent in online spaces outside unions' visibility and control. Diamond and Freeman (2002) predicted the emergence of new Internet-based organisations that could replace unions' activities. In fact, these organisations seem to be online networks themselves which provide the infrastructure for ad hoc connectivity among professionals and multiple channels to raise concerns even bypassing traditional structures of representation. This suggests that unions have to rethink their role as facilitators of networking in the workplace and networks of professionals.

New models of unionism that incorporate some of the successful characteristics of social networks might seem unlikely at the moment (Bryson *et al.* 2010), but unions could identify spaces of professional networking and develop the capacity to use them as information sources about advancements in the workplace, sentiment of employees and further issues that might shape the union agenda. The capacity to listen, identify useful information and intervene does not necessarily require mobilisation of resources. Even compared to monitoring traditional media, there are useful tools that could facilitate establishing in-flow of information such as Twitter hashtags, email alerts, RSS feeds and social media dashboards. Despite their importance, these aspects of networking and monitoring were very little mentioned in the survey and further comments.

#### *5.4. Unions as social movements*

Further to connecting professionals, social media can have a key effect on mobilising people around union campaigns. So far, citizen movements in the UK, Spain and Greece and other European countries have demonstrated the power of social media as an organising tool for networked individuals who express disagreement about radically changing conditions in their working life (Theocharis 2011). Many of these citizen movements directly evolve around the European solidarity narrative, which can be the central space for trade unions to mobilise their members. The Occupy movement, initiating from the USA, was rapidly expanded with support from transnational advocacy networks including trade unions. Its key messages were centred on social inequality and unfairness in the distribution of global wealth (“we are the 99 %”).

Given the fact that social injustice is one of the most important triggers of union mobilisation (Kelly 1998), it is important to consider how social media can enable unions to function as social movements specifically in Britain and countries of the Eurozone. Through online networking, the main narratives of solidarity in times of austerity can become viral, more easily understood and shared by the general public. For example, the campaigns “I am not a number” by Prospect (2013) and a million voices by UNISON (2011) promote stories of real people whose personal and working lives are negatively influenced by cuts in public sector budgets. Their message can help the public realise that austerity measures, being implemented all over Europe, have a direct impact on workers and form the difficult reality behind financial measures and political agendas. These campaigns enable engagement with an active and networked audience that might not have a formal relationship with the union, but supports its causes by sharing key messages with their own networks. In this context, interacting with union information takes place with small actions such as “like”, “retweet” or the broadcasting of users’ own content.

## **6. Concluding remarks**

Drawing on the findings of an international survey with UNI Global affiliates, this study assessed how unions are using social media and associated their use with technological,

organisational and environmental variables. The study cannot offer conclusive statements in a rapidly changing technological context, but in line with previous studies in the area, it shows how leadership, resources, union characteristics and beliefs about the importance of social media drive decisions to use them (Diamond and Freeman 2002; Fiorito *et al.* 2002; Greer 2002; Ward and Lusoli 2003; Stevens and Greer 2005). The survey shows interesting trends in how new information sharing and networking channels are contributing towards social media active unions which attempt to engage with diverse audiences.

The 149 unions, whose responses were used in the survey analysis, have diverse characteristics and information needs. In addition to sample diversity, this exploratory work requires further limitations to be acknowledged. First, the choice of an online survey attracted respondents from unions where interest in online communications and social media is likely to be high. Since the study does not aim to statistically generalise to the whole population of UNI Global affiliates or beyond, response bias has to be seen in terms of how it affects the exploration of relations between the variables. The profile and origin of unions that participated in the study (section 4.1) shows that there was diversity in density, membership base, sectors of representation, staff employed by the union and country of origin. Possible bias could mainly come from the language of origin with unions outside Europe or English-speaking countries being less likely to complete a questionnaire in English (Harzing 2006).

Second, as Fiorito *et al.* (2002) note, there is always difficulty in measuring and isolating the effects and use of ICT. The reliability of constructs used here serves the purpose of an exploratory work but might require changes before a similar study could be replicated. Third, the survey did not assess how the different channels are used by unions in detail. Social media cannot be treated as a single entity or sets of practices with interchangeable properties. The types of interactions which they enable or enhance explain many of the decisions to use them. Despite the plethora of examples in the comments and feedback received, it was a choice not to extend the questionnaire in this direction.

Future work can certainly elaborate on these aspects and examine how different tools change union interactions with members (e.g. industrial disputes, law advice and employment) and when, where and with whom social media can be used to engage. For example, social media in the workplace, in the context of union activities and beyond, have important implications that merit attention (Panagiotopoulos 2012; Bucher *et al.* 2012). The blurring of work-life boundaries is already an issue that creates tensions in employment relations and has triggered extensive research (e.g. Boswell and Olson-Buchanan 2007; Fonner and Stache 2012). If union interactions become more ubiquitous due to the use of social media, how to plan and manage these transitions has to be addressed. Technology itself poses some open issues here with the use of mobile devices (smartphones, tablet computers) being only briefly mentioned in the survey, but rapidly adopted by union members and young professionals who are likely to join unions.

## Notes

1. A network or community of practice can be defined as a group of professionals who share material, knowledge, practices and concerns (Wenger and Snyder 2000).
2. Such pressures are usually categorised as coercive (legal compliance), normative (professional practices accepted as standard in a field) or mimetic (copying practices from successful organisations) (DiMaggio and Powell 1983).
3. The orthogonal Varimax rotation method was reported here after confirming that correlations between the factors are rather low (below absolute values of 0.20) with the exception of *Institutional enablers* and *Leadership* which was 0.37. Alternative Principal Component Analyses using Oblique rotation methods only slightly affected the cross-loadings and range of factor loadings for each reflective construct.

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## References

- Barrios, M., Villarroya, A., Borrego, A. and Olle, C. (2011), "Response Rates and Data Quality in Web and Mail Surveys Administered to PhD Holders ", *Social Science Computer Review*, 29(2): 208-220.
- Blodgett, B. and Tapia, A. (2011), "Do Avatars Dream of Electronic Picket Lines? The Blurring of Work and Play in Virtual Environments", *Information Technology & People*, 24(1): 26-45.
- Boswell, W.R. and Olson-Buchanan, J.B. (2007), "The Use of Communication Technologies after Hours: the Role of Work Attitudes and Work-Life Conflict", *Journal of Management*, 33(4): 592-610.



- Bryson, A., Gomez, R. and Willman, P. (2010), "Online Social Networking and Trade Union Membership: What the Facebook Phenomenon Truly Means for Labor Organizers", *Labor History*, 51(1): 41-53.
- Bucher, E., Fieseler, C. and Suphan, A. (in press), "The Stress Potential of Social Media in the Workplace", *Information, Communication & Society*, 1-29.
- Carter, C., Clegg, S., Hogan, J. and Kornberger, M. (2003), "The Polyphonic Spree: the Case of the Liverpool Dockers ", *Industrial Relations Journal*, 34(4): 290-304.
- Chaison, G. (2005), "The Dark Side Of Information Technology For Unions ", *WorkingUSA*, 8(4): 395-402.
- Diamond, W.J. and Freeman, R.B. (2002), "Will Unionism Prosper in Cyberspace? The Promise of the Internet for Employee Organization", *British Journal of Industrial Relations*, 40(3): 569-596.
- DiMaggio, P.J. and Powell, W.W. (1983), "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields", *American Sociological Review*, 48(2): 147-160.
- Evans, J.R. and Mathur, A. (2005), "The Value of Online Surveys", *Internet Research*, 15(2): 195-219.
- Fiorito, J. and Bass, W. (2002), "The Use of Information Technology by National Unions: An Exploratory Analysis", *Industrial Relations*, 41(1): 34-47.
- Fiorito, J., Jarley, P. and Delaney, J.T. (2002), "Information Technology, US Union Organizing and Union Effectiveness", *British Journal of Industrial Relations*, 40(4): 627-658.
- Fonner, K.L. and Stache, L.C. (2012), "All in a Day's Work, at Home: Teleworkers? Management of Micro Role Transitions and the Work-Home Boundary", *New Technology, Work and Employment*, 27(3): 242-257.
- Greene, A., Hogan, J. and Grieco, M. (2003), "Commentary: E-collectivism and Distributed Discourse: New Opportunities for Trade Union Democracy", *Industrial Relations Journal*, 34(4): 282-289.
- Greene, A. and Kirton, G. (2003), "Possibilities for Remote Participation in Trade Unions: Mobilising Women Activists ", *Industrial Relations Journal*, 34(4): 319-333.
- Greer, C.R. (2002), "E-Voice: How information technology is shaping life within unions", *Journal of Labor Research*, 23(2): 215-235.
- Harzing, A. (2006), "Response Styles in Cross-national Survey Research: A 26-country Study", *International Journal of Cross Cultural Management*, 6(2): 243-266.
- Hertenstein, E.J. and Chaplan, M.A. (2005), "The Effect of Training for Internet Use among Local Trade Union Leaders", *New Technology, Work and Employment*, 20(1): 74-85.
- Hogan, J., Nolan, P. and Grieco, M. (2010), "Unions, Technologies of Coordination, and the Changing Contours of Globally Distributed Power", *Labor History*, 51(1): 29-40.
- Hyman, R. (2007), "How Can Trade Unions Act Strategically?", *Transfer: European Review of Labour and Research*, 13(2): 193-210.
- Kelly, J. (1998), *Rethinking Industrial Relations: Mobilization, Collectivism, and Long Waves*, Routledge, London.
- Kerr, A. and Waddington, J. (in press), "E-Communications: An Aspect of Union Renewal or Merely Doing Things Electronically?", *British Journal of Industrial Relations*, 1-24.
- Khalifa, M. and Davidson, R.M. (2006), "SME Adoption of IT: The Case of Electronic Trading Systems", *IEEE Transactions on Engineering Management*, 53(2): 275-284.

- LabourStart (2011), *Homepage of LabourStart social networking tool for unionists*. Available: <http://www.labourstart.org/> [2011, 06/20].
- Lee, E. (1997), *The Labor Movement and the Internet*, Pluto Press, London, UK.
- Lévesque, C. and Murray, G. (2010), "Understanding Union Power: Resources and Capabilities for Renewing Union Capacity", *Transfer: European Review of Labour and Research*, 16(3): 333-350.
- Levi, M., Olson, D., Agnone, J. and Kelly, D. (2009), "Union Democracy Reexamined", *Politics & Society*, 37(2): 203-228.
- 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 Walker, S. (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., Walker, S. and Trevorrow, P. (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.
- Masters, M.F., Gibney, R., Zagencyk, T.J. and Shevchuk, I. (2010), "Union Members' Usage of IT", *Industrial Relations*, 49(1): 83-90.
- Meyer, J.W. and Rowan, B. (1991), "Institutionalized Organizations: Formal Structure as Myth and Ceremony" in *The New Institutionalism in Organizational Analysis*, eds. W.W. Powell and P.J. DiMaggio, 1st edn, University of Chicago Press, pp. 41-62.
- Mignerat, M. and Rivard, S. (2009), "Positioning the Institutional Perspective in Information Systems Research", *Journal of Information Technology*, 24(4): 369-391.
- Mishra, A.N., Konana, P. and Barua, A. (2007), "Antecedents and Consequences of Internet Use in Procurement: An Empirical Investigation of U.S. Manufacturing Firms", *Information Systems Research*, 18(1): 103-120.
- Muir, K. (2010), "'Your Rights at Work' Campaign: Australia's 'most Sophisticated Political Campaign'", *Labor History*, 51(1): 55-70.
- Panagiotopoulos, P. (2012), "Towards Unions 2.0: Rethinking the Audience of Social Media Engagement", *New Technology, Work and Employment*, 27(3): 178-192.
- Pinnock, S.R. (2005), "Organizing Virtual Environments: National Union Deployment of the Blog and New Cyberstrategies", *WorkingUSA*, 8(4): 457-468.
- Prospect (2013), *Public Servants are not just Pen-Pushers*. Available: [http://www.prospect.org.uk/campaigns\\_and\\_events/national\\_campaigns/cutstop/notanumber](http://www.prospect.org.uk/campaigns_and_events/national_campaigns/cutstop/notanumber) [15/03, 2013].
- Pulignano, V. (2009), "International Cooperation, Transnational Restructuring and Virtual Networking in Europe", *European Journal of Industrial Relations*, 15(2): 187-205.
- Selvin, D.F. (1963), "Communications in Trade Unions: a Study of Union Journals", *British Journal of Industrial Relations*, 1(1): 73-93.
- Slaughter, M. (2007), "Globalization and Declining Unionization in the United States", *Industrial Relations*, 46(2): 329-346.
- Stevens, C.D. and Greer, C.R. (2005), "E-Voice, the Internet, and Life within Unions: Riding the Learning Curve", *WorkingUSA*, 8(4): 439-455.
- Straub, D., Boudreaux, M. and Gefen, D. (2004), "Validation Guidelines for IS Positivist Research", *Communications of the Association for Information Systems*, 13: 380-427.

- Teo, H.H., Wei, K.K. and Benbasat, I. (2003), "Predicting Intention to Adopt Interorganisational Linkages: an Institutional Perspective", *MIS Quarterly*, 27(1): 19-49.
- Theocharis, Y. (2011), "Cuts, Tweets, Solidarity and Mobilisation: How the Internet Shaped the Student Occupations ", *Parliamentary Affairs*, 65(1): 162-194.
- Tornatzky, L.G. and Fleischer, M. (1990), *The Processes of Technological Innovation*, Lexington Books, Lexington, Massachusetts.
- UNI Global (2011), *e-UNI Communicators' Forum*. Available: [http://www.uniglobalunion.org/Apps/iportal.nsf/pages/20090211\\_6ljyEn](http://www.uniglobalunion.org/Apps/iportal.nsf/pages/20090211_6ljyEn) [2011, 01/27].
- UNISON (2011), *A Million Voices for Public Services*. Available: <http://www.unison.org.uk/million/> [2013, 15/03].
- Visser, J. (2006), "Union membership statistics in 24 countries", *Monthly Labor Review*, 129(1): 38-49.
- Ward, S. and Lusoli, W. (2003), "Dinosaurs in Cyberspace? British Trade Unions and the Internet", *European Journal of Communication*, 18(2): 147-179.
- Wenger, E.C. and Snyder, W.M. (2000), "Communities of Practice: The Organizational Frontier", *Harvard Business Review*, 78(1): 139-146.
- White, A. (2012), *Guide to Online Campaigning for Unions: Everything a Non-Expert Needs to Take an Online Union Campaign from Start to Finish*.
- White, A. (2010), *Social Media for Unions*, Aleithia media and communications.
- Whittall, M., Knudsen, H. and Huijgen, F. (2009), "European Works Councils: Identity and the Role of Information and Communication Technology", *European Journal of Industrial Relations*, 15(2): 167-185.
- Wilson, S. and Spies-Butcher, B. (2011), "When Labour Makes a Difference: Union Mobilization and the 2007 Federal Election in Australia", *British Journal of Industrial Relations*, 49(s2): s306-s331.
- Zhu, K., Kraemer, K.L., Xu, S. and Dedrick, J. (2004), "Information Technology Payoff in E-Business Environments: an International Perspective on Value Creation of E-Business in the Financial Services Industry", *Journal of Management Information Systems*, 21(1): 17-54.