Machines that Think

Giant Brains; or, Machines that Think. By Edmund Callis Berkeley. New York, John Wiley & Sons [c1949], xvi, 270p. $4.00.

"The libraries are full of books: most of them we can never hope to read in our lifetime. . . . There is a big gap between somebody's knowing something and employment of that knowledge by you or me when we need it." Thus Mr. Berkeley describes one of the problems which our "giant brains" must solve. This account of the development of complex calculating machines is presented in as readable a style as could be devised, considering the difficulty of the subject. Mr. Berkeley has not been completely successful in writing an account to be read, as he intended, by everyone, but he has succeeded in presenting the mechanical brains in a fashion simple enough to be understood by the careful reader with a fair amount of mathematical knowledge. Mr. Berkeley's schematic and verbal descriptions of "Simon," a simple mechanical brain, serve to give the average reader sufficient confidence to go on to the explanations of the calculators at M.I.T., Harvard, and elsewhere. However, those explanations are necessarily too involved for the layman.

Although it may be disheartening in some respects, one of the proposed applications of mechanical brains must be considered by the librarian:

"We can foresee the development of machinery that will make it possible to consult information in a library automatically. Suppose that you go into the library of the future and wish to look up ways for making biscuits. You will be able to dial into the catalogue machine 'making biscuits.' There will be a flutter of movie film in the machine. Soon it will stop, and, in front of you on the screen, will be projected the part of the catalogue which shows the names of three or four books containing recipes for biscuits. If you are satisfied, you will press a button; a copy of what you saw will be made for you and come out of the machine.

"After further development, all the pages of all books will be available by machine. Then, when you press the right button, you will be able to get from the machine a copy of the exact recipe for biscuits you choose.

"We are not yet at the end of foreseeable development. There will be a third stage. You will then have in your home an automatic cooking machine operated by program tapes. You will stock it with various supplies, and it will put together and cook whatever dishes you desire. Then, what you will need from the library will be a program or routine on magnetic tape to control your automatic cook. And the library, instead of producing a pictorial copy of the recipe for you to read and apply, will produce a routine on magnetic tape for controlling your cooking machine. . . ." (pp. 181-82)

While this conception of the library may at first seem to lead toward technological unemployment (a topic considered in Chapter 12—"Social Control"), the relief from routines resulting could give the librarian time for research and reflection on the major problems confronting him. Any librarian interested in mechanizing repetitive tasks should read at least Chapter 4 ("Counting Holes: Punch-Card Calculating Machines") and review the bibliography on punch-card machines on pages 232-39.—*Ralph Blasingame, Jr., School of Library Service, Columbia University.*

Photography and Librarians

The History of Photography from 1839 to the Present Day. By Beaumont Newhall. New York, the Museum of Modern Art, 1949.

Die Geschichte der Kleinbildkamera (The History of the Miniature Camera). By Erich Stenger. Wetzlar, Ernst Leitz, 1949.

There are several excellent reasons why the librarian, individually and collectively, should want to concern himself with the history of photography.

1. In his use of the microfilm and the photostat he is not only benefiting from certain specific forms of photography, but he is also developing them and making a contribution of far-reaching importance. The librarian's employment of photographic methods as time-saving devices, as instruments