Who Owns my Soul? The Paradox of Pursuing Organizational Knowledge in a Work Culture of Individualism

Eileen M. Trauth, Ph.D.
Northeastern University
214 Hayden Hall
Boston, MA 02115, USA
1-617-373-2759
trauth@neu.edu

ABSTRACT

A meta-analysis of themes resulting from some human resource studies of information professionals is contrasted with trends in IT worker human resource management in order to highlight an apparent paradox in the path toward organizational knowledge management. Findings from three studies of information sector workers in Europe and America are contrasted with data from a recent information technology workforce convocation conducted in the United States in order to focus attention on the paradox in the movement toward knowledge management and organizational productivity. On the one hand, the human resource studies document the shift in focus from *individual productivity* to *organizational productivity* as the means to competitive success. Hence, the management of organizational knowledge has become paramount. At the same time, however, the hiring practices of information sector employers -- as brought out at the IT workforce convocation -- are encouraging employees to focus on individual rather than organizational gain. In order for firms to reap the benefits of their intellectual assets this paradox must be addressed.

KEYWORDS

Information Professionals, IS Human Resource Issues, IS/IT Profession, Knowledge Management, Knowledge Worker, Organizational Productivity

1. INTRODUCTION

At the close of the twentieth century, the American economy is moving beyond the information age and into the knowledge age.

During the information age American businesses came to recognize that information was a valuable resource separate from the technology which stored, retrieved and processed it.[1] The elevation of the senior information technologist into the Chief Information Officer resulted from this recognition, as did the movement toward conscious management of information as a valuable corporate asset.

In the final decade of this century, American society has moved into the knowledge age as organizations are coming to understand the full ramifications of using information for competitive advantage. Companies are no longer seeking differentiation on the basis of technology use alone, but also on the basis of the value-added benefits which derive from adding intelligence to the interpretation of a firm's information. Hence, the term "knowledge management" has entered the corporate and research lexicons. This term also heralds a shift in focus from *individual productivity* to *organizational productivity* as the measure of competitive success. Along with the recognition of the quality of output as the ultimate measure of productivity is the recognition that individual efforts need to be enacted within a vision of the whole. Thus, in order to achieve organizational productivity, knowledge must be shared among its members. For these reasons, the management of organizational knowledge has become has become a key theme in the 1990's.

Knowledge management and organizational productivity have become important research topics, as well, as the title of this conference attests. The study of knowledge management is broad in scope, from the tools to facilitate knowledge storage, retrieval and sharing, to evaluating the value of knowledge, to considering the human resource implications for information professionals. This paper is concerned with a specific human resource issue with respect to information professionals and knowledge management. The purpose of this paper is to explore an emerging paradox with respect to the motivation of information professional's to participate in the knowledge management

---

[1] See, for example, [17].

movement in American organizations.[2] On the one hand, information professionals are encouraged to contribute body and soul to the knowledge sharing effort. On the other hand, there is evidence that information professionals are increasingly being stripped of their humanity as they are prized not as people but as skill sets. The question, which this paper explores, is the following:

> What are the implications of the changing employer-employee contract on the motivation of information professionals to participate in knowledge sharing?

This question is addressed the following way. First, the findings of previous studies of the work and work environment of information professionals are presented. These findings are used to develop a portrait of knowledge workers and their environmental needs. The emerging paradox is then presented by contrasting a work environment supportive of knowledge workers with a picture of emerging human resource management trends regarding information professionals in America. From the juxtaposition of these two images comes a reasonable response on the part of information professionals -- one that speaks to motivation and is in conflict with the direction of the knowledge management movement.

2. METHODOLOGY

This paper draws upon findings from three studies of human resource issues for information professionals conducted by the author. One is a mixed methods study of the skills and knowledge requirements of information professionals.[3] The second is an ethnographic study of information professionals and their managers in multinational and indigenous information sector companies in Ireland.[4] The third is an interpretive study of the behavior of IT champions in the Netherlands.[5] Each of these studies considered knowledge and skill requirements, motivational factors, productivity, stimulating innovation and quality of worklife issues with respect to information professionals.

The information from these studies is contrasted with the information obtained from participant observation at the IT Workforce Convocation which was held in January 1998 in Berkeley, California to consider the "IT workforce crisis" in the United States. The Information Technology Association of America (ITAA) commissioned white papers on various aspects of this "workforce crisis" as background to the symposium. This two-day, high visibility symposium was well represented by the government. Several cabinet members were in attendance and Vice President Gore gave the (videoconferenced) keynote speech. The private sector was also represented by key players in the information sector. Noticeably absent were the voices of the IT

workforce which was "in crisis" and academics who carry out the research about and educate these IT workers. As a participant observer at this symposium, this author acquired data from both the background papers, attendance at the sessions and interaction with the participants.

3. INFORMATION PROFESSIONALS IN THE KNOWLEDGE AGE

The dawn of this knowledge age has been accompanied by the recognition that individual technical skill, alone, will not satisfy the demand for organization-level information and knowledge. The implications of this recognition for the development of IS human resources have led to a changed definition of the IS professional and her/his education and career path. This section constructs a picture of knowledge workers and their environmental needs which is pieced together from the findings of several research projects.

3.1 Skills and Behavior of Information Professionals

By the early 1990's there was evidence of a paradigm change in the information systems field. The traditional role of IS as the sole proprietor of information was being challenged by the end user revolution that got underway during the previous decade. But while IS may have given up some direct control it did not lose its importance. Indeed, the pervasiveness of IS and the recognition of the critical importance of information served to enhance the importance of IS within an organization. But another effect was that the skill set began to expand along with the changing role of information and IS in businesses. There was a shift in emphasis away from purely technical capabilities and knowledge of traditional systems development techniques toward the inclusion of strong interpersonal skills and broader understanding of business operations as well.

In order to better understand the new skills and knowledge that would be required of information professionals in the 1990's an exploration of the changes in their work was undertaken at the beginning of the decade. A mixed methods study conducted in America which employed interviews, focus groups and surveys explored the changing qualifications for information professionals.[6] The trend toward organizational value-added was clear. The relative importance of IS tasks that resulted from this study prefigured today's organizational knowledge management movement. The four themes that emerged speak directly to organizational knowledge: understanding the business; integrating technology with business processes; linking information to corporate strategy; and managing the data reservoir [4, p. 10].

Confirmatory evidence about the skills and behavior required of information professionals in the 1990's and beyond came from a multi-year, ethnographic investigation of information

---

[2] Focusing the discussion on the American context is not meant to imply that similar phenomena are not occurring elsewhere. It is simply that the evidence being used to argue for the paradox comes from the American context.

[3] For further discussion of the methodology, see [7] and [22].

[4] For further discussion of the methodology, see [14] and [23].

[5] For further discussion of this study, see [5].

[6] For discussions of various facets of this study see: [3], [4], [7], [21] and [22].

professionals working in Ireland's information economy.[7] The work and work environment of these information professionals was viewed through the lens of the post-industrial society of which the information economy is a part.[8] The characteristics of the work, which emerged from this study, reinforce the growing focus on bringing "intelligence" to bear on the information processing function. This "intelligence" has two meanings. It refers to *organizational intelligence* as a higher order form of information processing. It also refers to the characteristics and behavior of information professionals in performing their work.

Unlike the rigid work of the industrial-era, information work is highly dynamic, requiring the flexibility to change on a moment's notice, and the intellectual capacity to learn and adapt. In the realm of information work productivity shifts from individual, assembly line measures to an organizational-based evaluation which looks to the quality of an integrated output. Workers engaged in such endeavors need to carry out their specific tasks with a vision of the whole. They must not only understand their own work but how it fits into the larger picture. Doing so requires that communication and organizational understanding be interleaved with the mix of technical skills needed to accomplish one's work. It also requires worker flexibility and willingness to adapt one's work and workstyle to suit the changing needs of the organization. Finally, information professionals need to contribute their creativity to the organizational knowledge base. Accompanying the ever-changing nature of information technology is the need for ongoing innovation.[9]

The depiction of the twenty-first century information workplace presented in the research literature has been echoed by the management literature.[10] In writing about knowledge workers, Drucker [2] describes individuals who are capable of adding value at the group level, who can handle a complete task while keeping in mind the big picture within which it fits. Such people engage in continuous learning to adapt and grow as organizational needs change.

3.2 Quality of Worklife for Information Professionals

The expectation in the knowledge age is that information professionals will adapt their knowledge and skills to suit the requirements of organizational productivity. But in satisfying this expectation more attention is being focused on the role played by the organizational climate. Thus, the human resource and general management role in this transition from narrow, information workers to broader knowledge workers becomes more important than ever. As knowledge becomes recognized as a key resource in the post-industrial organization, the "knowledge possessors" -- the people -- require ever more careful attention.

A study of the personal characteristics of successful IT champions in The Netherlands [5] highlighted ways in which the work environment contributes to successful innovation. The value of making the IS people involved in the project feel important and recognizing their efforts and overtime contributions was emphasized. When profiles of three specific IT champions were developed, the defining characteristic of each one reinforced the influencing role of the environment in which the innovation occurred. For one champion, there must be a culture of trust. Another spoke of nurturing creativity. This man sees his role as one of creating a "green area" within which the vitality, which feeds creativity, can flow. The third champion identified gaining organizational acceptance as the key characteristic of his role.

These findings are consistent with those from the study of information professionals in Ireland discussed earlier [16]. In that study, there was consistency about key motivational factors. Financial reward was necessary but not sufficient. Intellectual stimulation, recognition, a feeling of accomplishment, feeling a part of the whole and opportunities for social interaction were the determining factors in decisions about leaving one's current position.

The research cited in this paper supports the claim that the goal of effective IS human resource management in the knowledge age is organizational productivity. Further, it suggests that this goal is best achieved in an environment that emphasizes commitment, creativity and value-added intelligence. The conclusion of this argument is that the motivation for today's information professionals to effectively produce organizational knowledge is heavily influenced by environmental factors.

4. EXPLORING THE PARADOX

Herein lies the paradox. At the same time that a case can be made for focusing greater human resource management efforts on strengthening commitment, another line of evidence suggests that the exact opposite is resulting from emerging human resource practices. In this section the paradox is presented by offering some contrasting data about American human resource management trends regarding information professionals.

> The new paradigm in employer-employee relations is that the employer is not responsible for the employee's career, the employee is responsible. Translating this, it means that you come to work, you work and we pay you. When we think that the work can be done just as well and cheaper by someone else, we no longer have any obligation to you. If you do not keep up with the technology, then we will replace you. The employee's career is their [sic] own problem. [1, p. 11]

In tandem with the view of the human resource requirements of knowledge workers and information professionals presented in the previous section, is emerging another view. It is a view of a new workplace with new relationships and new rules. This new workplace was the focus of the Information Technology Workforce Convocation of January 12-13, 1998 in Berkeley, California. This convocation sponsored by an IT industry group -- Information Technology Association of America -- was

---

[7] According to Porat [12] the information economy includes the workers and firms who produce information technology, software, systems and information content.

[8] For discussions of various facets of this study see [15], [18] and [20].

[9] See [19] for further discussion of human resource issues.

[10] See, for example, [11] and [13].

convened to discuss the "IT worker shortage" [24] and what to do about it.

In the course of presenting evidence that challenged the claim of an IT worker shortage, some participants presented a telling description of the new paradigm of employer-employee relations. The above quote from a briefing paper by the American Engineering Association's Manpower Committee articulates an emerging human resource paradigm in the American information economy. In this paradigm information professionals are to be managed as "skill sets" or "knowledge sources" rather than people. In its report, the AEA [1] charged that companies are over specifying skill requirements by imposing unnecessarily excessive specifications on skills needed. American industry is not devoting the energy and funds to training that it should; instead, it is looking outside the firm to fill new openings. Employers' behavior, the report concluded, indicates that they expect access to an instantly available supply of individuals exactly matched to their latest experience and educational specifications (p. 15) In this view, career development is a thing of the past.

Norman Matloff [8,9] vigorously expanded on these themes in his papers for the IT Workforce Convocation. In addition to the charges of over specification, he cited other attitudes and practices, which serve to undermine the sort of work environment that would motivate people to share intellectual assets. His main charge is that at the heart of industry's human resource behavior is its desire for ever cheaper labor. This cheap labor comes from two sources: recent college graduates and foreign workers. An additional benefit of hiring recent graduates is that employers can have fewer concerns about employee's quality of work life: recent graduates are generally single and can, therefore, work large amounts of overtime without being constrained by family responsibilities (p. 4). A hiring manager in a Silicon Valley firm told Matloff:

> . . . the top management in our company has directed us to focus our hiring on new or recent graduates only. These are people who have no family and can work long hours. Yes, salary is a major factor, that's what it boils down to. You work the young ones for five years and then replace them. I have objected to this, because I believe that many of our projects are being hurt by the fact that everyone is so inexperienced. [8, p.5]

In view of the pace of technological change, an effect of external hiring of cheap new labor in very specific specialty areas is the displacement of experienced mid-career professionals, those who, ironically, have the most tacit organizational knowledge. Citing data about computer programmers from the National Survey of College Graduates in 1993, he shows that 20 years after graduating from college, only 19 percent are still working as programmers. While it is true that some of these individuals have moved into management or other aspects of the information profession, it is also true that many left involuntarily.

The evidence presented by these critics of the IT worker shortage, suggests that current human resource practices in the information sector are working directly against the goals of organizational

productivity and organizational knowledge management discussed previously. The logical outcome of these kinds of hiring practices is personal career management based upon individual, not organizational, gain.[11] In such an environment what is the motivation for employee commitment to sharing such an important asset as their expert, tacit knowledge? The environment of mutual lack of loyalty breeds an "every worker for her/himself" mentality.

Matloff suggested that employers are shooting themselves in the foot under their current policies (p. 3). Rather than work to hold onto general programming talent that transcends a particular technical implementation, employers are encouraging self-oriented individualism on the part of employees. If computer science graduates expect to be structurally employed within 20 years they cannot be blamed for continuous job hopping in search of ever higher salaries -- while they can get them.

But beyond the issue of the productivity declines associated with continuous employee turnover is the larger issue of the creation and protection of organizational knowledge. Zack's recommendations for better alignment of knowledge management with corporate strategy include paying careful attention to the management of the tacit as well as the explicit knowledge in the firm. He praises those who:

> . . . protect their knowledge resources by recruiting and developing intelligent, loyal and committed employees and support them with a culture of learning, commitment and collaboration. While the leaner, more abstract explicit knowledge may diffuse out of the firm, the richer, tacit knowledge providing the firm its sustainable knowledge-advantage still remains within the firm. That tacit knowledge is what enables the firm to learn faster and to develop more creative and valuable insights than its competitors. . .
> [25, p. 12]

This recommendation gets to the heart of the motivation paradox. A learning culture supporting commitment and collaboration is exactly what the research on emerging skills and knowledge is calling for. Yet evidence from the information workplace paints a very different picture. In that world, the most logical thing to do would be to pull in, to take care of oneself. This would mean holding back one's tacit knowledge in the interests of job security or job mobility. If intellectual assets are the currency, on what basis does an employee trade once she or he has given it up?

5. CONCLUSION

A significant challenge for organizational knowledge management and organizational productivity is to coordinate the goals of knowledge management with emerging human resource management practices of information sector employers. As a practical matter, there is a career cost-benefit tradeoff. There needs to be a balance with respect to what a worker gets in exchange for what s/he gives. An intelligent, capable information

---

[11] In addition, the individualism inherent in the American culture [6] might serve to exacerbate this tendency.

professional needs some motivation to share highly valuable tacit knowledge about the firm or the industry. Changes as simple as giving more attention to training and career development on the part of employers are a step in the direction of gaining greater employee commitment, which, in turn, can enhance organizational knowledge management.

The intention in writing this paper was not to propose a solution to the paradox. It is much too complex an issue to be resolved here. Rather, the goal was to call attention to an important issue that may be hindering the best efforts towards organizational productivity and organizational knowledge management. In addressing this paradox we need to create a fit between the new workplace paradigm and the human resource requirements of the knowledge age.

6. REFERENCES

[1] AEA Manpower Committee. Information Technology Workforce Findings and Recommendations. American Engineering Association, Inc., 1998.

[2] Drucker, P. Post-capitalist Society. HarperCollins Publishers, New York, 1993.

[3] Farwell, D.W., Kuramoto, L., Lee, D., Trauth, E.M., and Winslow, C. Information systems education and industry requirements in the United States: Implications for vendors. Spectrum (February 15, 1991), 17-1 -- 17-7.

[4] Farwell, D.W., Kuramoto, L., Lee, D., Trauth, E.M., and Winslow, C. A new paradigm for IS: The educational implications. Journal of Information Systems Management, 9, 2 (Spring 1992), 7-14.

[5] Heng, M.S.H., Trauth, E.M. and Fischer, S.J. An Innovation Model of Information Planning. vrije Universiteit Amsterdam, Faculty of Economics and Econometrics, Department of Information Management and Information Technology Research Memorandum 1994-7, Amsterdam (March 1994).

[6] Hofstede, G. Culture's Consequences: International Differences in Work-Related Values. Sage Publications, Beverly Hills, CA, 1984.

[7] Lee, D.M.S., Trauth, E.M., Farwell, D. Critical skills and knowledge requirements of the IS profession: A joint academic/industry investigation. MIS Quarterly, 19, 3 (September 1995), 313-430.

[8] Matloff, N. Debunking the Myth of a Software Labor Shortage. Position Paper, IT Workforce Convocation (January 10, 1998).

[9] Matloff, N. http://heather.cs.ucdavis.edu/itaa.html

[10] National Information Technology Workforce Convocation: Task Force Reports (Berkeley, CA, January 12-13, 1998).

[11] Nonaka, I. and Takeuchi, H. The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation. Oxford University Press, New York, 1995.

[12] Porat, M. Information Economy: Definition and Measurement. Office of Telecommunications, Washington, D.C., 1977.

[13] Tapscott, D. The Digital Economy: Promise and Peril in the Age of Networked Intelligence. McGraw-Hill, New York, 1996.

[14] Trauth, E.M. Achieving the research goal with qualitative methods: Lessons learned along the way in Information Systems and Qualitative Research. A.S. Lee, J. Liebenau, and J.I. DeGross (eds.), Chapman & Hall, London, 1997, 225-245.

[15] Trauth, E.M. Educating information technology professionals for work in Ireland: An emerging post-industrial country in Global Information Technology Education: Issues and Trends. M. Khosrowpour and K. Loch (eds.), Idea Group Publishing, Harrisburg, PA, 1993, 205-233.

[16] Trauth, E.M. The Evolution of an Information Economy. Book manuscript.

[17] Trauth, E.M. The Evolution of Information Resource Management. Information and Management, 16, 5, 1989, 257-268.

[18] Trauth, E.M. Impact of an imported IT sector: Lessons from Ireland in Information Technology Development and Policy: Theoretical Perspectives and Practical Challenges. E.M. Roche and M.J. Blaine (eds.), Avebury Publishing Ltd., Aldershot, UK, 1996, 245-261.

[19] Trauth, E.M. Leapfrogging an IT labor force: Multinational and indigenous perspectives." Journal of Global Information Management, Special Issue on Global IT Human Resources, Forthcoming in 1999.

[20] Trauth, E.M. Women in Ireland's information industry: Voices from inside. Eire-Ireland, 30, 3 (Fall 1995), 133-150.

[21] Trauth, E.M. and Farwell, D. Implementing a changed vision of the IS professional: An industry-education partnership. SIM Network (June-July, 1991), 1-4.

[22] Trauth, E.M., Farwell, D. and Lee, D. The IS expectation gap: Industry expectations versus academic preparation. MIS Quarterly, 17, 3 (September 1993), 293-307.

[23] Trauth, E.M. and O'Connor, B. A study of the interaction between information technology and society: An illustration of combined qualitative research methods in Information Systems Research: Contemporary Approaches & Emergent Traditions. H.-E. Nissen, H.K. Klein and R. Hirschheim (eds.), North-Holland, Amsterdam, 1991, 131-144.

[24] Virginia Tech. Help Wanted: A Call for Collaborative Action for the New Millennium. Executive briefing of a study on IT workforce shortages. Author (January 12, 1998).

[25] Zack, M.H. Developing A Knowledge Strategy. Northeastern University, College of Business Administration, Working Paper, Boston, MA, 1998.