

Will Unionism Prosper in Cyberspace? The Promise of the Internet for Employee Organization

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Abstract

The low cost of information, communication, and interaction on the web offers trade unions opportunities to improve services and attract members, and thus reinvent themselves for the twenty-first century. The authors argue that unions can use the web to: develop virtual minority unions at many non-union firms; improve services to members; enhance democracy in unions; aid in industrial disputes; and strengthen the international labour community. They conclude that, if unions fail to exploit the opportunities on the web to gain members, other organizations are likely to provide services to workers on the internet.

1. Introduction

The internet is the twenty-first century's mode of mass communication.¹ In 2001 over 70 per cent of Americans and Scandinavians, 50 per cent of the British and over a third of persons in most other advanced OECD countries used the internet. The logistic growth curve for internet usage in the USA parallels that for television in the 1950s (Thierer 2000: chart 3), making the internet one of most rapidly adopted innovations ever. Some analysts believe that the internet will render superfluous intermediate organizations like unions since it can link individuals directly to firms and governments (Grossman 1995, Corrado and Firestone 1996; Negroponte 1995; Castells 1997). According to this view, '[T]he big losers [from the web] ... are the traditional institutions that have served as the main intermediaries between government and its citizens — the political parties, labour unions, civic associations ...' (Grossman 1995: 16). By contrast, some analysts of the

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internet (Bimber 1998) reject the notion that the internet will have such an impact on interest groups; and some analysts of unions and technology (Shostak 1998; Lee 2000a; Darlington 2000) argue that the internet will be a transforming technology that will reinvigorate trade unions.

What is the impact of the internet on employee organization and representation? How have unions responded to the new technology? Can the internet strengthen labour in the USA and UK? Will unionism prosper or wither in cyberspace?

Since the internet is a recent phenomenon, answers to these questions must be based on logical extrapolations of internet capabilities and interpretation of emerging patterns of web use, rather than detailed econometric or historical analysis. As far as possible, we ground our answers in data: two surveys of web use by workers — the August 2000 Current Population Survey (US Bureau of Labor Statistics 2000) for the USA and the 2001 British Workplace Representation and Participation Survey (Diamond and Freeman 2001) for the UK; a compendium of the web presence of unions built from the cyberpicketline directory of unions on the web (www.cyberpicketline.org); and examples of leading-edge union web activities and a review of worker-oriented web-based services from non-union organizations, derived from online and offline media. We present our conclusions in the form of hypotheses about how the internet affects unions, with examples to illustrate those effects.

Our principal conclusion is that the internet offers unions great opportunities to improve services and attract members because it bridges the gap between an increasingly heterogeneous and individualistic work-force and the collective activity and solidarity that lies at the heart of trade unionism. If, because of organizational rigidities, unions fail to exploit the opportunities of the web, we expect other organizations — internet recruitment firms, occupational associations, ethnic or gender-based groups — to do so.

2. Workers' and union members' use of the web

How much do union members and other workers (potential members) use the internet in the UK and USA? If unionists were not making extensive use of the internet, any study of the role of the internet in the future of unions would be largely speculative, or at least limited to its impact on a small number of presumably high-tech workers. By contrast, if unionists make wide use of the internet, then it has much greater potential for the future of unions broadly.

The best evidence on union members' use of the web in the UK comes from the June/July 2001 British Workplace Representation and Participation Survey, which contained information on internet usage by union status (Diamond and Freeman 2001). Table 1 shows that union members are slightly more likely to have accessed the internet in the previous month than non-union members. They have greater access at work, but somewhat less

access at home, than non-unionists. Since union workers are disproportionately male, a bit better educated, a bit better paid and more likely to work in the public sector than non-union workers — all of which are associated with greater use of the internet — but are also older than non-unionists — which is associated with lesser use of the internet — it is possible the general similarity in web usage shown in the table masks differences in usage among observationally comparable workers. The multivariate regressions in the first two columns of Table 2 reject this possibility. They show that, comparing workers with the same demographic, employment and earnings characteristics, unionists continue to have slightly greater access to the internet overall and comparable access to the internet at home as non-union workers. More important, among all workers and among union workers taken separately (third and fourth columns), age is a major determinant of internet usage. Younger workers are more likely to use the internet than older ones. While some British union leaders are sophisticated users of the web, the greater use of the internet by young members (and presumably by younger activists and leaders) suggests a potential gap in internet awareness, and in familiarity and expertise between leaders and younger members, that could slow down innovative use of the internet by unionists. In any case, in the year 2001 union workers were as likely to be online as other workers in the UK.

The data on web usage in Table 3 shows that many workers use the internet to search for information about jobs, but that union workers do much less job search on the web than non-union workers. This reflects the fact that union workers are older and more likely to hold permanent jobs, and thus less likely to be on the active job market. The table also shows that union workers make less use of discussions/online chats, accessing bulletin boards, or seeking information on financial or legal rights — perhaps because union membership offers them a separate channel of information and discussion — but the differences here are modest.

TABLE 1
UK Workers on the Web

	<i>Union membership status (%)</i>	
	<i>Member</i>	<i>Non-member</i>
Have you used the internet in the last month?	50.2	45.5
Where have you accessed the internet from?		
From home (or via domestic technology)	78.6	81.6
At work	49.1	44.3
From public access machines (café, library, school, etc)	9.0	14.9
From a mobile platform	1.3	4.2
Friend's/relative's house	4.3	5.0
Other	—	0.2

Source: BWRPS (2001), Q65: 'Where have you accessed the internet from [in the last month]?'

TABLE 2
Multivariate Logistic Analysis of UK Workers' Use of the internet

	<i>Internet access in past month? (Y = 1)</i>		<i>Respondent has accessed Internet from home (Y = 1)</i>					
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Union membership (Member = 1)	0.134	0.161	0.005	0.158	—	—	—	—
Age	−0.057	0.007	−0.038	0.006	−0.044	0.012	−0.012	0.011
Sex (Male = 1)	0.229	0.160	0.478	0.156	0.472	0.284	0.752	0.272
Public v. private sector (Public = 1)	0.229	0.168	0.292	0.164	0.714	0.272	0.775	0.265
Pay (£000 PA)	0.074	0.013	0.056	0.012	0.054	0.021	0.029	0.019
Top pay band (dummy)	−1.129	0.574	−0.191	0.538	−2.336	0.851	−0.945	0.817
Manager or non-manager (Manager = 1)	0.399	0.283	0.173	0.264	0.281	0.609	−0.102	0.521
Usual working hours per week	−0.021	0.007	−0.020	0.007	0.006	0.011	0.010	0.011
Highest qualification:								
None (reference)								
GCSE or equivalent	0.748	0.236	0.646	0.239	0.768	0.379	0.957	0.385
A-level or equivalent	1.117	0.256	0.856	0.257	0.718	0.420	0.454	0.429
Degree or equivalent	1.506	0.284	0.915	0.280	1.647	0.448	0.981	0.438
Postgraduate or equivalent	2.146	0.424	1.737	0.387	2.307	0.640	1.754	0.558
Other	0.787	0.362	0.642	0.366	0.502	0.598	0.659	0.585
Constant	0.484	0.364	−0.303	0.366	−0.895	0.733	−2.460	0.760
Observations	1089		1089		393		393	
Pseudo <i>R</i> -squared	0.179		0.115		0.181		0.100	

Source: BWRPS (2001), Q65: 'Have you used the internet in the past month?'

TABLE 3
Use of Internet for E-Union Type Activities in Last Six Months (%)

	<i>Member</i>	<i>Non-member</i>
Taking part in discussions or online chat	19.2	22.8
To look at job opportunities	29.1	41.9
Accessing bulletin boards or newsgroups	22.2	25.6
Finding information about financial investments or share prices	19.2	24.8
Finding information about your legal rights	6.8	10.7
Any of the above activities	59.8	63.8

Source: BWRPS (2001), Q67: 'Which of the following activities have you used the internet for in the last 6 months?'

The best evidence on union members' access to the web in the USA comes from the August 2000 CPS *Internet and Computer Use* supplement, a survey that contained questions about household members' use of the internet, and data on union membership. Table 4 summarizes the information on this survey about union members' use of the internet. In the USA as in the UK, union members use the internet regularly and are as likely to access the web as non-members. In addition, workers in the USA use the internet for similar purposes to those in the UK. Moreover, in both countries younger workers are more likely to access the internet than older workers, and younger union members are more likely to access the internet than older union members.

TABLE 4
Use of the Internet by US Workers (%)

	<i>Union membership status</i>	
	<i>Union</i>	<i>Non-union</i>
Do you regularly use the internet from home?	79.4	86.0
Regular use of internet from home for ...		
Checking news, weather, or sports	43.2	45.6
Searching for information	51.8	56.2
Searching for jobs	11.1	18.7
Job-related tasks	28.1	31.1
Shopping, paying bills, or other commercial activities	32.5	34.4
Internet use outside the home for ...		
Checking news, weather, or sports	21.4	23.5
Searching for information	50.1	48.0
Searching for jobs	7.8	8.7
Job-related tasks	60.3	62.5
Shopping, paying bills, or other commercial activities	7.4	11.4
How do you access the internet at home?		
Regular, or dial-up telephone service	92.0	89.5
Higher-speed internet access service	8.0	10.5

Source: CPS internet and Computer Use Supplement (August 2000), PEERLAB: 'On this job are you a member of a labour organization or of an employees organization similar to a union?' PRS11: 'internet use at home for any purpose'; PES11x: 'Does [respondent] regularly use the internet [at home] for ...'; PES17x: 'Does [respondent] use internet outside the home for ...'

3. Unions on the web

That union members and workers use the web is a necessary but not sufficient condition for the internet to offer opportunities for unions to use the new technology to improve their services to members and possibly attract new members. Another necessary condition is that unions themselves develop websites and that those websites offer valuable services. Although unions were slow adapters to the web, thousands of unions and union activist groups around the world have gone online. In the early 1990s many US unions built websites. In the UK, Unison established the first union website in March 1995. In the late 1990s many union federations and locals developed their own sites (*IRS Employment Trends* 2000).

Tracking union and union websites on the web is problematic. There is no specific union domain name to facilitate the easy identification of union websites. In November 2000 the internet Corporation for Assigned Names and Numbers, the private group that determines domain names, rejected the request of the International Confederation of Free Trade Unions (ICFTU) to create a dot-union name, despite a campaign from union groups and the recommendation of its own investigative committee (Lee 2000). Consequently one has either to search for trade unions or unions in online search engines, or use specialist directory lists to find union sites. For our estimate of the number of union sites, we combined sites listed at the cyberpicketline website (www.cyberpicketline.org.uk) with those in various union website directories. As of April 2001, we estimate there are over 2700 union sites. Since any single search engine captures at most one-fifth of web pages (Lawrence and Giles 1999), this listing undoubtedly misses numerous union sites, most likely the sites of small local unions and those of unions in non-English speaking countries that the search engines and directories do not cover well.²

Table 5 shows the ecology of the union web world as of April 2001. In terms of absolute numbers, the English-speaking countries make up the largest proportion of union websites — 57 per cent of all the listed sites (this may reflect our failure to search in non-English languages for local union sites) — with the USA accounting for 26 per cent of the sites and the UK 14 per cent. There are 60 international trade union secretariat sites on line, including the International Confederation of Free Trade Unions (ICFTU), the Union Network International (UNI) and the International Transport Workers Federation (ITF), each linked to their associated national unions around the world. Nearly ninety per cent of the union sites are from OECD countries, which also dominate the distribution of internet hosts in general. As internet usage expands into the developing world, its use by unions will expand concomitantly — save possibly in China, which currently outlaws independent trade unions.

Union websites vary immensely in what they offer. Some are simple bulletin boards or 'posters sites' — the equivalent of a Yellow Page style advertisement. Others are much more sophisticated designs, making the

TABLE 5
Centre for Economic Performance Listing of Union Websites, by Country and Type of
Organization, April 2001

<i>Country</i>	<i>Main union</i>	<i>Local union branches</i>	<i>Regional union sites</i>	<i>National federations</i>	<i>Total</i>
UK	75	278	13	7	373
USA	116	557	18	2	693
OECD — Other English speaking	142	289	24	6	461
OECD — Non-English speaking	610	144	51	72	856
Non-OECD	161	31	—	45	242
International organizations	—	—	—	—	60
Albania				1	1
Australia	46	99	6	1	152
Austria	16	1	4	1	22
Azerbaijan	1				1
Bahamas	1				1
Barbados	3				3
Belarus	1			1	2
Belgium	13		5	2	20
Brazil	51	30		3	84
Bulgaria				1	1
Canada	82	190	17	4	293
Cape Verde	1				1
Chile	3				3
China	3			2	5
Costa Rica	1				1
Croatia	3				3
Cyprus	4			2	6
Czech Republic	13			1	14
Denmark	45			3	48
Dominica	1				1
El Salvador	1				1
Estonia				1	1
Finland	25			3	28
France	149	27		5	181
Germany	27	24	4	4	59
Grenada				1	1
Hungary	7			3	10
Iceland	9			1	10
India	7			4	11
Indonesia				1	1
International					60
Ireland	14		1	1	16
Israel	3				3
Italy	43	36	31	3	113
Jamaica	2			1	3
Japan	29			4	33
Kazakhstan				1	1
Lithuania	1			1	2
Luxembourg	8			2	10
Malaysia	3			1	4
Malta	3				3
Mauritius	1				1
Mexico	6	1			7
Nepal				2	2
Netherlands	35			6	41
New Zealand	11			2	13
Norway	40	42	4	7	93

Table 5 (contd)

<i>Country</i>	<i>Main union</i>	<i>Local union branches</i>	<i>Regional union sites</i>	<i>National federations</i>	<i>Total</i>
Palestine				1	1
Philippines	3			3	6
Poland	4			4	8
Portugal	21			4	25
Puerto Rica	1				1
Romania	2			3	5
Russia	2			4	6
San Marino				2	2
Singapore	1			1	2
Slovakia	4			1	5
Slovenia	5			1	6
South Africa	14			2	16
South Korea	16		3	2	21
Spain	32	3		5	40
St Lucia	1				1
Swaziland				1	1
Sweden	39	7		7	53
Switzerland	17			2	19
Taiwan	2			1	3
Trinidad and Tobago	3	1			4
Tunisia	1				1
Turkey	10	3		1	14
Ukraine	1				1
Uruguay	4				4
Venezuela	1				1
Yugoslavia	1			1	2
Zimbabwe				1	1
Total	1088	1299	106	132	2685

Source: CEP Survey of Union websites (April 2001).

maximum use of current web technology. In September 2000 the AFL–CIO used its portal www.workingfamilies.com to develop a virtual Labor Day for members to replace what had become a day of dwindling marches with ancient banners in ever fewer cities. The virtual Labor Day contains various interactive games, quizzes, music, and similar amusements revolving around union issues that might otherwise have been found at a traditional Labor Day march. In September 2001 the Federation held the second Online Labour Day Festival (www.aflcio.org/laborday). Another innovative use of the web as source of information is found in the Hotel and Restaurant Employees Union www.eyesonsodexho.com site. This site provides data on the Sodexho–Marriot corporation's record in food safety and labour relations in ways that will make it hard to sympathize with the firm in any organizing drive.

The question is not whether unions will use the internet as a means of connecting to the world. Unions already do so, just as they make use of many other forms of modern communication and technology from fax machines to mobile phones. The question is whether unions will be able to use the internet to build a modern growing movement.

4. The opportunity of cyberspace

The internet offers unions (and similar intermediate organizations) three areas of opportunity: (1) to present the union case on various issues to the online population through provision of information; (2) to communicate directly with union members or potential members through targeted electronic messages; (3) to engage in interactive discourse with members or others by responding to queries and by online discussion forums.

The internet is an inexpensive cornucopia of information. As of 19 November 2001, there were perhaps 8 billion web pages.³ Non-negligible proportions are updated regularly. As a result, millions of people rely on the web as a major source of information on almost everything. In 2000 over half of US internet users said that they used the web regularly to search for information, beyond checking news, weather, sports, or jobs (Table 4). Many British internet users also say that they used the web to search for information, but the categories in the UK surveys do not match those in the USA (Table 3). The ability to post information at low cost on the web creates an opportunity for unions to present their arguments directly to the public without expensive advertising or reliance on traditional media outlets. It also creates an opportunity to directly influence journalists, 92 per cent of whom go online to research articles, according to a 2000 Middleberg/Ross survey (<http://www.middleberg.com/toolsforsuccess/fulloverview.cfm>). Many union websites contain the latest press releases of the union and an archive of releases, making it easier for reporters and others researching union activities to learn the union's position on an issue. An example of imaginative use of the web to disseminate information is the AFL-CIO's www.paywatch.com. This site gives information about CEO pay at firms in a manner that highlights the huge and rising income inequality between workers and CEOs. The site received 11 million 'hits' (requests for pages) in 2000. In April 2001 the site added e-mail links to company directors to encourage workers and shareholders to protest directly about what it viewed as egregious CEO pay.

The massive flow of information on the internet also creates a very different role for unions: as interlocutors or guides to the information available on the web. Most union members are only marginally or intermittently involved in public issues and are unlikely to look online for matters beyond their immediate concerns without some encouragement. As Catherine Needham has noted, 'The internet is a difficult medium through which to reach the unmobilized and uninterested. Visitors to a website have to make an explicit choice to be there' (Needham 2001: 31). It is up to unions to convince members that an issue is important and to direct them to the relevant websites. In the market for information, as in other markets, there is a demand as well as a supply side, and it is the job of intermediate organizations to direct demand in directions that fit their goals.

The internet is also an inexpensive medium for communication. E-mails can be sent at zero marginal cost to all members of an organization as well

as from one person to another; and members can send e-mail protests to the government or to the union. Unions are using e-mail both to contact existing members and to organize new members. The MSF union in the UK has an e-mail list that its representatives use to communicate information. In its 2001–2 campaign to organize fixed-term academic staff and to improve their status, the UK's Association of University Teachers used e-mail (www.aut.org.uk/campaigns/index.html). In 2001 the American Federation of Teachers used e-mail to reach out to a large number of part-time instructors, who intermittently visited the college campus, in its drive at Polomar College in San Diego (www.gigalaw.com/articles/2001/towns-2001-06-p6.html; accessed 12 August 2001). Similarly, unions can exploit the communication power of the web to ask members or activists to bombard authorities with e-mail protests on particular issues. The AFL–CIO, the ICFTU and other union federations regularly send e-mail messages to persons regarding particular campaigns or protests.

The internet is also an inexpensive way for individuals to interact and participate in decisions or meetings that are more difficult to arrange through telephone or mail communication. Chat rooms, discussion forums and list servers create virtual communities that can spontaneously develop new thinking on issues as well as share information outside official settings. A 2001 survey of US internet users found that 84 per cent of users have contacted an online group at one time, ranging from a local community group to professional and political groups, and that 60 per cent of these e-mailed the group regularly (Horrigan 2001: 3). However, just 1 per cent said that the group they were most in contact with was their trade union, suggesting that unions have a long way to go to match other groups on the web. But there are many opportunities for unions here. Unions can conduct inexpensive plebiscites and canvass members about alternative ways to solve problems. Perhaps most importantly, activists can sidestep union hierarchies, devising plans and sharing information on the web without worrying about protocol. Individuals can inform, radicalize and mobilize one another through peer-to-peer contact. When IBM changed its pension system in 1999 in ways that harmed middle-aged workers, the workers went to online chat rooms to make their case against the company. These discussions led to the formation of the IBM–Alliance union (www.allianceibm.org).

From an economic perspective, it is the low cost of information, communication and interaction on the web that promises to change how unions operate in the next decade. The reduced cost of providing some services and of interacting with members and the outside world in particular ways will lead unions to expand in those areas, potentially leading to a new 'e-union' organization. We encapsulate the various ways we expect the internet to change unionism in the form of five hypotheses relating to: (1) modes of organizing and recruiting members, (2) the services unions provide, (3) union democracy, (4) labour disputes and (5) international union activity.

Hypothesis 1 (the Cyber-Organizing Hypothesis): The web will create new modes of organizing and virtual union locals

Organizing workers is the *sine qua non* task for American and British unions. In the USA, unions struggle to contact workers at the workplace, and historically they disappear from a work-site in the wake of a defeat in an NLRB election. In the UK, unions have problems enrolling members even at work-sites with a recognized union and a neutral or friendly management. How might the internet help unions overcome problems in organizing?

The first thing the web does is to make it easier for unions to present their case to workers and reach them outside the workplace. Employees can read information about the union without fear of reprisal from management, and they can do so at any time, day or night. Once a union has the e-mail address of potential members, it can contact them directly and cost-effectively, customize the union approach to them, and respond rapidly to captive-audience speeches and other communications in companies. Already many unions have membership forms available to download from their website, and some can even sign up members online.

US unions have been in the forefront of using the web for organizing. The United Food and Commercial Workers developed the site www.walmartworkerslv.com to organize Wal-Mart workers. The UFCW describes its Wal-Mart activity: 'Although we do print publications as well, we've found most of our members use the internet and enjoy this medium. They have learned about the process and keep up-to-date on current Wal-Mart activities online. It's also a vehicle for the community to see how our campaign is running and what we're really up against so that Wal-Mart Corporate is not the only one talking.' The Service International Employees Union used daily e-mail messages and a chat room in its effort to organize nurses in Houston in 2000. The National Writers Union reports that up to 50 per cent of its new members join via the web. Efforts to organize programmers at the French software firm Ubi-Soft via the internet, however, failed (see www.mulimania.com/ubifree/).

Second, and potentially more revolutionary, the internet creates space for virtual unions — minority unions that exist on the web but lack company recognition — to become permanent fixtures in companies where unions cannot gain majority status or recognition. What is needed for a virtual union is a set of activists committed to developing a website with information about issues in the company. With current technology, setting up a site can be done cheaply. The national union can provide some content; the site can sign up for free daily labour news from around the world from Labourstart.org, obtain free business news about the firm from a business news service and post information from workers in the firm. All that is needed is a group of committed volunteer workers to maintain and update the site.

Alliance@IBM (www.allianceibm.org), associated with the Communication Workers of America (CWA), is the archetype of this form of union. The

Alliance is chartered as local 1701 by the CWA and thus is treated as a regular local union, although it does not have a collective bargaining contract with IBM, and comes from two groups, www.ibmemployee.com and www.casepensions.org, that formed in response to IBM's 1999 unilateral change in the company pension system which greatly harmed some future retirees. The workers protested in chat rooms and sounding boards around the web, impelling IBM to restore some of the pension benefits. Alliance@IBM has a small number of voting members (75 per cent of whom signed up on line), a larger number of 'subscribers' to e-mail messages, and an even larger number of visitors, which undoubtedly includes managers. The alliance site provides discussion groups, mailing lists, links to related sites and information about company issues of concern to workers. It was developed in large part by local members, making it a 'grassroots' site (Guyer 2001). Among the internet-based accomplishments of IBM workers was an e-mail campaign to raise the allowance per mile driven by IBM customer engineers, who pay for their own vehicle costs when travelling to repair customer machines. When management did not respond to individual complaints about rising costs, the customer engineers planned a one-day e-mail and phone call campaign to contact the manager in charge. The one-day campaign succeeded in getting the mileage allowance increased (Guyer 2001).

WashTech (www.washtech.org), also associated with the CWA, is another virtual union, representing the interests of Silicon Valley and related high-tech industry workers. It is based on occupation rather than on employer and thus resembles a craft union. This organization raised the issue of overtime pay for contract employees at Microsoft and other high-tech firms that hire many software engineers as contractors. It provides discounted cost training courses, information about developments in the industry on its website, contract advice and legislative advocacy. It delivers the *WashTech News*, a free digest of news via bi-monthly e-mail, or whenever issues warrant, to subscribers who are promised that the list membership will be kept confidential. The form for subscribing says 'Yes! I support the basic goals of WashTech and believe that workers need a collective voice in the high-tech industry. Please subscribe me to the WashTech News'; this aligns the subscribers with the union.

In October 2001 the New South Wales Labor Council in Australia launched a virtual trade union designed to help IT workers (www.itworkers-alliance.org). 'The idea of the IT Workers Alliance is to provide a space for IT workers to share information and ideas and receive advice on workplace issues (rather than) ... attempting to recruit members up front — rather to create a culture that workers will want to be part of' (Labor Council secretary John Robertson, <http://www.itworkers-alliance.org/news/general/7.html>). It includes a forum for discussion, news about the IT sector, information on independent contractor issues and numerous frequently asked question sections (FAQs) so that the IT workers learn about their rights and ways to redress problems. The industry took the new organization as an organization capable of having an impact on workers' thinking

and behaviour, and three weeks after the launch of the IT Workers Alliance the Australian Computer Society (ACS) formed a special interest group for contractors in New South Wales, in part to compete with the new union.

Even if workers at IBM and most other high-tech firms never win an NLRB election, the low cost of the virtual union can make the union a permanent fixture of the company in a way that was impossible prior to the internet. Similarly, even if WashTech and IT Workers Alliance never attain the collective bargaining position of the building trade craft unions, they can still be a permanent part of the IT labour market in ways that were impossible prior to the internet. Minority unions can exist in cyberspace at any major company or in any occupation where some workers want an independent voice. The CWA has chartered both the alliance@ibm and WashTech as regular union locals, even though both organizations have many more persons involved through e-mail lists than subscription-paying members, and have little chance of bargaining collectively over wages in the near future. The existence of a sizeable number of persons having a loose affiliation with the union, such as non-due paying subscribers to a union website, and of union members with little chance of gaining a collective bargaining contract raises important questions about how to count union membership as well as about the fundamental activities that differentiate a 'trade union' from other worker associations and interest groups.

Hypothesis 2 (the Customized Services Hypothesis): Unions will improve services to members

'The membership of trade unions will increasingly demand the levels of services which can only be provided by the . . . e-union . . . Our members will find that, in dealing with other organizations, they are given increasingly speedy and personalized service on a 24-hour, seven-day a week basis. They will expect no less from their trade union' (Roger Darlington, Communication Workers Union (UK)).

By lowering the cost of providing various services to members, the internet allows unions to meet the demand for better services that Darlington has identified. It can do this in three ways: by improving the knowledge with which local representatives serve members; by providing general expert systems advice to workers through FAQs and queriable online 'knowledge base' systems; and by providing individualized services to members based on their personal characteristics in much the same way as firms use customer relations management (CRM) to enhance their services to customers.

The easiest way for unions to improve services to members via the internet is to connect local representatives and activists to national or international expertise through regular online meetings — chat rooms, educational e-mails. In this vein, the TUC has developed 'Risks', a weekly e-bulletin about health and safety at work, with the aim of keeping safety representatives and others informed about new developments www.tuc.org.uk/risks). The UK building workers' union UCATT has an online forum for its safety representatives.

By giving union representatives greater information concerning their jobs, the central union bodies will improve the ability of branches and locals to service members. While central union groups could have used the mail or fax machines to provide regular information on key issues to representatives, the zero marginal cost of digital communication makes such activities much more cost and time-efficient for large organizations.

In the USA, the National Writers Union (www.nwu.org) has organized some 7000 freelance writers, for whom it provides information and generic assistance via the web. The writers are spread out around the country and across the world, so the union almost *has* to deliver services to them via the internet. The NWU views its website as the 'cyberspace equivalent of the union hall where members (and prospective members) can find the information they need and conduct union business' (Hartford 2001). The NWU e-mails the entire membership several times a month and its website averaged some 125,000 page views a month in early 2001. The site includes a national job hotline, which lists freelance writing projects that members can apply for. In 2001 the NWU won a Supreme Court case on copyrights of written material on the web against the *NY Times* (Greenhouse 2001). Other unions have extensive FAQ sections on their web pages, providing workers with instant information on a variety of workplace issues (see e.g. www.teamster.org or www.gmb.org.uk).

In 1998 the British union Unison established Unison-Direct, a help-line call service that provides advice to union members 18 hours a day and Saturday. While the Unison system uses a 17-seat call centre rather than computer linkages to respond to members' problems, it does make extensive use of IT to deliver its services (Whitfield 2001: 4). The call centre workers have access to over 300 scripts from which to guide members through common problems as well as a CRM database holding personal membership details. Unison members have made extensive use of the system, with 150,000 calls anticipated for 2001. Unison officials can 'mine' the data in the CRM database to uncover problem 'hotspots' in workplaces or occupations. The Transport and General Workers Union (TGWU) has developed an analogous facility for its members. These systems rely on call centres, because at present half their members do not have regular access to the internet (Table 1), and because at present members prefer to talk to a real person. Over time, cost considerations will undoubtedly move these services on to the internet. Unison already envisages delivering the Unison-Direct service via mobile phone short messaging services or internet-enabled PDAs (personal digital assistants). In the future, these three ways of delivering services — representatives, generic FAQs and personalized services — are likely to come together in sophisticated artificial intelligence (AI) expert systems. Such systems will provide generic advice on labour laws, work-related issues and problems, answer workers' questions, provide isolated workplaces with expert advice, and offer members the opportunity to initiate an interactive session with the AI expert program 'Sam Gompers' (or 'Ernest Bevin', or whoever) which embodies information about labour issues much as existing

medical and legal AI experts do in other fields. The union database will eventually include the particulars of the member, so that the AI expert or union representative can personalize the advice. Moreover, given a membership data base with e-mail addresses and personal characteristics, the union will be able to take a more proactive stance in servicing members, providing them with information on such matters as training, job prospects and children's education, in addition to responding to workplace-based complaints.

Unions that use the internet to service members need to consider what services, if any, to provide to non-members. Existing members may complain about using dues to service non-members, but unions need websites that are accessible to non-members to showcase what a union can do for them. If non-union members get better service from, say, an internet recruitment site or a labour law or government site, they will be unlikely to want to join a union. Unions have adopted two strategies here. The first is to invest in websites designed specifically for non-members. Here, again, Unison has been in the forefront of innovating. In 2000 it initiated www.troubleatwork.org.uk in conjunction with the National Union of Students, a site dedicated to providing information and advice on work-related problems for student workers. The topics covered range from health and safety issues to contracts to holidays, working hours and dealing with discrimination.

The second strategy is to provide general information freely to anyone visiting the site, but to also have a password-protected members-only areas. Online forums and discussion groups are usually restricted to members, but in practice there is little differentiation in the quality or amount of information offered to general visitors and members, save for that relating to internal union issues. As unions build up CRM-style databases on members' preferences, problems, skills, etc., we anticipate that this problem will lessen; for with such information unions will be able to differentiate the online services to members and non-members more sharply. Only members will receive services based on their work history and personal situation. The opportunity to customize services to members through the internet and related computer-based technology is fundamental for unions seeking to 're-invent' themselves and bridge the gap between individualistic workers and collective voice and action.

Hypothesis 3 (the Cyber-Democracy Hypothesis): The web will enhance union democracy

The internet can improve union democracy and accountability to members in ways that challenge Michel's 'iron law of oligarchy' on the organizational forms of modern unions. The information provided on the web gives all members, rather than just the few who attend a union meeting, access to information on policies and the opportunity to communicate views about those policies. This should encourage leaders to consult more with members before making key decisions, or suffer the consequences.

While other media too can improve union democracy, as the requirement for postal ballots in the UK has done, the web offers the most immediate and interactive way to link union members to union leadership. In November 2000, the UK's MSF union canvassed members on its proposed merger with AEEU via the Electoral Reform Ballot Services website (www.erbs.co.uk). While dissidents rejected the legitimacy of the poll, the idea of using the internet to learn how members think about an issue is valuable. By reducing the cost of canvassing and balloting members, moreover, the internet should increase turnout on strike votes, acceptance of contracts and the like. For this to happen, however, web ballots will have to be deemed legal in the same manner as postal ballots or other forms of expressing the franchise. In March 2000 the US Society of Professional Engineering Employees in Aerospace (SPEEA) voted online on their latest contract and elected to call off a strike at Boeing. SPEEA members who were out of state could vote via the web, but the vast majority voted by conventional means. In November 2000, the UK's CWU held an internet ballot over accepting a collective bargaining agreement and achieved a voter turnout of 71.9 per cent. The Hawaiian Airline Pilots developed an extensive web news update on its year 2000 contract negotiations to inform members of progress or lack thereof with the National Mediation Board (www.halpilot.com/C2K/newsupdate.html).

The internet can also increase union democracy by enhancing the ability of dissident groups to make their case to members. Union leaders may be wary of discussion boards that provide a platform for dissent, but dissident factions can develop their own sites to publicize their cause. Examples here include Teamsters for a Democratic Union, which uses the web to convey information and has organized online campaigns for union office candidates independent of the dominant union group (www.igc.org/tdu; www.leedham.org). In the UK rogerlyons.com is devoted to criticizing the General Secretary of the MSF union Roger Lyons's expenditure of union money to defend himself against charges of financial indiscretion. As of March 2001, it had received over 12,000 hits and achieved notoriety throughout the union (www.davidbeaumont.btinternet.co.uk). Another notable dissident site in the USA is www.labourers.org, which is designed to 'take back control of our union from organized crime, institute democratic reform'. It gives detailed information on the legal problems of top union leaders, some of whom, such as former President Arthur Coia, were convicted in federal court of criminal activity regarding union resources. Union leaders have to face the possibility that more and more members are getting their information about the union from the dissident rank and file websites (<http://fast.antenna.nl/~waterman/zeltzer.html>).

In perhaps the most striking example of dissident use of the web, a group of flight attendants at Northwest Airlines who opposed their union's 1999 contract with the airline developed an e-mail list of the 2500 or so attendants worldwide and sent them the entire contract for discussion and debate. A new round of negotiations was halted when a federal mediator called the

union's new contract demands unreasonable. Contract talks were broken off with speculation that they might not resume for months. The dissidents responded by calling for a sick-out, against the policy of the union, leading to cancellation of many flights. The company proceeded to dismiss the instigators. A federal judge gave Northwest the power to hire a third party to confiscate the personal computers of the 21 defendants and search for information to support the company's allegations that electronic mail and the internet played a role in instigating the sick-out (www.wsws.org/articles/2000/mar2000/nwa-m14.shtml).

Finally, the web creates the potential for online union conferences and congresses. In Australia the ACTU, together with other unions, held a Unions Online Conference in November 1999. In May 2001 the Norwegian Confederation of Trade Unions (LO) set up a special website (www.kongressen.no) to make available documents and resolutions, and broadcast the proceedings live in addition to web-TV interviews and chat sessions.

Hypothesis 4 (the Cyber-Dispute Hypothesis): The web will alter industrial disputes

The internet has become a medium through which unions conduct labour disputes. They do this by e-mail contact with members, and by presenting the unions' case to the general public over the internet. The first and most common mode of using the internet in disputes is union provision of online information about the dispute. The web allows unions to supplement or correct highly filtered media reporting at low cost and to inform members or the public about bargaining issues. Pliskin *et al.* (1997) have documented an early example of a union using the internet to keep members aligned in dispute. In 1996 an Israeli academic union established an e-mail discussion forum for members and negotiators during a protracted labour dispute. The e-mail forum closed the communication gap between negotiators and members and increased the unity and cohesion of the virtual community of strikers.

The US Teamster's Union has made extensive use of the internet to publicize its disputes with employers. In its 2000 dispute with Overnite, the Teamsters put up daily updates and sent out 4000 e-mail alerts, some to customers of the firm. Teamster spokesman David Cameron, declared: 'The internet has been phenomenal, clearly it's a means of communicating almost instantly with a wide variety of folks' (Dresang 1999: 1). The Teamsters also used the internet to connect to members and the public in their successful 1997 strike against UPS. In the 2000 US Communication Workers strike against Verizon, the union posted daily bargaining updates on its website with access restricted to members.

In the high technology sector, Greer (2001) gives examples where unions at Boeing made the internet an integral part of strike management and bargaining sessions, including the SPEEA (www.speea.org) strike against the plane manufacturer in 2000, during which time the union posted its

detailed proposals regularly on the union website, with page ‘hits’ during the strike being ‘off the chart’; and the 2001 negotiations between the Southern California Professional Engineers Association (www.scpea.org) and the company, where the union provided daily accounts of bargaining and had an e-mail link for members to give input to the negotiations committee.⁴ During the winter 2000 Boeing strike in the USA, activists listed the names of strikebreakers on websites (Fiorito and Bass 2002: 44).

In Canada, the Office and Professional Employees’ Union used cyber-picketing in its 1999 dispute with the British Columbia Automobile Association. The union created a number of websites that were similar in appearance to the Automobile Association site and used the same list of keywords in its web page ‘meta tags’ that the employer used to direct search engines to the employers’ site. (Meta tags are lists of words in the description of a web page that search engines will look for when searching for a site; by including the same tags as the employer, the union was assured that its website would appear along with the employer’s whenever someone was looking for the Automobile Association using an internet search engine.) In January 2001 the Supreme Court of British Columbia ruled that, because the union was not competing commercially but was just trying to communicate its side of the dispute to the public, the union had the right to make use of the tags and to use the Association’s trademark. The union’s right to free expression took precedence over the employer’s property rights (Shelton 2001).

Another way unions have used the web in labour disputes is to widen the geographic locale of a protest from particular localities to the wider world — using the web to create secondary pressures or sympathy actions. In the steelworkers’ strike in North Carolina against German-owned Continental General Tire in 2000, the union provided information to activists around the USA via websites and e-mails that led activists to pressure tyre distributors and purchasers of continental products including Wal-Mart and Ford. Some 80–100 internet ‘postcards’ were sent to the headquarters in Germany. Changing the locus of the dispute from one of the least union-friendly states in the USA to the wider world helped the union win its dispute.

Richard Cloward and Francis Piven (2000: 5) have suggested that the growing importance of company websites in informing customers about products and in online sales makes them a natural target for protests:

There is no reason why thousands of workers could not simultaneously shut down their computers, just as strikers shut down assembly lines. Hackers have shown how defenceless businesses are to ‘denial of service’ attacks — that is, to preventing employers from delivering services to the public by overloading their computers with requests for services ... collective cyber disruption is (workers’) main source of power in dealing with capital in the new age, and they will invent the cyber equivalents of industrial sabotage, of working-to-rule, and of strikes. (Cloward and Piven, 2000: 6)

Unions can organize ‘cyber-picketing’ by flooding a company’s e-mail system with protest messages. (‘Cyber-picketing is just a highfalutin’ word

for sending out thousands and thousands of e-mails and annoying the hell out of people': D. Cockroft, General Secretary of International Transport Workers Federation (Flynn 1999: 1.) They can overload a company's website with excessive requests for services. In February 2000 the Yahoo and Amazon.com websites were the first high-profile victims of successful 'denial of service' (DoS) attacks. But, because unions could be financially liable for the costs of 'the cyber equivalents of industrial sabotage', unions orient their cyber-picketing around providing information rather than more disruptive tactics, leaving the most aggressive activities to non-union protest groups. The Electronic Civil Disobedience website (www.ecd.org) offers information on 'hacktivism' and related web-based tactics of disrupting normal communication on the web. Prominent examples are the June 2000 takeover of www.nike.com, which directed people to a site that protested sweatshops and globalization; and the February 2001 hacking of the World Economic Forum site, which obtained the credit cards of many of the rich and powerful.

Hypothesis 5 (The 'New Internationalism' Hypothesis): The web will strengthen international labour co-operation

Thanks to the internet, a century-long decline in internationalism has already been reversed. For thousands of trade unionists who log on every day, the International has already been born . . . (Lee 1998)

In books and several articles, Eric Lee of www.labourstart.org has presented the 'new internationalism' hypothesis. The first component of new internationalism is the ready provision of up-to-date information on labour issues around the world. The two leading sources are Lee's www.labourstart.org and Steve Davies's www.cyberpicketline.org.

Begun in March 1998, Labourstart provides daily labour news from newspapers around the world, which some 99 volunteer correspondents send to the site (as of November 2001). The site has over 100,000 unique visitors a month, and over 276 labour union sites run its daily free news service. The cyber-picketline site provides a directory of union websites and information on current labour disputes. Other sites provide information on working conditions in less developed countries, focused on particular companies (*vide* Nike), countries (Indonesia, China, Central America) or groups or disputes (Elliot and Freeman 2001).

Going beyond provision of news and site information, LaborNet (www.labor.net.org) and LabourNet (www.labournet.net) promote computer communications for strengthening and building organized labour. LabourNet states that, because '[i]nternational co-operation and solidarity has become totally essential' for unions to do their job,

we are working towards the widest possible international labour network . . . the fullest possible discussion on the issues facing our movement within LabourNet conferences, lists and our websites for coming labour movement events, etc. from around the world. Our emphasis is on contributions and reports from rank and file trade unionists. . . .

International trade union secretariats have also shown a burst of new activity in cyberspace. The International Confederation of Free Trade Unions (www.icftu.org) gives daily information releases via the internet. The International Federation of Chemical, Energy, Mine and General Workers' Unions (www.icem.org) has established global networks at Goodyear, Rio Tinto and Bridgestone. Union Network International (www.union-network.org) has developed a website that provides detailed information about e-commerce and retail trade activities of companies and unions. The International Transport Workers Federation secretariat has worked to bring together the unions that represent airline workers at the various global alliances, making extensive use of the internet to create stronger ties among unions (www.itf.org.uk/civil_aviation/alliances/index.htm).

Publicizing labour disputes in foreign countries has limited the ability of some governments to suppress union activities. In 1999 the government of Korea arrested Korean Confederation of Trade Union (KCTU) leaders. The KCTU sent out an urgent appeal by e-mail to all its contacts in the international labour movement. The appeal was published on the LabourStart website and sent to the more than 1400 subscribers to LabourStart's e-mail newsletter. The KCTU attributed the ensuing release of all the jailed trade unionists to the internet-based protest (Lee 2000b). But international support for Liverpool dockers in the mid and late 1990s, some co-ordinated over the web, did not produce victory for the dockers (www.labournet.net/docks2/other/topdock.htm).

5. Competing in cyberspace

Unions are not the only organizations delivering services to workers over the internet. Look on any search engine for information on labour laws, salaries, job training, career advice, or employment problems, and a host of government, commercial and other non-union sites will pop up. Whether unions will prosper in cyberspace depends in part on how they meet the competition from these other organizations.

Consider some of the competitors. Labour law firms offer free legal advice online (www.electroniclaw.uk; www.lawrights.co.uk; www.employment-solicitors.co.uk; www.emplaw.co.uk). Government agencies provide diverse work-related information (www.dol.gov/elaws). Professional associations offer services (www.programmersguild.org). In the UK the Citizens Advice Bureau, which gives advice on various problems, including employment, has gone online (www.adviceguide.org.uk). It offers FAQs on many employment issues as well as directions how to find the nearest CAB office, where someone can provide more customized advice if the online information is insufficient. In the USA the National Employment Rights Institute runs the 'Workplace Fairness' website (www.nerinet.org), which aims to provide information, education and assistance to workers and their advocates. In addition, there are several general sites that contain discussions or forums

on employment issues (ivy.ivillage.co.uk) and specialized sites that deal with the employment problems of particular groups, such as lesbians and gays (www.lager.dircon.co.uk). And there are online training sites offering online training in virtually anything.

The most noticeable providers of services to workers on the web, however, are internet recruitment sites. These sites gain revenue from employers who pay for listing job vacancies or for the right to search CV databases. These sites must attract job-seeking workers, and they do this by providing free services to workers as well as the opportunity to find a job from the listed vacancies. Most internet recruitment sites offer e-mail notification of job vacancies, career advice and information; salary surveys, advice on job search and preparing a CV and online job applications; many conduct online surveys, provide FAQ information on legal rights in employment issues and give news about the occupation or industry where the candidate is seeking work; some provide e-mail questions and answers on work-related issues, e-mail career newsletters and online 'chat rooms' and forums for job applicants; some offer links to training sites and provide online psychometric tests. The most progressive sites seek to become personal agents for workers: 'a complete employment network, connecting people who want to change the way they work, develop their careers, update their skills and find new jobs, with the employers, businesses and professionals who want to reach them' (www.workthing.com). One major UK recruitment firm said that its goal was to recommend appropriate training to persons whose CVs do not attract much interest from potential employers, and, if a candidate gets a new job in a new location, to recommend estate agents and movers, tailors, restaurants, etc. Its profit would come from earning commissions from all the businesses to whom it had steered the job applicant. If these firms succeed, the space for unions to represent workers will narrow considerably.

Unions have some advantages in competing with these other organizations in cyberspace. Unions have experience in protecting labour workers. If management treats workers poorly, a union can organize collective action or use its political power to attract government or media attention. Workers are inclined to believe that elected union representatives are more likely to put their interests first than recruitment agencies whose income comes from employers. But unions have one major disadvantage in attracting workers to their site. They are not a natural source of job vacancies. If you want a new job, you will click on www.monster.com not www.AFL-CIO.org. (Monster.com is the market leader in internet job boards.)

This is important, because job search is one of the most popular uses of the web. One way for unions to remedy this problem is to post vacancies on their sites, as the Teamsters and Communication Workers in the USA do, or to develop their own recruitment consultancy, as Connect in the UK does (www.opus2jobs.com). Another way to deal with the problem is for the union to develop strategic partnerships with commercial recruitment firms. The union would trade access to its members and the other users of its site in

return for the commercial content that the recruitment firms would use to attract job applicants. Conversely, workers seeking jobs or training or legal advice at the commercial sites would be directed to the relevant occupational or workplace union. Unions might even assist organized workplaces in recruiting new staff by offering online applicants access to union chat rooms or information about the employer or their employment rights. The Spanish internet recruitment site, www.canalrabajo.com, contains a direct link to Spanish trade union sites.

How well unions will do in cyberspace depends on what labour market services workers want on the web, and the effectiveness of union websites in providing the desired services. To find out what workers want in terms of internet services, the British Workplace Representation and Participation Survey (BWRPS) asked workers with web access 'How useful would you personally find each of the following services if provided on a website?' and listed a set of employment-related information or communication services.⁵ Table 6 shows that union and non-union members found most of the suggested services very useful or quite useful. Union members were somewhat more positive about all but one service than non-union members, the

TABLE 6
How Useful Would You Personally Find Each of the Following Services
if Provided on a Website? (%)

	<i>Very useful</i>	<i>Quite useful</i>	<i>Not very useful</i>	<i>Not at all useful</i>	<i>Don't know</i>
Information and reviews about your employer or another employer that you might consider working for					
Member	34.2	46.2	11.5	4.3	3.8
Non-member	37.2	39.7	12.2	7.4	3.5
Advice about pensions and personal finance					
Member	35.9	39.3	13.2	6.8	4.7
Non-member	30.0	44.2	9.9	12.9	3.0
Information about salaries for people in your line of work					
Member	35.5	33.8	18.8	8.5	3.4
Non-member	35.5	40.0	12.2	9.7	2.7
Discussion forums for people at your workplace or people doing your type of job in another workplace					
Member	25.6	41.5	19.7	9.4	3.8
Non-member	21.6	39.7	22.8	12.7	3.2
Advice about your rights at work					
Member	36.8	48.3	6.8	4.3	3.8
Non-member	39.0	39.5	9.4	8.4	3.7

Source: BWRPS (2001), Q68: 'some websites provide information and services to people at work. How useful would you personally find each of the following services if provided on a website?'

TABLE 7
Internet Active Union Members' Knowledge and Assessment of
their Union's Website (%)

Internet active union members who have ever visited their own union's website	19.7
Usefulness of union website	
Excellent	14.3
Good	36.7
Fair	34.7
Poor	14.2
Not visited own union website	52.1
Union does not have a website	6.4
Don't know	21.8
All union members who have ever visited their own union's website	9.9

Source: BWRPS (2001), Q69: 'To the best of your knowledge does your union have a website? If so, have you ever visited it?' Q70: 'How useful did you personally find your union website?'

exception being information about salaries for people in their line of work. Salary information is more openly available in union than in non-union settings because of collective bargaining. We also asked union members with internet access whether they had accessed their union's website and, if they had, how they would rate the site for meeting their concerns. The results, summarized in Table 7, show that UK unions have a long way to go to make their websites relevant to most members. Just 20 per cent of members with internet access had ever visited their union's website, and of those that did as many rated the site as poor as gave it an excellent rating. That 22 per cent of union members did not know whether their union had a website shows that, while some unions and some activists are attuned to using the new technology, many unions and members have yet to move seriously into cyberspace.

6. Conclusion: towards the e-union?

If our five hypotheses prove correct, within the next decade unions in the UK and USA will have the opportunity to change many of the services they provide members and the ways in which they operate, potentially morphing into a new 'e-union' organizational form that will differ as much from current union organizations as industrial unions differed from their craft union predecessors. Table 8 shows how we envisage that a new twenty-first century e-union would differ from traditional twentieth-century unions. We expect the new unions to provide individual representation and customized services as well as to continue to bargain collectively for workers with management; to deliver services on the web as well as at workplaces, to use digital technology, including AI expert systems to respond to members'

problems; and to offer more services outside collective bargaining. Union membership will widen to include not only dues-paying members at recognized sites, but also subscribers who give their e-mail addresses to unions at virtual union sites. Unions will deal with free-rider problems by customizing services to members only, and will operate in a more decentralized, member-driven manner. The survey of how unions are using the internet in this study shows that there is nothing 'pie in the sky' about this potential evolution of union structure and operation. One or more unions or union activists already use the web in some of the ways discussed above. However, no single union has put all the pieces together to create the 'e-union' of the future, and many unions fall far short of modernizing their practices.

That all the pieces for a new union movement can be found in different places does not mean that unions will put them together successfully. Technology does not dictate economic or social behaviour. It creates the opportunities for individuals and organizations to change. Whether unions succeed in exploiting the new opportunities provided by the internet and related IT technologies depends on the choices that union leaders and activists and members make.⁶ Union bureaucracies may be incapable of making the necessary radical changes in strategy and approach to take full advantage of the promise of the internet. There are organizational problems in getting large democratic organizations, often run by pre-internet leaders, to pursue the opportunities that the internet offers, particularly when some internet activities are likely to change the organization's power structure. The problem has been stated succinctly by Paul Mason (2001: 5), 'the more

TABLE 8
The Transformation of Unions in the Internet Era

	<i>Pre-internet activities of unions</i>	<i>Additional activities after internet</i>
Primary business	Collective bargaining	Individual representation and advice
Delivery of services	Workplaces Services delivered by reps/leaders Outcomes depend on collective bargain with employer	Web Digital AI services Services provided directly to workers
Method of dispute	Strikes	Web communication Cyber-picketing
	<i>Pre-internet membership</i>	<i>Post-internet membership</i>
Locale	Workplace Members with employer recognition	Differentiated membership: Members, subscribers, Visitors to website Virtual presence at workplaces
Free-rider problems	Collective bargain creates incentive to free ride	Customized services to members only
Internal democracy	Elected leaders and bureaucracy	Decentralized; internet plebiscites Activists operate independently

bureaucratic organizations are, the less effectively they use the web; the more an organization's members use the web, the more bureaucracy is undermined'. In the 1930s a new union federation, the CIO, willing to break with existing organizational structures, was needed to develop industrial unionism in the USA. Only when faced with the challenge of the CIO did the older AFL unions accept the need for organizing along industry lines. Perhaps a similar new organization, organized by young internet-savvy unionists or other worker advocates, is needed to push the union movements in the USA and the UK to risk radical changes. It is also possible that non-union organizations may win the competition in cyberspace for providing services to workers. The experience of e-commerce demonstrates a significant first-mover advantage for online businesses, with first-on-the-block companies such as Amazon, Monster and E-Bay dominating their particular retail sectors. The first organization, union or other, to provide a comprehensive service to workers may establish a similar dominance. Employers may try to block workers using the workplace internet access to contact unions and to prevent unions from using the firm's intranet or the internet to connect with members.⁷

The pressure on unions to use the internet to improve their recruitment and services is a powerful one. Natural selection will weed out unions that fail to exploit the internet while rewarding those that find the right mix of services and activities on the web with growth of membership and influence. Unions will copy what works best and spread best practice. The lesson of the business side of the internet that success is more likely to come to firms with strong brands and products in the normal commercial world than to internet start-ups bodes well for union internet activities. Still, success in cyberspace does not guarantee a renaissance of unionism. It is one part of the process of unions' adapting to new economic circumstances and the changing concerns of workers and firms — a necessary but not sufficient condition for unions to prosper in the twenty-first century.

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Notes

1. We use the terms 'internet', 'World Wide Web' or 'web', and 'cyberspace' interchangeably in this paper. The 'internet' refers to the infrastructure of interconnected computer networks. Technically speaking the 'World Wide Web', or 'web' for short, refers to one of the communication protocols that transfers information on the internet (the Hypertext Transfer Protocol or HTTP). Given that modern web browsers invisibly integrate support for all the main internet protocols, such as the e-mail protocols and file transfer protocols, most internet users do not differentiate between the internet and the world wide web. Cyberspace refers to the electronic medium of computer networks, in which online communication takes place.
2. To get some notion of how many local union websites would be missing from the cyber-picketline database, we searched for local unions in the Teamsters Union. The site www.teamsters.net contains a listing of 149 local union sites, which compares with 22 local Teamsters sites on the cyber-picketline database. We also note that the cyber-picketline does not include many regional federation sites in North America. Local union sites are often designed by non-professionals and hosted on free web servers, making them difficult for search engines to find or to index properly.
3. The Google search engine has indexed some 2 billion web pages as of 19 February 2002. But Google covers perhaps one-fifth of the web. Steve Lawrence and C. Lee Giles (1999) show that even the most comprehensive search agent covers no more than a fifth of the web. They estimate that there were 800 million pages as of February 1999.
4. The UK site www.e-collectivism.org.uk provides links to several campaigns that use the web as part of their overall strategy.
5. The British Workplace Representation and Participation Survey (BWRPS), conducted in June–July 2001, consisted of 1355 face-to-face interviews with employees in Great Britain, selected using a random location sampling design to ensure a representative, unbiased survey. The survey fieldwork was undertaken by BMRB International and was supported by the Trades Union Congress and the Centre for Economic Performance.
6. Some British unions have given considerable thought to putting the pieces together. The Engineering and Management Association (EMA) union has developed a business plan for an e-union, 4U@work, that would offer legal advice, access to union expertise, assistance in workplace disputes and other services through the internet, some free and some available only for a fee. The finance workers union UNIFI piloted an 'e-branch' in 2001. The TUC's Task Group on Promoting Trade Unionism has also explored developing e-union services to non-union workers, to change the image of the union movement and to show these workers the benefits of unionization.
7. The UNI international trade union secretariat has taken a lead in examining issues regarding union members' use of the internet at work. UNI has a model agreement on issues of electronic surveillance and personal privacy.

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