Today's Unions as Tomorrow's CyberUnions: Labor's Newest Hope

Arthur B. Shostak

Drexel University, Philadelphia, PA 19104

I. *Introduction*

On-going efforts by the AFL-CIO and its 64 affiliates to maximize their creative use of computer power may help slow, stem, and finally reverse Labor's decline in union density. Computerization makes possible certain distinctive reforms vital if Labor is to soon improve its renewal chances.

While emphatically not a "magic bullet" or an instantaneous cure, computerization makes possible wide scale communications of dazzling speed and enormous outreach (national and international). It enables unprecedented accessibility of office-holders, and timely exchanges of views among them and members, and among the members themselves (via electronic bulletin boards and chat rooms, including some run unofficially). It makes mobilization for political action and strike support far more feasible. And it facilitates corporate campaigns that would otherwise overwhelm with complexity and data.

On the level of the local, computerization enables International Representatives and Business Agents to download into a laptop reams of relevant material (grievance and arbitration records, previous contracts, etc.). This enables them to do on the spot the high quality job expected by dues-payers influenced by the "Buck Rogers" high-tech world around them. As well, locals can create electronic list serves to link together the entire membership, appeal to prospective members, address sub-cultures differently, and in other overdue ways, build a new form of "electronic community," a 21st-century adaptation of yesteryear's solidarity.

Where labor militancy is concerned, intriguing new tools are available: Unions can encourage members to threaten to shut down or in other ways impede the use of their computers at work. Or they can create "picket lines" in cyberspace. Or urge boycotts of the products or services of targeted employers, and do this faster and with far wider coverage than was possible relying on old-fashioned mailings offering "Do Not Buy" lists. Contrariwise, concerning co-creating a high-performance workplace in partnership with a cooperative employer, Labor's use of computers can facilitate employee dialogue about overdue workplace boosts to productivity - complete with a union imprimatur.

Accordingly, although insufficient in and of itself to "rescue" Labor, computer power raises fresh hope that ensuing gains in efficiency and effectiveness may help attract many new members. It could help raise the level of support of existing members (always Labor's best organizers). And in 101 other significant ways, it could rapidly bolster Labor's urgent effort at recovery. (See, in this connection, http://workingfamilies.ibelong.com/   and http://afscme.org/publications/puttc.htm).

I. *Background*. When in the early 1970s Labor first got involved with mainframe computers, they were used to handle the massive data-warehousing and data-mining record-keeping needs posed by dues and fringe benefit matters. Word-processing desktop PCs followed, and in due course, certain especially progressive unions and locals began to employ the laptop and e-mail power of Internet and the World Wide Web.

Were this all there was to the computer use story it would reduce only to a minor tale of bureaucratic modernization, a necessary, but insufficient explanation for Labor's (continually more threatened) persistence. While commonly overlooked, aspects of this tale are, in fact, much richer matters.

Computerization has begun to challenge the status quo in many critical aspects of modern unionism (and modern life alike). Components of trade unionism from A (accountability) to Z (Zeitgeist) are being substantially altered, especially matters of internal administration (the special concern of this essay). (Lee)

Symbolic here is the conversion of the AFL-CIO News, the bland, mind-dulling house organ that John Sweeney, new head of the Labor Federation, inherited in 1996. His aides quickly turned it into a bright, brassy, and "hip" publication now called America @ Work, complete nearly every issue with a page devoted to Internet sites and cyberspace tools worth union attention. This move showed recognition by the Sweeney forces of the need to present a new "face" for Labor, one that signals "being with it," via energizing, colorful, and morale-boosting messages.

In this essay I explore how computer uses are altering the internal operations of certain progressive International Unions and their best locals. More specifically, I will discuss five related matters: 1) What are the major areas of advancement? 2) What are the major causes of concern? 3) What are the relevant types of computer-using (or non-using) unions and locals? 4) What defines a CyberUnion? And 5) what pending changes in computer options should Organized Labor take carefully into account?

Given an inexcusable neglect by scholars of this subject, and the related paucity of available data, only very tentative answers can be shared at this time, answers that hopefully will earn testing and improvement in further discourse. (1)

III. *Methodology*. Drawing on 47 years of formal study of unionism here and abroad, and especially on my last 26 years of adjunct teaching at the AFL-CIO George Meany Center for Labor Studies (Silver Springs, MD.), I have long tracked the complex pattern of union uses of computer power (Shostak; 1991).

Most recently, I attended LaborTech Conventions held in 1998 (San Francisco), 1999 (New York), and 2000 (Madison, WIS.), as these three-day events highlight progress and problems in an invaluable (and unofficial) way. (They are self-sponsored by grass-roots activists, and only in 2000 did the AFL-CIO send several representatives). I have often interviewed key AFL-CIO and International Union computer specialists (Web Masters, etc.), and I have attended several workshops given for unionists eager to gain computer skills. I was an invited guest at the inauguration in 2000 of the new Teamster Union Web site, and I have guided teams of my students in close studies of the 61 Web sites of the 64 AFL-CIO union affiliates (along with hundreds of local union sites and several overseas sites).

In 1999 I authored CyberUnion: Empowering Labor through Computer Technology, and I am busy now preparing a successor (Manual-like) volume for publication in 2001 (Shostak: 1999). In 2000 I co-produced a 30-minute VHS film, "Labor Computes: Union People, Computer Power," made up of pithy interviews with Labor digerati types. Naturally, I participate in various Labor-oriented list serves, maintain one of my own (www.cyberunions.net), and "surf" both the literature and the Internet (with its estimated six billion pages) for relevant material. (2)

IV. *Areas of Advancement*. Four key aspects of internal affairs appear significantly changed by Labor's use of computer power. Just about every aspect of unionism has been impacted, but the four - alliance-building, communications, organizing, and staff development efforts - are at the forefront in demonstrating whether or not computer uses make a really consequential difference.

1. Alliance-building has always been a priority, with unions and locals alike seeking strategic ties to other bodies in Labor and to various Non-Governmental Organizations (NGOs).

Historically, however, this has generally meant burdensome file drawers stuffed to overflow with relevant clippings and correspondence, etc. Union officers had a mountain of "must call!" pink phone slips on a desktop spindle, and a pile of business cards from contacts only vaguely remembered. Much of the information quickly grew stale and useless.

Today, reliance on computers means electronic files that can save space, are timely, and can with reasonable effort be kept current - thanks to e-mail exchanges designed to update information. Phone calls can give way to real-time e-mail exchanges (complete with a "paper trail"). As well, a union or local can discretely assess the Web site of a prospective allied organization, and determine privately whether or not to reach out itself for a new alliance in a coordinated boycott, educational venture, lobbying effort, picket line, or the like.

2. Communications has historically featured a staid house organ, poorly attended meetings, many (commonly ignored) mailings, and some new and breathless use of faxes or even beeper messages. The material generally came from the top down to the rank-and-file, and was commonly innocuous or manipulative propaganda (and just as commonly under-valued by many recipients, staff and rank-and-filers alike).

Today, at a click of a mouse millions of members of 61 of the AFL-CIO's 64 affiliates with a Web site can have their own unprecedented access to facts, figures, documents, archives, rules, regulations, photos, videos, etc. They can re-sort this material to suit their purposes, and can request additional material - including streaming video subject matter and other fascinating forms of communications they are coming to expect from their International Unions

Shop Stewards, for example, can access elaborately kept proprietary profiles of active mediators and arbitrators (their biases, idiosyncrasies, standards, etc.), as well as data on labor law cases and precedents. Especially helpful are clues as to how best handle a grievance, arbitration, etc., in light of yesterday's major decisions, clues the computer can format as an electronic tutorial or rulebook.

Members can be briefed immediately about fast-breaking developments, and kept abreast almost in a real-time mode. E-mails now go out in a 24/7 (day-long; every day) format, and a remarkable new "web" of tight communications never possible with mail, phone, or fax now binds members as never before.

Especially novel is the opportunity computer-based communication has made possible for a vast upgrade in the very old effort to forge strong bonds among unions around the world. With an estimated 2,700 Labor Union Web sites online now, and more being added weekly, the opportunities for networking are enormous. (Freeman and Thomas, in Taylor)

To be sure, various federations have struggled with this for decades (the ICEM, with its 403 union affiliates in 113 countries; and many others), but making phone connections and/or airmail use were always a hindrance. Now, e-mails flash back and forth almost in real time, aiding far-flung port boycotts, corporate campaigns, and other coordinated international activities, despite daunting time and space challenges.

Not to put to fine a point on it, but perhaps the most far-reaching change in Labor's communications involves the newfound ability of members to reach one another. Historically, a member could to do this only through the union's newspaper or magazine, and then only if the editors agreed to do so. Today, grass-roots activists are busy on a 24/7 basis exchanging advice, views, and visions where their world of Labor in concerned. Caucuses of like-minded members link together in e-mail list serves or through a shared Web site. Solidarity is built, and the cause of union democracy can receive a strong boost.

(To be sure, resistance to this sea change in communications is also part of the Labor scene. Many staffers resent heightened expectations on them to respond almost immediately via e-mail to scores of e-mail queries that never stop coming in, even while their previous workload weighs heavy. Top officers often shift their e-mail response load to staffers with blithe indifference. As well, paltry raises in staff salaries utterly fail to assuage the pain. More on this below).

3. Organizing has previously been a neglected step-child, receiving only about five percent of the annual budget and little respect from many stand-patters (often waiting out their retirement, or disinclined to assume the heartaches that came with having to service a lot of new members with unreasonable and untutored expectations).

Today, however, in response to the crisis posed by Labor's steady numerical decline, and the unrelenting pressure from the Sweeney Administration, many unions and locals are spending more money and effort than ever before - with computers strategic in the process.

Many leads are coming in cyberspace to union Web sites specifically designed to attract non-members reaching out for help. Organizers are immediately advised by Web Masters via e-mail whom they are to rush to contact. The computer also draws a roadmap to the home of a prospective member, and provides an analysis of the company, industry, and labor market history involved in this specific case.

Especially intriguing is the possibility that unions might soon use the Internet to organize "minority" locals inside a workplace as yet unorganized. Incubators for unionism, these computer-based "locals" could collaborate via list serves with one another around the country, trading field-proven advice and lending precious morale support. These unofficial "locals" could make a case for formal unionization by proving useful to their surreptitous members and promoting solidarity - even as participants wait until the times are propitious for seeking an open card count or NLRB election (Freeman and Diamond, in Taylor).

Another less-heralded aspect of this matter, organizing the organized, can also receive a major boost from Labor's use of computer power. Local unions in particular can use their Web site as a 24/7 "newspaper," rich in very current coverage of the activities of members. Photos of participants in a rally, a picket line, a union picnic, or a meeting can appear within a few hours of the event (or sooner!). Immediate news of births, deaths, retirements, etc., can be proudly carried, the sort of homey material that used to grow stale in a once-a-month prosaic union paper, but now can excite and please members who appreciate a bit of positive recognition.

Especially creative Web masters can use their site to offer members a swap service. Or for a garage sale outlet. Or for a recipe-exchange page. Or for other "down home" services valued by a membership that comes thereby to think first of the local's Web site when seeking valuable information. In this way new bonds can be forged between local officialdom and dues-payers, bonds that may yet help secure the highly rewarding volunteer services of rank-and-file organizers.

4. Staff development efforts, while not as poorly treated as was organizing, have also suffered from neglect and low priority. They were commonly under-funded, sporadic, uneven, and poorly assessed. Inadequate backing meant meager results, with ensuing inefficiencies, uneven effectiveness, high staff turnover or burnout, low morale, and other costly consequences.

Today, however, Labor knows it can and must do better. Staff obsolescence threatens unacceptable chaos, especially where getting the staff up to speed in computer use capabilities is concerned. Accordingly, tutorials on line or through computer workshops are increasingly common, and are budgeted for as a necessity.

As if this wasn't enough, a new type of staffer has been added to the lineup: a Labor Union computer specialist. These talented (and often expensive) individuals help assure the adequacy of the union's computer system, offer staff training, prop up the computer work of key officers, prepare power point presentations, and in general, keep the organization "on line." (Katz)

In all, then, four key aspects of internal administration - building alliances, getting the word out (and back), recruiting new members (and re-organizing old ones), and upgrading the human capital of the union's or local's staff - would seem to benefit considerably from computer use.

V. *Areas of Concern.* Five sources of anxiety standout, and restrain Labor's use of computer power. While some of this can be traced to the newness of applications, it is still unclear how much will respond to gains in experience and the passage of time.

1. Many in Labor worry about a potential erosion in face-to-face contact, arguably Labor's greatest asset in earning and holding onto members. Dues-payers like to feel recognized (and valued) by union officialdom, a feeling that impersonal e-mails may not convey. "Pressing the flesh" and "showing your face" are practices many in labor think indispensable, regardless of the time-and-energy saving (cyberspace) alternatives championed by Labor's digerati.

2. Many in Labor worry about loudmouths and troublemakers monopolizing dialogue in non-moderated chat rooms and bulletin boards. They fear that "crazy talk" will drive others away, and undermine the entire medium. They also worry that thin-skinned officers will be hurt by outrageous posted criticism, and insist on either strong censorship or a shutdown.

3. Many in Labor worry about a Generation Gap that separates older leaders from young "hot shop" types. The younger leaders are often impatient to get on with it, to rush the computerization process faster than the older (pre-computer) leaders are comfortable with - a rift that exacerbates the natural divide between the generations - and undermines solidarity.

4. Many in Labor worry about loss of confidentiality. They fear that hackers and others possibly in the pay of government RICO "snoops," union busters, union-hating employers, or the dangerous like, will break into union data banks and files, much to the union's dismay.

As well, when a Federal Court in April of 2000 ordered seizure and search of the home computers of 21 flight attendants suspected of coordinating via e-mail an illegal sick out, a chill went through Organized Labor that has left its mark. Never before had a court given an employer the right to tap the equivalent of a home phone, search for incriminating data on 43 people (many more than the 21 attendants), and "invaded" private homes. Although fought by Ralph Nader's Public Citizen's litigation group and other like organizations, the story stays alive in Labor's oral culture - and scares many computer users (Wieffering and Kennedy).

5. Finally, many in Labor worry about the overload that e-mails entail in worklives already stretched to the limit. Union staffers complain of their inability to keep up with electronic messages rushing in, and earmarked for rapid response, almost regardless of the situation of the receiver. Many grumble about an unreasonable speedup, made all the less bearable by the absence of any commensurate increase in salary.

All five anxieties - possible erosion in face-to-face relations, loss of control over the medium, Generation rift, loss of confidentiality, and (unappreciated) work overload - can serve as a valuable alert: None need prove a paralyzing self-fulfilling prophecy.

Remedies are available, such as special schooling (private, discrete, and exceedingly sensitive) in computer use for older union leaders. Password protection schemes (as used now by the AFL-CIO and various

unions). (Levy) And, redistributed workloads, the hiring of additional aides, and overdue salary increases for those genuinely overloaded by computer inputs.

Above all, Labor helps to remember "high tech" computerization works best when aiding such "high touch" efforts as "one-on-one" organizing, "shoe leather" vote-getting, "button hole" lobbying for labor law reform, and so on É the humanizing dimensions of unionism that constitute its unique "value added" dimension.

VI. *Three Patterns of Computer Use: A Division of the House.* Given the pattern above of gains and pains associated with current computer use by Labor, three models seem to dominate the scene.

The first, which I call Cyber Naught, involves minimum employ of computer potentialities. Cyber Naught unions and locals generally hesitate to go beyond staid reliance on electronic bookkeeping. They pretend little has changed around them, deny being under pressure to modernize, and essentially sleepwalk through time.

The second, Cyber Drift, has labor organizations move spastically first in this direction, and then that, unable to guide their own efforts. Crippled by unthinking adaptation of incompatible, if glitzy and trendy equipment, Cyber Drift unions and locals disappoint unionists eager to believe Labor has much to gain from computer use.

The third, Cyber Gain, wins accolades for its state-of-the-art accomplishments where computers are concerned. Ironically, however, its lasting significance may be to set the stage for the emergence soon of its necessary successor, Cyber Unions, today only an alluring distant possibility. Unless and until Cyber Gain organizations are succeeded by the CyberUnion variety, Organized labor will continue to sub-uptimize possibilities, and remain far more vulnerable than is tenable.

1. *Ostrich Approach.* Where the internal operations of a union are concerned, Cyber Naught labor organizations seek to preserve and persist, rather than to update or innovate. They employ computers primarily to satisfy traditional business needs, as in accounting and bookkeeping (payroll data; etc.).

Put starkly, Cyber Naught unions and locals use computers to get through the day, and do so in a flat and uninspired way. Labor officials and members settle for inertia and quietism É much as if Toffler's 1970 classic, Future Shock, had not been written, complete with its urgings that the Labor Movement pioneer in the use of information technology breakthroughs. (Toffler)

The problem here appears rooted in conceptual inertia: Out-dated habits of mind have far too many Cyber Naught labor leaders preferring form to function, protocol to results, and rhetoric to risk-taking. They want a future like the past, only more so. They treat unionism as a passive and reactive institution, and they act as a deadening hand on change.

2. *Galloping off in All Directions.* Cyber Drift unions or locals move aimlessly, like a cork bobbing on a turbulent sea, though with far less likelihood than a cork of staying afloat. Lacking an Information Technology officer, and available for "seduction" by a never-ending series of slick-talking vendors, these organizations are crippled by incompatible software, hardware, and infrastructure components. Hardly anything works together, and frustration runs rampant.

3. *Labor's Best Hope - for the Moment.* In contrast with Cyber Naught types, Cyber Gain unions and locals make much of computer possibilities. Their use of computers can be creative (though as I shall argue later, it still does not go far enough). Officers, staffers, and activists alike appreciate how much more can be done, and enjoy adapting gains made elsewhere in and outside of Labor.

However, before too glowing an impression is given, it should be noted that Cyber Gain unions and locals have many telling weaknesses. More specifically, where computer applications are concerned, these unions and locals often remain frozen in the first generation of Internet use. They are preoccupied with meeting only straightforward informational needs. Their Web site typically offers their logo and basic facts, a static display critics dismiss as "brochure ware" or "billboards."

Cyber Gain Unions fail to understand, or decline to value the fact that second generation applications are quite different: Known as transactional, they emphasize the dynamic participation of the parties, rather than accept passivity, as at present in far too many Cyber Gain organizations.

While the Cyber Gain model is clearly superior to the Cyber Naught and Cyber Drift options, it will not

suffice. It rebuilds, but it does not adequately renew. By failing to take the full potential of computerization boldly into account, Cyber Gain organizations do not so much deal with the future as they streamline the past. Only a far more ambitious use of computers will do the job necessary if Labor is to survive and thrive.

VII. *Getting to a Third Wave CyberUnion F-I-S-T Model* . If Labor is to reinvent itself as rapidly, as thoroughly, and as meaningfully as appears necessary, far more than Cyber Gain unionism seems required.

Specifically, early 21st century unions might well experiment with an ambitious and creative alternative that incorporates futuristics, innovations, services, and labor traditions (F-I-S-T). Labor urgently needs the rewards possible from reliable forecasting. And the rewards that innovations, such as computer data mining, uniquely offer. And the rewards that computer-based services, such as volume discounts on PCs, can provide. And the rewards possible from the computer-aided modernization of traditions (as in the production of inter-active software rich with labor history material).

Together, then, these four items (F-I-S-T) just might help provide Labor with the foresight, the dynamism, the appeal, and the heart necessary if is to build on its Cyber Gain strengths and reverse its long-term decline. (Shostak: 1999)

Pivotal in the matter is the possible rise to power soon of Labor's digerati. When such activists envision the years ahead, they expect computers to soon secure unprecedented access of everyone in Labor to everyone else ... officers to members, members to officers. unionists to non-unionists, and vice versa.

The digerati dream includes rapid polling of the membership. Galvanizing of rallies or e-mail protests. Spotlighting of models worth emulating, and wrongs for the righting. Libraries put at a unionist's beck and call, along with valuable arbitration, grievance, and mediation material. And open chat rooms and bulletin boards for unfettered telling and listening, for the creation of a High Tech electronic (virtual) "community" to bolster High Touch solidarity among real folk.

As if this was not enough, the vision of Labor's digerati includes a quantum increase soon in the collective intelligence and consciousness of "global village" unionists in a global International. Unprecedented cooperation across national borders. The first effective counter to transnational corporate behemoths. And, going out a year or two further, possibly even Intelligent Agent software housed in computer "wearables," empowering unionists as never before.

Guided by this growing cadre of computer-knowledgeable types, Labor can soon move more unions and locals into CyberUnion status. And thereby invigorate the membership. Draw in new members. Intimidate opponents. Intrigue vote-seekers. Meet the very high aspirations union "netizens" have for the Labor Movement. And in other valuable ways, significantly bolster Labor's chances of moving especially advanced unions and locals up to CyberUnion status early in the 21st century.

Forward thinking and visionary, these techno-savvy men and women have a hefty dose of indefatigable optimism. Unlike many of their peers, their expectations concerning the renewing of Organized Labor are almost without limits. As they learn more about the F-I-S-T model, and make it their own, their influence may soar.

VIII. *What should Labor be Monitoring?* Expectations of changes in information technology are very exciting, and underline the life-and-death importance of Labor staying abreast: Internet cognoscenti "are betting they will soon rekindle the mega-innovation of the Web's early days [a mere ten years ago] É a world of pervasive computing that lets people communicate more efficiently than ever." (Ante)

By the end of 2002 there may be more mobile devices than PCs accessing the Internet, so powerful appears the next "killer ap," the "teleputer" (otherwise known as an advanced wireless mobile phone). By 2007 as many as 59% of all Americans (up from 2 % today) are expected to own a device that can access mobile data (pager, phone, Personal Digital Assistant). (Gunther)

Where stationary PCs are concerned, knowledgeable forecasters expect household penetration to plateau at about 73 percent by 2005, up from 57 percent in 2000, an expansion that underlines the increasing number of unionists able to use Labor Web sites and access Labor e-mail. (Baker).

By 2007,then, a significant number of union influentials (officers and members) may wear a compact picture-phone and computer on one's wrist and dictate to it by voice and listening to its "voice" in turn. They may use it to access any type of information, anywhere, at anytime. To stay in touch with significant others all the

time. To send and receive messages in all languages, as if their own. To surf the Internet and Web with the stress-less help of "smart" software that provides useful information even before they ask for it.

If only half of this is realized in the next few years, the rest is likely to be very close behind, and the impact is likely to prove mind-boggling É for social movements like that of Organized Labor, and everything else. Cyber Gain organizations, and their successor, CyberUnions, will need new hardware, software, and infrastructure resources to handle the challenges entailed in volume, language, and time zone matters. These and scores of related possibilities cannot be followed closely enough, or reacted to faster enough.

Summary: Labor Union Prospects? American Labor Unions five years from now are likely to be very different from their 2001 counterparts: Their hallmark will either be irrelevance, or they will draw handsomely on CyberUnion attributes (F-I-S-T). While computerization cannot "rescue" Labor, unless Organized Labor soon makes the most creative possible use of it, as with the F-I-S-T model, Labor probably cannot be rescued.

At least where four areas of advancement are concerned - alliance-building, communications, organizing (external/internal), and staff development - Labor would seem well on its way. Where five major anxieties are concerned - losing its personal touch, being battered by internal criticism, hurting its older leaders, suffering breaches of confidentiality, and work overload and speedup - Labor has several available remedies to employ, and other reforms still to create.

Alert to advances that other organizations - businesses, NGOs, levels of government, schools, etc. - are busy making in their uses of computer power, Labor is not too proud to adapt and utilize their hard-earned gains. Little wonder that academics like Harvard's Professor Richard Freeman now contend "employee organizations will prosper in cyberspace because the internet is the bridging technology between an increasingly heterogeneous workforce and individualistic workers and the collective activity and solidarity that lie at the heart of trade unionism." (Freeman and Thomas, in Taylor)

This much at least seems clear: With about three rewarding decades already spent learning how to better employ computer power, Organized Labor can be expected to explore creative possibilities here long into the future. Early in the 21st century, a new model of computer-based unionism - one celebrating the F-I-S-T model - may help Labor finally achieve the security and well-being that has eluded it from pre-Colonial years to date.

Notes

1. Typical of academic neglect here is the fact that only one page of the 127 pages in nine articles commissioned for the first part of this journal's two-part exploration of the future of private sector unionism even touched on this significant possibility. (Townsend, Demarie, Hendrickson; p.285).

2. I plan now to devote a sabbatical year (2002) to tracking in the field new uses unionists are making of IT in general, and computer power in particular. In this connection, I welcome leads to sites I should visit and people I should interview (shostaka@drexel.edu).

References

Ante, Spencer E. "In Search of the Net's Next Big Thing." *Business Week* (March 26, 2001)140-141.

Baker, Stephen. "A Net Not made in America." *Business Week* (March 26, 2001)124.

Fiorito, Jack, Paul Jarley, John Thomas Delaney, and Robert W. Kolodinsky. "Unions and Information technology: from Luddites to CyberUnions?" *Labor Studies Journal*, 24 (Winter 2000) 3-34.

Freeman, Richard and Wayne Diamond, as quoted in Robert Taylor, "Trade Unions: Workers Unite on the Internet," Financial Times, May 11, 2001.

Gunther, Marc. "Wireless E-mail." *FORTUNE* (March 19, 2001): p.76.

Katz, Jon. *Geeks.* New York: Villard, 2000.

Lee, Eric. *The Labour Movement and the Internet: The New Internationalism.* Chicago: Pluto Press, 1997.

Levy, Steven. *How the Code Rebels Beat the Government - Saving Privacy in the Digital Age.* New York: Viking, 2000.

Shostak, Arthur B. *Robust Unionism: Innovations in the Labor Movement.* Ithaca, NY: ILR Press, 1991.

Shostak, Arthur B. *CyberUnion: Empowering Labor Through Computer Technology.* Armonk, NY: M.E.Sharpe, 1999.

Toffler, Alvin. *Future Shock.* New York: Bantam,1970: p.452, 480-483.

Townsend, Anthony, Samuel M. Demarie, and Anthony R. Hendrickson. "Information Technology, Unions, and New Organization: Challenges and Opportunities for Union Survival." *Journal of Labor Research* XXII (Spring 2001): 275-286.

Wieffering, Eric and Tony Kennedy. "Search Raises Privacy Issues." Star Tribune, (Minn., MN), February 8, 2000. Pp.1, 3.