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# THE RAW AND THE COOKED AMONG LIBRARIANS

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**This introduction to *Library Hi Tech's* special issue on digital libraries and digital centers is about applying anthropology to library research. The goal is to demonstrate anthropology at work by examining the excellent data provided by the articles in this issue of *LHT* on the Electronic Library at University of Wisconsin at Madison and the federal model at University of Nevada at Reno (UNR). Three themes are examined, which represent binary tensions that exist in most libraries today: 1) physical metaphors for digital artifacts; 2) professional self-consciousness within integrative teams; and 3) centripetal administrative solutions to centrifugal service needs. The roles of anthropological theory, ethnography, and ethnology are also discussed as tools to help librarians to see the underlying elements in their work and workplaces.**

This introduction to *Library Hi Tech's* special issue on digital libraries and digital centers is about applying anthropology to library research.

Those who have read any anthropology over the past 30 or so years probably will recognize the reference in my title to Claude Levi-Strauss' famous book on American mythologies.<sup>1</sup> In our world presumably neither librarians nor library patrons indulge in the ceremonies that gave Levi-Strauss' book its name, but we can benefit from anthropological methods and theory to examine our systems in fresh, new ways. Anthropology is particularly worth looking to for methods and theory because it is one of the most accessible social sciences for a profession rife with historians and literature majors.

One of anthropology's contributions to the scholarly world has been to help us both to look *outside* ourselves at parallels with others, and to look *inside* ourselves at the unconscious foundations of our actions.<sup>2</sup> As a first step, anthropologists write ethnographies, descriptions of the societies and relationships they are studying. Traditional anthropologists may do this by going to remote south sea islands or jungle interiors, but ethnography is equally valid and increasingly practiced in the exotic world of modern institutions and modern business.<sup>3</sup>

Levi-Strauss talks of ethnographers (and historians) enlarging "a specific experience to the dimensions of a more general one...." He goes on to say that "in order to succeed, both historian and ethnographer must have the same qualities: skill, precision, a sympathetic

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approach, and objectivity."<sup>4</sup> Are these not similar objectives and qualities that librarians bring to much of what we write? The pages of this and other library journals are rich in descriptions of what we do and how we do it.

Let me proceed with the claim that the library literature is rich in ethnography. Ethnography, however, represents only the "raw" part, the data, of the anthropologist's intellectual menu. Ethnology is the "cooked" form, which appears on the academic menu as theories, symbols, and other abstractions. Often ethnology looks at a variety of cultures, while ethnography details only one. A functionalist stream of ethnology asks how a cultural artifact serves the operation of a society, while an "interpretative" anthropologist like Clifford Geertz seeks the symbolic and conceptual.<sup>5</sup> The library world can learn by picking and choosing among these theories as suits our need—as I am about to do.

My goal is to demonstrate anthropology at work by cooking a bit further the excellent data provided by the articles in this issue on library initiatives at University of Wisconsin at Madison and the University of Nevada at Reno (UNR). I propose to examine three themes:

- Physical metaphors for digital artifacts;
- Professional self-consciousness within integrative teams; and
- Centripetal administrative solutions to centrifugal service needs.

In these themes, I am proposing sets of binary tensions, which I think exist in most libraries today. Many other important themes are also possible, and I would like to draw particular attention to one, which is highlighted in the Wisconsin articles themselves: the inevitability of building new technology on legacy systems. Few libraries ever get a chance to start from scratch, and Wisconsin's achievement with its Electronic Library becomes all the more interesting because it had to be built on a tangle of aging, incompatible systems that sprang from its long history of high-tech leadership.

### Physical Metaphors for Digital Artifacts

*"...to the great despair of historians, men fail to change their vocabulary every time they change their customs."—Marc Bloch, 1944*<sup>6</sup>

Language has yet to catch up to modern technology. That is one reason why we use physical metaphors

for digital artifacts: we simply do not have better vocabulary for describing our computer- and network-based systems. A Web "page," for example, has little in common with the rectangle of paper that goes by the same name. Alternatives from the world of computer vocabulary, like "record" and "dataset," evoke none of the intellectual connections that library-oriented Web information encompasses and really ought to be associated with. Although my example is new, this kind of linguistic mismatch is not. But it is mainly in the latter half of the twentieth century that numbers of scholars have turned their attention to analyzing its consequences.

Structuralism offers further insight to this linguistic problem. It may be said to begin: "by proposing that, far from the world determining the order of our language, our language determines the order of the world."<sup>7</sup> In other words, the words we use to describe new digital tools determine our understanding of their nature, rather than some inherent quality in their nature determining what we call them. This idea has concrete consequences for the practicing librarian:

- The names we give to our digital tools help to shape them.
- Any mismatch between a tool's metaphorical name and its technical capabilities distorts our estimate of its functions.
- The connotations of those names shape user expectations.

Viewed in this context, Wisconsin's choice of the name "Electronic Library" stands out as intentionally bold, with an implied breadth of operations that is integral to its message. As Nolan Pope suggests in his discussion of the framework: "Electronic Library services and operations affect nearly every aspect of our campus libraries."<sup>8</sup> Wisconsin's metaphor draws on our images of a complete bricks-and-mortar library filled with paper tomes and human staff. Its completeness is striking—the suggestion that an existing complex of programs, databases, wires, and processors contains not just a catalog, or a reference collection, or a set of indexes, but something like the whole range of information and information services that a fully staffed, book-rich, bricks-and-mortar library embodies.

But does it? Can it? A natural tension exists between the metaphorical name and the digital artifact itself, which makes congruence between the former and the latter impossible. The implications of the mismatch are worth examining.

One implication of this mismatch is that Wisconsin has had to push existing technology hard to fulfill the

connotations of the metaphorical name. To become a complete electronic library meant offering more than just a few reference tools. The challenge meant offering a wide range of specialized tools. The difficulty in doing it emerges, for example, in the sidebar on geographic information systems, which lays out a model for testing a networked version of ArcView on processors that, a scant two years later, seem slow and antique.

A second implication is that the software behind the Electronic Library may have capabilities that the metaphor conceals, capabilities that have no analog in the physical library. The metaphor, for example, suggests neither the advantages of full-text searching nor any direct link between indexes (generally found in their non-digital form in reference collections located far from the journals they index) and full-text databases (whose bound equivalents mostly live in the stacks). This does not mean that users do not learn about full-text capabilities fairly quickly—only that the electronic library metaphor fails to imply them. A story circulated in my library recently of a patron who insisted on finding an article in the bound volume even though it was available (and printable) in full text on the screen in front of him. He was used to finding only abstracts online and extensive explanations did nothing to dislodge the idea from his mind. For someone like this user, a whole new set of mental links needs to be built to make electronic libraries comprehensible, which is one reason why Wisconsin's Electronic Library has an extensive bibliographic instruction program to help users.

A third implication of the metaphor affects user expectations. They quickly get the idea that the physical library is replaceable, if not actually being replaced. There are, of course, long debates in the library literature about whether this actually is happening or will happen. The point here is that the metaphor invites an overestimation of contemporary library technology, particularly for people (such as budget-strapped administrators) who have an exaggerated idea of technological change and little appreciation for the legal and economic barriers to a fully implemented electronic library. It is the reverse of the stimulation the name gives to those who want to make the electronic library as complete as possible.

### **Professional Self-Consciousness within Integrative Teams**

*"The whole point of a semiotic approach to culture is, as I have said, to aid us in gaining access to the conceptual world in which our subjects live so that we can, in some extended sense of the term, converse with them."—Clifford Geertz, 1973<sup>9</sup>*

Modern anthropology routinely deals with issues of cultural interaction. For anyone who cares to think about it, it is fairly easy to diagnose the existence of tensions between members of different professional subcultures on a wide variety of "integrative teams." Few librarians who ever have sat on a committee with a computer programmer will deny that that other tribe arrived in our midst complete with a foreign language and outlandish customs. Likewise it would enlighten virtually no one to point out the difference in emphasis and language between librarians and computing staff. Much more interesting is the diagnosis of how these groups succeeded in working together at Wisconsin and UNR.

A careful examination of the cultures of both librarians and computer professionals might well reveal structural similarities in their relationship to information as a product on the one hand, and to supplying that information to customers/users on the other. But the articles in this issue lay emphasis instead on external, not internal, factors. Two are particularly worth noting:

- institutional coordinating structures and
- user frustrations.

The word "committee" appears 41 times in the Wisconsin articles. Committees are, not too surprisingly, the chief institutional coordinating structure and also are used explicitly to break down hierarchical and organizational barriers. Committees exist at a variety of levels, starting with the Electronic Library Council (ELC). There are also standing committees, subcommittees, working groups, and ad-hoc task forces, which often "include an ELC member as liaison."<sup>10</sup> Since the subcommittees and working groups are allowed to recruit broadly, staff from all levels of the social hierarchy end up working face to face. The committees also are organized by functions and services, which again works to break down existing organizational units. While it seems clear that "automation staff," as the computer professionals are called, serve on these committees, they appear to have no explicit slots, quotas, named seats, or special roles. That suggests an impressive level of integration, even assuming it is a bit less true in practice than on paper.

At UNR the institutional coordinating structure appears to be the everyday working group rather than the more occasional committee, perhaps because it is smaller. Computing professionals who had previously mainly worked together on systemwide help desks were thrust into direct contact with librarians and patrons at stations throughout campus in an explicit attempt "to

begin a process of working across previously rigid organizational lines."<sup>11</sup>

Coordination is important, but user frustrations may be the greater force for cooperation. The word "help" appears three times in the short article about UNR and 72 times in the much longer Wisconsin articles. This suggests a strong emphasis, not just on user needs, but on handling (and avoiding) user troubles. Librarians and computer professionals go about this in different ways. The Wisconsin articles, for example, discuss both librarian-like concerns for subject structure and documentation as well as programmer-oriented network monitoring and system testing. But whether or not they sit together at the same "Help Desk," both librarians and computer professionals know that they lose when a user walks away angry.

### Centripetal Administrative Solutions to Centrifugal Service Needs

*"...structural analysis is confronted with a strange paradox well known to the linguist, that is: the more obvious structural organization is, the more difficult it becomes to reach it because of the inaccurate conscious models lying across the path which leads to it."—Claude Levi-Strauss, 1963<sup>12</sup>*

Understanding inherent organizational models matters to anthropologists. An analysis of the administrative structure of both the electronic library and the new service organization at UNR suggests not a single, simple principle, but a sophisticated balance between conflicting organizational norms, both of which need to be satisfied. One norm is centrifugal: increasingly users expect information services to come to them in their buildings, in their offices, in their homes, even during their travels. The other norm is centripetal: the need for a central authority to exercise its power in order to create the decentralized services that users want. Both norms are quite visible, and in themselves inaccurate because they are incomplete. The hidden balance between them is the key.

The terms centripetal and centrifugal imply a tension between opposing forces, such as the tension between gravity, which seeks to plunge our planet into the sun, and inertia, which would send it flying endlessly in a straight line away from the sun. Balance in the social world produces more irregular orbits than in the natural. But the analogy holds roughly true in these articles, where the central authority of the Electronic Library Council or the associate vice president's office can be seen to balance implicit local user interests. The difference is that in places like Wisconsin or UNR, the centripetal and centrifugal

forces do more than just oppose each other—they interact in the service of a broader common goal.

Examples of this interaction occur in the execution of three key service goals:

- 1) **Service that is uniform in time and place**—This means that a service like the combined Help Desks at UNR or the Electronic Library at Wisconsin becomes available at the same time in all branches, rather than just in the main library or at one or two larger libraries with local budgets for the necessary hardware and network connections. To achieve this at any given locality, some reallocation of resources can be necessary, which only a central administration can do.
- 2) **Service that is uniform in type**—This means that all features of the service become available throughout the system, and not just a subset of options in some locations. Testing high-end software on lower-end machines, such as Wisconsin did for ArcView, helps to ensure that this is technically possible. Such testing opens the possibility that the central administration must either scale down the software or upgrade the hardware.
- 3) **Service that is local in use**—This means that the service meets local needs for specialized, branch-specific areas, as well as serving broader, institution-wide interests. This can mean including software in the package, SGML for example, which only certain areas will use. It also can mean specialized training so that staff in each locality understand how to apply the service to their circumstances. At UNR, for example, the federal emphasis in Steven Zink's model guarantees a balance between coordination and local interests.

### The Raw Revisited

*"Structuralism works against any condescending assumption that some aspects of social behavior are insignificant, because its principle force is to take an interest in everything, or, if that is a superhuman ambition, at least to treat everything it meets with as interesting because it is significant."—John Sturrock, 1986<sup>13</sup>*

Librarians, in my experience, find it easy to take an interest in everything. Our profession forces us to be polymaths, and probably most of us would have it no other way. But often we become so entangled in delivering technology to our users that we fail to take as much interest as we might want to in the social and

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Having the right organization matters as much as delivering the right tools. And it is one of those perplexing facts that an organizational structure that fits one institution like the proverbial glove seems five sizes too large or too small, too stiff or too supple, for another. This is why viewing a range of organizations with a variety of approaches to solving the same technical problem and delivering the same range of services remains interesting. The variety is interesting initially because we, as practicing librarians, can ask: Will that idea, that interaction, that structure fit us? But they are interesting ultimately because, often subconsciously, we extract some key phrase, some set of ideas, that bridges multiple environments.

This brings us back to theory. Anthropological methods and structuralist ideas are like a pair of glasses that turn the blur of letters on a page into a readable text. No pair of glasses is perfect. All distort reality to some degree, and anthropological and structuralist lenses are not for everyone. Many people manage quite well without either glasses or theory. What matters is seeing clearly. This issue contains a wealth of information for those who want to deliver cutting-edge information technology. I invite you not only to admire what Wisconsin and UNR and others have accomplished, but to see the underlying elements that can inform your own efforts in similar realms.

#### NOTES

1. Claude Levi-Strauss, *The Raw and the Cooked*, trans. by John Weightman and Doreen Weightman (New York: Harper & Row, 1969).

2. Claude Levi-Strauss, *Structural Anthropology*, trans. by Claire Jacobson and Brooke Grundfest Schoepf (New York: Basic Books, 1963), 18.

3. Dean Takahashi, "Doing Fieldwork in the High-Tech Jungle," *Wall Street Journal* (27 October 1998): B1; and Francisco E. Aguilera, "Is Anthropology Good for the Company?," *American Anthropologist* (December 1996): 735-742.

4. Levi-Strauss, *Structural Anthropology*, 17.

5. Paul Robinson, Book Review: "From Suttee to Baseball to Cockfighting," *The New York Times* (25 September 1983): sect. 7; p. 11.

6. Marc Bloch, *The Historian's Craft* (New York: Random House, 1953), 34.

7. John Sturrock, *Structuralism* (London: Paladin, 1986), 17.

8. Nolan F. Pope, "The Administrative Framework of The UW-Madison Electronic Library," *Library Hi Tech* 16:3-4, (1998): 71.

9. Clifford Geertz, "Thick Description: Toward an Interpretive Theory of Culture," in *The Interpretation of Cultures: Selected Essays* (New York: Basic Books, 1973), 24.

10. Pope, 70.

11. Lynne Personius, "The Library, the Computing Center: An Innovative Organization in Nevada," *Library Hi Tech* 16:3-4 (1998): 63-65.

12. Levi-Strauss, *Structural Anthropology*, 281.

13. Sturrock, 43.