RIDING OUT THE APOCALYPSE: THE OBSOLESCENCE OF TRADITIONAL ARCHIVY IN THE FACE OF MODERN CORPORATE DYNAMICS

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A 'Parabull': of cows, cars, and starship captains

In the beginning, there was the cowpath. It was time-worn, beaten down by generations of cows as they headed to water—not a straight line, but a weaving path that avoided obstacles. Then came the car. It looked at the path the cows had wrought, and saw it was good. So it paved over the cowpath, and got to the water faster than a cow could ever dream of. Then came the starship captain, whose transporter technology gave him the ability to get to the water quicker than anything this side of light waves. Not only did instantaneous travel make land-based obstacles irrelevant by removing spatial issues from consideration altogether, it radically altered man's perception of the universe.

—The Galactic Encyclopaedia of Folk Tales (2077 ed.)

Jumping back a few generations from this fanciful tale, we can see that it has parallels in the modern world of corporate archives. Today's corporations are changing at an unprecedented rate, and that pace is accelerating ever more as the millenium approaches. Unfortunately, the philosophical raison d'etre supporting corporate archivy—that companies cannot know who they are or where they are going unless they know where they've been—has not kept pace. It is still the same cowpath that was used in the golden age of archival advocacy (and not, coincidentally, large corporate centers!) during the 1970s and early 1980s. Worse yet, it appears this limited conception of utility still influences the way corporate executives perceive the role of an archives. Juxtaposing this misguided philosophical foundation with managerial misperceptions of potential is a prescription for disaster, and can only serve to place corporate archives increasingly at risk as time goes on.[1]

It used to be that a corporate archivist's greatest fear was that his or her organization would deemphasize the importance of its history. While that deemphasis is more of an issue than ever for many parts of the corporate world, it is almost relegated to irrelevancy in the face of what author Rick Tetzeli has imaginatively tagged as "the two horsemen in the apocalypse of corporate efficiency": technology and downsizing. Changing management philosophies that emphasize a shrinking corporate center through decentralized and outsourced functions have combined with a firm commitment to desktop access through PC and network technology to radically alter information channels in most corporations. These alterations have significant implications for traditional archival precepts, and will force corporate archivists to reexamine what their goals are and make some hard choices concerning how to best accomplish them.[2]

Outreach: Victims of Success

Traditionally, specialized repositories such as archives or libraries have pinned their funding hopes to the creation of an enlarged user base. The argument was that high use indicated demand, and demand indicated utility and, more importantly, a demonstrated need. The assumption was that dollars would flow to a demonstrated need like beer to the bleachers at a ballgame. High use was seen as the best way to justify existence, and the literature abounds with discussions of the need for outreach as a survival tool.[3]

Now, however, there are disquieting indications in the corporate world that that assumption is no longer accurate. At Aetna, one of the nation's leading healthcare and financial services corporations, the Corporate Information Center, a state-of-the-art business library, had successfully marketed itself to the organization through the 1980s and into the 1990s—customer surveys consistently characterized the CIC's services as excellent over 90 percent of the time. In 1996, as part of a corporate center expense reduction drive, senior management instructed the CIC to reduce its $1.9 million budget by a third, regardless of how many requests the department handled. Under these financial strictures, the department was forced to alter staffing levels, mission, access policies, products and services—despite the fact that there was no user ground swell demanding change.

A more telling example of changing times is the story of Aetna's audiovisual function, another 1980s success story that has recently fallen upon hard times through no fault of its own. Aetna's AV met the company's internal and external audiovisual needs, producing educational films, company television broadcasts, and video and multimedia productions for conferences and other meetings. In 1991, the department handled 358 projects, had a staff of 26, and a budget of $3.8 million. But management saw the department as too easy to use; it was too accessible, which resulted in it being used too often. Which, in turn, made it too expensive a proposition for the company. The result? Aetna eliminated the department in a downsizing wave early in 1995. By year's end, the department still had handled 156 projects (43.6% of 1991 levels). But its involvement in most of these had consisted primarily of serving as a middleman, farming out internal projects to external vendors. Staff levels had been reduced 88% to 3, and the budget had been cut nearly 87% to just over $500,000.

The rationale behind this move was that it was seen as the easiest way to reduce costs. Changing a culture of use that had evolved over decades would be a difficult and drawn out process; it would be quicker to eliminate the function entirely. Today, Aetna is reliant on external audiovisual vendors to meet its needs. They cost more on a per unit basis than the in-house function, but they are also harder to use, which, in the new logic, will soon reduce spending. In effect, the company placed an artificial barrier to usage in order to cut costs.

What is so unsettling about this new trend in corporate thinking is not that it is illogical. In fact, it is chillingly logical. What is disturbing instead is that it rarely follows the path of traditional rationality. In modern corporate America, companies don't eliminate the need or the use—just the positions. The implication for corporate archivists is that in a dollar-driven environment, time-honored notions of outreach may no longer be effective justifications for existence; in fact, they may actually become arguments for elimination.

Reference Issues: From Feudalism to Democracy in 80 Keystrokes

By the millenium, experts anticipate that 45% of the average corporation's information technology budget will be spent on building enterprise-wide information systems. This budgetary commitment will meld with the current management trend of flattening organizational structures to radically alter access to information in the 21st-century corporation. Unlike their paper-pushing counterparts from as late as the 1980s, the employees of the 21st-century corporation will be characterized by an ability to access the information they need, instantaneously, at their desktops. Instead of working through layers of corporate structure to obtain answers, future "knowledge workers" will dive into electronic channels and grab the internal and external information they need in a few keystrokes. That world is here today. In the corporate environment the emergence of Intranets and "push" technologies like Web-mounted news broadcasts have revolutionized the information environment. These technologies are imperfect to be sure, but improving daily at a palpable pace.

The emergence of this democratized information culture clearly holds some interesting implications for traditional concepts of reference. First, it suggests the elimination of physical fiefdoms. There will be less reliance on location as the advent of electronic storage and delivery removes physical barriers to information. The physical fiefdom will be replaced by intellectual fiefdoms—electronic or "virtual" repositories characterized by their cross-disciplinary capabilities, incorporating information culled from a wide variety of internal and external sources and media.

These developments suggest a new corporate information paradigm: The virtual repository will be staffed by "subject matter experts" who will be positioned close to internal clients (organizationally speaking), both to facilitate access and to better know their clients' businesses in order to more effectively anticipate information needs. Developing this close working relationship will be relatively feasible for corporations, which have fairly finite, consistent user bases. Ultimately, the development of this relationship between SMEs and their clients will result in more research products, regularly prepared—new product analyses, demographic studies, backgrounder reports,

standard question fact sheets, competitive analysis, organizational data, and stockholder data. The reasoning behind this anticipatory approach to reference is not new, but the emergence of enterprise-wide information systems makes it possible on a much larger, more comprehensive scale than ever thought practical. Properly managed, these virtual repositories hold the potential to truly be one-stop information shopping.

There will be a reduced reliance on face-to-face, or even voice-to-voice contact. While this might suggest the decline in the importance of the reference interview, more likely it will force subject matter experts to identify new ways of defining client needs, which will in turn accelerate the movement toward providing tailored information products that anticipate client queries. The virtual repository will also result in the reduction of public access spaces, as space costs money. Technology will be crucial here not only in terms of formatting and storage, but also in terms of delivery via networks, groupware, hyperlinks, automated finding aids, and electronic imaging. [4]

What are the implications of all this for today's corporate archivist? First of all, if the archivist is reading the organization's information environment correctly and is adapting to meet changes in it, then there should be a decreasing reliance on actual reference inquiries. The proactive corporate archivist should be working to tailor products for electronic access; but implied in this shift is the recognition that if the archives' existence is justified by the number of reference requests answered, the archivist may have to find other ways of measuring performance and effectiveness.

Secondly, in today's world the unique nature of reference at a corporate archives requires the staff to do almost all the research required to answer client questions. It is often more efficient for the archivists to tackle complex requests themselves, which could result in spending weeks sifting through the collection and throw the most flexible of year-long departmental plans out of whack. This focus on customer service has always been one of the ways a corporate archivist could demonstrate value, and therefore justify continued existence. However, in a corporate culture where end users expect to have all the information at their fingertips, corporate archivists will once again have to look for other ways to prove their worth.

Appraisal issues: The Irrelevance of Historical Primacy

Traditionally, the corporate archives has positioned itself within a company as a collector of material that documented the growth and development of the company. In practice, this has almost always been an unreachable ideal as business needs, company size, organizational alignments, and limited resources made a complete fulfillment of this objective difficult (if not impossible) from a purely practical perspective. Nonetheless, the concept of impartial historical primacy—that the archives chief utility to a corporation and society is as a historical resource—remains the noble goal to which most business archives appraisal theory still aspires.[5]

But trends in today's corporations have a way of making even state-of-the-art appraisal theories obsolete. Of the two main appraisal philosophies currently being debated in business archives circles—structural and functional analysis—neither matches up very well with the reality of today's large companies.

The precepts of structural analysis are that organizational structures reflect the business realities that produce records, and any changes over time in structure stand as an accurate portrayal of the evolution of the firm. However, these precepts are philosophically far too rigid for the living records of a corporation. Any appraisal strategy based on corporate structure is seriously undermined by the extreme fluidity that characterizes the organizations of today and, as experts predict, tomorrow. Author Nick Blozan writes, "Management gurus are predicting the rise of the Virtual Corporation [where] companies will form temporary strategic alliances to take advantage of fast-changing business opportunities, only to disband when the tasks are accomplished and move on to the next project." Even a previously staid insurance organization like Aetna has experienced since 1991 three major corporate reorganizations, a $4 billion divestiture, an $8 billion acquisition, and a host of lesser alterations at divisional levels. It appears that corporate fluidity makes structural analysis a much more viable approach for records that are either inactive or closed, and therefore much more apropos for business repositories that acquire business records than a corporate archives with open record groups.[6]

Functional appraisal is philosophically more flexible in its approach to business records in that it encourages the documentation of function, which ostensibly will remain the same in most corporations regardless of how the structure of the organization is changed around it. But like its structural sister theory, functional analysis has a basic premise of documenting a company at a level far beyond what the company will ever need for its own purposes. In corporations, where archivists generally work within the strictures of limited resources, elimination of 'nice-to-have' functions, departmental politics, employee territorialism, records retention programs, far-flung divisional and branch offices, and sheer anti-historicalism, it may be asking too much of them to even begin contemplating a systematic collection policy that approaches the sophistication of these philosophies. It may be that the greatest applicability for the corporate archivist of these collection theories would be as the philosophical underpinnings of an arrangement and description policy—helping them manage what they already have and what they may get, by plan or by those seemingly abhorent accidents of evidence.[7]

In addition, both appraisal theories are undermined by the rapid approach of the paperless office. "A number of developments have recently combined," notes Leo Gotlieb in a Canadian accounting publication, "to bring the paperless office much closer to reality than most people think." Electronic data interchange, office application software "suites" with seamless multimedia merging capabilities, fax software that eliminates the need for hard copy, e-mail attachment capabilities, intranets and 'groupware' that allow documents to be shared and worked on by any number of people, trends in telecommuting, inexpensive storage capabilities, increases in network capacity and modem speed, and sophisticated compression/decompression techniques are all making it possible to bring multimedia applications to individual desktops without excessive waits—and you don't have to be a technocrat to see that information flow is changing even as you read this. Even though research in the early part of the 1990s indicated that only 10% of corporate records were machine-accessible, some experts predict that by the millenium over half the information in organizations will be in digital form. "In short," Gotlieb points out, "it has become both possible and practical

to create, access, and work with an almost unlimited variety of computerized information, without conversion at any stage."[8]

What are the implications of this future for corporate archivists who are overtaxed just trying to manage paper documentation? Some would argue that this is an argument for archivists to position themselves as electronic records experts—to recognize that the future is technology, and that they have to adapt to it if they hope to do their jobs (as defined) and continue to document the company. In a sense, though, migrating to an electronic storage function based upon traditional archival precepts may turn out to be too tough a financial, technological, and political nut to crack for institutional archives already pushed to the brink.[9] This conclusion may prompt many corporate archivists to give up the ghost of historical primacy; in essence, to abandon any pretension of being able to historically document a corporation at a meaningful level beyond its public face, and settle for collecting only the most rudimentary of documents—annual reports, board minutes, marketing and product information, divisional and employee publications, press releases, advertisements, and human resources manuals. However, it is likely in today's corporations that any archives assuming such a niche strategy would soon be trampled under the hooves of the apocalyptic horsemen. Since being left on the wayside of any corporate efficiency movement would not provide the personal security that an archivist desires and the permanence archival records demand, the question for a corporate archives is raised: Is there life after history?[10]

Gatekeepers to Wisdom: The Power of Knowledge Managers

From the perspective of the corporate archivist, the declining relevance of traditionally accepted approaches to outreach, reference, and appraisal may indicate that it is time to sit down and take a good hard look at what an archivist's role in today's corporation should be. The growing gap between the profession's precepts and corporate realities have added a sense of urgency to the issue. Whatever the answers that are reached by corporate archivists, a few basic generalizations will be true. The answers must be individualized, seamlessly fitting the needs of the organization; be proactive, anticipating change rather than reacting to it; and most importantly, be flexible—not limited by constraints of what conventional wisdom decrees an archives is supposed to be.[11]

If traditional archival beliefs and practices are becoming increasingly irrelevant, then what can archivists turn to that is pertinent? Clearly the solution isn't in the past, so the archival equivalent of the transporter must of necessity lie in the future. And what does the future hold? One possible vision is the world of knowledge management, the creation, capture, sharing, and use of a company's best thinking about its products, services, processes, market, and competitors. Knowledge management involves gathering internal information and combining it with related external data in order to: speed organizational access to information, eliminate redundant collection processes, enhance organizational synergies, and create structural intellectual capital. It views knowledge as actionable information, that is, information that has been edited and formatted for accessibility, relevance, and ultimately, business use. Knowledge is drawn from traditional sources like libraries, online products, and departmental manuals, as well as

some decidedly untraditional sources like the employees themselves.[12] And while knowledge management is heavily reliant on technology for both storage and subsequent sharing of information, it recognizes that hardware is not the most crucial part of the system—the provision of the 'right' information is.[13]

Knowledge management is an emerging discipline that systematically and actively manages and leverages the stores of knowledge that exist in a typical company, creating "knowledge centers" or networked databases containing organizational information. These databases can contain everything from internal best practices suitable for potential replication in other parts of the company, to daily performance statisitics, to self-guided benefits orientations for new employees, to listings of topical experts in the organization. "Companies must gather, cultivate, and manage intellectual capital as carefully as they do financial capital. Leverage knowledge ... and you can reduce time to market, cut research and development costs and boost productivity."[14] This is not a new idea—management theorist Peter Drucker expounded on the emergence of a knowledge-based society and its implications for work in the late 1960s. It is, however, new to everyday business life. For the first time, technology is making it practical. "'In the old world,' noted Thomas W. Malone, professor at Sloan School of Management at MIT, 'information was very expensive, so we managed with relatively small amounts of it; we developed organizations that could work in an information desert.' Storing, moving, and finding information is so much cheaper and easier now that 'We're in something more like an information jungle. Survival techniques that worked in deserts won't be as effective.'"[15]

According to a recent study by the American Productivity and Quality Center in Houston, there are several key ways American companies are currently using the concept of Knowledge Management. They are using it to:

- tie a firm's knowledge to revenue enhancement by linking it to growth strategies;
- focus on the systematic reuse and transfer of best practices within the company;
- capture information on customer needs, preferences, and concerns;
- catalogue and use the contributions individual employees make to corporate knowledge as a foundation for company-wide management; and
- marshal intellectual assets such as patents, research and development, new technologies, and management practices to improve profitability.

The realistic attainment of these objectives is made possible for the first time by the exponential growth in information storage and retrieval technologies. But while technological advances have opened new information frontiers, they alone are not the whole solution. The biggest challenge in this future world of electronic wizardry will be finding people with the magic combination of cognitive, problem-solving, and people skills to interact effectively in a high-volume information environment.[16] These knowledge managers will fill the void between the high priests of the information age (the software engineers and codesmiths) and the people who actually get things done (the knowledge workers), using their technical skill in classifying, abstracting, and processing information to proactively capture corporate knowledge as it is created.[17] "The future of information management is one in which there will be human involvement only if it is necessary to add value. As computers grow in power and software in sophistication,

people will be increasingly displaced. But where people remain involved, the technology to help them do their work effectively will be spectacular."[18]

Crucial to the success of this technology-based business world will be controlling the quantity and quality of the information available. "The trouble with the information age," writes *The Economist*, "is that it seems to place no value upon differentiation." Pundits have labelled this overabundance of facts "infoglut" and "infobog." But management guru Tom Peters puts it best in his own inimical way when he characterizes the flood of data in cyberspace as "garbage at the speed of light." And David Schenk has coined "data smog" as a tag for the effects this information pollution has on clogging the efficiency of both work and society.[19]

The information technology industry is very aware of this clogging effect, and software vendors are working to design filtering mechanisms to control the flow of information into corporations. And yet, as Isaac Asimov wrote in another context, "Scientific apparatus offers a window to knowledge, but as they grow more elaborate, scientists spend ever more time washing the windows." This point is amply demonstrated by the current difficulties with push technologies, which aim to define and deliver filtered information to the desktops; it appears clear that technology won't provide a reliable mechanism anytime in the near future. In the words of a pair of Ernst & Young consultants, the value of information choices "lies in being very conscious of what is being excluded, as well as what is being included."[20] As a result, corporations are increasingly recognizing how ideally suited information professionals are to serving as human filters—that is, as knowledge managers. "In the past few years...companies have begun to see them as some of the most valuable people in the organization. We are starting to see information work as a possible route to strategic management and the main board."[21]

Reaching for the Brass Ring: Archivist as a Knowledge Manager

Identifying the competencies necessary to be a knowledge manager of the future is more a taxonomy of function than a job description. Regardless of the type of information worked with, today's information professionals exhibit commonalities of function. They acquire information; they obtain physical and intellectual control over it; they store and access it in a cost-effective manner; and they provide value-added service to users.[22]

By managing intellectual and physical fiefdoms, such as libraries, records centers and archives, these information professionals have developed exactly the cognitive management skills that human resource managers are projecting to be in great demand in the networked corporation of the future. In a world where *The Economist* can pithily assert that "facts and figures are generally best used as a drunk uses a lamp-post—for support rather than illumination," information professionals have already mastered the art of throwing light on subjects by organizing and providing selective access to relevant materials based on their understanding of specific industries and their comprehension of technology.[23]

Information professionals have also developed the skill at managing resources that will be at a premium in the networked corporation, where technology investments that

focus on technology rather than content threaten to create informational sinkholes rather than fonts of knowledge. Crucial to avoiding these sinkholes will be efficiency of knowledge delivery. While cost-effective storage and retrieval of knowledge will be technology reliant, it will be the human value-added factor of appraisal, arrangement, and description of that information that will ultimately facilitate its use, thereby making the difference between unlinked facts and knowledge.[24]

Another crucial skill that information professionals possess is their experience in handling queries, and once again, it is the human value-added factor that makes the difference. Their knowledge of information-seeking behavior can prove valuable to IT developers because of their understanding of search engines and their ability to interpret the needs of users. But the personal touch is also useful at the end-user side of the transaction, as business managers tend to prefer personal and informal sources of information over formal and published sources. According to Arian Ward, Leader of Change at Hughes Space & Communications, knowledge management isn't about technology, but "about people and tapping their knowledge and potential. It's about linking them so they can share their knowledge and learn from one another. It's about becoming enlightened to the unlimited possibilities these intellectual assets offer. The emphasis needs to be on people and culture."[25]

The customer service mind-set that information professionals have developed in anticipating and exceeding the needs of their companies is an advantage in newly emergent information cultures that need to emphasize facilitating access to information rather than controlling it. Whether they realize it or not, information professionals have already inculcated an organizational reputation for openness and accessibility that will carry significant political weight as they start building relationships and partnerships with business and information technology areas in the future. One of the greatest concerns of any corporation seeking to change its information culture to more effectively utilize emergent technologies is overcoming ingrained proprietary cultural traits that work against information sharing. In this environment, the customer service-inspired generosity of information professionals can serve as a visible, tangible model of behavior for others to emulate. In a serendipitous fashion, the cultural generosity of information professionals has combined with the technological imperatives of the last decade to remain current with electronic developments to produce just the right mix of personal/technical expertise necessary to flourish in a networked corporation.[26]

The implications for corporate archives in this networked corporation seem clear. Corporate archivists share the same competencies that make other information professionals ideal candidates for knowledge managers. In addition, they are already experts about their companies from their collection and reference activities, since they generally perform most of the research on reference queries—even if the answers are found outside the archives' holdings. So it seems logical to position corporate archivists as knowledge managers for internal information; acquiring, maintaining, and updating organizational material is already part of their job. They are familiar with the types of information needed, and have the company-wide network of contacts necessary to update that information in place.

Ironically, by integrating the archives into a corporate knowledge management system, the archivist has the potential to keep appraised of a much wider sweep of material

than was ever practical before, material that is much closer to the day-to-day aspects of decision-making than that which most archivists can ever hope to acquire. There is no more valuable source of strategy and philosophy than the thinking of managers, consultants, and sales representatives; knowledge management systems for the first time hold the potential of capturing that thinking, company-wide, *as it happens*. It is also likely that the archivists will work more closely than ever before with product knowledge managers, as a good portion of archival holdings document the development of product lines, and therefore contain information that product knowledge managers will need for their knowledge centers. In a fashion that can only be characterized as a classic accident of evidence, knowledge management offers the opportunity to document the inner workings of business in ways never imagined by scholars or appraisal theorists. The irony of the situation is that in order to be in a position to save this information, corporate archivists, prompted by the non-historical needs of their company, may have to transport themselves beyond the pale of traditional archivy. In effect, they may have to evolve away from being archivists in order to more effectively perform the archival function.[27]

Conclusion

This is just one vision of the future. It assumes that the survival of corporate archivists will be based not solely on management of permanent resources but also on their ability to contribute in other ways. It presupposes a corporate environment where traditional archival concepts are becoming increasingly irrelevant: Outreach is outmoded by changing management philosophies; effective appraisal is stymied by volume and technology; reference activity is irrevocably altered by technological developments; and the archives' mission is made obsolete by technology-driven organizational changes. Lastly, it assumes that the future of the corporate archives is closely tied to the development of corporate knowledge management systems.[28]

In this environment, technology and management philosophies will force new ways of thinking. "Experience has shown that networking is a Trojan Horse undermining vested interests, which liberates the creativitiy of new layers of staff," writes Michel Bauwens, a futurist cybrarian. "Bureaucracy, an organizational and communication pattern based on restricted flows of information and a monopoly of knowledge, cannot survive the introduction of networks."[29]

One path to continued existence may be to proactively expand responsibilities which, thanks to the leveling tendencies of knowledge-sharing corporate cultures, may be easier to accomplish than in traditional hierarchical environments where corporate archives are notoriously powerless. While the concept of powerlessness is generally equated with organizational placement, more significant contributing factors can be found in the nature of archival work. Expense control measures in nonprofit centers limit staff size, which of necessity creates a focus on day-to-day, in-house activities like reference and processing, rather than high-visibility, cross-company projects. In addition, the specialized knowledge of archives positions—an expertise which, in the absence of organizational stature, creates that sense of uniqueness from which archivists

have always taken comfort—actually serves to isolate archivists from the rest of the organization.[30]

The most likely way for corporate archivists to overcome these limiting factors is to identify and assume related functions within the corporation, basing their pitch on the demonstrated universality of their information management skills. Most experts feel that flexibility and adaptability are keys to enlarging influence in organizations, and companies are placing a premium on the ability of current and future workers to adapt to change. By broadening their roles, corporate archivists can overcome the institutionalized powerlessness that places them at risk. They can expand their levels of expertise and break through the limitations of archival fiefdoms. As they become identified as fonts of cross-disciplinary knowledge, they will become more desirable intercompany team members on high-risk projects, thereby increasing their visibility. But in order to do this, archivists need to have a particularly fluid conception of their work, one that is not tied to a static job description or a defined physical space. At Arthur Andersen, which boasts one of the world's most advanced knowledge management systems, "knowledge integrators," who keep the firm's knowledge database orderly, describe their roles as part-librarian, part-entrepreneur, and part cruise ship social director.[31] That kind of personal flexibility will be the key to the future of corporate archives.

It's a bit of a paradox, but the pressures facing corporate archivists today may be at once both a threat to their existence and their greatest opportunity to maximize the impact of their skills on their organization.[32] If we have to reinvent our roles, now is a good time to do it. Organizational theories and technological developments that result in flatter organizations that exhibit more cross-divisional cooperation are redefining power structures within companies, and opening up opportunities for proactive archivists to carve out new roles and responsibilities. The emergence of knowledge management is just one of those opportunities.[33] "Knowledge is still power, but being part of the team that creates it, gathers it, shares it, and refines it is necessary to be successful as an information professional in the nineties."[34]

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NOTES

1. Peg C. Neuhauser, *Corporate Legends and Lore: The Power of Storytelling as a Management Tool*, (McGraw-Hill, Inc., 1993): 187; "First and foremost, then, a corporate archives helps a business to understand itself: how it got where it is today, its strengths and shortcomings, and its role within its sphere of operations. ...Archival records, moreover, assist the corporation in projecting a positive image of itself and in creating good will. Information about the corporation can build identity and loyalty among employees and can prove useful in orientation and training programs." Donn C. Neal, "Introduction," in *Corporate Archives and History: Making the Past Work*, Arnita A. Jones and Philip L. Cantelon, eds. (Malabar, Florida: Krieger Publishing Company, 1993): 2–3. There are several recent examples in the insurance industry where a primarily history focus is driving the development of new or existing corporate archives. The American Insurance Group hired a corporate archivist in late 1996 to start an archives based primarily on historical utility. Mutual of New York is funding a survey of insurance archives to help it decide what materials it needs to collect to preserve its company heritage and the future use of its history. And a Wisconsin insurer, American Family, recently publicized its archives to employees as the "keeper of the past, where "many interesting artifacts" are stored, and where neat trivia like how much was paid out for a typical claim in 1927 can be found. "Keeper of Our Past," *All American* (February 1997): 16–17.
2. Rick Tetzeli, "Surviving Information Overload," *Fortune* 130 (July 11, 1994): 60; John McDonald, "Managing Information in an Office Systems Environment: The IMOSA Project," *American Archivist* 58:2 (Spring 1995): 146–147. For similar sentiments regarding university archives, see Lee Stout, "The Role of University Archives in the Campus Information Environment," *American Archivist*, op. cit., 124–140.
3. For instance, see John J. Grabowski, "Keepers, Users, and Funders: Building an Awareness of Archival Value," *American Archivist* 55:3 (Summer 1992): 464–473.
4. Helen Tibbo takes a thoughtful stab at defining reference techniques in an electronic environment. From the corporate perspective, however, she is essentially paving over cowpaths: major corporations tend to display more connectivity than the environments she focuses on. Therefore, her still primarily reactive reference philosophy won't be of much use to proactive corporate information providers. Helen R. Tibbo, "Interviewing Techniques for Remote Reference: Electronic Versus Traditional Environments," *American Archivist* 58:3 (Summer 1995): 294 ff. See also Karl M. Pearson and Diana J. Jarvis, "Drumming Up Business," *Special Libraries* 87:3 (Summer 1996): 163–168; Craig St. Clair, "Electronic Outreach in the Archives: Bringing Them in at Digital Equipment Corporation", *SAA Business Archives Section Newsletter* 11:2 (Winter 1994) 4; Linda Folland, "Amway's Data Central: A Global Media Archive as a Tool for Corporate Communications Strategy," *SAA Business Archives Section Newsletter* 13:1 (Summer 1996): 7; Adam L. Gruen, "MCI History at the Desktop", *The Business Archivist & Archives Newsletter* 1:1 (February 1997): 8–10.
5. "All archivists, whatever the archives in their care, accomplish the culture function of protecting the existing evidence of past cultures for future cultures to interpret, absorb, and creatively renew." Luciana Duranti, "The Concept of Appraisal and Archival Theory," *American Archivist* 57:2 (Spring 1994): 328; see also Margaret Hedstrom, "Electronic Archives: Integrity and Access in the Network Environment," *American Archivist* 58:3 (Summer 1995): 317–318; Bruce H. Bruemmer, "Avoiding Accidents of Evidence: Functional Analysis in the Appraisal of Business Records," paper presented at The Records of American Business Symposium, 12 April 1996, Minnesota Historical Society, Saint Paul, Minnesota: 2; Philip F. Mooney, "The Practice of History in Corporate America: Business Archives in the United States," Jones and Canteleon, op. cit., 17–19; for an extremist societal perspective, where the author takes a 'what's the point' look at the practicality of documenting the volumes of information produced today, see Cullen Murphy, "Backlogs of History," *Atlantic Monthly* (May 1996): 20–22; for a rebuttal of the belief that a corporation has a social obligation to save its records for society, see Timothy L. Ericson, "Beyond Business: External Documentation and Corporate Records," paper presented at The Records of American Business Symposium, op. cit.
6. One of the latest theorists to argue the pros of structural analysis is forced to admit that "Structure is particularly problematical as a guide to the appraisal of business records ... because [it] has so many variables and is so protean." After that caveat, he then asserts that structure is "indispensable" to arrangement and description, an assertion which may hold true for 'dead records,' but which continues to be problematical for corporate archivists attempting to deal with the 'living records' of an extremely fluid organization. Christopher Baer, "Strategy, Structure, Detail, Function: Four Parameters of the

Appraisal of Business Records", paper presented at The Records of American Business Symposium, op. cit., 31; the discussion of the virtual corporation is from Nick Blozan, "Network Production and Restoration for Today and Tomorrow," *Industrial Management* 37 (March–April 1995): 27; see also Bruemmer, ibid., 18.

7. For a discussion of the levels of appraisal necessary to adequately document business, see both Bruemmer and Baer, ibid. See also Michael Nash, "Small Business, Manufacturing, and Flexible Specialization: Implications for the Archivist," *American Archivist* 58:3 (Summer 1995): 286.
8. Leo R. Gotlieb, "Our Journey with Information Management," *Management Accounting Magazine*, Society of Management Accountants of Canada (November 1994): 18; for a detailed examination of the expected developments in desktop technology and their implications, see Ronald F. E. Weissman, "Archives and the New Information Architecture of the Late 1990s," *American Archivist* 57:1 (Winter 1994): 20–35; for a discussion of practical business applications of Lotus Notes, the leading groupware product on the market, see Diana d'Ambra, "Full Power of Notes Frequently Goes Untapped," *Best's Review Life/Health* (August 1996): 90–93; see also Bruemmer, ibid. The notion of a paperless office and its implications for archivists was touched upon in *American Archivist* in the early 1980s; see Richard M. Kesner, "Microcomputer Archives and Records Management Systems: Guidelines for Future Development," *American Archivist* 45:3 (Summer 1982): 299 ff.; for a more recent discussion see McDonald, op. cit., 142–153.
9. Both David Bearman and Charles Dollar have pointed out the cost inefficiencies of creating a centralized electronic records storage environment. Hedstrom, op. cit., 319–320.
10. A necessary implication of this shift would be clearly placing the burden of documenting business records on external repositories. This in turn provides impetus to the paradigm of industry-wide documentation planning. Perhaps the future of documenting the records of American business will not be on an individual company basis, but as the result of concerted efforts to collect limited materials from a lot of companies. This could be done along the models already established by the Minnesota Historical Society's relationship with 3M, and Duke University's with J. Walter Thompson, but it would probably be unrealistic to expect a significant portion of American businesses to buy into this concept. It may be that most businesses have too few incentives and too few resources to ever make this concept work on an industry-wide basis. "Like world peace, when the time comes to make difficult decisions, the result will almost always be based on a local or institutional self-interest rather than 'the greater good,'" which makes working without corporate cooperation the most likely of all possible scenarios. In this environment, it may be that the best way to document American business may be external documentation, the kind of data linkage of informational resources that has been the bread and butter of historians for years. Repositories may design strategies to collect publicly available information on the company, obtaining copies of tax and regulatory filings, press releases, articles, online sources, and other valuable and relatively accessible sources. It is not a perfect solution to documenting business records (see Duranti, op. cit.), but it may be the most practical one. Ericson, ibid., 8; for an in-depth discussion of the variegated solutions to the issue of acquiring and retaining business records, see Karen Benedict, " Collecting Repositories and Corporate Archives: Variations on a Theme?," paper presented at The Records of American Business Symposium, op. cit.
11. An important discussion of flexibility and proactivity can be found in Robert Irving Berkman, *Rethinking the Corporate Information Center: A Blueprint for the 21st Century* (FND/SVP 1995), especially chapter 7; see also James V. McGee, Laurence Prusak, and Philip J. Pyburn, *Managing Information Strategically* (New York: John Wiley & Sons, Inc.1993): chapter 5; in England, "'There are many cases where companies are having to reinstate information departments they had earlier axed.' For this reason...information scientists need to promote themselves and their skills to the rest of the organization." Richard Poynder, "Back in Good Books: Richard Poynder on the Corporate Librarian's Transformation," *Financial Times*, The Financial Times Ltd., 17 January 1996: 20. For similar views, see Lewis J. Perelman, "Why Barnstormers Will Inherit the Knowledge Era," *Knowledge Inc.* 1:4 (July 1996); "Employers place far less emphasis on experience and much more on adaptability. Most of all, they're looking for people who can learn." David Stamps, "Are We Smart Enough for Our Jobs?", *Training* (April 1996): 44; McDonald, op. cit., 146–147; Stout, op. cit., 138–140.
12. Lois A. Remeikis, "Knowledge Management: Roles for Information Professionals," *Business & Finance Bulletin* 100 (Fall 1995): 41; "A lot of the value of the corporation is in the minds of the employees." Joseph Maglitta, "Smarten Up! Management," *Computerworld* (5 June 1995): 84. Most corporate archivists don't need to be told about the ephemeral nature of individual knowledge, nor its significance as a corporate asset. In a growth environment, the wisdom of a wizened veteran doesn't always receive the wide circulation it deserves due to logistical issues. According to an estimate by

Fortune, 62% of an industrial company's assets are intangible—ideas, concepts, time, and talent. And it is all at risk in an atmosphere of normal turnover, let alone downsizing. Standard corporate turnover rates average about 10%; in five years that rate will result in the loss of 50% of a firm's experienced workers, so capturing that knowledge either as it is created or before it leaves could be a key competitive advantage. Thomas A. Stewart, "Mapping Corporate Brainpower," *Fortune* 32 (30 October 1995): 209; Laurie W. Payne, "Unlocking an Organization's Ultimate Potential through Knowledge Management," *Knowledge Management in Practice* (American Productivity & Quality Center, 1996): 5.

13. "In cyberspace, knowledge only has to be produced once, and it can then be shared to anybody in the corporation, anyplace, anytime." Michel Bauwens, "Cyberspace: The Final Frontier?," *The Information Advisor* FIND/SVP 7:6 (June 1995): 1. "Knowledge workers are end users who employ a wide range of information technologies to draw on diverse information resources to address their immediate needs through sophisticated sifting, search, and reassembly of data into highly usable formats." Richard M. Kesner, "Group Work, 'Groupware,' and the Transformation of Information Resource Management," *American Archivist* 58:2 (Spring 1995): 157.
14. Maglitta, op. cit.; Payne, op. cit., 3–7.
15. Peter F. Drucker, *The Age of Discontinuity* (New York: Harper & Row, 1968): 263–380; Drucker continued to develop his notions on knowledge and knowledge workers into the 1980s. See Drucker, "The Coming of the New Organization," *Harvard Business Review* (January–February 1988): 45–53; Malone quoted in Stewart, op. cit.; for a period-piece prophecy regarding the expense of the information issue, see Drucker, "The Manager and the Moron," in *Technology, Management & Society* (New York: Harper & Row, 1970): 166–177, especially 172–173.
16. Poynder, op. cit.; Rick Mullin, "Knowledge Management: A Cultural Evolution," *Journal of Business Strategy* (September/October 1996): 58; Stamps, op. cit.; George Taninecz, "The Web Within," *Industry Week* (4 March 1996): 45 ff.
17. "Information professionals can play a valuable role in the technology area because of their understanding of search engines and for their ability to interpret the technical requirements of users to a company's information technology group." They "function as the conduit to corporate knowledge." Remeikis, op. cit.; Stamps, op. cit. In Lotus Notes, databases can be arranged in 'views' to facilitate end user access to the information. Properly crafted views require familiarity with both the databased information and the needs of the end users. Kesner, "Information Resource Management," op. cit.; d'Ambra, op. cit.
18. Gotlieb, op. cit.
19. "In Praise of Knowledge: It's Time to Move on from Information," editorial, *The Economist* (UK) 27 May 1995: 20; Tetzeli, op. cit.; Taninecz, op. cit.; David Schenk, "Data Smog," *The Next Progressive* (September 1993). Drucker once again anticipated these issues as early as 1957 in a paper before a conference on management science in which he described the paralysis of managers in the face of too much information. "Organization of information is often more important to the ability to perceive and act than analysis and understanding of the information." Drucker, "Long-Range Planning" in *Technology, Management & Society*, op. cit., 129–148, especially 136–137.
20. Michel Bauwens, "Knowledge Transfer, part 2," *Information Advisor* FIND/SVP 7:7 (July 1995): 5; *The Economist*, op. cit.; McGee and Prusak, op. cit., 137.
21. Poynder, op. cit.; one highly visible expression of the importance of humanized information systems is Thomas H. Davenport, "Saving IT's Soul: Human-Centered Information Management," *Harvard Business Review* (March–April 1994): 119–131. For an additional discussion of the need for information professionals as key and necessary filters for controlling Infobog even for experienced users, see Maglitta, op. cit.; Bauwens, op. cit.; Jon Foley, "Infoglut: New Tools Can Help Tame an Ocean of Data", *Information Week* (30 October 1995): 30, Fiona J. Mellor Ghilardi, "The Information Center of the Future: The Professional's Role", *ONLINE* (November/December 1994): 8–9; Stamps, op. cit.; Herbert S. White, "White Papers: The Perilous but Also Opportune Future for Special Librarians", *Library Journal* (January 1996): 59. For the Asimov quote, go to *http://www.cipher-sys.com*.
22. "[Archivists] are raised professionally in a tradition of uniqueness. We invoke uniqueness as both a rationale for action and an excuse for inaction. But we have made the mistake of extending the uniqueness of our records to a uniqueness in the techniques of managing them." Frank G. Burke, "Archival Cooperation," *American Archivist* 46 (Summer 1983): 294; for a practical discussion of the uniting of various types of information professionals into an Information Utility model, see Richard M. Kesner, "The Library as Information Center: A "Utility" Model for Information Resource Management and Support," *Library Trends* 42:3 (January 1994): 373. Margaret Hedstrom, in her perceptive article on networked organizations argues for the continuing need to differentiate between electronic reposito-

ries like archives and libraries, but in a corporation where both functions are subsumed under one common goal—to contribute to the bottom line—such differentiation will in most cases be irrelevant and potentially cost ineffective. However, Hedstrom's more current thinking on "distributed electronic archives" (a network of electronically linked institutional archives), described at a recent conference on documenting the digital age, is a paradigm that more closely parallels today's environment in the corporate world in that it utilizes technology to connect isolated pockets of information; Hedstrom, op. cit., 316–317; Margaret Hedstrom, "How Do We Make Electronic Archives Usable and Accessible?", paper presented at the Documenting the Digital Age Conference, 12 February 1997, Villa Florence Hotel, San Francisco, California, *http://dtda.mci.com.*

23. Remiekis, op. cit.; *The Economist*, op. cit.; Stout, op. cit., 139.
24. Stewart, op. cit.; Value-added processes are characteristics or attributes which are added to the data to make it more valuable to the user than the original information. Susan K. Goodman, "Measuring the Value Added by Records and Information Management Programs," *Records Management Quarterly* 28 (April 1994): 3; for a thoughtful discussion of the differences between data, information, knowledge, intelligence, and wisdom, see Bauwens, "Cyberspace: The Final Frontier?," op. cit.; see also Bauwens, "Knowledge Transfer, part 2," op. cit., and "Twenty-First Century Information Systems Management," 4030MIT, Datapro Information Services Group, (June 1996): 8.
25. For technology, see Remeikis, op. cit., and Richard N. Katz and Victoria A. Davis, "The Impact of Automation on Our Corporate Memory" in Jones and Canteleon, op. cit., 115–121; for the personal touch, see David Kaye "Sources of Information, Formal and Informal," Information Sources for Managers, *Management Decision* 33 (September 1995): 13; Davenport, op. cit., 121; Payne, op. cit., 5; Lori Zipperer, "The Creative Professional and Knowledge," *Special Libraries* 84:2 (Spring 1993).
26. The literature abounds with the importance of overcoming proprietary information cultures. Three of the most useful are McGee and Prusak, op. cit., chapter 6; Davenport, op. cit., 120, 124–127; and Thomas H. Davenport, R.G. Eccles, and Laurence Prusak, "Information Politics," *Sloan Management Review* (Fall 1992). For a detailed statistical analysis of the existence and impact of organizational proprietary culture, see http://cism.bus.ute...du./suri/node1.html. For a discussion of the opportunities present to archivists who embrace the new world order, see Hedstrom, "Electronic Archives," op. cit.
27. d'Ambra, op. cit. For a discussion of the impact of technology on traditional archivists which, while a thoughtful and necessary wake-up call, still may—in some basic respects—constitute paving over cowpaths, see Avra Michelson and Jeff Rothenberg, "Scholarly Communication and Information Technology: Exploring the Impact of Changes in the Research Process on Archives," *American Archivist* 55:2 (Spring 1992): 236–315; for a counterpoint to the view that technology will force archivists away from their theoretical groundings, see Luciana Duranti, "Commentary", *American Archivist* 57:1 (Winter 1994): 36–41. Duranti's argument is flawed from a corporate perspective in that its assumptions are based on traditional archival precepts, which have limited applicability in corporate settings. She argues that protecting the integrity and impartiality of the records should be the "first duty" of every archivist. In a corporation, however, integrity in the traditional corporate hierarchy is generally the purview of non-archival areas like records managers, systems managers, and the legal department; impartiality is an often irrelevant virtue in a for-profit environment. Regarding preservation being an essential component of the knowledge economy, Donald Waters has recently built a persuasive case for linking the concept of knowledge and the function of archives in a digital environment; see Donald J. Waters, "How Do We Archive Digital Records? Report of the CPA/RLG Task Force," 11 February 1997, paper presented at the Documenting the Digital Age Conference, op. cit.
28. There is a school of thought among management consultants that even the most adaptable organizational cultures must continue to strongly emphasize stability and continuity with the past. "If it does not, the organization would not be flexible and adaptive. It would be chaos and filled with continual confusion." Neuhauser, op. cit.
29. Bauwens, "Knowledge Transfer, part 2," op. cit.; Kesner, "The Library as Information Center," op. cit.; for a more detailed discussion of this phenomena, see Tora K. Bikson, "Organizational Trends and Electronic Media: Work in Progress," *American Archivist* 57:1 (Winter 1994): 48–69; Weissman, op cit. As caretakers of one of those physical and intellectual fiefdoms based on a monopoly of knowledge, corporate archivists need to reinvent themselves in the face of knowledge-sharing influences in order to continue to justify their existence. "Constantly evolving technology has also demanded that librarians reinvent themselves and their jobs." Poynder, op. cit.; see also McDonald, op cit. For a discussion of what those changes might mean for information professional skill sets, see Marydee Ojala, "Core Competencies for Special Library Managers of the Future," *Special Libraries* 84:3 (Fall 1993): 230. Ojala postulates an electronic future when 'cybrarians' proactively access, evaluate, for-

mat, and market cross-disciplinary data in a customer-driven fashion. They provide information leadership and are in tune with shifting organizational and human dynamics. See also "People Part of Groupware," *ONLINE* (March 1994): 276 ff. See Pearson and Jarvis, op. cit., and Perelman, op. cit., for further discussions of information professional core competencies.

30. Although hired for their specialized knowledge, archivists can also find that expertise is an isolating factor—a creator of powerlessness. Alison J. Head and William Fisher, "Special Librarians: The Origins of Power and the Susceptibilities to Powerlessness," *Special Libraries* 86 (Spring 1995): 121; as corporate hierarchies go through a technology-driven shaking-out process, foresighted archivists are presented with an opportunity to reach for the brass ring. "Networked information and communication technologies permit entire firms...to reconsider traditional boundaries and invent new organizational forms." Bikson, op. cit.; on recognizing and pursuing opportunity, see also Weissman, op. cit.; Duranti, op. cit.; John McDonald, "Commentary," *American Archivist* 57:1 (Winter 1994): 42–45; Victoria Irons Walch, "Commentary," *American Archivist*, ibid., 76–81. "With their [networks] introduction, power moves from the bureaucracy (those who control the flow of non-sharable paper-based information) to the cyberocracy (those with the best skills to access the shared knowledge streams on the networks). Power goes to those most adept at consensus-formation through knowledge-sharing." Bauwens, "Knowledge Transfer, part 2," op. cit.; "Powerless special librarians are regularly cast aside to the bottom of the organization where their work becomes unrecognized, their chance at developing coalitions is nil, and their self-esteem is minimized," resulting in some cases "psychological distress, discontent, loss of productivity, and...even sabotage." Head and Fisher, op. cit.; see also Ghilardi, op. cit., on the need for aggressiveness on the part of information professionals in driving changes in organizational information processes, as it is they "who have first-hand experience with research sources and users and their needs"; for an overview of proactive outreach in the corporate environment, see Helene F. Jaillet, "Corporate Politics and the Information Professional," *ONLINE* 17:4 (July 1993): 48, and Pearson and Jarvis, op. cit. Jaillet emphasizes doing basic legwork to identify the organizational and political structures within a corporation, and then tailoring a strategy for finding a niche in these power loops; one information specialist argues that the proper proactive strategy in a downsizing environment is not to validate bad management decisions such as reducing library budgets by working to maintain the quality of what's left. Instead, special librarians should attempt to convince management that they made a mistake and steer them away from the empowered end-user panacea. This is, I think, a wrong-headed approach in that it places information professionals directly in conflict with centers of power, which violates a basic principle of organizational politics: *Never gratuitously make enemies*. I believe a more fruitful strategy would be to stop trying to defend what once was; instead, move forward by anticipating future needs and then position oneself to help the corporation meet those needs. White, op. cit.
31. One of the most powerful expressions of this strategic approach, from the library perspective, is Thomas H. Davenport and Laurence Prusak, "Blow Up the Corporate Library," *International Journal of Information Management* 13 (December, 1993): 405–412; Poynder, op. cit.; Head and Fisher, op. cit.; Stamps, op. cit.; "Special librarians seeking to enhance their organizational power must also assess potential power bases that are expandable. ...Organizations increasingly require someone who is able to merge technical expertise with general organizational management, decision-making, and in turn, corporate power." Involvement with high-risk innovative projects is crucial to future success in that the teamwork brings executive visibility and additional skills. "Special librarians are desirable intercompany candidates for teams because of their research expertise; their ability to access, organize, and filter information; and their understanding of information-seeking behavior." Head and Fisher, op. cit.; for Anderson reference, see Stewart, op. cit.; for an example from the archival world, see Folland, op. cit.
32. It is also an issue for other information professionals, as a look at the literature will attest. "Becoming 'chief knowledge officers' or managers could help some IS groups gain or regain organizational stature." Maglitta, op. cit.; "Don't Be Shut Out," *Information Week* (16 January 1995): 28.
33. Head and Fisher, op. cit.; "In the modern organization, knowledge centers...are probably the most important input of evaluated information to major decision making. Each of these centers is made up of highly knowledgeable people who either process internal information or monitor the external environment and adapt and interpret external information in the context of internal information and decision needs." Goodman, op. cit.
34. Remeikis, op. cit.