

**WORKING DRAFT**

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**INFORMATION TECHNOLOGY AND THE VOLUNTARY  
SECTOR WORKPLACE**

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## **Information Technology and the Voluntary Sector Workplace**

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There is little debate over whether technological change affects work processes and tasks. Yet, exactly how this happens is not at all clear. According to *Futurework*, a 1999 U.S. Department of Labor report, "technology has fundamentally changed work as we know it." Studies conducted in business and government settings offer evidence of the complexity of workplace issues associated with the introduction of new technology. At the same time, however, one theme appears consistently—the potential of technology to transform the substantive content of individual jobs (Hodson and Parker, 1988) and the mix of jobs in work units. Commenting on changes in public sector organizations, Kraemer and Danzinger (1997) note that "access to information can change the location and nature of decision making, entire job classifications disappear while new ones are created, layers of management are eliminated, organizational politics take on new dimensions, and jobs can become more or less satisfying to workers" (p. 100). Simultaneous transformational pressures are often contradictory, making the challenge of identifying and disentangling these pressures even more formidable.

While research has been conducted on technology and work in the private and public sectors, there are few studies detailing the effect of technology on work in the voluntary sector. Nonprofits are finally entering the information age in large numbers and may just now be encountering some technology-related issues that businesses and government have been grappling with for a while. Our review of the literature plus a set of interviews on technology and work issues in four New York State government agencies led us to focus our research on the

relationship between information technology and the following issues: transformation in jobs; migration of work tasks within work units; shifts in the distribution of power; effects on job satisfaction.

Our study asks the question: How have information technologies changed the nature and distribution of work and workplace relationships in voluntary sector organizations? In the section that follows, we describe our research methodology. While many of the study's questions emerged from our investigation of the government workplace and technology, we also developed questions of particular importance to nonprofit organizations. The next section examines the findings in detail and reports the conclusions of other relevant current studies reported in the literature. While some of our results are consistent across sectors, we are careful to note findings of special relevance to nonprofit organizations. The conclusion turns to one of our most interesting interview questions: the relationship between nonprofit contracting with government and information technology issues. The paper ends with a brief exploration of questions for future research.

## **METHODOLOGY**

To examine how information technologies influence jobs and work relationships in nonprofit organizations, we chose human service agencies as the target for our research. In 1996, human service agencies constituted 37.5% of all 501(c)(3) and 501(c)(4) nonprofit entities in the United States, more than twice as high a percentage as any other service type (Boris, 1999, p. 12). Tens of thousands of individuals employed in the nonprofit sector work in organizations like the ones in this study's sample.

In one of the few published articles on information technology in nonprofit organizations, Berlinger and Te'eni observe, "Moreover, the context of using computers is important for understanding their successful implementation" (1999, p. 400). Following the important premise of this observation, we suspected that organizational context would also be important for understanding the particular effects of information technologies on jobs and work relationships in nonprofit organizations.

Utilizing a purposive sample of three large, well-established human service agencies enabled us to control for a number of variables, such as organization size, organization age, service area, and involvement in contracting with government, that researchers have identified as predictors of variation in a number of organizational processes. The three sample agencies are over 30 years old and have budgets over \$10 million (\$12 million; \$15 million; \$65 million). Because we are especially interested in the potential effects of contracting with government on internal organizational functioning, we selected nonprofits with an extensive history of involvement in contracting relationships with multiple government bureaucracies.

We conducted in-depth, semi-structured interviews with twenty-three respondents in three agencies in the Capital Region of New York State. Respondents include nine executives, eight professionals and clinicians, and six administrative support staff. One interview of executive managers was a focus group (n = 4); nine two-person interviews and one one-person interview were conducted. We chose to conduct interviews with nonprofit staff at different organizational levels on the basis of our review of the general literature on information

technology and work place issues. In addition, preliminary findings from our ongoing study of work and technology in public sector agencies<sup>1</sup> reinforce the conclusions of earlier researchers that effects of information technologies can vary significantly across different levels of jobs in the same organization (Grasso and Epstein, 1993).

Interview protocols included the same set of open-ended questions about the effects of computer technology on work performed by individuals and on the distribution of tasks within work groups. Executive managers also described the influences of technology on work from an agency-wide perspective. Questions probed whether and what kind of change had occurred in skill requirements, workload, and degree of job difficulty. Various dimensions of job satisfaction were tapped in questions about impact or no impact of information technology.

Additional questions asked about training, prospects for promotion tied to technology-related changes in work, and changes in supervisor expectations. A final question asked whether respondents perceived any connection between the changes identified in the interview and the agency's status as a nonprofit organization, as opposed to a government agency or business enterprise. After some follow-up, clarifying probes, this question elicited an interesting set of responses described in the conclusion of this paper.

Each hour-long interview was recorded and transcribed. We used Ethnograph v5.06 (Qualis Research, 2000) to analyze interview responses. Each of us independently coded the

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<sup>1</sup> A study of work and technology in four government agencies is under way at the Center for Women in Government, University at Albany. Principal investigator is Catherine White Berheide, professor of sociology, Skidmore College. Many of the interview questions in this study are revised versions of questions used in the public sector project.

interviews, using a set of codes we established and revised as we moved through the coding process. Then we met to reconcile differences in our choice of codes.

We present the results of our research along with a healthy respect for its limitations. A sample size of three large organizations in the same general service area and located in the same geographic region attests to the limits of the study. In addition, the agencies are all long-time participants in the contracting system of government-funded public services. A study of non-contracting nonprofits might yield a different picture. It should also be noted that, in recent years, the rapid and continuous rate of change in the tools of technology means that current findings are part of an unfolding story that is still being told. Finally, this study examines the effects of information technology only on administrative functions and reserves analysis of technology's effects on mission-related activities for future investigation.<sup>2</sup>

## **FINDINGS AND DISCUSSION**

As noted in the introduction, a recurrent theme in the literature on technology and work is that technology "will have an impact on the composition of jobs" (Economist, 1995, p. 23). The jobs that remain may be fundamentally changed by technological innovation. Less frequently noted are changes in the distribution of work tasks among staff members. Intensive interviews with staff in executive, professional, and administrative support jobs enabled us to pinpoint the transformational consequences of technology in nonprofit human service agencies, as well as the closely related redistribution of tasks throughout the organization.

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<sup>2</sup> This distinction derives from Berlinger and Te'eni, 1999.

## **Task compression/task migration**

“It has turned my world upside down.” Executive manager

One of our most striking findings about technology-related job transformation is the linkage between task compression and task migration. The linkage is experienced most frequently by executive managers, with the possible exception of the executive director,<sup>3</sup> and by professionals and clinicians. Mutschler and Hoefler note that “data entry and report generation are increasingly performed by human service professionals interacting with their terminal rather than through computer experts or clerical staff” (1990, p. 91). In response to an open-ended question about how computer technology had affected their work, many executive managers observed that they now write, produce, and distribute their own memos, reports, and correspondence. “I now do my own memos, I now do my own scheduling for the most part; I write my own reports. At some point that was a secretarial function and it has shifted to me.”

Tasks that were once performed separately and in sequence first by a manager with follow-up by administrative support staff are now compressed into virtually a single function and performed by the manager. We characterize this shift as upward task migration. A similar shift affects the work of professional clinicians in nonprofit organizations, according to a special educator and an occupational therapist.

At the same time that upward task migration appears, however, there is also evidence of what we call lateral task migration. Good examples of this change are shifts to direct care staff

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<sup>3</sup> The one executive director in our sample reported very little technology-related changes in his job. Our observation of other executive directors in action suggests that the interview response may apply to the executive director role more generally.

in off-site programs or to professional clinicians of medical management, behavior management tracking, and scheduling tasks formerly done by middle managers in the central office. One respondent noted that resentment expressed by professionals (“Why am I doing this? This is your job.”) often accompanied lateral task migration.

A third variation on the theme of redistributed tasks—circular task migration—was reported to have occurred in only one organization, but it could signal a pattern that will be observed more frequently in the future. In this example, a data entry task was transferred from a central office secretary to 12 different job coaches in the field. After experimenting with this more decentralized arrangement, however, an executive manager decided to return the task to the secretary. He concluded that job coaches made too many errors, an occurrence exacerbated by the high turnover rate in this position. As a result, reports forwarded to government agencies contained inaccuracies that could be reflected in reimbursements or future rate-setting decisions. In short, too much was at stake to maintain decentralized record-keeping.

### **Task expansion/ task migration**

“...basically I do the same thing plus. It just kept getting added onto, I would say, more than anything.” Administrative support staff

Despite the dramatic upward migration of many tasks, most respondents described a residual component of clerical work, such as filing, photocopying, and putting the finishing touches on word-processed documents, that remains to be performed by administrative support staff. Often fewer secretarial positions are required to accomplish these tasks. Because

information technology also adds new jobs, for instance technology support positions in our sample organizations, it is not yet clear whether there is an overall net gain or loss of jobs.

Beyond the continued performance of certain clerical work, one transformation in administrative support tasks now performed in human service nonprofits is particularly noteworthy. We describe this transformation as the expansion or differentiation of tasks. We found considerable evidence that the transfer of many clerical tasks out of the secretary job opened the door to the performance of new higher order and sometimes non-clerical tasks. One professional supervisor commented:

And their roles have totally changed over time. I mean they are not just sitting at their PC typing memos everyday...They're freed up to do more direct service. They are able to sometimes attend field trips in the community with the consumers...They have different things to do. We're putting different levels of importance on what their roles are...We can use them in ways that are valuable to us as directors. And what is valuable to us has changed over time because we aren't so reliant on them to do all the typing and that kind of thing.

Higher order administrative tasks that are newly delegated to support staff include work with data bases and spreadsheets, centralized coordination of client transportation, and survey research management. This task expansion was described by different support staff as a stressful increase in workload, as job enrichment, or as both on different days.

### **Contrasts in task expansion**

How has information technology transformed work in nonprofit human service organizations? Based on the responses of our interviewees, it appears that everyone in the labor force, regardless of hierarchical level, must now be more of a technician. Through processes of task compression, new proficiency in technical skills is now required of many executives and professionals. Lower order technical tasks have been added to ongoing analytical tasks such as decision making and planning. Not surprisingly, many executives and professionals report significant increases in the amount of work they perform and heightened stress at the beginning of the learning curve.

At the same time, the jobs of administrative support staff in nonprofits have also expanded, but in a different way. Secretaries have always been required to be competent technicians, and, although the technological tools have changed, this is still the case. What seems to be different, however, is the incorporation of higher order administrative and direct service tasks into the jobs of some support staff.

### **New jobs/new career opportunities**

“My whole job and career evolved because of the technology. It’s not really anything I planned on or started out to do. And, because of it, I went a whole different direction.” Executive information manager

In the current information-rich economy, hundreds of new jobs not even imagined a generation ago have now emerged. The way in which new IT jobs in human service agencies are often filled may, however, be somewhat unique. Five of the study's 23 respondents—three executives, one professional, and one administrative assistant—shifted careers in significant ways to assume new technology-related responsibilities in the same organization.

Several times respondents reported leaving clinical positions, such as language therapist, treatment counselor, or music teacher, to start down an entirely new career path. The fluidity of the job opportunity structure in nonprofit organizations seems particularly noteworthy. Combined with voluntary sector organizational cultures that value the contributions of all staff to get the job done in whatever way necessary, this characteristic may constitute one of the more distinct contrasts with the less flexible civil service classification systems of most public sector work places.

Our finding that nonprofit agencies often “grow their own experts” challenges the observation made in a 1995 article in the *Economist* (“A World without Jobs”) that the speed of technological change might lead employers to lay off rather than reassign employees in need of retraining. It should be noted, however, that labor market trends, especially the unmet demand for and high cost of IT workers and the high turnover rate in many nonprofit positions that require familiarity with the needs of special populations, are powerful reinforcers of a “grow your own” policy.

## **Distribution of power**

“I think by virtue of having information I might have more power. But at the same time I think I have less power in the sense that I’ve tried to drive the technology down. Therefore, the people under me who have embraced that technology have more power.” Executive manager

Whether or not organizational power shifts as a result of the influx of information technology is under continued debate. Northrop et al. suggest that technology has “tended to reinforce existing power relations in organizations” (1990, p. 505). Kraemer and Danzinger (1990) take it a step farther noting that when computing affects control over people in the work situation, “it has tended to increase control by managers and professionals and to decrease the autonomy of clerical/administrative workers” (p. 598). Johnson (1987) suggests that power may shift either way when nonprofits begin to automate: either toward managers who begin to do their own work or to support staff who handle more complex tasks. Yet, Barner (1996) points to the increasing technical skills of support staff and the availability of electronic networking as a method of addressing senior level executives directly. In this study, we identified three sources of power related to technology and work: delegated power, expert power, and access power.

### ***Delegated Power***

One of the most interesting findings of this study relates to power at different organizational levels. Executives and professionals were most likely to identify delegated power or power they had driven down to their subordinates via technology. Several upper level managers reported empowering their staff to work more independently, to develop and implement new ideas, and to make decisions without management approval.

Yet, none of the six administrative support staff we interviewed mentioned an increase in delegated power. Support staff were much more likely to mention expert power as the source of their increasing organizational authority. This raises the question of whether power is truly being pushed down the ranks, as managers seem to believe, and is not being fully utilized or recognized by support staff. Or whether power remains at the top of the organizational hierarchy, either intentionally or in spite of the good intentions of executives and professionals. It is also possibly a definitional issue. What managers define as power may simply seem like more responsibility or a natural outgrowth in tasks due to the expanding use of computers to the support staff.

### ***Expert Power***

Expert power was a second type of power identified by individuals across the agencies. One professional noted that “people at lower levels in the organization with IT knowledge have more power. Their status certainly went up. We’ve become more dependent on these people.” Support staff also reported having increased expert power with even the smallest bit of additional know-how. One agency designated individuals with an interest and skills in computers as “helpers.” While the helpers did not receive additional compensation, their power appeared to increase as a computer “pecking order” developed within the organization. Burkhardt and Brass (1990) suggest that information technology “experts,” regardless of how much knowledge they have, can mitigate the uncertainty computers introduce into an agency. Those individuals with specialized knowledge are able to share their wisdom with others and build a base of expert power within an organization.

### *Access Power*

What we call access power, including both newly accessible information and new avenues of communication, was another type of power mentioned solely by executive and professional staff. Several professionals and executives noted the increased availability of information across the organization as a source of power. One professional responded, "I'd say I have more power for sure, by the simple fact that knowledge and information are now power." Another professional noted the availability of information on the web that allows her to do a more complete job. While it is often assumed that professionals by definition have access to information, the advent of information technology has opened up even greater resources thereby augmenting professional power.

In terms of communication, several executives mentioned improved and increased interaction with staff. "Electronic networking" allows employees to bypass levels in the chain of command or provide information to senior executives directly (Barner, 1996). One professional said, "I think it's good to give people the opportunity to have a voice and in terms of using the computer and technology it has allowed more people to have more of a public voice." The same professional also noted that "it has allowed people to empower themselves. To feel that they have more of a voice or more of a say or more of a path to these 'unreachable' people." Individuals at all levels of the organization have a greater opportunity to participate in organizational decision-making and agenda setting via e-mail, list serves, and web based discussion groups.

McConnell suggests that technology “challenges the traditional management hierarchy, moving many organizations from pyramid-shaped structure to a flatter structure” (1996, p. 1). However, nonprofits tend to have flatter, participatory organizational structures as a norm. In his national follow-up survey on the attitudes of 1,190 adults working in all three sectors, Mirvis (1992) notes the continued “collegiality” of nonprofit organizations and observes that “the simplest explanation for more favorable ratings of management in nonprofits is that these organizations are more egalitarian than business or government and that their managers are somewhat more people minded” (p. 36). Assuming that the agencies included in the present study had relatively open, democratic communication systems in place, it is particularly striking that several upper level managers noted an increase in communication. Conversely, it is also interesting to note, that none of the administrative staff identified increased access to upper level managers as a source of growing power for them. While it is crucial to keep in mind the small number of support staff included in this study (six), it is also worth noting the differences across organizational levels in reporting the effects of information technology on power.

### **Job Satisfaction**

“And, basically, it’s nice too because it’s a constant learning experience and I think I’ve grown more knowledgeable in different areas because of it.” Administrative support staff

In the organization behavior literature, job satisfaction is a multidimensional construct (Daft and Steers, 1986), reflecting the fact that, in the workplace, each individual seems to have a different, often competing definition of job satisfaction. In this study, we asked several questions related to job satisfaction: Have computers made your job more enjoyable, more

stressful, or left it unchanged? Is your work more, less or as interesting? Is your job now harder, easier, or about the same? Do you have more, less, or about the same amount of work? The responses to these questions form the basis of our analysis of job satisfaction in the context of nonprofit workplaces deeply engaged in implementing information technologies.

Continuous learning in information technology was identified in several of the questions as an important contributor to job satisfaction. One professional said, "It's like a bonus to be given the opportunity to learn these new skills." Another professional saw the opportunity for learning as an incentive to continue working for the agency. An executive felt that "Everyday, it's like a new challenge, and that's interesting to me, so it really does kind of keep my morale up and that part of the job is enjoyable." Continuous IT learning was mentioned at every organizational level as an enjoyable activity that boosted job satisfaction. Other respondents mentioned increased access to information, the immediate gratification of completing a task quickly, and the freedom to design reports and control workflow as reasons technology has increased their interest in work and their job satisfaction.

The development of technological skills also increases one's marketability, according to both executive and professional staff. With increasing computer skills, opportunities for promotion were thought to increase both inside and outside the agency. One professional was "thinking of even entry-level staff that we've given the opportunity to have computer training. Once they have learned it and mastered it, it makes them a more viable candidate for the next level of positions. So I think at every level it provides opportunity for advancement." Another professional noted that "as far as skills I have and their marketability outside of here, I certainly

have become much more marketable than I would have been five or ten years ago.”

Interestingly, none of the support staff reported that increased competence in information technology was likely to result in promotion opportunities inside the agency or make them more marketable to other employers.

Flexibility in completing work and control over work tasks are also important to employee satisfaction. One professional noted, “One of the reasons that I really love my job is that it is never doing the same thing.” Task variety helps maintain interest in work. Another professional related that “Yesterday, I was able to pull this damn budget up, put it in an e-mail, and send it out. It was taken care of. It’s important to see that complete. That’s something that I think is different that IT has really succeeded in affecting, at least partially.” Immediate gratification gives the worker an instant sense of accomplishment that may be more difficult to achieve in a human services organization where results are often long-term and difficult to define. In terms of managing work tasks, Kraemer and Danzinger (1990) see computerization as having increased employees’ “sense of control over certain aspects of the job including mastery over relevant information and improved communications” (p. 598). A professional noted that she found her job more enjoyable by “being able to not have to rely on other people as much if I need something instantly. I can have it because I know how to do it.” Control over work also included increased access to information.

While job satisfaction overall appears to have increased due in part to information technology, computers also bring frustration that decrease employee satisfaction. One frustration that may be somewhat unique to nonprofits is the relative slowness of the sector to enter the

information age. Several professionals mentioned their relief at finally getting computers and technological training. One professional said “I think people feel better about their jobs because it’s a little bit more up-to-date” with the influx of computers. Clearly, nonprofit employees recognize the organizational value of computers and express frustration with the sector’s slow embrace of technology. Another major problem, which may be exacerbated by the scarcity of resources devoted to IT in the nonprofit arena, was the lack of technical support and training. An administrative staff member noted repeatedly, “If you don’t know what you are doing then its disastrous. It’s frustrating if you don’t know.” One agency does not have technical support on the premises. Staff members rely on each other to troubleshoot problems and to teach one another the ins and outs of specific programs.

## **Workload**

“It doesn’t feel like more work. It is more. If you were to take away my computer I couldn’t get done what I do now.” Administrative support staff

The findings on changes in employee workload as a result of technology are interesting if somewhat puzzling. Kraemer and Danzinger (1997) note that technology has “expanded the number of tasks expected of workers and the array of skills needed to perform those tasks” (p. 103). Given the increased task and skill demands, one might expect job satisfaction to decrease. Yet, findings here do not bear this out. Virtually all respondents agreed that workloads had increased with the use of technology. Only the Information Systems Director at one site claimed his workload had decreased due to his ability to troubleshoot from remote access sites as opposed to going to each location. Individuals attributed the increased workload to many

factors. One executive saw more work because “it opens up so many more avenues of thought and ideas that you never thought you’d reach until maybe five years down the road or something like that.” More options may push individuals to study and understand a greater array of choices creating additional work.

Several respondents noted the increased need for training and keeping up with changes as increasing their workloads. The hope is that upfront increases in workloads associated with training will be offset later by decreased workloads once everyone understands how to fully use the technology. The rise in managerial expectations leads to an increase in the demand for more sophisticated data while the upsurge in accountability demands by the government increases the necessary reporting in each agency.

Yet, given these increased workloads, few people seemed to have lowered job satisfaction as a result. Again, opportunities for continuous learning, the ability to be more creative, and the control over work processes appear to mitigate dissatisfaction that might be associated with a workload increase.

### **Worker Skills**

“As I became more familiar with the system, my tasks did change. I was able to perform higher difficulty of tasks.” Administrative support staff

There is some debate over whether technology increases or decreases worker skill. The demand for workers with both technical skills, including software knowledge, word processing

and spreadsheet capability, and basic skills, including math and communication competencies, is also growing (Lerman and Schmidt, 1999). The flexibility technology allows in production can translate into a workforce with a broader technological skill set (McConnell, 1996; Lerman and Schmidt, 1999). Employees now have an array of ways their daily work can be completed.

However, new technology may also result in a mismatch between workers and the new jobs technology requires. There is no guarantee that jobs which are transformed by technology will be suitable for the workers in those jobs (Laver, 1989; Economist, 1995). The dimensions of the mismatch vary across organizations, jobs, and workers. There is a "dynamic process at work in which some skill requirements are raised, while others are reduced" (Hodson and Parker, 1988, p. 5). While the skilling theory is more widely accepted, the deskilling of the labor force remains an area of investigation.

The current study is clearly an example of upskilling. Only one respondent felt that she used the same level of skill regardless of the technology. All other respondents pointed to the introduction of technology in their agencies and the training they received, whether formal or informal, as an example of increased skills. What is more interesting is the finding that emerging technological skills require the development of additional non-technological skills. The norm in nonprofit agencies may be for individuals to help train and coach one another when there is little in the way of a technology training budget. One such administrative helper felt that IT "helps with your interpersonal skills too, with people. Because you have to sit down with these people and you're trying to explain something to them 15 different ways trying to make them understand. I feel more like a teacher sometimes." A professional mentioned the need to "have to be a person that's willing to negotiate with people that don't have a face at all." Since much

of his dealings are via e-mail, he had to learn additional negotiation skills and to trust individuals he had never met. These are just a few of the non-technical skills information technology demands.

## **CONCLUSION**

Given the nature of our inquiry into how information technologies affect work in voluntary sector organizations, we were particularly interested in whether interviewees perceived a connection between the changes identified in the interview and the agency's status as a nonprofit. Two themes dominate the responses: (1) the belief expressed repeatedly that nonprofits are always strapped for resources; (2) explanation of the importance of nonprofit status in terms of nonprofit relationships with government.

The institutionalized belief in the condition of chronic nonprofit resource scarcity found expression in many responses. Most often interviewees reported that the relevance of their organization's status as a nonprofit lies in the fact that finding revenues for anything, including funds to support IT development, is always difficult. According to one executive: "...being a nonprofit it was always an obstacle. Where are we going to get the money to do this?" A clinician referred to the perceived tough trade-off between spending resources to provide more direct care to clients vs. more computer training for staff. "Now how does that affect the IT system? Well, we're not going to spend, we don't have a lot of extra dollars, so we're not going to spend a lot of money on computer training."

As noted in the methodology section, a particular focus of this research is on the relationship between the effects of information technology on the nonprofit workplace and nonprofit involvement with government through the contracting process. Interestingly, many responses to the final question about the relevance of the IT story to the organization's status as a nonprofit were articulated in terms of the agency's relationship with or dependence on government.

Several respondents attributed their agency's recent embrace of IT to the availability of government funds specifically for IT development or to requirements imposed on the agency by government funders. A different set of respondents emphasized the importance of new government accountability procedures. One professional staff member observed: "What I think has changed over the years is the amount of documentation that is required now. Because of federal and state regulation we have to be better at documenting what we do and how we do it in order to be paid for our services." An administrative support staffer mentioned another relevant consequence of the nonprofit-government contracting partnership—the need for compatibility between information systems in both sectors. "And it so happens that there's now the big push with a lot of the programs: get as up to date as you can because their (government's) software is ever evolving and we're not really quite compatible."

A more critical analysis comes from an executive manager who noted, "We are required by government to report so much more meticulously, too much, no question. And this definitely would not have happened had there not been computers." Another manager argued that the

excessive amount of minute information about nonprofit performance now required by government has been used as the basis for future decisions that actually hurt the nonprofit.

So, there's no ifs, ands, or buts that we're much more susceptible to pressure by government because technology is available that will allow them to process that information. I think that information has been used against us in some ways because they have more access to exactly how you spent your money in the past. They've used that as a club to prevent you from spending money in the future.

A final point to be made pushes the analysis in a different direction, away from distinctions based on sector auspices. Several executives spoke with emphasis about the need for technology in order to be competitive, regardless of sector. "I think you need technology today whether you're a nonprofit or for-profit, I don't think that's the issue. I think you just need technology to do the job." Although several other respondents also downplayed the relevance of nonprofit status, the majority of interviewees described ways in which their agency's nonprofit status figured into information technology issues.

### **QUESTIONS FOR FUTURE RESEARCH**

The findings reported in this study raise intriguing questions in need of additional research. One theme that recurred in several interviews was the effect of technology on mission. Can technology help an agency fulfill its mission? Should mission be a consideration when deciding on and implementing new technology? Nonprofit personnel seem aware of the

connection at some level but it is not clear from this study just how carefully decision makers examine the relationship between mission and technology.

Another theme that was touched upon in a variety of ways in several interviews was organizational culture. How does the unique nature of nonprofit organizational cultures interact with information technology? Can we identify systematic relationships between characteristics of nonprofit culture and different effects of information technology on the work performed in nonprofits? It seems probable that organizational culture will affect issues related to training, prioritizing, decision-making, and the distribution of power. The specific ways in which culture and technology intersect in the nonprofit sector are still to be examined.

Finally, this study focused on a group of human service nonprofits that contract with government in the same region. Results might vary if the study were repeated in a different service area within the sector, such as arts and culture, in a different region of the state or country, and with agencies that do not contract with government. All of these factors may or may not result in a different set of findings.

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