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The World We Want: Emerging Communities, Emerging Information

EMERGING DEMOCRATIC COMMUNITIES

In a recent essay, the philosopher Richard Rorty (1992) reflected on a lifetime of engagement with the fundamental ideas of our time and concluded that the historic quest for a single vision that encompasses both the real and the ideal worlds is, sadly, a mistake. Further, Rorty argues that “the main trouble is that you might succeed, and your success might let you imagine that you have something more to rely on than the tolerance and decency of your fellow human beings” (p. 153). Indeed, the search to realize one or another ideal world—through philosophy, religion, national identity—remains a root cause of human suffering, as each day’s news broadcasts all too vividly remind us.

Rorty’s alternative, building on Dewey, is the always evolving democratic community, which combines a shared understanding of human fragility and mutual dependence with the recognition of individual rights, limited only by the prohibition against causing injury to others:

It is a community in which everybody thinks that it is human solidarity, rather than knowledge of something not merely human, that really matters. The actually existing approximations to such a fully democratic, fully secular community now seem to me the greatest achievement of our species. (Rorty, 1992, p. 153)

I will argue here that distributed digital information, seamlessly integrated into a comprehensive National Information Infrastructure, is essential to realizing Rorty’s secular, communitarian vision: the creation and sharing of knowledge about what it means to be “merely human.” But creating the infrastructure will also require creating a version, at least, of Rorty’s democratic community. I believe that this will depend, in large measure, on the ability of the many organizations and interest groups in the information universe to transcend their narrow, absolute views of past, present, and future, and create—if only for a little while—the integrated, democratic communities that Rorty envisions: communities of experimentation, communities of trust.

If the integrated, democratic information-rich community is our vision of the future, what of the present? The anthropologist Mary Douglas has devoted her professional life to thinking about, and chronicling, the conceptual and

structural underpinnings of cultures. With Aaron Wildavsky, she has written about the assessment of ecological dangers as a canvas to limn the relationship between the "center" and the "border," between conventional and sectarian perspectives on our shared human nature, and the world.

Early on, Douglas and Wildavsky (1982) define knowledge in a manner that would sustain and extend Rorty's vision of an evolving democratic community:

Instead of the old recurrent imagery of knowledge as a solid thing, bounded or mapped out, we prefer the idea of knowledge as the changing product of social activity. It is not so much like a building, eventually to be finished, but more like an airport, always under construction. It has been compared to an open-ended communal enterprise, to a ship voyaging to an unknown destination but never arriving and never dropping anchor. It is like a many-sided conversation in which being ultimately right or wrong is not at issue. What matters is that the conversation continue with new definitions and solutions and terms made deep enough to hold the meanings being tried. (pp. 192-193)

Evolving, democratic, communal. Change, social activity, always under construction. Unknown destinations. Fragility, mutual dependence, human solidarity. Conversation. Meaning.

Together, these rich ideas create a human tapestry, which may be at odds with the commonly understood goals of information in the information society, and of librarians as creators, with others, of this tapestry. In the next section of this paper, I will look at networked information in the light of Rorty's and Douglas's shared vision, and challenge—or at least revisit—some cherished assumptions about the meaning and purpose of the information enterprise.

A NATIONAL INFORMATION INFRASTRUCTURE

The traditional justification for building the National Information Infrastructure, and creating digital libraries of scientific and technical information, is that

building an electronic science library will have impact on education, industry, research and the general state of science in the U.S. It will permit people throughout the U.S. to immediately answer scientific questions and keep abreast of new technology more rapidly and with less effort. It will permit U.S. scientists, whether in industry or academia, to deliver their results immediately to educational or commercial users. It will stimulate development of computer-based training systems, informal information circulation, and other new forms of information transfer. And it will provide a base on which the U.S. can maintain a leading position in the international information industry. (Nationwide Electronic Science, 1992, p. 12)

The focus, in statements of purpose such as this, is on immediate answers to straightforward questions, on instantaneous access to new facts. These are worthy aims and represent some of the tasks that a National Information Infrastructure must support. It is interesting to note, however, some of the core ideas from Rorty and Douglas that are absent here—like the social construction of knowledge, change, mutual dependence, meaning, and, perhaps most important, innovation and creativity. No technology is neutral: or, rather,

all technologies bear whatever meanings we assign to them. Therefore, we must not only ask whether a technology will work, but what kind of a society is promoted by the meanings it bears.

Choosing to embark on a ship "voyaging to an unknown destination" has profound implications for the choices we make in designing and implementing an infrastructure for a national system of digital libraries. Some of the issues include:

- Who builds it?
- Who runs it?
- What do we want it to do?

Who Builds It? Who Runs It?

Building the computer and network infrastructure for a comprehensive national digital library system is a complicated and expensive enterprise. One recent study (Egan, 1991, p. 118 and *supra*) estimated that it would cost about \$310 billion to provide fiber optic linkages to every American home, without even considering the cost of computing or of creating and distributing content.

Even the telecommunications giants would have trouble producing this level of investment without significant changes in the regulatory environment. Cable companies are even more fragmented, and local monopolies are unlikely to pursue aggressive investment strategies without any competitive threat. And in the current economic environment, the computer companies, suppliers, intellectual property owners, or user organizations would also have a difficult time, alone, putting together the resources required to build and disseminate a national fiber optic infrastructure—or to equip it with knowledge.

Hence, many argue, the federal government must assume leadership in funding and directing this massive effort. This appeared to be the thrust of several of Vice President Gore's comments at the pre-inauguration planning conference in Little Rock and more recently at the February Clinton-Gore infrastructure briefing at Silicon Graphics in California. A major federal role is also contemplated in the High Performance Computing Act of 1991, which created the National Research and Education Network (NREN); further legislation is anticipated, along with a major report from the President's Council on Competitiveness.

In addition, the newly formed Computer Systems Policy Project (CSPP), created by the chief executive officers of 13 leading American computer companies, has proposed the establishment of a federal National Information Infrastructure Council and substantial federal investment in infrastructure research and implementation (CSPP, 1993).

But is a leading federal role appropriate, given Rorty's and Douglas's vision of the role of knowledge in an evolving, democratic community? So far, the results are mixed: the federal government has funded a limited amount of research into the major technical issues impeding large-scale dissemination of digital libraries (mostly through the Defense Advanced Research Project Agency [DARPA] and the National Science Foundation [NSF]). But it has also adopted positions that are inimical to the goals of openness and dialogue,

which are fundamental to the vision. The Federal Bureau of Investigation has proposed legislation that would require any network provider to ensure that their system could be tapped by law enforcement agencies. Furthermore, the National Security Agency has supported restrictions on the export of key encryption algorithms: the algorithms are needed to help protect digital libraries against unauthorized intrusion and the information they store against unauthorized distortion or destruction. Bits know no boundaries.

Bringing in the full involvement of the federal government is a little like inviting a 500-pound gorilla to your four-year-old's birthday party: terrific if he behaves himself, not so good if he decides to sit on the cake. And once he's there, it's especially tough to get him back in his cage again.

The analogy suggests that the ideal federal role would involve creating a regulatory and financial climate that supports private investment in a National Information Infrastructure, while also perhaps funding research and development in areas that appear unlikely to provide short-term payoff (see Egan [1991] for specific actions): that is, behaving itself, eating only its own piece of cake, going back in the cage when the party's over. The government's willingness to leave the enterprise to private initiative will depend, in large measure, on the readiness of other key stakeholders to work collaboratively to build it.

Why collaboration? It is evident that no one community—network providers, computer companies, content owners, researchers, government, information specialists, or users—can bring to bear all or even most of the elements required for a successful system. Networks are empty without content; content is inaccessible without networks; networks and content are useless without computer systems, information specialists, and users; research is meaningless without systems for instantiating and disseminating the results; government funds, policies, and regulations have no impact unless they result in innovation; information specialists and users are isolated without systems to satisfy their needs for information. And so it goes.

Therefore, a knowledge-rich information community must grow, in the words of Tennessee Williams, "out of the kindness of strangers": through the complex interworkings of mutually dependent, evolving communities, communities that may come to resemble, if we are very fortunate, Rorty's emerging democracies.

But will we in fact be fortunate? We have already reviewed some of the risks involved in the government assuming primary leadership in designing and building the National Information Infrastructure; there are others to be considered as well. Control of the infrastructure by any one private organization, or industry, could have an equally negative effect. There is widespread agreement that digitized information must generate a profit for those who invest in its creation and dissemination. Narrow control could lead to monopolistic pricing, while competition, both within and across industries, should reduce prices to the lowest profitable level. Look, for instance, at what has happened to the price per unit of computing power since clone competition entered the IBM/DOS marketplace. There are powerful, well-financed players entering the

information infrastructure sweepstakes, and we will all need to maintain vigilance, and build alliances, to ensure that the interests of all parties in this fragile, mutually dependent coalition are satisfied.

What alliances? I believe that there are some important opportunities awaiting key interest groups, as the various parties seek others to reinforce their position. In particular, there is a natural alliance—obscured by old antagonisms and competition for limited resources—bringing together librarians and other information specialists with publishers and other information owners and providers. My friend Paul Peters has led librarians, administrators, computerfolk, and publishers in the Coalition for Networked Information (CNI) to recognize their mutual interests and the value of collaborative effort.

These mutual interests include, for example:

- the need for regular, predictable content and schedules;
- a commitment to maintaining standards of quality in information products;
- the need for standardized systems for identifying and describing information content;
- mutual dependence, at least in the scholarly publishing world, on the same set of creators and end-users;
- a shared recognition of the need for user-centered diversity in content and mode of delivery;
- a recognition of archival responsibilities to future generations;
- the need for confidence in the significance of their own long-term role in any national digital library system;
- the need for strategic alliances, as other organizations and industries assume increasingly significant roles in designing and implementing the infrastructure;
- a fundamental commitment to the importance of thoughtful, accessible information in enriching the work and life of the nation.

I do not need to elaborate on the forces that, historically, have led librarians and publishers into mutual suspicion and occasional conflict. Neither can afford the luxury of these self-satisfying but unproductive sentiments. Nor can the other key stakeholders in the information infrastructure: all will have to hang together, or hang separately.

As we have seen, a number of powerful forces push key stakeholders in the emerging information infrastructure to work together for common goals. One important argument on the other side needs, at least, to be discussed. In his elegant little book *The Logic of Collective Action*, the economics Nobel laureate Mancur Olson (1965) argues that rational individuals (or organizations) will be reluctant to contribute to a common goal, if they can be assured to benefit from the results whether or not they contribute. Take, for example, taxes. Olson argues, persuasively, that we must be coerced into paying our taxes, because we are assured the benefits (if any) whether or not we contribute. Applied to infrastructure, this suggests that collective action would be unlikely *if* the key stakeholders were convinced that the national infrastructure would be built and disseminated without their contribution, *and* that their role in the system would be sustained whether or not they contributed.

A big *if*, and an even larger *and*. For the time being, I believe, cooperation among the stakeholders in building the infrastructure, and in constructing a consensual community around it, is both necessary and inevitable. However, as the process evolves and new working partnerships develop, it is conceivable that this initially fragile consensus may dissolve. It needs to be supported and sustained.

What Do We Want It to Do?

Most discussions of the National Information Infrastructure have focused on wide-ranging visions of new capacities for information dissemination and on the whiz-bang technologies that, we hope, will take us there. At the Silicon Graphics briefing, for instance, Vice President Gore noted that “one of the things that this plan calls for is the rapid completion of a nationwide network of information super highways. . . . We want to make it possible for a school child to come home after class and, instead of just playing Nintendo, to plug into a digital library that has color-moving graphics that respond interactively to that child’s curiosity” (Office of the Press Secretary, 1993).

This vision has several powerful elements, from the fashionable dismissal of Nintendo (and the accompanying assumption that “real learning” can and should be even more fun) to the child (potential Einstein?) creating at her home computer. Discussions of the vision generally focus on the formidable technical and economic obstacles that must be surmounted: Where is all that bandwidth going to come from? How will the computer know what information to select? What happens if the child comes home, asks to know everything about dinosaurs, and the overload drags the entire world computer system to a screeching halt? Who pays?

There is much too little said about what we want the system to do for us—about what kind of world we want, and how an information infrastructure can help provide it. I believe that librarians (and information specialists: librarians in computer clothing) are better equipped by skill, commitment, and training to address these questions than anyone. Why? How can this voice be heard?

By choosing their profession, librarians have embraced a unique culture and are especially well suited to provide leadership in the emerging information age. Librarians are among the most computer literate of all professionals, and the most skilled navigators of the Internet/NREN. The value of libraries, and librarians, is defined by the intermingling of information and user/learners, generating new relationships, new knowledge—while preserving older ones. The physical library is simply a contingent means to that end, an information coffeehouse where the necessary linkages—and preservation—can occur. These values may be better sustained in an automated environment, where the physical limitations disappear, allowing learners and their agents—librarians—to focus on information and its use.

The values embraced by Rorty and Douglas—nurturing a fragile democracy while embarking on the ship of knowledge, bound for an unknown destination—are also deeply imbedded in librarians. Librarians have led the fight to ensure that public libraries and resource-poor user communities (e.g., small towns,

inner cities) not be further disenfranchised by the information revolution. And librarians understand as well that knowledge is process, not outcome.

But these important factors have not resulted in a powerful librarian voice in the vision, design, and implementation of the National Information Infrastructure and digital libraries. Why is this?

First, librarians have sometimes been reluctant to seek alliances with other parties who share common goals, even if they do not agree about all aspects of the enterprise. Instead, too often, librarians (and their organizations) have expressed their views in isolation, hoping that someone in power will listen.

Second, until recently there have been few opportunities for librarians to talk together about the future of their profession and the role it can and should play in the information age. In the last year or so, however, there have been several encouraging efforts to discuss and present a vision and to provide, in the words of one, a "basis for librarianship in the 21st century."

Its goals include, for instance, "furthering the development of the 'virtual library', a concept of information housed electronically and deliverable without regard to its location or to time," and "taking responsibility for information policy development, information technology application, environmental awareness, and risk-taking in making strategic choices in the information arena" (Strategic Visions, 1992).

Among other things, this effort has generated a draft, by Anne Lipow (a national resource), of a "21st Century Library Position Announcement," a wonderful and challenging description of one possible (quite rosy) information future. For example, Lipow (1992) describes how people have personalized their computer-mediated relationships:

However, around the turn of the century a practice arose that has become an international convention: staff and client 'touch' forefingers on the screen—especially as a parting gesture. (A recent embellishment by some high school users of the public library teledesk may be spreading in popularity: a rather complicated 'handshake' that involves a sequence of maneuvers using all fingers, the palm, the front and back of the wrist, and the elbow. Parents have begun to protest the inclusion of hip-action in this ritual.)

These are important first steps, but they have not materially increased the power and influence of librarians in the emerging infrastructure. Too often, discussions of a vision for librarians have seemed to descend into credentialing, with too much emphasis on figuring out how to protect the existing turf from incursions by computerfolk and information techies and too little on how to influence the larger equation and build the desired world. Furthermore, the dialogue has been largely restricted to librarians, with little success in involving other key parties: government, private corporations, information providers, university administration, end-users.

But not entirely—with the support of the Research Libraries Group (RLG), Richard M. Dougherty and Carol Hughes (1991) of the University of Michigan have initiated a series of efforts to involve library directors, chief academic officers, computer center directors, other key university personnel, and outside specialists in a collaborative process to discuss and select preferred futures for libraries and to decide how to achieve them. Beginning with university provosts

and library directors, the effort is now focused on what Dick Dougherty (1992) calls the "I-Think Project":

The objective of this project is to build an innovative problem-solving approach that can be used to facilitate the work of information professionals who seek to create a new world of scholarly and technical information for a networked environment. The heart and soul of the project will be a virtual think-tank based on computer-mediated communications tools. The structure of this envisioned capacity will be malleable so that it can be used to serve multiple purposes, e.g., projects that might range from decision support to policy analysis and strategy development activities. (pp. 3-4)

CONCLUSION

In this paper, I have attempted to link several normally disparate elements: ideas about democracy, ideas about information, ideas about infrastructure, ideas about libraries and librarians. In the information ferment that envelops our work and lives, it is all too easy to assume that emerging technologies will somehow "take care of" the issues of goals and purposes I have discussed here. That assumption is correct: they will take care of them. But as Orwell and Huxley understood many years ago, if we want the worlds we seek, we had best take care of them ourselves—in communities of dialogue, communities of purpose, communities where "it is human solidarity . . . that really matters" (Rorty, 1992, p. 153).

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