viewpoint

The visible library and legible spaces

In his 1956 film, *Tout la mémoire du monde* (*All the memory of the world*), French director Alain Resnais turned the black and white documentary footage of an automated retrieval system at the Bibliothèque Nationale into an ominously *noire* work.[1] The film depicts an enormous open space criss-crossed with a matrix of metal rails. A robotic unit moves through it with eerie precision, its mechanism stopping to pull a book in crude imitation of a human motion. The tone has more in common with that of Jean-Luc Godard's *Alphaville* (1965) and Chris Marker's *La Jetée* (1962) than with any cheerful 'Let's go to the library' educational pitch. After all, this is a library into which *no one* can go. A fully machinic world, its combination of nineteenth-century technology and twentieth-century managerial aspirations eliminates human presence as part of its pre-steam-punk dystopianism.

What is so disturbing about the depiction is not just that it reduces the search process to the retrieval of a single targeted object, or even the unflinching efficiency and rational systematization it depicts, but the absence of any humanly legible information within the organization of the space. Presumably, books were stored here by size, rather than subject, and they lived in zones defined by format —folio, quarto, octavo—rather than any categories reminiscent of, for instance, the Western classical divisions in the trivium and quadrivium. We shudder to think of *Pat the bunny* or even *Jane Eyre* waiting in the dark as the phlanged wheels creak closer. Now that Renais's nightmare has become a common reality, and the trend to remote storage dependent on electronic and digital systems is increasing, the question of what is lost in the process needs more than nostalgia to counter the impact.

Some personal experience of libraries as legible space provides a background to my reflections. In my teens, I took a job as a page in my local branch of the Philadelphia Public Library. The revelation of the position was that the spatial layout of the books had a semantic value. Fiction was ranged alphabetically by author on the shelves that edged the main open stack area (mysteries and biographies were set aside for readers with *those* proclivities). But the free-standing shelves were ordered by a strange numerical code into whose mysteries I was initiated on the first day. The revelation of the Dewey Decimal system was life-changing. My perception of my job went from lowly file clerk alphabetizing books to keeper of a universal order whose assumptions were at once logical and idiosyncratic. This meta-structure of knowledge organization *was legible,* and the space of the library was the physical manifestation of a world view available *to be read*. I did not know what kingdom this was, only that I now had the keys.

Encounters with my college libraries, and then research libraries, led to an expanded understanding of the way stack diagrams depicted intellectual neighborhoods–government, politics, foreign relations and other areas I passed through on the way to art and literature. Older institutions sometimes preserved local legacy systems of classification. In a library like the above mentioned Bibliothèque Nationale, no single integrated catalogue existed at the time I did research in the mid-1980s. You combed through various acquisition record ledgers and other inventories without cross-references. Though the spatial arrangement of books in the great domed reading room could be viewed, the sheer scale of collections required they be invisible, housed in closed stacks for security and preservation. In older universities, whole rooms might preserve the original order of a donor gift or sub-set of the collection. In an homage to such early organization, the Library of Congress has installed a display of Thomas

1. The entire short film is available: https://www.youtube.com/watch?v=i0RVSZ_yDjs Accessed March 13, 2019.

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Jefferson's Library according to his original order, one he derived from Francis Bacon's division of knowledge into Memory, Reason, and Imagination.[2] As the curators point out, Jefferson adapted these for his own purposes to group History, Philosophy, and Fine Arts into these rubrics. On display in a circular array of glass-fronted shelves, the collection can be 'read' as a knowledge scheme with all of its historical and cultural specificity, not just as a collection of volumes.

The history of classification and spatial manifestation is fascinating, but as 'modern' systems developed in Western culture, colonial impulses developed with them, along with assertions of the incontrovertible seeming authority of science as the ultimate model of knowledge.[3] Libraries in antiquity divided the Greek from the Latin, placing the chambers to house their scrolls on either side of a temple. Three thousand years ago, Chinese librarians struggled to organize inscriptions on oracle bones which could not be shelved conveniently.[4] The legendary Pinakes catalogue composed by Callimachus for the library at Alexandria had to be linked to the hanging etiquettes, tags on scrolls, that identified items among the piles of materials whether they were shelved by size, subject, or author -- or some practical combination of these. Some private and university collections took their catalogue system from physical locations. Portrait busts of famous figures from antiquity were common elements in libraries. A book shelf might be identified as 'Homer' and the name included the shelf-mark to aid in locating volumes stored under that sculpture. Private libraries might be organized entirely to suit the whim of their owners without submitting to any professional requirements, but their legibility, like that of curiosity cabinets, is a functional feature of their physical order. We all know the neighborhoods in our own bookshelves, even if we are not making use of Jacques Charles Brunet's 1842 guideline for the Paris Bookseller's classification and separating our work into theology, jurisprudence, sciences and art, history etc. The system of classification is not the same as the objects subjected to its order -- but the shelves are where the intersection is made visible.

The legibility of systems is a political issue as well as an epistemological and professional one. *Where* a book is positioned reflects the values of the classification by which it is placed. When the system is concealed, the workings of classificatory power are obscured. As a student pointed out to me some years ago, it matters enormously where the Apocrypha are shelved and classified, just as surely as we recognize the problems of putting books about creationism into science. The decisions about classification are made out of sight, but unless we can see them, they are hard to read. Invisible power has great efficacy. Masking these organizational structures is a way of obscuring their machinations.

In the present, two related challenges face us – the pressures on libraries to use spaces for activities rather than collections (the sorry, pejorative term 'warehousing' suggests the depths to which stacks and shelves have fallen in the estimation of the profession) and the need to think creatively about the use of digital representations of collections within schemes of knowledge organization. While I will advocate for open stacks as long as I have breath, the reality is that they are expensive and endangered. So, if remote storage and retrieval increasingly are replacing browsable stacks, then what are the adequate surrogates? An interface that brings classification into view would make it possible, as with reading those stack maps, to understand a work or object within its contexts – its conditions of identity. Standard online systems are very limited in the way they can be used by a reader. I know of no library online interface that shows me, for instance, the full extent of Library of Congress subject headings so I can locate my research within them. My keyword searches give me partial views of the classification system when what I want is to be able to read it as a scheme -- search *though* it. Virtual browsing, even in new systems that have the worthwhile goal of using Linked Data to expose collections, has a long way to go to expose the organization of the systems on which it is drawing.[5]

The second challenge is to meet the long-standing promise of digital environments to move from a singular 'universe' of knowledge organization into a 'multi-verse'. This has not materialized. In commercial browsers, the customized screen, driven by commerce, cookies, and weighted preferences, skews towards ever narrower views of the digital inventory. Library systems may avoid advertising, but their intellectual structure is even narrower—no fuzzy browsing results or 'Did you mean–?' queries appear, only literal matches. The library interface remains a strict martinet, subjecting its users to a rigid discipline of spelling and terminology on its own uncompromising terms.

2. https://www.loc.gov/exhibits/thomas-jeffersons-library/overview.html Accessed March13, 2019.

3. Ronald Day, *The Modern Invention of Information* (Carbondale, IL: Southern Illinois University Press, 2001) and *Indexing it All* (Cambridge, MA: MIT Press, 2014).

4. Zhixian Yi, "History of Library Developments in China," IFLA, WLIC 2013 http://library.ifla.org/143/1/164-yi-en.pdf Accessed March 13, 2019.

5. The W3C report from 2005 is a start point for studying the aspirations of these systems, with many up-to-date initiatives working to make use of existing data and metadata in creative ways. See: https://www.w3.org/2005/Incubator/lld/wiki/DraftReportWithTransclusion for the history and https://www.ld4l.org/linked-data for current discussions. Both accessed March 13, 2019.

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No technical impediment prevents us from using multiple – even infinite – classificatory systems for search and access. The idea of being able to read the contents of a physical or virtual library in accord with the knowledge organization of the Chinese sages, an Islamic encyclopedia, a Neo-Platonic world view or the cosmological structure of a child, an immigrant, or a visually-impaired individual? The days of presumed objectivity are long behind us, but those of inscribed and manifest subjectivity – or relativity – have not materialized. That materialization, I suggest, can be put at the service of cognitive processing of knowledge as both system and substance. The physicality of the world is not a trivial inconvenience, but an opportunity whose properties are valuable for intellectual and political reasons. A system concealed from view cannot be addressed, analyzed, criticized, or challenged. Make knowledge systems legible within real *and* surrogate spaces, through virtual means and physical ones. Expose the ordering that shows an object is not identified by a unique number, but that its identity is also an effect of its place within a system, among other objects. The topological aspect of knowledge and its mapping onto physical spaces has not received much attention, but as the legible systems of library layouts vanish, their value becomes ever more visible.

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