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Information Technology: An Erosion of Cataloguing and Classification Practices?

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Abstract

The gradual metamorphosis of information handling techniques from the era of book arrangement according to weight, length/size, colour, etc. to the informatised epoch is explored. TINLIB software has been made the paradigm in the study and analysis of the impact of Information Technology on Library Management Packages. There has been a progression in the system of managing information in Nigeria, albeit only minimal. The information handling mechanism has also crawled-up to a level where cataloguers, classifiers and indexers need a re-orientation to be able to cope with the on-going universal informatisation of society.

Introduction

Our pre-occupation in this paper is to explore the traditional cataloguing and classification practices with a view of showing how the advent of Information Technology (IT) has affected conventional practices in the technical services of the library system. We shall also attempt to redefine our roles in the context of changing circumstances and imposition of greater responsibilities and challenges. How has IT transformed information management? Has there been a complete invasion of the traditional roles of the cataloguer? In what area(s) shall the cataloguer re-orientate himself in preparation for the 21st century?

One of the foci of research endeavours the world-over today is in the areas of information management, technology and global communications networks. As in post-modernism and women empowerment (feminism), the information specialists must confront the twenty-first century prepared for more career challenges. Information Technology has brought radical departures to information processing and management over the past two decades or so that the Librarian or information manager must brace himself up for more surprises in the next few decades. Moreover, the challenges of the modern day information seeker is spurring librarians to be even more ingenuous and less apathetic in theirs approach to handling information. Victor Rosenberg posits that the new distribution technologies will make information more of a commodity belonging to everyone. As information itself becomes such a commodity, the value added by vendors becomes more important: indeed, the added value becomes the time sold. This value added can be timeliness of information, the speed of publication or, more likely, it will become the intellectual effort in selecting and evaluating the information; the annotation, or

interpretation, or even the aesthetic quality of information. Thus, *the organization and access to information will become more important than the information itself.* Interestingly, the job of the librarian, particularly those in the technical services division and most especially the cataloguer and indexer is to provide the expected organization and needed access to information. They provide the key to the gateway of information.

The Transformation of Information Management Skills

This paper is not expected to bore us down with the rhetorics of the history of book management; the inherent sense of classifying; the efforts made to describe, group and regroup knowledge; and of course, the present persistence to discover the most enduring means of organising knowledge. It must be mentioned that the theory of Universal and constant flux propounded by a philosopher of old, Heraclitus is true also of information management techniques: it is obvious that change, indeed, is the permanent phenomenon. Now IT is here with us. It is not something in the vague future. It is revolutionizing our concept of record keeping in an upheaval as great as the introduction of printing, if not of writing itself.

Unrelating, accelerating change has brought libraries and librarians to the threshold of a new era, radically different from even the recent past. The computerized system and other noteworthy developments are changing the very substance of libraries as the custodian of information, even though libraries tenaciously conform to a traditional model of local, physical collections made accessible by a variety of uncoordinated bibliographic tools.

It is equally noteworthy that modern technologies are transforming library operations from simple resources reservoir to comprehensive information systems and are in the process of redeeming the promise of transmitting the world's libraries and information centers directly to the desktop of users. By and large, with reduced importance of physical libraries, librarians and information specialists will therefore need to be proactive and promote their special services to their user communities. They will need to function more like information consulting engineers than traditional passive information resources custodians and dispensers of documents.

Those that are in this endeavour will enjoy satisfying careers and perhaps earn the status and respect long due, but not achieved by the library profession. Librarians who cling to the old paradigms of librarianship may find themselves curators of infrequently used, increasingly irrelevant information museums. Information concepts and technologies are changing so rapidly that even the most alert librarian is hard pressed to keep current. The changes are affecting libraries of all sizes and types.

Three areas of particular importance in today's changing world of librarianship are: the growth of on-line search services; the impact of telecommunications technologies; and advances in micro computer applications. These technologies and concepts are transforming both the internal workings of the library and the services offered to users. According to Jeremy Beale[3], the development of information infrastructures and new multi-media services is taking on more and more importance. The ability of information infrastructures to handle simultaneously interactive voice, data and image transmissions opens the possibility of using them to deliver consumer and information services. New means of finding and organising information on remote networked databases is already expanding very fast. One can therefore see and not merely perceive the immense potentials of information technologies and their impact on the Librarianship profession.

For a thorough understanding of this gradual, yet highly dramatic and potent process, it is pertinent to have a closer look at the evolving trends against the backdrop of the traditional cataloguing and classification practices.

Library Management Software Packages Versus Anglo-American Cataloguing Rules (2)

Today's information seeker cannot be burdened by volumes upon volumes of tiny, tightly-compacted, type-faced cumbersome looking books. His information needs are more direct and goal-oriented such that he gets what he wants with hardly any stress. The onus direct and goal-oriented such that he gets what he wants with hardly any stress. The onus is on the cataloguer, classifier and indexer to take the stress off his chest. The challenges of the needs of the modern users; the pressure to keep up with the new technology; and the need to continue to be relevant, combine to gear librarians (and other information professionals) to developing means of coping with users' needs using the available technologies. Because of this pressure and the opportunity provided by IT, bibliographic, and especially, subject descriptors are becoming more succinct and less ambiguous. Subject descriptors are, infact, getting more and more specific. This is evident in the frequency of the revision of 'Subject Headings'. The changing phases of the descriptors have introactive effect on the media through which they are communicated and therefore posing serious challenges for the remodelling of the describers.

Cataloguers seem to be witnessing the gradual invasion of Anglo-American Cataloguing Rules 2 (AACR2) through the enforcement of information technology imperatives. The AACR2 provides access to a book through the main entry and other tracings i.e. the subject headings and added entries. Hence, a book may have about 10 catalogue cards as access variables in the card catalogues. Whereas the access variables are tagged searchable fields in computerized system, the dignification of the main entry has been quietly swept aside.

The On-line Public Access Catalogue (OPAC) provides several option of searchable fields on the computer and with the touch of appropriate keys, all the bibliographic records needed for tracing or retrieving a title are presented. At the stage of cataloguing, TNLIB Catalogue module, for instance, gives opportunity for a cataloguer to create as many fields as possible by pressing 'insert' on the keyboards on desired or required fields in order to create new fields and input necessary data. This had led us to see that the practice of multiple access in the card catalogues is mere waste and with time, such catalogues will disappear from libraries as OPAC takes pre-eminence. No matter the Library software adopted for us, multiple access is obtainable on-line through OPAC.

The practice whereby according to AACR2, a book that has more than three authors will be entered under title and added entry made for the first named author when cataloguing has been negated by the computerized system. It is now possible to create fields for all the named authors and, depending on the practice in each library, all the named authors could be made access points on the computer.

Moreso, TNLIB allows that users can access materials on the same subject on OPAC through the classification number. The classification number here referred is the main class which may/may not include the cutter number and which is different from the call number. The second '*shelf reference*' indicated on TINLIB Catalogue template now bears the full location mark which are appropriate to each item catalogued in the spine label field.

Version 300 of the TINLIB package has immense potentials for greater accessibility. The capabilities have been enhanced. The Catalogue module, for instance, has been improved to accommodate all necessary descriptive analysis presented in the third level cataloguing description' enunciated in AACR2.

it is instructive that some library softwares like TINLIB generate index words automatically from the title words. And when manipulated correctly, the keywords could be used as access points for retrieving records from the computer. With OPAC, one can browse through the indexes and switch form title words (KWIC-index) to subject headings and classification; or to

the author file and find many new and unexpected items. The user can browse these files, form sets of truncated or full terms, apply boolean combinations, and use limitations e.g. year of publication, availability, type of materials etc. Anatol Vasiljev[4] of Delft University of Technology Library, Netherlands, writing on Enhancement of the Subject Access Vocabulary in an On-line Catalogue said,

> By introducing many more "see" cross-references (c-refs) than formerly used in a card subject headings catalogue, we can achieve better matchings … (i.e between a variety in an index of controlled terms and a variety of users' querries). The subject access vocabulary must be richer. The syndetic structure in a KWIC-index of traditional-precoordinated subject headings is different if compared with that of the card catalogue … The On line input of new and useful C-refs is much more easier. And more, the variety present in content bearing words of a title KWIC-index can and should, in an interactive search show us the way to useful subject headings and class notations.

This is even moreso with TNLIB Catalogue module which is, for instance, the repository of bibliographic information that offers unrivalled access for information retrieval such that a user no matter how inexperience about computers, can instantly search by navigating from one field to another. The systems are mostly menu driven and therefore user friendly.

Dispensing Cataloguing and Classification in A Computer Network Environment

Computer Network environment refers to a situation where the usage of a database can be shared at different locations (terminals) at the same time. This is possible only when computers are connected. Local Area Networks is the connection of a group of computers to a single storage unit containing the data base and located either in a room or in a building. Networks have implications for cataloguing practices.

Before the advent of computer technology, the Acquisitions section of the library keeps a separate record of materials placed on order. The data kept are usually skeletal but comprehensive enough to make the books ordered recognisable when they arrive. This basically involved describing the materials ordered. After preliminary checkings when books arrive in Acquisitions section, the books are passed on to cataloguing and classification section where fresh bibliographic descriptions are made. With the new technology, an integrated data base system evolves whereby the same record used when orders were placed are called-up on the computer by the cataloguer for necessary editing. Essentially, the descriptive aspect of cataloguing would have been handled by the Acquisitions personnel.

Ruth Hafter opined that "increased reliance on networks creates a trend towards the deprofessionalization of cataloguing" because "control over the work flow has shifted from the cataloguers to library administrators and network personnel". She then noted that the majority of cataloguing was done by library assistants.

Although the deprofessionalization hypothesis was faulted by Kenneth Furuta[6] on the basis of preconceived opinions and personal bias being superimposed on the findings of Hafter's study[5], we must be very cautions. In Kenneth Dike Library University of Ibadan for instance, the cataloguing backlog incurred as a result of the on-going retrospective conversion exercise (RECON) of the manual catalogue to machine readable catalogue was an item of discussion in a meeting where it was suggested that the collection development staff should now help in the preliminary descriptions of the books so that the professional cataloguers will have time for subject analysis. This suggestion, although has not led to reduction of cataloguers duties, it has led to the transportation of the roles of library assistants in cataloguing section on the library assistants in collection Development Division.

It is infact interesting to note that Cataloguing is being made easier now. The impact of new technologies is far reaching on cataloguing and classification than any other aspect of librarianship. The introduction of cataloguers Desktop will further reduce the strains and stress of cataloguing. Classification schemes are now on compact Discs and place on the laps of the cataloguers. The Library of Congress Classification Scheme has already been concerted to this format. The expensive schedules covering all the classification are in the Cataloguers Desk top.

The Library of Congress, Compact Disc-Machine Readable Catalogue (LC CD-MARC) has serious impacts on cataloguing practices. The energy and time used ins searching National Union Catalogues (NUC) and other bibliographic tools has simply been removed. One can download directly into diskettes and later edit, convert and transfer into local databases from LC CD-MARC. The problems of searching through NUC subject Headings, numerous annual supplements and local card catalogues to locate evasive subject headings when doing original cataloguing have also been removed. LC CD-MARC has subject heading records where basic class numbers are gotten from such records and applied as necessary except for titles that need modifications. Little time is spent on authority files or determination of cutter numbers.

Redefining the Cataloguer's Role

It is increasingly becoming apparent with the advancement of IT that the cataloguer must come to terms with undisputable changes in his role. Kenneth Furuta6 discovered that the revolution spawned by the introduction of modern bibliographic utilities in the 1970s led to a body of literature, by the beginning of the 1980s, that explored the future roles of professional cataloguers. He further said that throughout the papers, there seemed to be general agreement that the future for cataloguers lies more in the management of automated systems. In fact, the cataloguers must not just stop at managing automated systems, because it is not enough to acquire the technology, it is important to keep pace with it. New models of composers wish greater memories, efficiencies and capabilities are manufactured form time to time; recording formats of information get obsolete very fast. The cataloguer, classifier or indexer who is not alert will ate himself into insignificance.

Susan Charkes affirming this position said,

> The information manager's role should not be limited to content. It must include the technology used to communicate content to the user. The distinction between content and technology is a false on that makes us vulnerable to losing control over the tools we need to do our jobs. We must replace this false distinction with an approach recognising that our role in communications process necessarily includes technological expertise, and that our value to the enterprise increases as our sphere of competence expands.

Although this is directed at all information managers, the cataloguers are more specifically addressed. We must master the technology in the tools that we use for our jobs. In the print era, the librarian might not benefit much from the technology of printing because information was embedded in the same medium in which it was communicated to the readers. There was not much of repackaging done. You wanted a book, you got a book?

The electronic library has revolutionized this trend. Technical knowledge is now central to user-oriented service. Digital information exist in a myriad of forms at the point where it is accessed; and it can also be changed not a manifold variety of media when delivered. Technical knowledge also empowers us to create new options for access. Unless we understand the technology well enough that we can comprehend its implications, we can be no more than its passive consumers.

In summary, the emerging roles of the cataloguers are such that apart from being all they had always being i.e. bibliographic and subject analysts, classifiers, indexers, e.t.c. they must now begin to take the responsibility of managing automated systems with an indepth knowledge of the content of the new technology. This will enable them package and repackage information to suit the needs of their users who are becoming increasingly dependent on their expertise.

Conclusion

One can see at this stage that IT has not eroded cataloguing and classification practices but has brought about a finese that is causing cataloguers all over the world to reshape their roles within the information society. IT has made it a lot easier for the user to access information; and less cumbersome and straineous for the cataloguer to process it. There has not been substantial change in the acts of cataloguing, classifying or indexing – a transformation of these roles has merely taken place. Even when technology has brought about remodelling of AACR2, the cataloguers handle input of data on templates and editing of records; even when it is an integrated system in a network environment, the cataloguers still edit; more importantly, subject analysis and basic indexing are their exclusive domains; Cataloguers' Desktop, CD-MARC and all the possibilities they hold for cataloguing and classification are to enhance the jobs of cataloguers, not to usurp them.

With IT, the cataloguers' roles have not changed, they still hold the key to the gateway of information. If anything, greater responsibilities and challenges have been hoisted on them especially those in the Third World. As we approach the 21st century, we must warm up to IT and get friendly with 'user friendlies'.

References

Beale, Jeremy (1995) "The Information explosion'. *The OECD Observer No. 196, October/ November;* P. 6.

Furuta, Kenneth (1990) 'The Impact of automaton on professional Cataloguers'. *Information Technology and Libraries, 9 (3), Sept.,* P. 243.

Hafter, Ruth (1986) Academic Librarians and Cataloguing networks: Visibility, quality control and professional status.' *New York: Greenwood,* P. 125.

Rosenberg, Victor '(1994) Will new information technology destroy copyright?' *The Electronic Library, Vol. 12, No. 5, October,* P. 285.

Rothenberg, Jeff '(1995) Ensuring the longevity of digital documents.' *Scientific American, January,* P. 42.

Vasiljev, Anatol (1990) 'Enhancement of the Subject access vocabulary in an Online Catalogue'. *In Fugmann, Robert (ed.) Advances in knowledge organisation, Vol. 1 (1990): tools for knowledge organisation and the human interface. Proceedings 1st International Society for Knowledge Organisation (ISKO) Conference, Darmstadt, 14-17 Aug. 1990. Frankfurt/ Main: Indeks Verlag,* P. 164.

Other Consulted Materials

Gorman, Michael (1988) (Ed.). 'Anglo-American Cataloguing Rules. – 2nd Rev. ed. – Ottawa Canadian Library Association, 677p.

TINLIB (1994) The information navigators: version 280'. – London: Information Management and Engineering, 109p.