The Networked Public Librarian

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The rise of networked information economy challenges librarians to think of their role in the networked public sphere. Some of the core anchoring characteristics of the library seem to be challenged. The necessity of the physical anchor, the library, as a storage and distribution platform for reading, in particular, is being challenged by both commercial and non-commercial online storage and retrieval systems. The expertise of librarians is being challenged by the so-called "Wisdom of Crowds" and its doppelganger, the Niftiness of Algorithms. How should one think about the role of the library in the networked information economy?

The critical technical transformation underlying the challenge is the emergence of low cost networked computers. These place in the hands of large portions of the population the physical capital necessary to create, store, and communicate much larger portions of the universe of human knowledge than was ever possible before, even for the largest stores of knowledge. The most important implication of this radical decentralization of physical capital is the rise of social production: production based on social relations rather than on the price system or hierarchical organization—both governmental and corporate. This allows for individuals, even alone, at a price acceptable to them, to fulfill on an amateur basis some of the archiving and distribution functions of the library. It allows large-scale cooperation among individuals to increase the scope and efficacy of these efforts, as well as to harness unprecedented levels of amateur human effort and judgment to parse the vast quantities of information and engage in peer-based evaluation, accreditation, and filtering of the ever-growing stock of digitized human knowledge.

At the same time, the new abundance of information has increased the scarcity, and hence value, of human attention, by comparison to units of "content," or objects of attention. This new abundance of content and scarcity of attention, in turn, is underwriting a rapid shift of commercial practices away from proprietary strategies of commercial appropriation of the value of information and knowledge, and toward attention-based models of appropriation. In doing so, commercial companies, most visibly Google, are challenging an important economic niche that anchored libraries: the provisioning of already-existing information at its marginal cost of zero. Libraries played this important function, as one strategy to reducing the inevitable inefficiencies associated with solving the public goods problem of information production through the introduction of exclusive rights.

Caught between the challenge of commercial providers of information at marginal-cost (read, free of charge), on the one hand, and the rise of peer produced storage, archiving, filtering, and accreditation, are libraries and librarians to disappear quietly into the night, a vestige of print culture? The answer is, of course, no. It's practical contours are marked by the relative advantages and limitations of the two sources of challenge. To see these, consider three dimensions along which the universe of human knowledge is tugged when it is networked. One is the dimension of commercial-noncommercial. The second is the dimension of professional-amateur. The third is organizationally-

embedded to independent. Figure 1 portrays this space.

Each of these dimension represents a set of motivations, constraints, and affordances that people have with regard to their actions, and which therefore affect how they interact with the universe of knowledge, tugging it like directed forces and shaping the domain of human knowledge as they do. A commercial effort has certain affordances provided by its funding model that allow it to speed up the construction of fast, comprehensive digitized collections. But its funding requires its attendance to patterns of demand and demand management that are quite different from those of the profession of librarians or of academics or of a variety of other actors working within different platforms, with different motivations and different values around the production and dissemination of knowledge. Similarly, an amateur effort has certain affordances, not least of which are the sheer scope of human intelligence and knowledge applied to the material and the direct connection between the organization of knowledge and extant patterns of what people who are particularly engaged, but not professionally trained or organizationally embedded, focus on. It is precisely this diversity and independence that make the networked public sphere so attractive from the perspective of most democratic theories, but our system of knowledge production has also long-included a commitment to a set of professional values of inquiry and organization of thought to insulate knowledge from fashion and prejudice. This is true of the academy in research, and it is true of the library in defining the stock of human knowledge.

The role of the networked public librarian is, then, defined both internally—by the values of the librarian and library as profession and organization—and externally, by the needs and opportunities presented by the other major occupants of the networked information environment. Along the dimension of professionalism and amateur effort, the role of the librarian is to tug knowledge toward the professional. In this it tugs together with some, but mostly at an angle to, much of amateur peer production. It also tugs together with some professional commercial production, but also against some of the efforts that commerce often attracts where startup costs are low, as they are in the networked economy. Along the dimension of commercial-noncommercial, the library and librarian have a particular role to tug in the noncommercial direction, because habits of the industrial information economy have led many in society to associate commercial activity with professionalism and authority. The cultural role of the professional librarian makes the introduction of the accredited, trustworthy noncommercial professional particularly valuable in tugging against the cultural force of the commercial end of the spectrum. Finally, along the dimension of independent / organizationally-embedded, the direction of the library and librarian are neither necessarily the same, nor necessarily obvious. The library *qua* library offers a certain continuity, funding structure, and organizational assurance of commitment to the prior two dimensions, and in this complements peer production. The librarian *qua* professional may actually act in both the organizational mode, and the networked mode, operating in both dimensions at once at different times of day, week, or social context. The librarian who brings his values to Wikipedia as a contributor with a certain training is acting along the independent end of this dimension, while that same person speaking at a municipality meeting about the potential for provisioning an Internet point-of-presence for the local Wifi network at the library is

speaking for the organization, leveraging its organizational characteristics to achieve the other two goals at the level of access to the Internet—provisioning an open network that is dedicated to open use, not commercial appropriation and manipulation of attention toward the lucrative. Figure 2 suggests how one might portray the role of the networked public librarian along the three dimensions.

What are the kinds of practical functions that the networked librarian could perform in pursuit of her role? We can organize the answer around to traditional roles of the library: subsidization and distribution of reading at marginal cost; and the provision of professional skills and expertise.

Reading and distribution at marginal cost. For the next decade or so, this will still be necessary for books. But, like video and music, this is becoming less technically necessary (it is only still necessary for those media today because of policy choices in the copyright/regulatory arena.) The cost and quality of displays will, however, likely solve this problem over the next decade, making reading, like music and video, merely a matter of policy. By then, the open access publishing movement in science and the academy should solve policy issues for that segment, and possibly business models in the industries that have faced the challenges earlier will do the same for texts, though this is of course speculative. Even if books do become freely available in digital form, however, there may be some communities, particularly poorer urban and remote rural, where access to machines will be limited. Here, the traditional library building itself can continue to provide a reading space through the subsidized provision of the necessary basic machines for reading.

There are two more basic transformational moves that libraries could undertake in the effort to update their role as the core of subsidized reading in local communities. The first is to provide an anchor for local wireless broadband access. We are seeing how, in the United States in particular, commercial broadband deployment is lagging. The primary reason for the lag is that the monopoly structure of the industry, coupled with lack of regulation, has allowed broadband providers to focus on building appropriable networks, rather than the fastest, highest capacity bit-carriage networks technically feasible. The result is that, unless policy changes, the higher-speed networks that will emerge likely reflect commercial values more than knowledge values. The library can play a central role not only in the pace of deployment, but, more importantly, in the knowledge-orientation of the network. Rather than buying access from the local cable company, municipalities should and could invest in making their public libraries—already existing organizations with a certain stability and longstanding commitment to openness—into a local Internet Point of Presence (POP). Bringing a high-capacity fiber connection to a library has become a relatively inexpensive prospect. Redistributing that capacity through open wireless networks—be they mesh-based, WiMax, or some combination, is also within the means of small to mid-size communities. The advantage of such a library-based local network would be its commitment to openness and providing information to users, rather than eyeballs to advertisers and paying content providers.

The second transformational role that the library could play is in the digitization of collections.

Scanners are relatively cheap. Books are distributed. Librarians, too, are distributed. There is a vast overcapacity built into the universe of libraries, were it to be tapped in a collaborative platform—assuming one can overcome the regulatory restraints. The advantage of a librarian- and library-based digitization effort, as compared to the Google-led effort, is that it would offer a noncommercial universe of digitized materials, open for all to use and reuse without restriction to that which is available under commercially-appropriable conditions. Doing so for public domain purposes only requires a will and organization. Doing so for all-but-the-newest copyrighted materials requires, first and foremost, political will and organization to deregulate the use of the vast majority of existing cultural objects still regulated under an exclusive rights regime.

Expertise and skills. The traditional role of curation through selection for inclusion in a limited space is largely obsolete with the new abundance of storage and communications capacity. But the core set of professional commitments and practices that went into that selection remain central as the underpinning for the new important role of navigation. With abundance of materials from diverse sources, navigation—the capacity to select, accredit, and structure, as well as educate in a skeptical view of materials and investigation, become a core set of necessary skills. The librarian, rather than the library, becomes the core resource, both in local, geographically-bounded terms and in networked terms.

The continued role of the library as a locally-available meet point for learners and bibliophiles becomes more a point of face-to-face cooperation and learning than a point of acquisition and distribution. It marks and provides a location for presence-based interaction. It accredits and houses the local expert in information navigation—in understanding how to search information, how to evaluate it, and how to organize it. To fulfill this role, however, librarians will have to emphasize their own life-long learning, and to understand that almost always some of their users, including the children, will know more about one new twist or another in how one can search for information, than they do. The idea that there is a relatively stable system for the organization of information and its characterization and retrieval is obsolete. Librarians must adopt a commitment to skepticism, provisional belief fixation, and learning, or constant revision, through conversation with users. And through serial cooperative engagement with users, to themselves become nodes in networks of acquisition and dissemination of knowledge about how to know what there is to know.

This life-long commitment to training, and the turn to the librarian, rather than the library, as core, suggests the need for a model of the networked librarian. Just as in other forms of professional networked organization like free or open source software development, individuals can transcend organizational boundaries to form global networks of collaboration around a core set of practical problem solving practices and a shared sense of professional commitment values. Through networked engagement, librarians can engage both in lifelong learning and in leveraging the economies of distributed computation, storage, and communication to serve the basic goals of the library since Alexandria: to make all human knowledge available to all human beings in usable structures.

Figure 1: Forces operating on the structure of knowledge

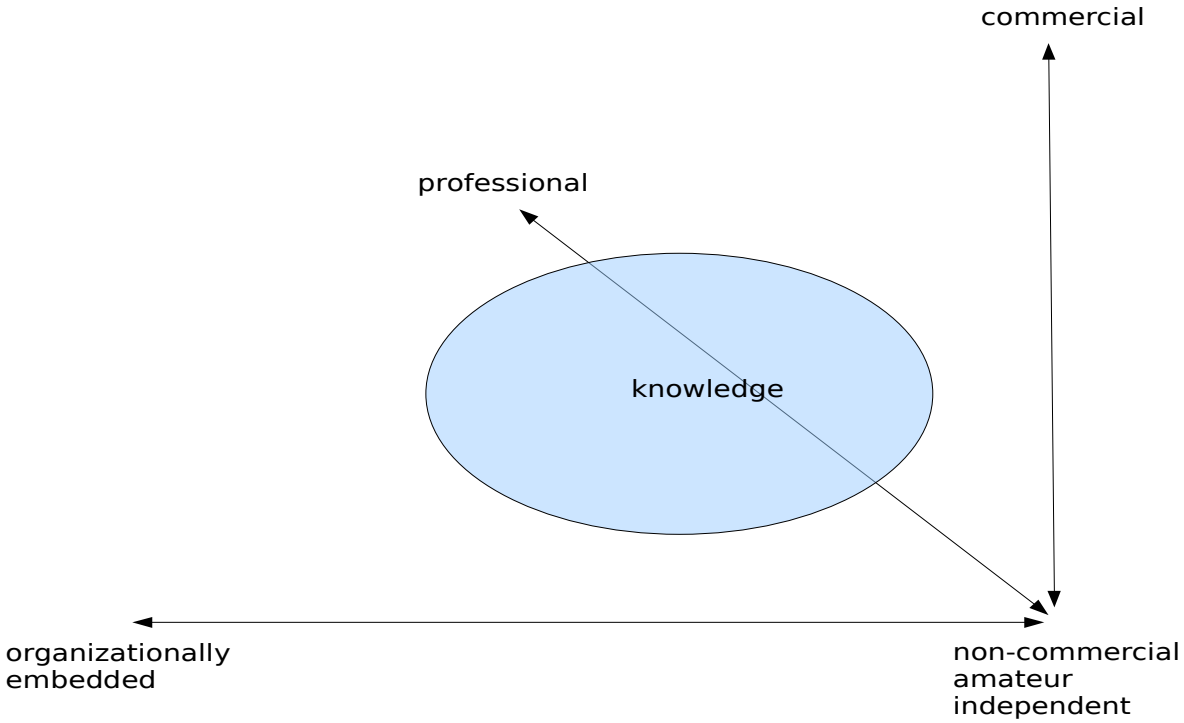

Figure 2: The Networked Librarian