

## SOME TRANSPACIFIC PERSPECTIVES ON AUTOMATION IN THEOLOGICAL STUDIES

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My purpose in this brief paper is to present some random observations (drawn from visits in 1986 and 1990) of automation in theological libraries in the United States and to endeavour to draw some implications for the situation in Australia and New Zealand.

### COLLECTION DEVELOPMENT

While visiting the Lutheran School of Theology at Chicago (with its Jesuit-Krauss-McCormick Library) in 1986, I took a walk two blocks south and two blocks east, then back to LSTC. It took me past the Chicago Divinity School, the Chicago Theological Seminary, Meadville Lombard School of Theology, and McCormick Seminary. The walk took me less than half an hour, but it took me past more theological books (in libraries) than we have in the whole of Australia and New Zealand (1.5 million)! From Berkeley to Boston, North America has many such concentrations of theological resources. I need hardly mention that we have no such concentrations in Australia or New Zealand. What it means is that a researcher working in such an area in the United States can assume that just about any book likely to be needed can be in hand within an hour or two. In our situation, I venture to suggest that we might dare to dream of a situation where just about any book in theology or religion might be available within a week or two from somewhere in Australia or New Zealand. I believe it could happen if we plan for it to happen and if we take advantage of the information technology currently at our disposal.

In the Australian and New Zealand library communities these days, they are making much of the concept of the Distributed National Collection (DNC). Adapted to the situation of our two nations, I believe it has much greater applicability to theological libraries than to any other

sector of the library community. This is because we do not have any major research library in the field of theology (such as a Yale or a Harvard or a Princeton or a Union) that we can fall back on when resources are lacking. In essence, the DNC concept means seeing our collective resources, not as 100 or so different collections, but as one collection, distributed over 100 or so locations. While individual institutions would retain ownership and control, certain implications would necessarily result from such a concept. There would be an obvious commitment to resource-sharing (e.g. through inter-library lending and reciprocal borrowing, as appropriate). But the essential prerequisite to effective resource-sharing is the sharing of information on holdings. Through the *Australasian Union List of Serials in Theological Collections (AULOTS)*, we have very adequate control of existing serials literature, but the situation regarding monographs and nonbook materials is utter chaos! It is here that we need to exploit the computer systems that already exist and are readily available to us - providing excellent quality at a very low price - at least, for Australian libraries. The advent of full-screen access by dial-up mode to the Australian Bibliographic Network places the full resources and services of the National Bibliographic Database at the disposal of every library, of whatever size. Theological libraries currently using ABN for copy-cataloguing report hit rates of 80-85% of current, commercially-published, English language materials available for copying onto local systems, whether in hard or soft copy. And for original cataloguing input to the NBD, contributors receive a handsome credit of \$7 an item. If we can learn from our colleagues in North America, we might note that 85% of theological libraries belong to such a network, in most cases the Online Computer Library Center.

A further implication of the DNC concept is that libraries will plan together to ensure that the national and regional coverage of theological literature is as broad and deep as possible, and that unnecessary duplication is avoided. Here also, automation can play a key role. A first step might be a conspectus project and a regional theological inventory to identify the strengths and weaknesses of the regional collection. In 1986, I was present at Kansas City at a conspectus workshop which was to become the launching pad for the North American Theological Inventory. The plan for NATI was that theological libraries should

evaluate their libraries according to a predetermined coding system which graded the various parts of the collection with values from 0 to 5. These individual assessments would then be collated to provide a conspectus of the total North American scene. The result is a document which divides theological literature into 377 categories, showing how well or how poorly each category is represented in the national collection. A similar project, aimed at a collective collection development policy, is currently being worked on in the Sydney area; if this could be replicated right across Australia and New Zealand, we would have an excellent basis on which to plan for further cooperation in collection building and in maximizing the use of scarce financial resources.

### INFORMATION RETRIEVAL

To highlight the importance of using modern information technology in the area of information retrieval, let me share the observation of a good friend and colleague who did his doctoral dissertation some years ago at a prestigious university in the field of Old Testament studies. His projection was the analysis of a particular linguistic feature of the Hebrew text. He said that 80% of his work was simply searching for and finding this phenomenon in its various occurrences. Today, with the aid of information technology, the search could be done in half an hour. The topic might be suitable for a term paper, but would never be acceptable as a topic for postgraduate research. The point of the illustration is that, at least in some areas, automation can have a big impact on the quality of work we can expect from our students, freeing time from unproductive searching for critical reflection on what has been found. To fail to provide our students with the research tools which are available is to seriously disadvantage them by comparison with their fellows in other sectors of tertiary education and to hinder them in the pursuit of theological knowledge.

One example of such information technology which is being used in North America is IBYCUS, a computer program developed by David Packard for multilingual text manipulation and word processing. It costs US\$4000 and handles Roman, Greek, Hebrew and Coptic scripts. Its main function is to handle texts of the *Thesaurus Linguae Graecae*, but

it has become the basis for the development of further software for manipulating the TLG texts. Thus, if you have the CATSS (Computer-Assisted Tools for Septuagint Studies) and CCAT (Center for Computer Analysis of Texts) software, you have all the requirements for the most sophisticated morphological, lexical, and syntactical research in the Masoretic Text (Biblia Hebraica Stuttgartensia), the Greek Septuagint (Rahlfs) and the Greek New Testament (United Bible Societies, 3rd edition). Other texts are increasingly being provided with indexes and concordances.

Not unknown in Australia and New Zealand is the GRAMCORD software, developed by D.A. Carson and Paul Miller at Trinity Evangelical Divinity School, Deerfield and being used in many M.Div. courses across North America. All students at TEDS are required to present at least one term paper based on the use of this software. It costs about \$500 and provides also for morphological, lexical, and syntactical research.

Anyone interested in pursuing further examples of automated information retrieval tools is referred to John J. Hughes, *Bits, bytes and biblical studies* (Zondervan, 1989). It devotes a lot of attention to Compucord which Hughes considers one of the most powerful programs on the market (for Old Testament studies).

A little known non-commercial project involving several media is the Lutheran Brotherhood Reformation Research Library at Luther Northwestern Theological Seminary, St Paul. The aim is to collect existing microfilm and microfiche relating to the Reformation and to photograph documents not previously published. The resulting collection is being catalogued and will result in a huge database which can be searched by author, title, or keyword in title. It will contain hundreds of thousands of documents.

## CATALOGUES

While computers are by now an indispensable part of the scene of theological librarianship in North America, there are still many libraries

which do not have Online Public Access Catalogues. One of the alternatives one finds in quite a number of libraries is the CD-ROM catalogue. The two which I saw in action were Marcive and Intelligent Catalog. Their choice over online systems seems to have been dictated by price. However, as their name implies, they are essentially read-only systems; thus although one may read of automated circulation systems being attached to CD-ROM catalogues, the examples which I saw were supported either by conventional card-based circulation systems or completely separate automated circulation systems. Generally, they are considered a temporary expedient, pending the installation of an online system, and, in any case, are not available in Australia.

The database with which I became most familiar during my six months' job exchange in 1990 was the Online Computer Library Center (OCLC). With its headquarters in Columbus, Ohio, it has a database of more than 23 million records and a membership of more than 1600 libraries, of which 160 are theological libraries. With such a huge database, there are very few items which are not available for copy-cataloguing. The Hammo Library, where I was working, inputs about 50-60 items of original cataloguing a year out of some 3000 items catalogued - and this is considered a substantial contribution. While it would be technically possible for an Australian library to be a member of this network, it is not likely to be financially feasible, because of the high cost of overseas telecommunications and of OCLC membership. The best alternative for anyone wanting to use the resources of OCLC is its CD-ROM product, as is being used at Catholic Theological Union, Hunter's Hill, Centre for Ministry, North Parramatta and St John's/Trinity, Auckland. It costs about A\$4000 per annum, for which you are provided with current cataloguing data, as well as a selection of the 1.35 million most commonly used older records. Users report a 70% hit rate for the current material and even better for the retrospective material.

At present there is a move afoot among the American Theological Library Association Theological Users Group (ATLATUG) to create a CD-ROM database of all the holdings of all 160 ATLA participants in OCLC plus the four libraries which are members of RLIN. This might be a more useful database if it does eventuate and if OCLC makes it

available for cataloguing purposes; however, the present intention is that it should be used for location information for interlibrary loan purposes.

## SUMMARY

Between my visits to the United States in 1986 and 1990, it is obvious that there has been a tremendous increase in the use of computers in theological libraries. Indeed, in the North American context, it is almost inconceivable that a library could be without automation. What I suggest we in Australia and New Zealand may need to grasp is that the installation of computer equipment and the provision of computer services is not just a matter of "keeping up with the Joneses", but a matter of providing our users with the resources they need for efficient and effective theological research.

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Our overseas delegates: Helen Scarlett (South Africa); Jeanette Little (Fiji); and Lyn Elsholz (Papua New Guinea)

