

Of New Libraries and Futuristic Libraries

BY CLARENCE GORCHELS

THE COMPLETELY AUTOMATED "futuristic" library could become a reality in a newly-born college or university in the very near future, possibly within three years.

Almost one hundred new colleges and universities are to be created in the United States within the next five years. This is not a crystal ball prediction; it is a simple fact, based on known legislative actions, definite appropriations, the existence of paid planning staffs, and buildings going up. In California alone, six new junior colleges, three new state universities (albeit components of the University of California), and two new state colleges are coming into being. Four of these five new campuses for higher education will each have more than ten thousand students within a decade. In other states, also, such as Florida, New York, and Colorado, among others, machinery has been put into motion to produce large new colleges and universities.

One or more of these fast growing colleges and universities, unfettered by vested interests as reflected by existing staffs, book collections, and old buildings, may well develop the first totally automated library. It is entirely possible, of course, that one of the new smaller colleges will be the first to own and operate all of the electronic equipment, machines, devices, and services, thus to earn the accolade "futuristic library." Small size and moderate growth potential, however, would limit economic feasibility, and automation could be administered another setback! On the other hand, it might be sound fiscal policy to buy full automation at the

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outset for library service in one of the colleges which will grow from one student to ten thousand students in the immediate future, such as the University of California at Irvine, Denver State College, Florida Atlantic University, or the California State College at Palos Verdes.

What new electronic machines and devices are likely to be of special value to these budding futuristic libraries?

Of course, electronic computers are basic. It would be redundant here to recount in detail the potential usefulness of computers in the storage and retrieval of knowledge,¹ in cataloging, in circulation work, and in maintaining serial records. Details of these operations have been covered quite adequately by other writers. Up to now, however, the writers have acknowledged that the cost of using computers in these processes has been almost prohibitive. Random access computers are far too expensive for libraries alone "to keep." Recent developments in the computer world, however, may mean that libraries can have a continuing share of computer time (with immediate and constant access to the computer) without total computer time expense. Especially encouraging are the means of sharing random access computer time developed by the System Development Corporation of Santa Monica, California.

While discussions of computers and

¹ Especially recommended is the article by Marjorie Griffin: "The Library of Tomorrow," *Library Journal*, LXXXVII (April 15, 1962), 1555-57.

their potential usefulness to libraries have appeared in library journals rather frequently, heretofore writers have not indicated an awareness of the existence of other specific automated devices and services which can be valuable. True, such terms as "closed circuit television" and "microminiaturization" have been airily tossed about as possessing a pleasant if somewhat vague significance for academic libraries in the future. But the future for these assets is now, because appropriate equipment is already available.

Already in use is Phonoscope, a compact two-way audio and visual instrument, being used in classrooms in Texas and probably elsewhere. Imaginative people will disagree with the holier-than-thou statement from the manufacturers of Phonoscope: "From its inception, television has been considered as inherently a one-way communication tool." Yet, as a system which is designed specifically to incorporate features of both television and telephone, to provide face-to-face communication between two or more points, Phonoscope can be of noteworthy value in many libraries. To have a librarian actually available at every readers' service station during all of the seventy to one hundred hours per week that a college or university library is open is prohibitive in cost and wasteful of the talents of good readers' service librarians. A two-way Phonoscope set up at every service point, with each instrument tied to all others, and all "answerable" by a librarian stationed at any one service desk, will make possible the availability of professional reference service at all points every hour the library is open. Incidentally, the education given in good library schools to equip librarians with an excellent general background for reference work will be more appreciated than ever. Expert generalists and teachers of the use of the library will be valued once more despite the popularity of the subject-divisional plan of library organization.

One of the more promising micromini-

aturization concepts for libraries is the Magnavue system developed at Magnavox Research Laboratories in Torrance, California. The equipment developed for this system makes possible the automatic selection and reproduction, on demand, of any page or document in a "stack" or file of six hundred and seventy-five thousand pages in an average of thirty seconds. During a normal working day, five thousand pages or documents can be "retrieved" and two thousand new pages can be added to the stack. Actually, the stack is an electronic storage drum of pages (or drawings, or maps, or catalog cards, or order records) which have been reduced to "3 inch x 35 mm." microfilm chips. To say more about the obvious uses of a system like Magnavue in libraries would be gilding the lily.

A number of other means of saving space and time in the futuristic library already exists, of course, including the opportunity for subscribing to journals, such as *Wildlife Diseases*, which are issued only in microform without interim publication on paper.

To supply library materials in depth, it is expected that the fledgling libraries will be connected (for immediate interlibrary loans) with libraries owning more comprehensive resources. Of course, it is no longer necessary physically to send bound volumes from one library to another, as photo-duplication is widely used. Now even the mailing of photocopies can be eliminated, because transmission of hard copy over telephone wires is a reality. "Al Pur Com" (All Purpose Communication System) developed by the Alden Research Center in Westboro, Massachusetts, is one of a number of systems which make possible the speedy delivery to a reader of microfilm copies or hard copies of pages of a publication held in a distant library.

It is possible that there are now fewer electronic machines (other than computers) designed to expedite the work of

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their present positions, the difference was not significant. This means that the greater experience found for the white librarians in terms of total number of years worked as a professional librarian before the present appointment did not necessarily indicate movement from one library to another or the number of years of experience in the present position.

CONCLUSION

The effects of professionalization and standardization were reflected in the educational preparation of the Negro chief librarians. To a great extent, they had received professional education from the same accredited library schools as the whites, and they had become full-fledged members of an occupation not yet fully professionalized but one that is moving along the continuum of professionalism.

Achievement of this status by Negro librarians has resulted from a combination of efforts: (1) to improve Negro colleges and their libraries, so that they might compare favorably with colleges and college libraries in general; (2) to prepare professionally educated Negro librarians to staff the college libraries;

and (3) to meet standards for college libraries and librarians, as they have been set forth by the Southern Association and the ALA.

Although Negroes entered the field of librarianship later than whites, and although Negro college library development lagged behind that of college libraries in general, there have been persistent efforts, especially since 1925, to develop a body of professionally educated Negroes for the occupation of librarian. It is important to note that the strides which have been made in this direction were not fostered primarily by Negroes themselves. In a large measure, the financial support for library education for Negroes in the South and the leadership from the library profession came through the sponsorship of white philanthropic foundations and white leaders in both the fields of education and librarianship. Negro men and women have been eager to enter the field of librarianship and to take advantage of the opportunities for professional education. The findings of this investigation reflect this combination of efforts.

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the technical services than there are to aid the reader services. Yet, at least one kind of machine appears to be most useful in the technical services operations. Punched tape typewriters, such as the Flexowriter, are invaluable in library order and processing work. Moreover, punched tape typewriters have been found to be particularly useful when wedded to a random access computer, as has been done at the Hanford Atomic Energy Works library in Richland, Washington.

Finally, one basic service for nurturing automation is not yet on the market. Eyes

are focused on the Library of Congress, expectantly waiting to see the initiation of the distribution of Library of Congress catalog cards on magnetic tape. This is a possible service which has been discussed for some time among librarians interested in automation. When this service is perfected, electronic computers can produce for libraries on demand catalog cards untouched by human hands. Unquestionably, among the first subscribers for this new service will be the libraries of the new colleges and universities.

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