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THE USE OF LIBRARIES BY ECONOMISTS

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A draft paper for the International Economic Association 1975 conference on "The Organization and Retrieval of Economic Knowledge," circulated for criticism, comment and correction.

1. Introduction

This essay is personal.[*] The writer is an economist, and to some extent, an economic historian, with limited knowledge of the fine points of librarianship. Writing it has been in fact a voyage of discovery. In the past, I have worked extensively - i.e. for period from two weeks to a number of months or years in ten great or good libraries,[1] and for lesser periods down to one hour in perhaps ten more. Since undertaking the assignment, I have had a chance to visit or inspect another ten.[2] But in forty years of teaching and research, it is appalling what I did not learn about libraries, and in particular about library directories, books on subject collections, professional bibliographies, published catalogs.[3] I cannot claim to have repaired these long-term omissions. In addition to library visits, research for the paper included sending a questionnaire to a selected list of libraries. Returns were somewhat spotty, and numerical material in any case is ambiguous because of imprecision over the limits of "economics" on the one hand and what constitutes a book, volume, pamphlet, periodical, manuscript, item, etc. on the other.

As a personal effort, the paper does not deal with the economics of libraries, as for example in William J. Baumol and Matityahu Marcus, <u>Economics of Academic Libraries</u>, Washington, D. C., American Council on Education, 1973, which applies regression analysis to statistics of academic libraries, or in Jeffry A. Raffel and Robert Shisko, <u>Systematic Analysis of University Libraries</u>, an application of Cost-Benefit Analysis to M.I.T. Libraries, Cambridge, Mass., M.I.T. Press, 1969, which covers formally many of the issues touched upon in what follows.

The subject is organized under four headings: the personal library, working library, teaching library and research library.[4] The paper is faintly analytical. Anecdotes abound but are relegated to footnotes.

Books are usually private goods; libraries, except for personal collections, public goods. Books and periodicals are used to disseminate knowledge; old books, periodicals, manuscripts, and archives are needed to preserve old knowledge and to produce new. For the purpose of dissemination, books should be widely distributed; for preservation and the production of new knowledge, it is useful to accumulate books and papers in a single place, to provide reader-researcher convenience. Rare books, however, are also a private good for the owner, interested in their uniqueness. From this point of view, rare books should be widely shared - in the interest of equality of wealth. For use, they should be gathered in one place to provide shopping economies of agglomeration. The conflict between books as rare objects and as tools of research runs through the subject, and occasionally results in some antagonism between librarians who occasionally seem to want to keep their collections untouched, like objects in a museum, and the scholar who wants to read. The collector wants originals; the scholar is content with facsimiles. Cheap and efficient reproduction is well on its way to resolve the conflict between them.

2. The Personal Library

Students of economics, along with those of other subjects, face many times a year the decision of whether to buy a book or to wait for it to be provided by "his (or her) library." It would have been a useful exercise in consumption theory - or perhaps the theory or production with intermediate goods - to study with multiple regression the size of personal libraries of economists. Raffel and Shisko (p. 47n) observe that M.I.T. faculty members in 1968 spent $130 annually on books (and students $110) but the variance is doubtless high both between and within departments. My casual empiricism suggests that among economists size of library is a function of subject of specialization, age, income or wealth, office wallspace available, nearness to the (say) university library, its efficiency, and personal characteristics, i.e. the extent of the economists collector's instinct, usually anal retentiveness, but perhaps in a few cases, interest in speculation for profit.

Subject is critical. Mathematical statisticians go in for hardly any books at all - a few periodicals at most. The burden of the pure theorist is light, unless he cultivates an interest in the history of thought. An economist with two specialities - say trade and development - has more books than one interested only in trade or only in development. Within the development field, moreover, there is a question of the number of countries the specialist tries to keep abreast of. The greastest burden is economic history, and I would guess, in that of Western Europe.[5]

Age governs the integral, converting flow into stock. The relationship is not simple. Some scholars weed, some do not. The wife of a colleague - call her Mrs. Murgatroyd - has enunicated the law of the ever-normal library (granary): "bring a book home tonight, you take one away tomorrow morning." Mrs. Murgatroyd cannot enforce her rule at the office, but after time, wall and cabinet space tends to.[6] The burden of periodicals is particularly hard on the old. Copies of the American Economic Review for the 1930s and 1940s are eating their heads off in thousands of personal libraries, taking up space and earning their rent in only one or two cases. The constraint of wall space is self-evident.

Modern architecture with its large windows has doubtless cut the demand for books. I know one scholar who built shelving out into the room away from the wall, as do libraries, but the practice is rare.

The coefficient in the regression of nearness to the university library is of great interest and importance.[7] Should the library be centralized for the convenience of the scholar who has come there and wants to explore other fields, or decentralized to bring certain books nearer to the teacher in his office?

Something depends, of course, on speed of accession and putting into use of new books by the university central or department library. Where the delay is long, purchase is necessary for recent books needed immediately. Considerable improvement seems to have been recorded lately in this area, as cataloging in publication (CIP) and National Computer Bibliographical Networks have reduced exploding accession time more than reduced budgets and book output have increased it by complicating the selection process. I am informed that the M.I.T. library backlog has been sharply reduced from its peak of five to 10 years ago.

One could devote time to the problems of the personal library: how books should be arranged: by subject? alphabetically? by height? etc.;[8] whether to keep reprints in cardboard boxes on shelves or in vertical file cabinets; the economics of marginal notes for information retrieval which reduce the second-hand value of the book in the usual case;[9] whether one should take typed notes of books one owns, along with those on borrowed books, so that when the time for retrieval is at hand, there is only one source to consult;[10] how to divide books between office and home, for those scholars who work part time at home. The footnotes skim a few of these topics. I restrict the text to what is called in growth theory the problem of terminal conditions: how to dispose of the personal library. If the economist does not provide for its disposition, the surviving spouse or colleagues must bear the burden.

A personal collection of books may be given away intact to a library that wants it, sold intact, sold piecemeal, given to book rummage sales, distributed more or less randomly to members of the family, colleagues, students, or left in an attic or cellar. University libraries used in at least some cases to appraise a book collection for tax purposes, accept it as a gift, keep what it wants and dispose of the rest through the dealer network. Such appraisals now must be undertaken professionally as libraries recognize the perils of mixing in matters with tax consequences. One used to be able to recognize in the the New York second-hand dealers lists when the library of a defunct Columbia professor reached the market. Notable collections such as the two of Foxwell in the Goldsmith Library at the University of London, and the Kress Library at the Harvard Graduate School of Business Administration, the Seligman collection at Columbia, Hutzler at Johns Hopkins, Hollander at the University of Illinois are given or bought and kept intact. Japanese universities have bought the libraries or part of them of Adam Smith,[11] Karl Menger, Karl Bücher, Werner Sombart, Gustav Schelle, and among them Hitotsubashi University was given the greater part of Josef Schumpeter's library by his widow. G.D.H. Cole's collection is the basis for the Nuffield College Library at Oxford; the National Bureau of Economic Research started with Wesley Clair Mitchell's books; Erich Schneider's private collection of theoretical economics, consisting in about 7,000 volumes, was left to the library of the Institüt for Weltwirtschaft which he headed from 1961 to 1969; the University Library in Uppsala was founded in 1620 by a gift from King Gustavus Adolphus of books and manuscripts from the nunneries and monasteries closed as result of the Reformation, partly of war booty, and of books from the royal collection; etc. etc.

Optimally perhaps, given the need for spreading teaching materials on the one hand, and concentrating scarce resources on the other, rare books should be sold (or given) to the the great research libraries, ordinary books given (or sold) to the poorer colleges trying to rise in the scholarly world. Such papers as economists who have served in government have left over from those days may well be given to archival sources, in the United States: the Hoover, Roosevelt, Truman, Kennedy, and Johnson libraries. The tax advantages in the United States of so doing are not what they used to be.

3. The Working or Specialized Library

The economist doing research on a praticular problem will do well to consider applying to a library specialized in the field. This may be a great library with strength in the given field. It may, however, be one with 100,000 volumes or less, but narrowly concentrated. Many of these belong to research or operating agencies, private or governmental. Since the library services a particular purpose other than the needs of the general reader, there may be a necessity of an introduction of the outsider to establish professional bona fides.

The size of specialized libraries evidently depends upon their coverage in three dimensions: time, subject matter and countries. The International Labor Office (ILO), for example, has three times the number of volumes (340,000 to 95,000), twice the periodical subscriptions (5,000 to 2,400), and more than 10 times the number of microfilm reels (2,000 to 140), of the Joint Bank-Fund Library of the International Bank of Reconstruction and Development (IBRD) and the International Monetary Fund (IMF), mainly, I suspect, because it has been going twice as long, set up after World War I instead of after World War II. Both have the incomparable advantage of official status so that they automatically receive government publications; the collection of national governmental budgets of the Joint Bank-Fund Library, for example, is the best in the world. Both have world-wide coverage. The subject span of the ILO library in labor, education, training and management, may or may not extend more widely than the IBRD-IMF interested in central banking, domestic banking, international monetary affairs an economic development. It is of interest, however, that both organizations have found it necessary to establish faster retrieval machinery for books, journal articles and governmental documents. The ILO has been abstracting since 1965 and has a computer file of 55,000 document abstracts, from which 2,000 bibliographies are made each year. The system is known as Integrated Scientific Information System (ISIS) and is being developed in collaboration with Stockholm and Ottawa. The Joint Bank-Fund Library undertook its own periodical indexing for some 500 titles because other indexing and abstracting services are slow, limited in coverage, and weak in articles in collected works and proceedings. Another organization which produces its own abstracts and makes them available publicly is the French Institut National de la Statistique et des Etudes Economiques (INSEE). Documentation Economique is a quarterly review which has been published since the 1940s, most recently in a form in which the entries can be ripped out, and filed on stiff cards. This covers abstracts. The Bulletin de la Bibliothèque is a weekly catalogue of accessions, without abstracts, which again can be used as file entries after cutting. INSEE was erected on the basis of the old Statistique Génerale de la France and has 275,000 volumes, plus

2,400 periodicals with its primary strength evidently in statistics about France, but attention as well to foreign country statistical sources and international documents.

Other libraries specializing in current economic statistics are those of the National Bureau of Economic Research (NBER) in the United States and the National Institute for Economic and Social Research (NIESR) in Britain. The former is putting more and more of its series on machine readable tape. It notes that this field is in a state of disarray with need for procedures for identification of content to be developed. The basic collection consists of statistical yearbooks, studies in methodology, mathematical models for forecasting. The NIESR librarian observes that limitations on size and staff inhibit it from encouraging the use of the library by outsiders, and that space make it selective in purchasing and rigorous in discarding working papers after five years and underutilized material, including especially journals, pamphlets, and old statistical material.

Governmental department libraries are typically inadequately noted by the academic world. They are specialized by subject and Agency, Commerce, Agriculture, Labor, Interior, Patent Office, Health, Education and Welfare, Tariff, Commission, Treasury, etc., large, with wide international coverage from exchange of reports with foreign governments, and not always well organized. The 3rd edition of Lee Ash and Dennis Lorenz, Subject Collections, published by R. R. Bowker and Co. in 1967, states that the Department of Commerce has 472,000 volumes. In its returned questionnaire, the Commerce Library noted in more detail that it had been collecting materials since 1903, that it held 60,000 catalogued books, 10,000 statistical publications for 100 foreign countries, 36,000 items in the maritime section, not to mention 44,000 volumes in its law branch, which is strong on hearings, committee prints and other material from the United States Congress. The law library of the Supreme Court, maintained by the library of Congress, specializes in foreign law, legislative acts, and such compartmentalized fields as taxation. The Department of Agriculture Library is one of the strongest in the world, so much so that the Library of Congress does not collect in this field.

Among foreign large specialized libraries, Subject Collections in European Libraries (New York, R. R. Bowker and Co., 1965) mentions the Board of Trade Library in London with 200,000 "volumes," the library of the Chamber de Commerce et d'Industrie in Paris with 250,000 volumes, 3,000 current periodicals and 150 microfilms, and the library of the Commercial University "Luigi Boccari" in Milan with 143,000 volumes and 1,200 current periodicals.

Smaller European libraries include those of the Organization for European Cooperation and Development (OECD), the European Economic Community (EEC), the Food and Agriculture Organization at Rome (FAO), the Bank for International Settlements (BIS) at Basel, etc. The OECD library is first rate, with a good supply of books, documents, and periodicals, room to spread out and a helpful staff. In 1965 according to Subject Collections in European Libraries (New York, R. R. Bowker & same source gave the EEC library as 25,000 volumes. I do not know the EEC or FAO libraries but judging by the fine research which has come out of American scholars spending sabbaticals in them, they provide what is needed. Perhaps one ingredient in specialized libraries in operating agencies is the presence of the operators. "A peek is worth two finesses", and it frequently saves time to ask one who knows rather than to seek to learn entirely through the written word.

For some purposes a small and unpretentious library is better than one with a greater outreach. For one who starts without great depth in a subject, enough is as good as a feast, and too brave a show of riches may merely inhibit.[12]

For particular purposes libraries can be tremendously specialized. The Dag Hammerskjold Library of the United Nations in New York is understandably very strong on government publications, but especially so in economic planning for which it, with the assistance of the Interdocumentation Company of Zug, Switzerland, prepares a microfiche edition of the development plans of the countries of the world. Walter J. Levy, a private economic consultant on oil, has 10,000 volumes on oil alone in his personal and business library, 150 periodicals, 59 Conserva shelves of clippings and financial information on 600 companies. Only one third of the 10,000 volumes fall within the Library of Congress classification of economics (LC HA to HJ), which suggests the difficulty of defining where "economics" begins and ends.

In three sabbaticals in Europe working with five libraries, I have been guided largely by information picked up osmotically and word of mouth. Since the process led me to the European libraries mentioned in footnote 1, the system is efficient. One may, however, save time and effort, and minimize the risk of a poor choice, by the use of materials of librarians, and research specialists. Subject Collections and Subject Collections in Europe have been noted above, UNESCO publishes a Guide to National Information Centers, 3rd ed., revised and enlarged, (Paris, 1970). World Guide to Libraries (New York, R. R. Bowker and Co., and Munich, Verlag Dokumentation, 1970) gives minimal information on numbers of books but includes an enormous range of libraries.

In the United States, the American Library Association publishes the American Library Directory, of which the 28th edition for 1972-73 appeared in 1972 (New York, R. R. Bowker and Co., Richard C. Lewanksi is the author of European Library Directory, a Geographical and Bibliographical Guide (Firenze, L. S. Olschki, 1968).

One or two detailed and specialized guides have been prepared. Robert B. Downs' Resources of Canadian Academic and Research Libraries (Ottawa, Association of Universities and Colleges of Canada, 1967) has a strong librarian interest. Edwin K. Welch has edited "Libraries and Archives in France, A Handbook" for the Council on European Studies (Pittsburgh, 1973) with detailed instructions as to how to use the collections, down to the numbers of the buses to take to reach them. It lacks a reference to my Ministry of Finance library in the Louvre, but is superb. It also fails to mention the fact that Bibliothèque Mazarine, the oldest public library in France, owns one of the four gold-bound copies of Quesnay's Tableau Economique - a fact communicated to me by Professor P. N. Rosenstein-Rodan - but says practically everything else one would want to know. Professor Scott Eddie has been kind enough to furnish me "Post Arrival Information for American Fulbright Grantees to Austria," published by the Austrian-American Educational Commission in 1972, which gives details on how to use the research facilities of Vienna, down to the discouraging information that it takes 24 hours for a book to be delivered after filling out an Entlehnungschein or a Bestellschein.

But having now seen the material available on how to choose and use a specialized or general library, I am not sure that I am willing altogether to part with the word-of-mouth information circuit.

If transport costs were zero, there would be a big research problem to tell where to study a given problem, as one compared the comparative strengths of collections. For railroad history: the Pliny Fisk collection of the Firestone Library in Princeton, the H. V. and H. W. Poor Collection in the New York Public Library (NYPL), or the Bureau of Railway Economics Library in Washington, D. C.? For Physiocrats: the British Museum and the Goldsmith Library of the University of London, recommended by Hoselitz,[13] the Kress Collection at Harvard, the Wagner Collection at Yale, the Seligman Collection at Columbia, the Eleutherian Mills Historical Library in Wilmington which contains along with its 98,000 volumes of United States economic and industrial history the library and manuscripts of DuPont de Nemours (1,000 volumes), or the Gustav Schelle collection (1,269 items) at the University of Otaru in Hokkaido, Japan?[14] Or all of them? But transport costs are not zero, nor is the opportunity cost of the scholar's time, though it may appear so to outsiders. Where transactions costs are high, the golden rule is to exhaust the general resources close at hand, and move to specialized libraries thereafter in some order, dictated partly by holdings and partly by the costs of overcoming distance, until diminishing returns approach the reserve price unless, of course, as in a sabbatical, the objective function includes in it an argument of considerable weight for leaving home. But Albert Hirschman tells we that if one wants to study, e.g. Argentina, one can do much outside for example, at the Pan American Library in Washington, the University of Texas at Austin, or the University of Miami, but that there is no escape from the need to go to Buenos Aires.

4. The Teaching Library

No ancient pure teaching library exists. Yesterday's teachings material is today's research material. And even libraries started *de* novo have a dual goal, to provide teaching materials for students and research materials for both students when they write papers, and faculty in its research. The distinction between teaching and research functions has been emphasized by separation of undergraduate and graduate course materials from research collections in the Lamont Library at Harvard, the Cross Campus Library at Yale, and new undergraduate libraries at Stanford, Michigan, other American and British universities. The Cambridge General Board's Committee on Libraries notes that the research coummunity in Cambridge, England consists in some 1,500 members of the senior teaching and research staff, 1,750 resident research students and from visiting scholars and non-resident members of the University using the Universities library sources, who may amount to 1,500 in any year. Undergraduates, with a different, though overlapping need for books, amount to some 8,500.[15]

Great public libraries, moreover, have a difficult time separating out the high school or college graduate student, cranking out a term paper from the serious scholar, and the NYPL went so far as to establish a new Midtown Branch library, in a basement of the old Arnold Constable store building across 5th Avenue from the famous stone lions, to care for the students who used to overwhelm the main building in the Christmas and Easter vacations.

Book/student ratios differ sharply for what we may loosely call students and scholars. For students, using texts and a few books for supplementary reading for courses, not to mention standard monographic literature, periodicals and reference and statistical material it may run 75 to 1. For scholars, the ratio should start at 200 and has no upper limit. In the British Museum in Great Russell Street, there are say 7,500,000 books and 600 seats in the reading room, a ratio of 125,000. For teaching libraries in normal times, the problem is overuse. For research libraries, after students working for courses and the large body of the public seeking to verify a "fact" or pin down an elusive reference have been winnowed out, the problem may be underutilization - a large social expenditure for small social gain.[16]

As a college or university library ages, its expansion of teaching materials slows down and levels off, while that of research materials continues to grow. The first appetite may in fact become sated; the second never. Some additional monographs are preferable to others, but apart from the congestion problem, an increase in holdings through purchases and through accumulation of periodicals and transient texts is always positive as it adds to the opportunities for research. Unhappily many books in teaching libraries are never consulted or borrowed.[17]

The problem of the teaching library is best illustrated by the issues faced by the new library in the new university. The amount it could spend for back materials is virtually unlimited. Retrospective statistical yearbooks and abstracts for the major countries are mandatory, but what about old primary materials: the British Parlimentary papers offered in some 80 sets by subject by the Irish University Press, at a total cost of more than $60,000, for example, with 95 volumes on slavery available at $6,889; 44 volumes on industrial relations at $3,842; or 80 volumes on the United States at $3,250; British government statistics 1809-1965 on microfilm ($9,185) or statistical yearbooks for Germany, France and Italy from about 1880 on microfilm, available from Chadwyck-Healey, Ltd; 35 books on the evolution of capitalism available from the Arno Press (subsidiary of the New York Times) for $584 or 27 volumes of

Temporary National Economic Committee (TNEC) reports for $800, 33 volumes of Tennessee Valley Authority reports for $415; 105 books on American labor for $1,409.50; 32 books on British labor struggles between 1727-1850 for $400; 51 books on Big Business for $932; 10 volumes of Annual Reports of the National Labor Relations Board, 1936-65 for $335; 53 books on Technology and Society for $1075. The Goldsmith/Kress Library of Economic Literature is to be reproduced in three volumes in microform. Volume 1 reproducing all books up to 1800 had a prepublication price of $39,000 for somewhat fewer than 50,000 fiche, and a post-publication price of $48,750. One can replace old serials or periodicals from reprints from the Johnson Reprint Corporation or Xerox and H. W. Wilson: The _American Economic Review_ from 1919 to 1944 at $910 from the Johnson Reprint Corporation and the _Economic Journal_ ($383.50 for 1891 to 1958 and $6.20 a year thereafter) and the _Economist_ ($2,462.40 for 1863 to 1964) from Xerox and Wilson.

The reproduction of economics classics started with Augustus M. Kelley in New York in a small way, each book taken apart and filmed page by page by Mr. Kelley. Copyrights were in the public domain or bought outright for a small sum. Bit by bit as technical progress in reproduction spread, and new colleges were increasingly formed in the 1950s and 60s, the industry grew. Kelley's 1969 catalogue offered 2,000 titles. The latest issue of _Reprints_ put out by Augustus M. Kelley, not dated but probably 1973, deals with items published since 1969 and contains some 800 to 850 authors of reprinted works in economics, political science and economic, political and social history.

In starting up a new university, the Grants Committee in Britain gives the library an extra budget for five years. The Carnegie Corporation has continued the interest of its founder in libraries with start-up grants in the case of at least one Scottish university, Stirling. But the problem faced by the new collection emphasizes the advantage in an ancient origin.

There may be external economies to a location in a city with other universities. The libraries may be combined, as in the Joint University Library in Nashville which is operated by Vanderbilt University, Scarritt College and Peabody College, and was started in 1936. Inter-library loans should perhaps be accomplished more expeditiously when libraries are located close to one another, although major libraries which have many demands on them may tend to discourage business by slow service and national systems of inter-library lending have lately come into being as discussed in the next section.[18] At the same time, rumor that a certain book bears on the answer to a question about to be asked on an examination may lead to that book being stolen out of every library in Paris which does not keep its books under lock and key. Theft is a serious problem in teaching libraries in every country today, as competition for academic achievement mounts and the rewards are higher. The other technique of monopolizing a book under competitive conditions when stacks are open is to misshelve it. Most university libraries must now spend time and money in searching the shelves for "lost" books which are accidentally or deliberately misshelved.[19]

In economics, the teaching library is very much aided by the periodical Economic Selections: an International Bibliography published from 1954 to 1962 by Johns Hopkins University and from 1964 to 1970 by the Department of Economics of the University of Pittsburgh and now provided commercially by Augustus M. Kelley, Inc. The periodical, sold on a subscription basis, is divided into Series I, a record of new books in economics appearing quarterly, and Series II, a Basic List in a specialized field such as economic theory, international economics, or public finance. Both lists are broken down into categories A through E. A refers to a junior college, or a first-rate high school, or a college with a combined department of social sciences, which spends up to $500 a year on economic books; B is a good college library emphasizing collegiate teaching rather than graduate study, budgeting between $500 and $900 a year. Category C refers to a university which wants a well rounded collection for teaching purposes, and spends $900 to $1500 a year, while category D is a university library emphasizing graduate research as well as graduate teaching, with a budget of $1500 to $2500.[20] A fifth category E comprises "alternative selections." The classes are of course cumulative. Items listed are described or characterized concisely.

A problem of some interest is presented by the question of foreign materials, and materials in foreign languages. Economics Selections Bibliography is called "International" and the subject matter is. In one randomly chosen Selections I issue (that for March 1970) there were roughly 135 selections dealing with foreign or international subjects, as contrasted with United States or theoretical, out of a total of 404, and in the Series II issue on Public Finance (dated December 1966) there were 68 foreign items out of 295, a somewhat lower proportion because the basic list of classic items is more heavily weighted with theoretical and synthetic treatments. But the Selection I issue had only 28 items in foreign languages, and Selection II none. Student bodies are more and more international in composition, but teaching libraries are entirely, research libraries mostly, confined to works in the native language. Even more casual empiricism indicates that the position is identical in periodicals. There is a variety of English, Canadian and international journals, largely in English, in most American libraries, few foreign. The position would be the same, with French substituted for English, in France. In other countries, the proportion of non-native books and journals would be far larger, since international scientific discourse today is conducted largely in English.

One of the more interesting ventures for a new library is that of the University of Warwick, established in 1964, which has only 25,000 volumes in economics but has specialized in two ventures, one a statistics collection of 10,000 titles and 2,000 current serials filed according to the Board of Trade Statistics Classification Scheme, with numbers for countries and letters for the subject of the statistics; and a collection of Working Papers from 360 series worldwide, with 10,000 in hand and weekly increments of 50 or 60.[21] This is the "largest collection of unpublished working papers in the UK (possibly the world?)", as the University answer to the questionnaire states, and with it the Library publishes a quarterly Bibliography of Economics Working Papers, provides an allied microfiche service to subscribers, and has a loan service for working papers in the U.K. and Europe. Here is a library rapidly converting itself into a major one for research.

5. Research Libraries

The great research libraries in economics are, with one or two exceptions, the great research libraries in general. In the United States, there come to mind the Library of Congress, NYPL, Widener at Harvard, Sterling at Yale, for width, and the Kress Collection of the

Baker Library of the Graduate School of Business Administration at Harvard, plus the Seligman Collection at Columbia University for depth. In Britain there are three, four or perhaps as many as six: the British Museum, the Bodleian at Oxford, the Cambridge University Library, and perhaps the Edinburgh University Library, the British Library of Political and Economic Science, and the Goldsmith Library of the University of London. In France, the Bibliothèque Nationale in Paris. In Germany the Bibliothek of the Institut für Weltwirtschaft at Kiel. In Japan, the library of Hitotsubashi University at Kunitachi outside Tokyo.

A library is great because of width and/or depth. As indicated above, it helps to be an ancient collector. Economies of scale abound. Large collections attract gifts of books and money, plus subventions from government. Governmental collections thrive on exchange of governmental documents with other governmental libraries. Where more than one library in a country is designated as a repository for copyright material, the larger collections are chosen.[22]

The Library of Congress and the British Museum alone of the national libraries have strong collections of foreign materials. Governmental materials are received in exchanges. Much is bought. In the United States, PL 480 counterpart funds have been used to buy books in eight countries Ceylon, India, Israel, Nepal, Pakistan, the Arab Republic of Egypt, and Yugoslavia. The program, which was started in 1962, provides materials for 350 libraries, not all of which find it useful. One librarian noted that the program was a "horror", having shipped over material indiscriminately, including comic books and instructions on boiling water, and filling up two valuable rooms with material which the library lacked time and staff to winnow. In addition, the Library of Congress receives an annual appropriation for current materials, plus a small sum to repair gaps, and maintains offices all over the world in which it purchases and catalogs material, the cataloging being available to other libraries using the LC catalog classification.

The Library of Congress was established in 1800 when the government left the cultivated city of Philadelphia to establish itself in an entirely new location. Among the original 152 titles in 740 volumes with which it started were Adam Smith's Wealth of Nations and Postlewaite's Dictionary of Commerce. As of June 30, 1973 it had 72,500,000 "pieces", consisting mainly of 16,500,000 volumes and pamphlets, 31,000,000 manuscripts (pieces), 8,500,000 photographic negatives, prints and slides, 3,500,000 maps, etc.[23] The LC classification "H" covering economics and sociology consists of 1,537,000 volumes,[24] with more than 1,200,000 volumes in classes HA to HJ covering economics, representing at least 450,000 titles. There is no possibility of estimating how many of the 100,000 periodicals are in economics. Its strength lies in American economic history, communism, socialism and anarchism, the legislative proceedings and public records of the United States and foreign governments, and statistical compliations from all official and unofficial sources.

In works close to economics, such as Science and Technology, the Library is very strong, based on collections of the Smithsonian Institution, which transferred to the Library 40,000 items in 1866 and 566,554 volumes, pamphlets, charts in 1930.[25] A scholar on its staff states that its collection in American history is virtually complete, although doubt has been cast whether it may not lack one or two regimental histories of the Civil War.

The New York Public Library (NYPL) is an amalgam of two institutions, the branch libraries, 82 in number, which lend books to the New York public, and the Research Libraries, formed in 1911 from the Astor, Tilden and Lenox foundations. The Economic and Public Affairs Division was organized in 1914. It has an estimated 630,000 volumes in economics, plus 1200 current periodicals and several hundred thousand microforms. Its librarian believes that the library has 75 percent or more of what has been published of research value on the United States and each of its regions, 75 percent of the research materials on economics published in England, France and Germany; 60 to 70 percent of output for the rest of Europe published in the Roman alphabet, and for Eastern Europe and the remainder of the world using non-Roman alphabets, about 50 percent of what has been published.

Much less information on economic collections is available for other great libraries not specialized in economics. The British Museum has 10-12 million total volumes in all 7 or 8 in the British Museum Building in Great Russell Street where Gibbon, Hume, Shaw, Marx, Lenin and the Webbs worked; one or two million more in storage at Woolwich Arsenal, available with a 1 to 2-day lag; a substantial collection of technical material, including scientific literature and patents, in two buildings of the Scientific Reference Library in London; and the Lending Division of 1,750,000 volumes at Boston Spa in Yorkshire, but is unable to estimate how much is in economics. Harvard has 8,900,000 volumes overall, and 48,000 periodicals. Its economics shelf list in Widener runs to 65,000 entries, and is published in two volumes. Baker has 478,000 items, including 65,000 manuscripts, 45,000 corporate records, and the Kress library of 25,000 items. Littauer (a departmental collection) and the Law Library also hold much of interest to economists. The Bibliothèque Nationale "one of the great libraries of the world" has a book collection in excess of 7 million volumes and a distinguished manuscript collection of 150,000 pieces. It is better on the Middle East than the Library of Congress, very limited on other non-French European and North American matters, and the extent of its economic collection is unknown. Yale, the second largest university collection in the United States after Harvard, with 6,200,000 volumes[26] estimates that its economic collection amounts to about 300,000 volumes and 6,300 serials. The Beinecke Rare Book and Manuscript Library has notable collection of British and Irish economic and political tracts, the Wagner collection with more than 10,000 volumes; the Cowles Foundation for Research in Economics Library emphasizing mathematical and statistical works runs to 5,400 volumes and 158 serials; the Economic Growth Center has a Library focussed on statistics, economic and planning in 100 developing countries, with 30,000 volumes and 3,800 serials. Supporting these are social science, statistical and area collections in the Sterling Memorial Library, plus the teaching collection at the Cross Campus Library. The overall collection in the Bodleian in Oxford is measured linearly, rather than counted, running to 98,600 meters of shelf space equal to 3,210,530 volumes not including manuscripts.[27] The economics proportion of this is unknown, but economics in Oxford is represented in Nuffield College library with an estimated 50,000 items, strong especially in British trade unionism; in the Rhodes House Library on Commwealth and United States history, including economic history; the Institute of Economics and Statistics; the Institute of Queen Elizabeth House in developing countries, the Institute of Agricultural Economics, and St. Anthony College. Cambridge University Library has 1,900,00 books and 600,000 volumes of periodicals and serials, for a total of 2,500,000; supporting it is the Marshall Library with 65,000 volumes and the Department of Applied Economics with 5,000, both in economics.[28]

Among the great libraries of the world no doubt should be included the Lenin Library in Moscow and the public library in Leningrad. In 1940, the Librarian of Congress stated that his collection was as numerous as those of the British Museum, the Bibliothèque Nationale and possibly the Leningrad Public Library.[29] In 1956, the Library in Leningrad named after Saltykov (the public library?) had 12 million printed units, but the Lenin Library of the U.S.S.R. in Moscow had 19 million books and periodicals.[30] Unhappily, the writer has to leave both institutions out of account beyond this mention.

Expansive collections concentrated in economics (and allied social sciences) are located in the British Library of Economic and Political Science at the London School of Economics and Political Science, the Institut für Weltwirtschaft at the University of Kiel in Germany, and Hitotsubashi University. The British Library of Economic and Political Science has 600,000 bound volumes, and 2 million items in all, divided among the social sciences and the law but with the main concentration in economics and political science. The Bibliothek of the Institut für Weltwirtschaft, given by Krupp to the Reich in 1913 as a present to commemorate the 25th anniversary of the Kaiser's accession to the Imperial throne, and miraculously surviving World II, contains 1,185,000 volumes on world economics, 770,000 on Europe, of which Germany 274,000, Great Britain 89,000 and France 56,000; 45,000 items on Asia; 32,000 on Africa, and 243,000 on the Americans, of which 168,000 on the United States.[31]

It is supported by the German government as the chosen instrument in the field. Hitotsubashi University is specialized in economics, commerce, law and social science, so that its library is heavily weighted in economics. In 1972 it consisted of 640,000 volumes, half in Japanese and Chinese and half in foreign books. "As a library devoted to social sciences, it is unrivaled in Japan, bearing comparison with almost any university in the world." It is, moreover, as presently to be noted, specialized in rare books.[32]

After breadth, depth. There are four great libraries in the development of economic thought, the Goldsmith at the University of London, Kress in Baker, the Seligman collection at Columbia, and Menger and Franklin collections at Hitotsubashi. The first two were collected by Herbert S. Foxwell, who used to fill his house with rare books and sell off the collection as he needed room and funds. Two housefuls went to the Goldsmith guild which ultimately gave them to the University of London. A third was bought by Kress for the Harvard Business School.[33] The Columbia collection assembled by Professor E.R.A. Seligman is reported to have emerged from a bargain between brothers, with one leaving the other free to take over the banking business in exchange for an agreement to buy his books in academic life. The Hitotsubashi collection started with the Menger collection, bought for $30,000 in the 1920s, grew with the Schumpeter collection left to the University by Mrs. Schumpeter, and has most recently been enriched by the purchase of the collection of Burt Franklin, a New York dealer, for $1 million contributed by a Japanese trading company. The Menger collection consists of 19,000 items, much in German but with strength in English and French, and somewhat less in Italian items.[34] The Franklin collection consists of more than 20,000 items, including many rare pamphlets. It has only been received in

Tokyo and will not be catalogued for several years. The Kress Library which focuses on economic literature prior to 1850 has an annual budget for acquisitions of $6,000 to $15,000 and acquired approximately 400 titles a year, largely foreign, in an effort to raise the foreign proportion of its library, now 40 percent of the total collection of 25,000 items. Goldsmith's Library collects only in English, and the Seligman collection is not being added to.[35]

For many of the major libraries it is not necessary to describe the collection in economics, since a catalog have been published in book form and are available for inspection without a journey. The Library of Congress, British Museum, Bibliothèque Nationale all have published catalogs, parts of the NYPL - of interest to economists mainly - the 40 volume Catalog of Government Publications, the Baker Library at the Harvard Business School, the Hoover Institution on War, Peace, and Revolution, the Institut für Weltwirtschaft, and many more. The G. K. Hall Catalog contains mention of card catalogs published in book form for a long list of specialized collections, including those on Middle East economics, World War history, African government documents, agricultural economics, colonial history, industrial relations. Locating these catalogs may require consulting the Library of Congress National Union Catalog (NUC) which attempts to list all books cataloged in the United States and reported to the Library of Congress, including its own collection. I am informed that NUC is not always complete, and note that it covers only three of the Institut für Weltwirtschaft's seven catalogs, described admiringly by Perlman,[36] the <u>Behördenkatalog</u> (Catalog of Administrative Authorities published in 10 volumes at $825); the <u>Körperschaftenkatalog</u> (Catalog of Corporations published in 13 volumes at $1,100); and the

Regionenkatalog (Regional Catalog published in 53 volumes at $5,775), but not the other four, Person, Subject, Title and Periodical, amounting in all to 142 volumes costing $14,840. It is not clear to me whether even the Library of Congress has the four volumes not listed. The other three are held by the Library of Congress and by six, five and four libraries each, with only Harvard, Yale and the University of Minnesota being common to all three lists. The useful Dictionary Catalog of the Gianni Foundation of Agricultural Economics Library of the University of California at Berkeley, in 12 volumes, priced at $985, seems to have been acquired only by the Library of Congress and Indiana University at Bloomington. The Harvard Shelflist in Economics is perhaps more widely spread, along with the single-volume catalogues of collections of rare books, but a shelflist is less encompassing than a subject catalogue, because it records each book only once, and not several times under different subjects.[37] The shelf list is also given, however, by author and by date of publication.

To a hardbitten bibliophile, the collection is all, but to most economists service counts too. We want amenities. The Dartmouth library is good but perhaps not great in terms of collection, with perhaps 100,000 volumes in economics, including bound periodicals, out of the 1 million books in the college's system. Located in a vacation area, with an excellent staff, not overworked in summer and eager to please, it has been chosen as a location for writing books by Milton Friedman, J. Kenneth Galbraith and Gunnar Myrdal, and as a pole for retirement by Frank W. Fetter and the late Bray Hammond. My personal predilection is for open stacks, rooms for typing, photocopying facilities handy, and a little help with problems.

Open stacks, with ample desk space bespeaks a new building, such as the handsome Basil Spence designed library of Edinburgh University, with the magnificent facility of widely spaced shelves housing Parliamentary Papers, and large desks nearby to spread them on.[38] The University of Toronto librarian, answering the questionnaire, stresses that in the new building, economists have been well taken care of in terms of space. If one must choose between open stacks and space, however, I think I choose open stacks, though most librarians like them closed,[39] and one can make mistakes with open.[40] But the preference for open stacks is based on speed of access, and the serendipity from browsing - an important ingredient in research - mentioned in footnote 12.

Typing and desk space is usually too little, and what there is usually overwhelmed by insiders. At the Library of Congress, there are three categories of facilities for scholars, reserved shelves on which to keep books, study desks on the decks and in the stacks, and some typing rooms. The last are always in use by government officials. The NYPL has a typing room with 8 desks, where books can be held out; the Wertheim study, given by Barbara Tuchman in memory of her father, has every convenience, including facilities for keeping 30 books for a month, but it is restricted to scholars with contracts to publish the work produced. The Library of the Palais des Nations in Geneva had a substantial typing room in 1954, plus an office in which my research team of 4 could keep books, type and operate calculating machines. I doubt that many libraries can offer that service today.

6. New Problems and Techniques in Library Organization

The knowledge explosion has widely commented on. In economics as in science in general, monographs, periodicals, students, Ph.D.s and the like seem to be growing at a rate of about 5 percent a year, resulting in a doubling every 15 years.[41] Recent trends may be incapable of being sustained as the knowledge industry changes from rapid growth to a sideways trend, and the deceleration causes problems for publishers, universities, libraries, etc. adjusted to expansion.

One particular aspect of the growth of recent years, in my judgement, has been the tendency of publishers to take advantage of the pressure on libraries to stay abreast of growing knowledge and to buy all books and periodicals. Some publishers have made a profit by bringing out books of dubious significance as contributions to learning, pricing them at monopoly prices and selling small editions largely to libraries. The functions of screening additions to the stock of knowledge is thus turned over from the publisher to the librarian. Harvard University has stopped placing standing orders for books, and employs 60 bibliographers, specialized by locality, rather than discipline, to order selectively. Cutting down on library budgets and orders, and the slowdown in the rate of growth of universities, is like to produce bankruptcies in publishing which will modestly alleviate the problem.

A further technique is specialization by libraries. At the teaching level, libraries cannot specialize until universities specialize in the courses they present, but specialization in research is well under way in the United States. The Joint Universities Library at Nashville, Tennessee, involves a complete merger of the library function among a number of contiguous universities. Less formal sharing takes place between Duke University and the University of North Carolina, some miles apart. There is a consortium of Western universities and colleges, founded in 1968, and built around the Hoover Institution Library at Stanford, with pre-eminent resources in the western two-thirds of the

United States. Nation-wide facilities have been developed in the Center for Research Libraries in the United States, and the National Lending Library in Britain. The Center for Research Libraries has some 60 members and 50 associate members to which it furnishes materials requested by a teletype network. The National Lending Library in Britain is a governmental body, has a collection of its own, and also organizes inter-library lending among other libraries within Britain and between Britain and foreign countries.

The Farmington Plan of the Association of Research Libraries provided for specialization in the collection of foreign materials among 60 research libraries. This appears to have broken down after the thirty years of operation and a looser arrangement for exchange of information on the acquisition of foreign materials substituted for it. A Farmington plan for Canada was rejected. In Britain a Standing Conference on Library Materials on Africa (Scolma) assigns to different universities the task of collecting materials on specified African regions.

Most recently new groups are forming. In Canada, the Ontario Council of University Librarians plans closer cooperation among Brock, Guelph, McMaster, Toronto, Western and York Universities. In the United States, there is proposed a Research Libraries Group, to consist originally of Columbia, Harvard and Yale Universities, plus the New York Public Library, but open to other members, to consult constantly among libraries and to share the development of collections. It is of course strenuously opposed by publishers and author organizations.

At the same time, it is tragic that some libraries are being pulled apart. I am given to understand that the separation of the French from the Flemish portion of the University of Louvain will result in dividing the library in half, not by language, but arbitraily, by title - the odd numbered ones to one university, even to the other. The thought evokes the judgement of Solomon.

Schemes for cooperation or integration are a response to the necessity to cut library budgets on the one hand, and the opportunities presented by falling costs of communication, photocopying and machine information handling on the other. In the ultimate, as I understood it, the thought of Project Intrex at M.I.T. was that there was need for no more than one copy of a book in the world which could be found, examined, and, if thought useful, photocopied from anywhere in the United States or the world by remote - controlled televiewing and photocopying. The question, of course, is whether the costs of electronic handling of information are declining fast enough to enable libraries to maintain or improve service in the face of exploding materials, and still cut budgets.[42] It may be necessary to spend vast sums of money for hardware to save money, but it is not obvious that the technique will work. One small indication in the pessimistic direction is that the Project Intrex experiment, now completed, has not been extended in new directions.

Space remains a problem for all libraries. New buildings are under construction in many locations; the Library of Congress, British Museum, International Labor Office, INSEE, the Hoover Institution, etc or have just been completed - the University of Toronto. Collections of rare books are underutilized, as noted, and some libraries located off the beaten track, such as that of the Institut für Weltwirtschaft. For others, space is critical. One technique is to transfer older books to depositories at a distance, reducing service to the occasional scholar who needs them but easing congestion. Especially popular libraries have to limit use by rationing or the price system. The Library of Congress is open, apart for governmental officials, and especially the Congressional Reference Service, only to those whose research is likely to result in a published work. The British Museum requires demonstration that the works sought are not available elsewhere. The Bibliothèque Nationale restricts foreigners through the cultural attaches of embassies who must vouch for visitors; the routine of the United States embassy in Paris is to refuse recommendation to undergraduates and to those below a certain age, except where a compelling case is made.

M.I.T., Harvard, Yale and Princeton use the price system to control outsiders. At M.I.T. industrial users are charged $500 a year, individuals $100, and alumni $50, a neat example of discriminatory pricing based on elasticities of demand. Scholars not on the university's rolls at Harvard are given a month's use of the library each year gratis, but thereafter pay. The fee is $125 a quarter, $175 for six months, and $300 a year. Alumni may use the library for $75 a year. Yale charges $40 a month, ($10 a month or $100 a year to alumni), with no period of grace. Between 1971-72 and 1972-73, the number of readers paying for the privilege rose from 295 to 363, and the fees from $10,000 to $14,000, or two-tenths of one percent of the library budget. The Princeton charge is $40 a year. This is held low because of the state aid received by the library in certain fields and the need to provide service to the public in return. It is not believed that market competition is so perfect that the prices of these several universities reflect marginal utilities.

The questionnaire request for general remarks about problems of organizing and retrieving economic knowledge brought forth a limited response but one largely emphasizing the need for more, better, and especially more current indexing of articles in periodicals, pamphlets, symposia, Festschriften, foreign governmental statistical materials. This effort has begun with machine techniques in the sciences, where verbal ambiguity is less than in economics. The initial attempt in business and management has not been a great success: the indexing of a limited number of periodicals for a limited number of years. But statistical material will shortly be available in machine readable form, up-to-date. One librarian is convinced that library networks using the new machinery are the wave of the future. Another notes that the time is not far off when Computer Output Microform, telefacsimile etc will provide the user what he wants when he wants it - adding however that this is only relatively speaking, as she has been listening to these discussions for a good many years.

The writer is incompetent to discuss the issue of the new technology, which will be dealt with by others at the conference. He would, however, raise a question whether it will ever be possible to dispense with the technique of search by asking someone knowledgable in the field. The retrieval of statistics by machines is readily done, although the librarian of the NBER notes that the field is in some disarray. At the other extreme, however, machine translation of foreign languages has been proven a failure. Too much ambiguity resides in words with different meanings in different contexts.[43] I am concerned that the user seeking a bibliography on a given subject would get too much[44] and that even a bibliography which catalogued a book under four or five subjects would miss out on some important uses to which it could be put.[45]

More bibliographical aids are doubtless needed. Articles in Festschriften and symposia are in most cases Spurlos versenkt. I have no idea how scholars learn where various manuscript collections are located without NUCMUC, the National Union Manuscript Catalog now in preparation by the Library of Congress, except by the word-of-mouth circuit.[46] Timeliness is important for the reasons mentioned in footnote 21. But I detect a professional division between librarians on the one hand, who believe that a librarian should be able to find reference for use in answering all questions, and a user relying on more organic methods: ask a few colleagues and friends, get a few references, and the sources used in those will lead you out into the field. Formal bibliographies are suggestive, and often serve as reminders of works noted and temporarily forgotten, but it is unthinkable to me to start on research by compiling a bibliography which one then proceed to read systematically. The 90-page bibliography in Volume VI of the Cambridge Economic History of Europe gives me intellectual indigestion. Bibliographies abound: Theodore Besterman's A World Bibliography of Bibliographies, 4th ed., Lausanne, Societas Bibliographies, 1965 has 36 columns (18 pages) of bibliographies in economics, including such specialized ones as than by a German governmental agency on the Marshall plan and another on French 16th century economic documents. The bibliography prepared in advance of the research will very little resemble the list of reference contributing usefully to the project after completion.

An economist looking at libraries cannot help but be struck by the slow pace in achieving economies of scale in classification and cataloging. The gain to the user would be trivial. If he reads a book in one place, he is not likely to read it elsewhere, and the cost of looking it up in another card catalogue is small. The gain to libraries where so much work goes into accessioning (a barbarism for acceding to), however, would be large. There are the Library of Congress and the Dewey Decimal systems, with a Bliss system, which preceded them, used by the University of London and the several University Colleges in Africa patterned after it, with libraries of 100,000 books. The British Museum, Harvard and Princeton have their own classifications. Some libraries like the Dewey Library at M.I.T. and Yale University are engaged in the long-drawn out process of shifting from Dewey to the Library of Congress at the margin. As M.I.T. shifts from Dewey LC, moreover, the Edinburgh Library shifts from its idosyncratic system to the Dewey decimal.

Like 33, 45 and 78-rpm records which can all be played on the same phonograph, fitted with an adaptor, the Library of Congress seeks in its cataloguing to provide LC, Dewey Decimal, International Standard Book Number and MARC classifications for new books as they are produced in the United States and bought abroad. Libraries like the Dewey at M.I.T. shifted over for current acquisitions in 1964, but made no attempt to reclassify the existing collection. In economic history, and the history of thought, where obsolesence is slow, this means the necessity to keep two classifications side by side. For smaller libraries, with accumulation, the new standard system, now LC, tomorrow perhaps MARC, gradually overwhelms the old. But for ancient libraries, the cost of reconverting ancient treasures to modern systems is too great. They are thus unable to take advantage of standardization and the economies it affords.

7. Conclusion

Time was then the great library had the task of buying it all. Except for national libraries dealing with national literature, received for copyright purposes, that day is over. Large libraries like small must choose. The specialized library has an easier time, since comparability is more readily achieved within a field than across them. Inter-discipline comparisons, like those of utility between persons, are hard if not impossible.

To this user of library services, it is shocking to realize that he has been getting along with only a limited understanding of the rich bibliographic resources available in libraries. In part, he has been aided by professional librarians who provided results without revealing how the machinery worked. In part, however, there may be diminishing returns to organized knowledge retrieval, and merit in sequential scanning and search, starting with a few sources and spreading out, relying on word-of-mouth communication and serendipity. Bibliographies, guides to literature, etc have a short half-life except in the rare-book field. The economist and the librarian are each sceptical of the other. The resulting tension (not antagonism) is doubtless fruitful.

* I acknowledge with gratitude the help of Edgar W. Davy, director of the Dewey Library at M.I.T. but since our points of view differ in a number of respects, he is not to be regarded as believing everything I say.

Footnotes

1. Among the great economics libraries, those of Harvard and Columbia Universities, including at Harvard both the University Library (Widener) and the Baker and Kress of the Graduate School of Business Administration; the Bibliothek of the Institut für Weltwirtschaft at the University of Kiel in Germany and Edinburgh University Library. Among the good, I may list my own Dewey Library at the Massachusetts Institute of Technology (MIT); the United Nations (formerly League of Nations) Library at the Palais des Nations, Geneva; Nuffield College Library at Oxford; the Ministry of Finance library in 101 Rue de Rivoli, Paris; and the Library of the Bank of Italy in the Via Nazionale in Rome. Acquaintance with the collections of the University of Pennsylvania, the Federal Reserve Bank of New York, and the Board of Governors of the Federal Reserve System in Washington, the library of the Bank for International Settlements at Basle was once intense but has eroded with the passage of time.
2. In these last two categories, in the United States: the Library of Congress, New York Public Library (Research Libraries) (NYPL), the Regenstein Library at the University of Chicago, the Firestone Library at Princeton and the Milton Eisenhower Library at Johns Hopkins University; in England, the British Museum, the British Library of Political and Economic Science at L.S.E., the Middlesex

and Goldsmiths Libraries of the University of London, and the Bodleian Library at Oxford; in France, the Bibliothèque Nationale, libraries of the Institut des Sciences Poltique, the University of Paris I (Sorbonne), the Institut Nationale de la Statistique et des Etudes Economiques (INSEE), and the Organization for Economic Cooperation and Development (OECD), all in Paris; plus the libraries of Hitotsubashi, Keio and Tokyo Universities in Japan.

3. Cf., e.g. University of Warwick, Guide to the Library, p. 5: "Social Sciences: Library materials in these subjects usually give the greatest problems to users, even relatively senior ones..." This line was probably written by John Fletcher, the economics Librarian at the University of Warwick, who is the editor of The Uses of Economic Literature, Hamden, Conn., Archon Books, 1971 and the author of five of its 24 articles, which I discovered only at the end of writing the first draft. This is a first-rate guide to the use of libraries by economists, together with bibliographical studies in particular branches of the subject, I disagree in part, however, with the emphasis of Michael Shafe, who writes under "Reference and Bibliographical Tolls" (p.31):

> "The relationship between the librarian and the economist in a search of information is an important one. Too often the 'old boy network', mentioned in Graham Mackenzie's article in Aslib Proceedings, July 1969, on reader instruction, is the first source of information and the library is thought of only as a secondary source. That net is full of holes: .... members of the network... can perpetuate errors and leave unknown areas still unexplored. Librarians can help to reduce the size of the holes in the net... Time is money, and as specialists' browsing time dwindles, the librarian can help to increase the economists' productivity and effectiveness."

In my view, the word-of-mouth circuit can produce information which cannot be retrieved by bibliographical tools alone.

4. This breakdown closely resembles that of the First Report of the General Board's Committe on Libraries of Cambridge University (Cambridge University Reporter, Vol. XCIX, No. 4653, 28 March, 1969), which discusses undergraduates buying books - it is noted that they fail to spend their full local education authority maintenance grant for the purpose of £35 - and College (teaching), Departmental (working), and University (research) libraries.

5. In their formula for measuring the adequacy of academic library collections, Verner W. Clapp and Robert T. Jordan ("Quantitative Criteria for Adequacy of Academic Library Collections," College and Research Libraries, Vol. 26, No. 5 (September 1965), include 2,000 books for each field in which a university offers graduate work at the master's level or equivalent, but note that within this average, requirements differ by field: e.g., anthropology 2,000, physics 1,885, area studies 7,000. (p.375).

6. There are two ways of weeding: by book and by subject. The latter has greater benefits for the recipient of the weeded objects. Some years ago I decided that I had done with economic development and gave to the library of a struggling college all books on the subject. The weeding of working paper files calls for the impossible discipline of throwing out the conference papers when the published proceedings are received.

   Weeding and duplication are even more serious problems for libraries, of course, but ones which we do not have time to explore below.

   Raffel and Shisko discuss weeding as a technique of saving on storage costs and analyze a number of criteria: past circulation, age of book and gross characteristics, such as those classified by the Dewey Decimal System in a library that has converted to the Library of Congress (op. cit., pp.15ff.) None seems to me acceptable. They conclude that the saving of storage costs is too small to validate the loss of reader benefit. The task of libraries in eliminating duplication is horrendous when articles are often produced numerous times as working papers, journal paper, in a collection, anthologies, etc. It would be invidious to name the economists who squeeze all possible mileage out of their work in this way and complicate the lives of librarians.

7. My colleagues and I at MIT doubtless buy more books after the Dewey Library was transferred from the third floor of the Sloan Building to a new building, joined by an enclosed bridge to be sure, but down two floors. It is rumored that a former star of the Johns Hopkins Department of Political Economy was moved to accept an offer from another university in considerable part because of the transfer of the library from Gilman Hall outside his door to the new Milton Eisenhower Library building across a quadrangle.

8. I recall asking Alexander Gerschenkron to borrow a book and being surprised that he could move across the room to its exact location. Asked how he know exactly where it was, he said he had had a grant from a foundation to rearrange his books. I neglected, however, to ask him what system was installed.

9. If one achieves immortality as an economist, it will of course prove to have been worthwhile to have made marginal notes, as they increase the value of the book. Josef Schumpeter's notes on his books were made on slips of yellow paper, which the Hitotsubashi Library, which

acquired the bulk of his collection, extracted and filed separately. In examining the collection I sought to see his notes on Keynes, General Theory, but this book was not among those given to Hitotsubashi. Notes on Samuelson's Foundations were disappointing, merely two slips with some scrappy matrix notation.

10. In a conference on the Organization and Retrieval of Economic Knowledge, some attention might perhaps be paid as to how to retain at the ready, the knowledge one has obtained from books. I find students, in economic history at least, enormously interested in this simple methodological problem: are 3" x 5" card in file drawers, for example, better than 8 1/2" x 11" loose-leaf notebooks, one to a subject? (I am a loose-leaf notebook man.) Should all notes be typed for easy visual retrieval? (I think so.) On note-taking in general, R. M. Hartwell had the discouraging experience of taking detailed notes on a book, losing them four or five years later, reading the book again and taking another set. On finding the first set and comparing the two, he found an overlap of no more than two-thirds. It is evident that as interests change with time, the meaning of a book for the scholar changes. Bibliographical card filing can be overdone: the office of a professor in the Harvard Law School has several hundred thousand 3" x 5" cards in trays on shelves, desk, tables, cabinet, chairs and floor. Many a scholar's office is similarly encumbered with a disarray of books piled high everywhere.

11. Adam Smith's library is for the most part in the possession of the Edinburg University Library. (308 volumes) The University of Tokyo owns 141 books, including a 1781 catalogue drawn up by Smith himself, bought at a London auction in July 1920 (see Tadao Yanaihara, Catalogue

of Adam Smith's Library, Tokyo, Iwanami Shoten, 1951). The Hutzler collection of the Johns Hopkins library has a score of books belonging to Adam Smith, with his bookplate. Others are in the Kress collection, the University of Glasgow (the Livingston collection), Queens College of Belfast and Kyoto University (see James Bonar, A Catalogue of the Library of Adam Smith, London, Macmillan, 1894, rev. ed. 1932; and Hiroshi Mizuta, Adam Smith's Library Supplement to Bonar's Catalogue, Cambridge, Cambridge University Press, for the Royal Economic Society, 1967. This library is thus divided and spread over the world like pieces of the True Cross.

12. In the summer of 1960, I read French financial economic history in the Ministry of Finance library in the cupola on top of the Louvre on the Rue de Rivoli side of the building. The library was primitive, perhaps 10,000 books in all, no titles in languages other than French, and housed in three rooms, Salles I, II and III. The catalog referred the reader to room, tier and shelf number only, with the remaining requirement that the book be found by search among the 50 to 70 on each shelf. In looking for particular books, I uncovered other highly useful titles. At the end of three months of this serendipity, however, I was ready to move out into the rest of Paris' library treasures to tackle gaps in the Ministry's collection more purposefully. Similarly in 1972, I read Italian economic history in the working library of the Bank of Italy in Rome. It was highly useful in getting a neophyte started efficiently. If I had started with the library of the Luigi Einaudi library in Turin, containing 120,000 volumes on Italian economics, history and politics, I should have been overwhelmed. The latter, it may be noted, receives 1,500 periodicals from Europe and has available several archival sources.

13. Bert F. Hoselitz, ed., A Reader's Guide to the Social Sciences, New York, Free Press, rev. ed., 1970, p. 245.

14. Masuo Hambayashi, Catalogue de la Bibliothèque du Professor Gustav Schelle, Tokyo, Librarie Keiso Shobo, 1962.

15. "First Report of the General Board's Committee on Libraries," Cambridge University Reporter, op. cit., p. 1195. A crude rule of thumb is that a teaching library should consist of a minimum of 100,000 volumes, with 75 volumes per student overall, and 200 volumes per graduate student, The Association of College and Research Libraries of the American Library Association established a standard in 1959 of 50,000 carefully chosen books for 600 students (at the four-year college standard), with steady growth at the rate of 10,000 books for each additional 200 students, up to a level of 300,000 books at which level the rate of increase could decline. A more refined standard of Clapp and Jordan (op. cit.). starts with a basic undergraduate library of 35,000 titles (42,000 volumes) 250 periodicals (with 3,750 bound volumes over 15 years) and 5,000 volumes of documents, and adds to it for each faculty member, student and field of concentration at the bachelor's, masters and doctors degree. The 2,000 titles (2,400 volumes) per field at the master's level or equivalent has been mentioned in footnote 5. For each Ph.D. field 15,000 titles (18,000 volumes), 100 periodicals (1,500 bound volumes) and 5,000 volumes of documents are suggested.

It is of some interest that when the formula is applied to a group of large American universities, the University of Illinois is 35 percent above the Clapp-Jordan norm, Michigan 32 percent above, and UCLA 22 percent above, whereas one unnamed university with 1,675,000 volumes is 35 percent deficient, and another with 268,000 volumes, 55 percent deficient. In Canada, only the University of Toronto, and two small colleges, met the Clapp-Jordan criteria.

16. See Kenneth E. Carpenter, "The Great Collections in the History of Economic Thought," paper presented to the Midwest Economics Association, April 1974: "Kress and Goldsmiths' are both underused in terms of the curators' wishes. We would welcome more demands on us." But contrast Collison Black's review of Catalogue of the Goldsmith's Library of Economic Literature, Economic Journal, Vol. 81, No. 323 (September 1971), pp. 702-03, which characterized the Library as "well housed, equipped and staffed; well sited, well supported, and well used." When I visited the Library on a Saturaday afternoon in January 1974, it had but one reader.

17. Of ten books pulled at random out of the shelves of a small library of a black college, not in Georgia, only one had been borrowed and all looked in mint condition.

18. Students of international economics may be interested in pursuing the analogy between the European Payments Union and interlibrary lending. Any system which will work well with bilateral balancing will break down if some countries (university libraries) are persistent debtors and others persistent creditors. (The same point could be made about the tuition exchange plan for free tuition among faculty children, which collapsed as undergraduate colleges, and especially those for women, found themselves called upon to provide more places than their faculty members needed outside). Dewey Library finds it more expeditious to undertake interlibrary loans at a distance so as not to add to its persistent deficit at the Library of Congress or Widener. On the other hand,

the Yale Sterling Library's gross imports are highest from the Library of Congress, and Widener to which it can furnish effective reciprocity. The creation of a National Center for Research Libraries with its own resources is comparable with infusing the European Payments Union with capital of its own.

19. At Yale, 15 percent of all new books purchased for the Cross Campus Library between January and May 1973 were replacements for missing volumes. "Report of the University Librarian, 1972-1973," Bulletin of Yale University, Series 70, No. 2 (15 January 1974), p. 8. The same report notes further (p. 11) that a reorganization of the main Sterling book stack and extensive inventorying of the French literature collection reduced the number of books unaccounted for to 1.3 percent and is thought to have contributed to a reduction of 22 percent, from 10,130 to 7,951, of search requests from readers using the central stack.

20. An indication of the inflation of the last twenty years in books is provided by the 1954 corresponding categories: A up to $250; B $250-$500; C $500 to $1,000; D $1,000 to $2,500.

21. A number of other institutions have organized themselves to list working papers, so that readers of the list may write away to receive them. Among them is Office of the Assistant Secretary for International Affairs (OASIA) of the Treasury Department, which operates an International Clearing House for International Economics intending to send out lists quarterly. At times, I have taken the view that there is too much material in too many periodicals, and that I would not read any article, no matter how beguiling the title, until I had seen or heard it mentioned twice, a test which

no computer-aided bibliography is likely to apply. For thesis writers, however, and scholars working in a popular field, it may be vital to scan the literature in press as well as that in print.

22. Such a choice in the early 19th century had costs as well as benefits, and two libraries at least, of the ten originally designated in the United Kingdom, gave up the privilege. The University of Glasgow in 1830 yielded it for an annuity from the government of £600; the Edinburg University Library sold its privilege to the local city library. Designation as a copyright depository does not guarantee complete coverage. Some works are not copyright. Some copyright works were not deposited. And some libraries from time to time sold off books received in this way to acquire cash to convert into other assets, which is why early in the process, the British Copyright Office would harass the depository libraries to check up on their holdings.

    The Library of Congress is the only copyright depository in the United States. The process began in 1846, was interrupted by the Civil War. Part of the early collection was lost in an 1851 fire when the Library was in the Capitol. One book each was received until 1870; thereafter two.

23. Annual Report of the Librarian of Congress, 1973, Washington, Library of Congress, 1974, Appendix 2, p. 103.

24. *Ibid*., p. 110

25. *Ibid*., p. 110

26. See "Academic Library Statistics, 1972-1973, A Compilation of Statistics from the Eighty-one University Members of the Association of Research Libraries," Washington, 1973. After Harvard and Yale,

the largest general academic libraries in North America are Illinois (5,200,000 volumes), Columbia (4,500,000), Michigan (4,400,000), California at Berkeley (4,300,000), Toronto (4,100,000), Cornell (4,000,000), Stanford (3,900,000) and Indiana (3,500,000). The University of Texas and Toronto lead Harvard and Yale in volumes added in 1972-73. British Columbia, Syracuse and Missouri lead in microform holdings. Berkeley with 98,000 (to Harvard's 48,000 in 7th place) is the leader in current periodicals, etc.

27. University of Oxford, Annual Report of the Curator of the Bodleian Library for 1971-72, Supplement, No. 6, to the University Gazette, vol. ciii, (June 1973), p. 2.

28. Cambridge University Reporter, op. cit., pp. 1236, 1238, 1249.

29. Annual Report of the Librarian of Congress for the Year Ended June 30, 1954, op. cit., p. 3.

30. The Large Soviet Encyclopedia, Special Edition of Volume 50, pp. 409-10, information kindly communicated by Professor E. E. Domar.

31. Bibliothek des Institut für Weltwirtschaft, "Statistiche Ubersichten für den Zeitraum 1971-73-" Kiel, 1974, pp. 10-13. The totals given are understated since they represent cumulative acquistions between 1925/26 and 1973. By 1926, the collection had reached 100,000 volumes. (Frieda Otto, "Die Bibliothek des Institut für Weltwirtschaft,: in Institut fur Weltwirtschaft an der Universitat Kiel, 1914-1964, Kiel, 1964, p. 75.

32. Hitotsubashi University, Bulletin of Information, 1972-73, Kunitachi, Tokyo, 1973, p. 61.

33. In a book from Baker, there was pencilled inside the front cover: "This book was compiled by ____ from his notes on historical

lectures at the School of Economics, including even some of the little jokes with which I tried to keep the class awake. The lectures were delivered from 7-8 PM. Not a word of acknowledgement, of course." Kenneth Carpenter, Curator of the Kress Library, readily identified the handwriting as that of Foxwell.

34. See Katalog der Carl Menger-Bibliothek in der Handels-Universität, Tokyo Bibliothek der Handels-Universitat, Vol. I, 1926 and Vol. II, 1955. Hitotsubashi University was earlier named the University of Commerce. Other European collections in Japan, not previously mentioned, are the library of Werner Sombart at the Municipal University of Osaka (cf Katalog der Werner Sombart, Osaka, Bibliothek in der Stadtischen Universitat, 1967), consisting of 10,000 items, and the collection of Karl Bücher, the German Economic historian, of 11,466 volumes, acquired by the University of Kyoto in 1920 for $4,000 (Katalog der Karl Bücher, Bibliothek in der Wissenschaftlichen Fakultät der Universität Kyoto, Kyoto, 1970.

35. Carpenter, op. cit.

36. Mark Perlman, "The Editor's Comment, " Journal of Economic Literature, Vol. XI, No. 1 (March 1973), pp. 56-58.

37. In a given year, the Bibliothek of the Institut für Weltwirtschaft will acquire 50,000 works (in 1972) and make 240,000 entries in its various catalogues (Statistiches Ubersichten), op. cit., p. 30.

38. In the 1920s and 1930s among the undergraduates at the University of Pennsylvania it was believed that the reason the University Library ressembled the Philadelphia Baltimore and Ohio railroad station was because it was the same building. According to the legend, the City planned to extend Locust Street through the

campus, and was prevented only by insistence that the University had begun the construction of a Library. Asking to see evidence, they were shown the hastily modified plans for the railroad station on which the University's architects had last worked.

39. Sir Roy Harrod tells of visiting Harvard University at a time when he was a member of a committee considering open stacks for the Bodleian Library. He asked Paul Buck, the Harvard Librarian of the time, about Widener's experience with open stacks, and on learning of large losses through theft, recommended against them. In a subsequent visit, he learned that in the meantime almost all the three or four thousand books reported stolen had been recovered in the possession of a single kleptomanic. Today Cambridge University boasts of being the largest open-stack library in Britain.

40. When I wanted to consult Jacques Boudet, Le Monde des Affaires (Paris, Société d'Edition de Dictionnaires et Encyclopédies, 1952) it was not on the shelf nor charged out at Harvard, Princeton, or Chicago. A visit to Columbia University brought forth a helpful reference librarian who consulted the National Union Catalog, noted it was available at NYPL. There, with closed stacks, my slip was brought back to my seat with an "idiot card" attached to it, saying "Take the card catalogue tray to the Librarian and ask about the book again." I did so and learned that the small + in the upper corner meant that it was oversized and filed separately. It should be said in my defense that the Widener catalogue card did not have an F for folio size. Incidentally if I had been knowledgable enough to consult the National Union Catalog myself before setting out in search of the book, for reasons mentioned in footnote 44, I

should not have looked for it at Harvard, Princeton or Columbia libraries, all of which have it but are not listed in NUC. It is of some modest unscientific interest that Boudet, which I have converted into a shibboleth for libraries, is found in British Museum, but not in LSE, the University of London, Edinburg or Aberdeen. It is listed in NUC as held by NYPL, the Universities of Chicago, Michigan, Oregon and Virginia, Duke, Rutgers, Ohio State, Stanford, the Union Library of Pennsylvania in Philadephia, Air University at Air Force Base, Montgomery Ala., but not Yale, Illinois, and as noted, not Harvard, Princeton or Columbia.

41. See Michael C. Lovell, "The Production of Economic Literature: An Interpretation," Journal of Economic Literature, Vol. XI, No. 1 (March 1971), pp.27-54. For an artistic impression of the problem, see Jorge Luis Borges, "The Library of Babel," in his Ficciones, New York, Grove Press, 1962, pp.79-88. Sr. Borges was for many years the director of the National Library of Argentina. The reference was brought to my attention by Professor Carlos F. Diaz-Alejandro. Historical perspective may be obtained from William Jacob's A View of the Agriculture, Manufactures, Statistics and Society in the State of Germany and Parts of Holland and France, London, John Murray, 1820: "It is a very general and well founded complaint, both among authors, booksellers and others, that too many books are published. The constructed nature of German society, and the want of a point which could be considered the force of literature, occasions this excess of writing. Every man who thinks he has anything to communicate, runs to the press with eagerness, and is sure to find some admires in some circles..." (p. 308)

42. The financial plight of the New York Public Library is especially serious, since it has benefited from sevaral one-time grants and transitional subventions but is still running a substantial deficit annually and has drawn down its endowment from $90 millions to $70 millions.

43. An historian at the Library of Congress who was using its MARC system of machine readable records which use a 10-digit system and one key word in context (KWIC) to check the monthly flow of black studies turned up 125 to 150 cards in each of three months but these included a number of titles relating to Black Hills, the Black Forest, black holes and the like. I have tried to contemplate how a reading machine using KWIC would respond to David S. Landes <u>Unbound Prometheus</u> (Cambridge, Cambridge University Press, 197). With fuller subject references, it would of course show up on lists dealing with the industrial revolution, technological progress and European economic history. Project Intrex used an "augmented" catalog entry for information retrieval in a narrow field - materials science - with a conventionalized vocabulary. The average document in its file ran to six pages. The expense of producing these catalog entries is of course formidable.

44. The late Norbert Wiener once stated that it was true that a million chimpanzees typing a random for a million years would produce the works of Shakespeare and the Holy Bible, but the problem would be to find them in an accumulation of paper larger than the earth.

45. In work on technical education in France, I tried to find out about the education of businessmen in France, working both from Centenary volumes of the Ecole Polytechnique and the Ecole Centrale des Arts et Manufactures to industry, and from the businessmen to their education. In the latter connection, since the <u>Dictionnarie de Biographie</u>

Francaises goes only to E, I found great difficulty until I asked Professor Maurice Levy-Loboyer who suggested Jacques Boudet's Le Monde des Affaires, mentioned in footnote 40, which proved enormously helpful. I do not see how it would have been possible to locate this work through a bibliographic search whether or not aided by Machine Readable Records.

46. I see no way of knowing, for example, that John Hopkins Library would hold correspondence of Scott Nearing from 1912-1922; of Josef Schumpeter from 1913-1924; of E.R.A. Seligman from 1893-1918; or of Francis A. Walker from 1870-1896. Nor do I see how scholars like Richard Kuisel and Charles Maier would know that papers of Louis Loucheur, who worked in the French government on industrial and reparations questions, would be at the Hoover Institution library, as they evidently do from their writings.