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Titel: The Critical Choice

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The Critical Choice[1]

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Academic and special libraries are to a great extent old cultural institutions, which have been through a violent process of change during the last years. The use of modern computer systems and dataprocessing has given librarians and academic librarians new tools unknown before. That is in any case the situation at the University Library of Oslo, where I have my daily work as an academic librarian, responsible for selecting, classifying and presenting books, dissertations, journals, bibliographies, encyclopedias etc. for the benefit of the students and researchers in political science.

Generally speaking the libraries are in the public eye as never before. And big, modern libraries are planned and built all over the world: in Copenhagen and New York, in Taipei and Tokyo - and in Oslo. Among those that have attracted most attention are perhaps the new national library in Paris and the Alexandria library. In Oslo the building of the new university library will be completed in 1998.

Many questions are now being asked about the managing of all these new libraries, and the old ones as well. How can we, for instance, in the typical teaching library manage to solve the

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[1] Paper presented at LIBER Annual General Conference 1997, Bern.

problems connected with combining the traditional library techniques with al the new ones?

The new tools are undoutedly very helpful for those visiting the library, but it is my assertion that they also pose stiff and increasing demands for professional reflection on part of the users when they have to choose from - so to speak - a torrent of data and information. The users have to make what I prefer to call *the critical choice*.

"Throw yourself on the net!" is perhaps the latest slogan in a world where data technology and computer science are receiving more and more attention. And in the last years new technical possibilities have indeed been created to control, to search and to find data and information as electronic material - via on-line searching, CD-Rom and the Internet. But this has, in fact, also created a new educational debate about the role of the book, about the acquisition of knowledge, about the situation for the researchers and last, but not least, about the importance of the special libraries.

One main problem - or paradox - is that although it has been predicted for years that we will move in the direction of a "paperless society", this prediction seems to be a sort of myth. In fact we have a society with overconsumption of paper.

Never before in the history of documentation work has the consumption of paper been greater. People don't read lengthy texts on the screen. They print out what they need, collect texts in folders and make their own small "libraries". It has been suggested that full-text databases would be the solution to this problem. But we still have the same situation - the users print out texts of considerable length, which again are collected as new books. In consequence the need for printed material is, accordingly, increasing and not declining. And the production of books, not least specialist literature, with strict demands for technical quality, excellent layout, correct language and reliable binding for securing the legitimate rights of the authors, assures

that the traditional publishers manage as well as before. Therefore, the publishing of books is still a growing industry. The demand for specialist literature in the university libraries for instance, is at least as strong as before.

General and specialist literature in Norway
in number of titles 1970-1995.

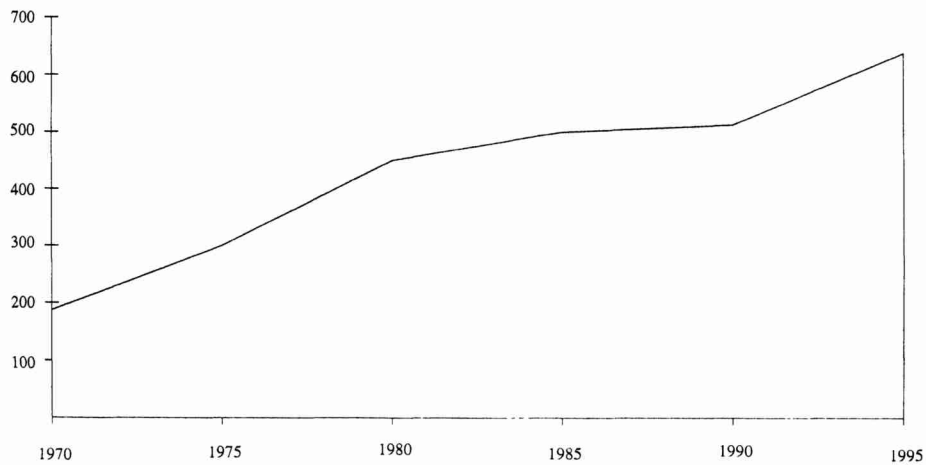Source: Statistics of the Norwegian publishing houses 1995(Bransjestatistikk 1995.)

Figure 1

This beeing said, it is also an established fact that the new electronic media have fascinating possibilities for those who work in archives and libraries and those who are researchers. For students and researchers who have the right spirit of inquiry, the new media have developed into indispensable tools for finding one's way in the ever increasing abundance of data. In the

University Library of Oslo we have today, for instance, more than 60 reference and bibliographical databases. They can be a real gold mine - but alas - they have to be used *critically*.

One of those who has developed a fruitful theory, or model, about the problems of the modern information society is the sociologist Orim E. Klapp. He points out that there is a general danger in what he calls "overload and boredom"1). The user comes under stress and is overwhelmed by the enormous multitude of books, articles, dissertations and notes. Klapp fears that "The result of our information society is that we suffer a lag in which the slow horse of meaning is unable to keep up with the fast horse of mere information"2). He operates with four key concepts: *information, entropy, redundancy* and *variety*. The first pair is information versus entropy. Information includes useful knowledge, learning, adaption, meaning and wisdom. Entropy is the negative of information. So information and entropy comprise a continuum. In general, information means progress and entropy a step backward. Another parameter comes from the other two key concepts: variety and redundancy. These can be both positive or negative: boring redundancy or functional redundancy. Boring variety or good variety. The theory implies that there are two states in which one can escape boredom. One is by variety so interesting and meaningful that it leads to discovery, learning, adaption, invention and progress. The other is by redundancy that is familiar, reliable, reassuring, communicative and useful. Perhaps this model could tell us something about the ideal teaching library?

"GOOD" (FUNCTIONAL)
REDUNDANCY

Meaning

"GOOD" VARIETY

rules
skills
codes
custom
ritual
education
history
tradition
memory
identity
souvenirs
relics

discovery
learning
adaptation
invention
progress
games of chance
clowning
cosmopolitanism

Redundancy ← → **Variety**

BORING REDUNDANCY

banality
clichés
platitudes
monotony
tedium
restriction
formalism
rigidity
dogmatism
parochialism
stagnation

BORING VARIETY

noise
equivocation
ambiguity
irrelevance
trivia
faddism
information overload
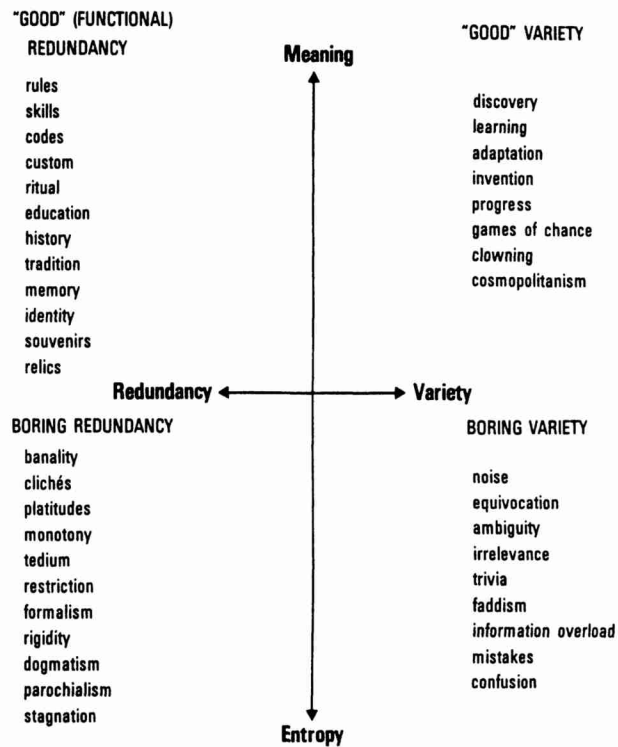mistakes
confusion

Entropy

Figure 2

The well-known author, philosopher and semiotician, Umberto Eco, has also long been preoccupied by how to manage these problems. In his opinion data technology very easily leads to the finding of a overhelming quantity of irrelevant information. Therefore, he states, in the world of the libraries the users - students and researchers - have to be taught how to filtrate and choose critically; the users have to learn what he calls the art of decimation, i.e. how to make the critical choice: "It must be an absolute necessity to find rules for decimation; rules that change from one subject area to another. If not, the future will change

for the worse, and we can end in a situation where overinformation and censorship will identify each other" 3).

In connection with research conserning the use of modern data technology, it is essential to differentiate between pure *information* and *knowledge*. And in the demanding intellectual/educational process of learning, we operate with exactly the same thought process in a person today as occurred 30 or 300 years ago. An obvious danger is the smart, journalistic, popular understanding that it is now so easy to find what we are seeking via simple keypushing on a computer - because everything is now to be found in digital media.

The reality is, however, quite another. Digital media information can certainly not replace basic arithmetics, educational understanding, solid language comprehension or solid social and community knowledge. It is for exactly the same reason that as you don't develop into an author simply because you are able to write on a PC. Everything still has to be learnt! Therefore, the book is still alive: the professional, good quality well formulated, respectable, pedagogical text, that is presented. And, therefore, the high-quality, specialized book-colletions are still vital for academic and special libraries. It is through these academic books that the students still have to work. This is how professor of literature, Harold Bloom characterizes the situation: "It is hard for students who have grown up with the great, blank eye of television to do the solitary, intense, deeply imaginative, deeply responsive reading that is needed" 4).

Today we are in the situation that a schism is developing between the popular view of how easy data-technology has made searching for information, and the reality that there are increasing demands upon the modern library users. The political scientist Frederick Holler is not in doubt of that: "Despite advances in electronic telecommunications technology, the task of learning about political life is getting more and more difficult. The large quantity of information scattered through the electronic and

printed media, the enormous but often confusing holdings of library and other repository collections, and the everpresent time pressure combine to make it now significantly harder for most persons to inform themselves adequately" 5).

Professor Holler makes reference to Dr. Samuel Johnson, who some 200 years ago, observed that there are two kinds of human knowledge. He said: "We know a subject ourselves or we know where we can find information upon it" 6). Since Dr. Johnson's time, however, enormous advances have been made in the first kind of knowledge, but a comparable improvement in the second kind of knowledge has, regretably, not yet been achieved. As knowledge on most subjects increased, it became increasingly difficult to find information about what was already known.

A law of inverse knowledge relationship was born. Stated in its simplest terms the law means that the more knowledge becomes available to mankind, the less the individual knows how to retrieve it. Indeed the deficiency in the second knowledge is so great that the knowledge of the first kind is constantly recreated and frequently lost.

This paradoxical situation is the result, as well as the cause, of specialization in research, which is a fundamental feature of modern educational systems and modern civilization. Unable to master human knowledge as a whole, the individual tends to concentrate on narrower and narrower segments of it; thus, the existing boundaries of the individual's knowledge may reach unprecedented depths rather than breadths. Educational progress is gauged by how well individuals *know* a particular subject, regardless of their ability to *find* information in or outside their field of specialization.

It is also a fact that the different information and retrieval systems - utilizing as they do several different transfer channels and a multitude of individual reference works - are exceedingly complex. A large amount of activity and interest has been focused on the task of carry-back, or reference activity, undertaken by

specially trained librarians. A main point in professor Hollers argumentation is that the librarian's assistance is essentially *a service activity*. It should in a higher degree develop into an educational endeavor: *a teaching library*!

In spite of many recommendations, colleges and universities in many countries still do not offer sufficient instruction in political information retrieval. And I fear this is relevant to information retrieval in general. The ignorance of the mechanism of information is, therefore, a form of functional retrieval illiteracy that is often costly not only to individuals but also to society as a whole. In my own discipline at the University Library of Oslo this problem has been taken seriously and today it is compulsory to take a reference activity course for those who are majoring in that discipline.

One of the most insidious results in which the lack of adequate retrieval competence can express itself is the illusion gained by many library database users that they have collected sufficient information if they have found a lot of information in the particular time they have allocated for searching. Due to the mass of available information it is frequently quite easy to find what seems to be more than enough information on a particular topic of inquiry. The mistaken belief that one is adequately informed as a result of being exposed to prodigious amounts of information is a very common error in academic institutions. How can the teaching library be devoted to giving assistance to all persons or organizations desiring to find *adequate*, rather than *plentiful* information?

One main point is to teach users that there is not an antagonism between the new media and traditional, printed material - both forms are useful to the users; but they have to be taught that the information technology makes *demands* on them. Often *knowledge* comes as a decisive premise for understanding, choosing and selecting from the growing stream of information. And the good choice leads to increasing knowledge.

Today the user ought to be deliberate about what he or she wants to find - if not "the noise" will be overwhelming. What should one do with a datasearch that gives hits in the form of 100 books or 500 journal articles? *The time* still gives us a frame around our lives which is as strict as before. And as the quantity of potential hits is mounting, *the choice* of what to use, read and try to understand is of greater importance than ever before. It is here knowledge, reflection and preparation of information come into the picture -the human factor, the neurological aspect. Therefore, it is of value to get people used to works of reference such as encyclopedias, handbooks or dictionaries. Thorough reflection and thinking the problems over carefully ought to be a basic method for useful datasearching. The student who places himself or herself in front of the screen and is interested in "something about pressure-groups", ought to have worked out and sorted the different terms in advance: for instance the differences and points of resemblance between terms such as "pressure groups", "interest groups", "lobbying" or "corporatism". Here it can be suitable to remember the wise words of Louis Pasteur: "In the field of observation , chance favours the prepared mind" 7). This philosophy will undoutedly be not only "to the benefit of the user", but also "to the benefit of the librarian".

Information is a process, as well as a product, of the human brain and senses that has the potential to reduce uncertainty within a specific parameter or limit. This assumtion does not imply that information must necessarily be correct or complete, for, in fact, much information is *false* and *fragmentary*. Inherent in the defintion, however, is the implication that information is relative to a specific source or recipient. Information can not be assumed to be a reduction of uncertainty per se, as some authors have suggested, because information may create new uncertainties or may fail to reduce uncertainty in recipients.

The foregoing is the main point in a book by the Norwegian data-technologist Espen Holm: "Intelligent idiots. Society,

creativity and information technology" 8). Pure *data* have to be decoded to give sense. When the data are understood and categorized, they turn into *information* for the recipient. It is often the difference between data and information that is the main cause that brings people, in spite of PCs and Internet, to complain about lack of information. We have a lot of data, but are short of information. Information is, in the next step, transformed into *knowledge* by individual systematizing and interpretation. Knowledge is something one has to acquire through one's own efforts. But *knowledge of facts* is not identical with *understanding*. Only when you can explain or formulate a connection, have you understood it. So we have the next step of the stairs: *applied knowledge*. If you can also manage to *analyze* and give *an account of* a case then the data are tranformed into something that is useful. And if you in the end use the analysis to *come to a conclusion* and are able *to evaluate the result*, the basic data have contributed to enrich a process of decision.
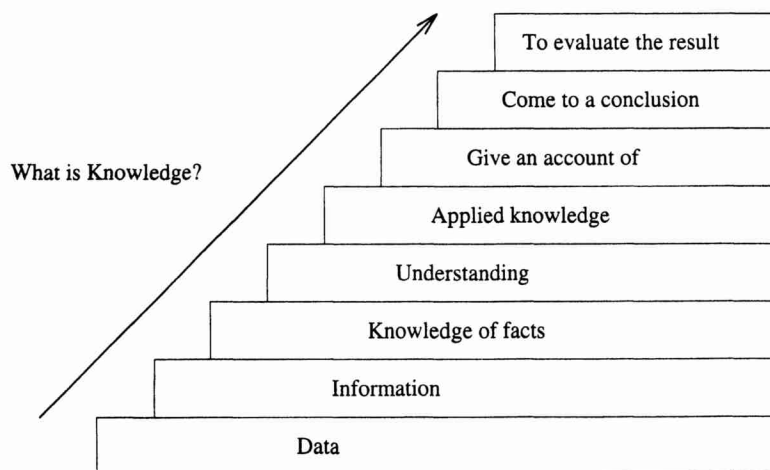
(Source: Holm, E. (1996))

Figure 3

It is not easy to know how special and academic libraries will function in the future. But if one says that "the future is now", the good library is a place where the user moves in a landscape characterized by broad collections of specialized books and high quality reference collections, relevant, modern electronic databases and librarians who can teach the users how to use the library. The Norwegian deputy librarian Hans Martin Fagerli has expressed it in this way: "Library teaching and research have to work for interdependence so that these activities come to work more closely together" 9).

Today: Students:
                                More teaching
          Library   less selfinstruction

          Academic
          Community

- -

Tomorrow: Students:
                                Less teaching
                                more selfinstruction

          Library
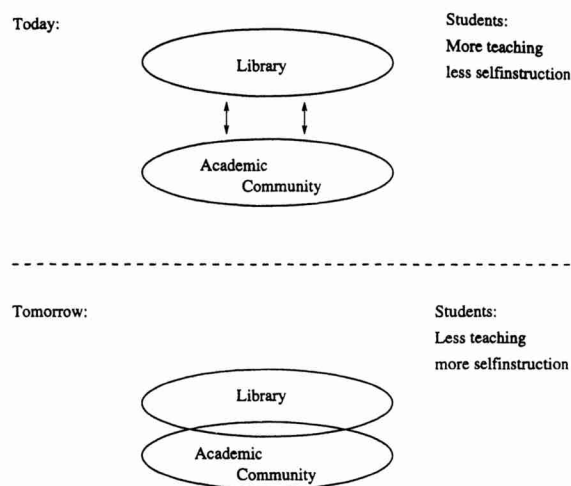
          Academic
          Community

Figure 4

In my opinion the special or academic library, then, must develop into a teaching library where both the students and the researchers are taught how to use the modern library and, where

therefore, users are trained to know how to get what they want. Thus users will become used to making - in a rational way - the necessary critical choices. Or said in another way: the users

will find themselves in a rich intersection between the printed material, the electronic sphere and the neurological process.

Notes

1. Klapp, O.E. (1986) Overload and Boredom: Essays on the Quality of Life in the Information Society. *Contributions in Sociology*, 57. Westport, Conn., Greenwood Press. 174 p.
2. Ibid. p.2.
3. Umberto Eco interviewed by Patrick Coppock in *Ikkevold*, 166 (4/95): Desimerte fellesskap (Decimated fellowships) p.16.
4. Farish, I. (1995) Choice interviews Harold Bloom, Choice 33:901.
5. Holler, F.L. (1987) *Information sources of political science*. 4th. ed. Santa Barbara, ABC-Clio. p.XV.
6. Ibid. p.1.
7. Kvittingen, L. (1996) Serendipity og kjemi (Serendipity and chemistry) *Naturen*, 120:23.
8. Holm, E. (1996) *Intelligente idioter. Samfunn, kreativitet og informasjonsteknologi*. Oslo, Forum. 245 p.
9. Fagerli, H.M. (1995) *Vår digtale fremtid. Den elektroniske informasjonsformidling. (Our digital future. The electronic procurement of information)*. Oslo. p.63.