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dLIST Classics by S.R. Ranganathan:

Five Laws of Library Science, Ed. 1 (1931)
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New Education and School Library: Experience of Half a Century (1973)
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CHAPTER VII
THE FIFTH LAW

Now, we come to the fifth and the last Law of Library Science. While the first four laws deal with the functions of a library, the Fifth Law tells us about the vital and lasting characteristics of the library as an institution and enjoins the need for a constant adjustment of our outlook in dealing with it. While the first four laws indicate the spirit that should characterise the management and administration of libraries, the Fifth Law enunciates a fundamental principle that should govern the planning and organisation of libraries. While the first four laws embody maxims that are nearly obvious, the Fifth Law is not perhaps so self-evident.

The Fifth Law is: A LIBRARY IS A GROWING ORGANISM. It is an accepted biological fact that a growing organism alone will survive. An organism which ceases to grow will petrify and perish. The Fifth Law invites our attention to the fact that the library, as an institution, has all the attributes of a growing organism. A growing organism takes in new matter, casts off old matter, changes in size and takes new shapes and forms. Apart from sudden and apparently discontinuous changes involved in metamorphosis, it is also subject to a slow continuous change which leads to what is known as 'variation', in biological parlance, and to the evolution of new forms. This change is so slow but so effective that the protagonists of evolution assert that it is the shapeless undifferentiated protozoa of the Palaeozoic age that has transformed itself, by successive stages of variation, into the most differentiated specimen of creation—the human being. The one thing that has been persisting through all those changes of form has been the vital principle of life. So it is with the library.

GROWTH IN SIZE

We shall first trace the consequences of the simple growth in size. For this purpose, it may be convenient to examine the main parts of the organism that are capable of growing. They are the books, the readers and the staff. It is well to repeat here that a modern library is a trinity of these factors. It must be clearly realised that a collection of books without readers has no more right to be called a library than a group of readers without books and that the mere juxtaposition of books and readers without the service of a staff, that know to effect contact between the right reader and the right book, at the right time and in the right manner, cannot constitute a library either. The modesty with which library authorities underestimate the rate of growth of each of these factors is unimaginable. We shall have occasion to give instances of this modesty as we go into
details. But a far less pardonable thing is to set about organising a library as if it would be stationary, as if neither the books, nor the readers, nor the staff would grow in number. There could be nothing more reprehensible than a faulty organisation obstructing the free development of a library, or indeed of any institution, to its full stature. The frequent recurrence of this fatal mistake in library matters is due to the failure to realise a fundamental fact, viz., an organisation which may be suitable for a small library may completely fail when the library grows big. Technologists know from painful experience that a successful laboratory method may not always turn out to be a successful manufacturing method. Physicists too are now beginning to realise that what may hold good in situations of an infinitesimal order may cease to do so in similar situations of a finite order. The library organisation should not short-sightedly allow itself to be unduly influenced by the present size but should plan its lay out in such a way as to make it easy to keep pace with the necessary growth of the library. Let us now take up each of the three elements of the trinity and trace the consequence of its growth on the different aspects of library organisation.

Books

Let us first take the books. The number of books in a live library must and does grow. We shall assume that there is hardly any probability for the recurrence of the familiar anecdote of the Kansas legislator who objected to an appropriation for more books for the University library with the eloquent words, "Mr. Speaker, I object to spending this money. Why, they've got forty thousand books there at Lawrence now, and I don't believe any one of them professors has read 'em all yet!" We shall also assume the impracticability of the Quincy plan, which is to equalise the rate of weeding out and the rate of accessioning, after the size of the collection reaches an arbitrary norm. While finance is no doubt the ultimate deciding factor, it cannot be denied that some light is thrown on the average rate of growth of the book-collections of libraries by the following tables giving the annual rate of book-production in some of the important countries of the world.

Table 1 giving the number of books published in some of the foreign countries in 1927 is extracted from p. 281 of Vol. CXV of the Publishers' Weekly.

I am indebted to the Educational Secretary to the Government of India for Table II giving the number of books published in some of the Indian Provinces in 1927.

Table 1.

International Book Production Statistics for 1927.

<table>
<thead>
<tr>
<th>Name of the Country</th>
<th>No. of books published</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Russia</td>
<td>36,680</td>
</tr>
<tr>
<td>2. Germany</td>
<td>31,026</td>
</tr>
</tbody>
</table>

F. 49
Table II.

Book Production Statistics of India for 1927.

<table>
<thead>
<tr>
<th>Name of the Province</th>
<th>No. of books published</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madras</td>
<td>4,042</td>
</tr>
<tr>
<td>Bengal</td>
<td>3,425</td>
</tr>
<tr>
<td>United Provinces</td>
<td>3,298</td>
</tr>
<tr>
<td>Punjab</td>
<td>2,537</td>
</tr>
<tr>
<td>Bombay</td>
<td>2,211</td>
</tr>
<tr>
<td>Bihar and Orissa</td>
<td>1,500</td>
</tr>
<tr>
<td>Delhi</td>
<td>414</td>
</tr>
<tr>
<td>Central Provinces</td>
<td>217</td>
</tr>
<tr>
<td>Burma</td>
<td>122</td>
</tr>
<tr>
<td>Assam</td>
<td>54</td>
</tr>
</tbody>
</table>

To view the subject from another angle, here is a table giving the annual rate of accession in a few libraries:

<table>
<thead>
<tr>
<th>No. of the country</th>
<th>No. of books published</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Japan</td>
<td>19,967</td>
</tr>
<tr>
<td>4. Great Britain</td>
<td>13,810</td>
</tr>
<tr>
<td>5. France</td>
<td>11,922</td>
</tr>
<tr>
<td>6. United States</td>
<td>10,153</td>
</tr>
<tr>
<td>7. Poland</td>
<td>6,888</td>
</tr>
<tr>
<td>8. Italy</td>
<td>6,533</td>
</tr>
<tr>
<td>9. Holland</td>
<td>6,103</td>
</tr>
<tr>
<td>10. Denmark</td>
<td>3,293</td>
</tr>
<tr>
<td>11. Sweden</td>
<td>2,652</td>
</tr>
<tr>
<td>12. Spain</td>
<td>2,374</td>
</tr>
<tr>
<td>13. Switzerland</td>
<td>1,909</td>
</tr>
<tr>
<td>14. Norway</td>
<td>1,238</td>
</tr>
</tbody>
</table>

VII] Library Authorities Outwitted

<table>
<thead>
<tr>
<th>Name of the Library</th>
<th>No. of Vols. added in a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Library of Congress</td>
<td>202,111</td>
</tr>
<tr>
<td>2. Boston Public Library</td>
<td>94,339</td>
</tr>
<tr>
<td>3. Cambridge University Library</td>
<td>90,916</td>
</tr>
<tr>
<td>4. Birmingham Public Library</td>
<td>28,566</td>
</tr>
<tr>
<td>5. New York State Library</td>
<td>29,313</td>
</tr>
<tr>
<td>6. Imperial Library, Calcutta</td>
<td>7,832</td>
</tr>
<tr>
<td>7. Madras University Library</td>
<td>5,628</td>
</tr>
<tr>
<td>8. Aberdeen Public Library</td>
<td>3,726</td>
</tr>
</tbody>
</table>

Stack-Room and Fittings

We shall first trace the effect of the growth of stock on Library Architecture. The part of the library building that is primarily concerned with this is the stack-room. Its size, its relative position, the book-rack forming the unit out of which the stack is built, the parts of the book-rack, the shelf-planks, label-holders and all such things relating to the housing of the books will have to be examined in the light of the inevitable growth in stock.

Taking the size first, it is seldom that the Fifth Law does not outwit the library authorities. To take an example, the managing committee of a certain library estimated as follows in the year 1911: "In order to accommodate the books which the library already possesses together with those that the committee expects to purchase during the next year, a room 40' × 40' × 18' would be required. To accommodate books to be added . . . during the next twenty-five years (on the assump-
tion that the annual allotment will continue the same) another room of the same size will be necessary". But by about 1922, the committee was led to modify its estimate as follows:—"The two rooms each measuring 40' × 40' × 18' provided for the storage of books may be raised to three as future additions are likely to be much more than was originally anticipated". Later experience has shown that the stock, which was 7,000 in 1911, grew to as much as 70,000 in 1930. The stack-room had to be actually designed to consist of four tiers each 144' × 34' × 9', with provision for doubling the space as and when required.

The amount of forethought that the Fifth Law has induced in American Universities is illustrated by the following description of the planning of the Yale University Library. "The problem of the general library was to provide adequately for present needs and for future needs so far as they could be foreseen. The programme therefore asked for suitable accommodation for three million volumes on the day of opening, and ultimately for four million volumes".

Apart from emphasising the need for a generous provision for the future, the Fifth Law has been slowly eliminating the old alcove and gallery forms of construction for the storage of books. The stack form is steadily gaining ground and a further development in stack architecture is the stack tower. Another solution which has been proposed to meet the increase in stock is the build-

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ing of repositories of the warehouse type for the close packing of the book-racks for the economical storage of books infrequently used. Each rack is provided with wheels, so that it can be pulled out from its neighbours, when a book on its shelves is required for use. No doubt this way of meeting the Fifth Law would be prejudicial to the interests of the Third Law. It is a case of compromise here. It is only books which are entirely out of date and are not likely to be of any but antiquarian interest that would be consigned to such closely packed racks.

As the size of the stack-room must grow with the stock of books, it is necessary that the architectural features and the lay out should admit of an easy extension of the stack-room. Horizontal expansion may not always be possible. Hence, it is desirable to make the foundations of the stack-room strong enough to take extra tiers.

The unit racks of which the stack-room is built should all be equal in every way, so that the additions can be made by any number of units at a time. In particular, the shelf-planks should all be of identical dimensions, so that they can be interchanged in any manner. They should also be adjustable. While steel-shelves can be made universally adjustable, even wooden shelves can be made adjustable to an inch with the help of Tonk's fittings. The need for interchangeability and adjustability can be understood if we put together the Fifth Law and the fact that the books are to be arranged in a classi-
fied manner on a subject basis. As further additions are made, the books will have to be shifted from shelf to shelf, to keep their relative order intact. As books will be of all sizes, full freedom of adjustment of shelves will be necessary, to avoid waste of space.

Another consequence of shifting the books as the library grows will be the need for frequently changing the shelf-labels. We have already seen the need for a very large number of shelf-labels. In fact, a shelf-label will have to be assigned to every group of twenty books on an average. The frequency of shifting them as a result of the Fifth Law is bound to be very great. Hence, much thought has been devoted to the invention of a suitable form of label-holder. Primitive methods of shelf-labelling, such as sticking the labels to the edge of the shelf with gum or writing out the name of the class on the edge with a piece of chalk, will prove unmanageable in a growing library. A common form of label-holder consists of a piece of transparent xylonite bent at right angles and fixed to the underside of the shelf with a pair of drawing pins. The labour involved in pulling out and fixing the pins turns out to be prohibitive. Another form of label-holder is made of sheet metal, with the upper and lower edges flanged so as to form grooves to receive the labels. They are fitted to the shelves by projections at top and bottom, and are capable of being moved forward and backward as required. But the simplest and the cheapest me-

thod is to cut a groove of a suitable cross-section in the edge of the shelf itself. The shelf planks of the book-racks designed by me for the Madras University are one inch thick. A slightly wedge-shaped groove cut in its front edge takes a shelf-label 5/8" wide. The label can be moved from end to end and can be inserted or removed without disturbing the shelf and its contents. This design has proved to be quite satisfactory. There are no sharp edges in this device and there is nothing involving waste of time.

**Periodicals Room**

Another part of the library building which needs careful designing in the light of the Fifth Law is the periodicals room. Its size and its furniture will have to be examined in the light of the inevitable growth in the number of periodicals current in a growing library. The rate of increase is indicated by the following figures:

<table>
<thead>
<tr>
<th>Name of Library</th>
<th>In Year</th>
<th>No. of Periodicals</th>
<th>In Year</th>
<th>No. of Periodicals</th>
<th>Amount of Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madras</td>
<td>1908</td>
<td>160</td>
<td>1921</td>
<td>912</td>
<td>571%</td>
</tr>
<tr>
<td>Ames</td>
<td>1900</td>
<td>200</td>
<td>1925</td>
<td>1,414</td>
<td>707%</td>
</tr>
<tr>
<td>California</td>
<td>1915</td>
<td>7,000</td>
<td>1925</td>
<td>11,179</td>
<td>100%</td>
</tr>
<tr>
<td>Illinois</td>
<td>1900</td>
<td>414</td>
<td>1924</td>
<td>9,943</td>
<td>240%</td>
</tr>
<tr>
<td>Iowa</td>
<td>1900</td>
<td>213</td>
<td>1925</td>
<td>1,176</td>
<td>555%</td>
</tr>
<tr>
<td>Michigan</td>
<td>1900</td>
<td>775</td>
<td>1925</td>
<td>3,361</td>
<td>434%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>1906</td>
<td>321</td>
<td>1925</td>
<td>1,715</td>
<td>534%</td>
</tr>
<tr>
<td>Oregon</td>
<td>1909</td>
<td>158</td>
<td>1925</td>
<td>778</td>
<td>498%</td>
</tr>
<tr>
<td>Yale</td>
<td>1920</td>
<td>8,800</td>
<td>1925</td>
<td>11,548</td>
<td>330%</td>
</tr>
</tbody>
</table>

(1) The figures for American Libraries are taken from WORKS (George Allan): *Colleges and University Library Problems*, p. 124-s.
Another factor to be remembered in this connection is that the number of scientific periodicals published in the world is estimated to exceed 25,000, while it would exceed 60,000 if non-scientific periodicals are taken in the count.

To satisfy the first four Laws in general, and the Third Law and the Fourth Law in particular, it is necessary that the current numbers of all the periodicals taken by the library should be displayed in a classified order in a special periodicals room. The periodicals room should be of a sufficiently large size and should be so located and designed as to admit of extension. Further, to economise in table space, at least four rows of periodicals should be accommodated on each table. The periodicals should be put in good leather binders and made to stand vertically with the front cover facing the reader. The rows should be one behind the other in ascending steps, so that the periodicals in all the rows are clearly visible.

Catalogue Room

Another part of the library building which should be generously provided for in consequence of the growth in stock is the catalogue room or the room in which the catalogue cabinets are kept. A standard unit cabinet, which occupies a floor area of 23" × 28", can hold 48,000 catalogue cards. We have seen that each book may have to be given six catalogue cards on an average, if the Second, Third and Fourth Laws are to be satisfied. Thus, a unit cabinet is required for every eight thousand volumes. One can also infer from this the rate at which the number of catalogue cabinets will increase in a growing library. This consequence of the Fifth Law should be borne in mind in designing the catalogue room. Not only should that room be made sufficiently big to begin with, but provision should also be made for its extension. The Fourth Law would, on its part, urge that it should be located just near the entrance to the stack-room.

Catalogue

We shall next consider the effect of the Fifth Law on the physical form of the catalogue. If a library is a growing organism, it follows that the library catalogue will also be a growing one. In fact, the rate of growth of the catalogue may be said to be six times the rate of growth of the number of books, as a book requires six entries on an average. Hence, the first effort of the Fifth Law in the matter of the catalogue was to fight against the printed catalogue. Taking a library which adds 6,000 volumes a year and assuming that a page of the printed catalogue can take 20 entries, a volume of 300 pages would be necessary to print a catalogue even on the basis of one entry for a book. But, if, in accordance with the requirements of the other Laws, the catalogue should be of the classified form with an alphabetic index and a profusion of cross-references, the volume would swell to 1,800 pages. The time taken to see a catalogue of that size through the press would keep it always
behind date at least by a year. That is to say, the latest books, which are of the greatest interest, would not find a place in it. Further, there is the question of cost, and that of cumulating the annual volumes from time to time. On the other hand, a library catalogue never sells even when the price is nominal. Persons familiar only with libraries which are either stationary or at best grow inordinately slowly do not easily appreciate the waste and confusion involved in printing the catalogue of a growing library. Accustomed to the periodical supply of printed lists by libraries of slow growth, such persons fret and fume if printed catalogues are not supplied. If one attempts to convince them by argument, they refuse to listen and express their bitterness by saying that it is all the tyranny of experts. It may be more truly called the tyranny of large numbers or the tyranny of the Fifth Law. And the experts only try to find a way out of that tyranny.

But a more inexcusable attitude was that of the principal of a college, who said that the college did not mind the cost, since it realised the whole amount by forcing each student to buy a copy. What a narrow view! Was money to be wasted simply because it came from the pocket of the student? If money can be extracted from the students, can it not be utilised to enrich the library collection, instead of being wasted on an unwanted, out-of-date, poorly made list, passing under the dignified title of Library Catalogue? It is notorious how con-
derations of economy begin to loom large when the question of staff or the allotment for books is brought up. But all sense of economy seems to vanish away when the annual or biennial printing of the catalogue is undertaken.

Assuming that the catalogue can not be printed and that it should be only a manuscript one, let us examine what form the Fifth Law would recommend for it. It was the bound book form that was in use for a long time. But, in a growing library, the need for interpolating entries to keep up their correct sequence soon led to the adoption of the "paste-down form". In this form, the entries are written, typed or printed on narrow strips of paper, which are pasted down on the pages of a bound book, leaving ample interspace for future interpolations. If any region gets congested, the strips in that region are lifted up and redistributed. Apart from such paste-down catalogues soon becoming an eyesore, the time and labour involved in lifting and pasting are prohibitive.

The next stage of evolution to which the Fifth Law brought the catalogue was the loose-leaf form. Here, each leaf is made to take about half a dozen entries and the relative order of the leaves can be easily maintained. Several forms of loose-leaf binders have been invented during the last twenty or thirty years. The Kalamazoo binder is of a strong and convenient form although it is a little too costly. The loose-leaf idea, thus originated by the force of the Fifth Law of Library Science,
has now spread everywhere. Most of the business houses are now bidding good-bye to their bound books and are introducing loose-leaf ledgers in their place. Atlases, encyclopaedias, directories and such other publications, parts of which frequently become out of date, are nowadays issued in loose-leaf form, so that they may be maintained perpetually up-to-date, with the least cost and the least waste.

But, even in the loose-leaf catalogue, the insertion of more than one entry in a leaf led to a break in the sequence, which became increasingly inconvenient as the library grew more and more. To avoid this, the size of the leaf was reduced and only one entry was put on a leaf. It was next felt that it was inconvenient to handle such small thin leaves.

This brought into the field the card form of the catalogue. After a good deal of experimentation, 5" × 3" has now been accepted as the most convenient size. Each card gets one and only one entry. Hence, the right sequence is always maintained. Cards of .01 inch thickness are found to be suitable. As the cards should stand wear and tear, tough cards of close texture should be selected. Library suppliers like the Libraco, 62, Cannon St., London, specialise in the production of such cards. Their "35 cards, medium thickness, round punched," which cost about Rs. 8-8-0 per 1,000 including freight and customs duties are found to be quite serviceable. As in the case of the loose-leaf ledger, the card system is another epoch making contribution of the library profession to the business world in general. It has introduced great convenience, freedom, neatness and up-to-dateness in the maintenance of all kinds of records.

Shelf-Register

In the same manner the shelf-register, which shows the books in the order in which they occur on the shelf and is indispensable for checking the stock of the library, has also passed through similar stages of evolution and has finally assumed the card form, as a result of the Fifth Law.

Classification Scheme

Another important matter that needs to be examined in the light of the Fifth Law is the classification of books. In the first place, as A LIBRARY IS A GROWING ORGANISM and as knowledge itself is growing, it is necessary that the "classification must be comprehensive, embracing all past and present knowledge and allowing places for any possible additions to knowledge". Indeed this has been set down by Mr. Sayers as the first canon of classification. To quote Sayers again, "A classification must be elastic, expandable, and hospitable in the highest degree. That is to say, it must be so constructed that any new subject may be inserted into it without dislocating its sequence". Cases like that of Wave Mechanics, Matrices, Roman Effect, Internal Combustion Engine, Radium, Behaviourism, Dalton Plan and the entire subject of Sociology have had to be accommodated within
living memory. It can not be said that all the printed schemes in force have come quite unscathed out of this trial.

In addition to the scheme of classes being comprehensive and hospitable, the notation attached to them should be perfectly flexible. The greatest service done to Librarianship by Melvil Dewey is the demonstration of the immense potentiality of the decimal notation in meeting the difficulties due to growth. It is regrettable that the influential scheme of the Library of Congress should have failed to utilise the services of such a flexible type of notation and have adopted the primitive method of leaving gaps in the ordinary serial use of numbers. The Fifth Law will soon outgrow the gaps, however farseeing and generous they might be. It is only the decimal notation that will remain un-baffled by that law. Indeed the brilliant success of the decimal notation in overcoming the trials of the Fifth Law of Library Science is leading to its adoption in other spheres as well. Analytically minded authors like Jesperson and Whittaker, are beginning to number the paragraphs and chapters of their writings in a strictly decimal way. Some authors even claim that the use of the decimal notation adds substantially to clarity of thought.

It is by no means easy to secure hospitality of classes and flexibility of notation to the full satisfaction of the Fifth Law. Un-thought-of difficulties are likely to crop up as the library grows. One should not light-heartedly venture to construct schemes of classification. The old plan of dividing a library into about a dozen or two main classes and numbering the books in each class consecutively as received will soon prove inadequate and lead to confusion as the library grows. It is only ignorance of the Fifth Law that makes many of our libraries adopt such a plan. The best course is to follow a recognised printed scheme of classification. There are four such standard schemes used in English speaking countries. They are Brown's Subject Classification, Cutter's Expansive Classification, Dewey's Decimal Classification and The Library of Congress Classification. Of these, Dewey's Decimal Classification is the most popular. It is used in about 14,000 libraries. The Library of Congress Classification is also being largely used in America. The supply of printed catalogue cards by the Library of Congress has made this scheme very popular. Cutter's scheme and Brown's scheme are not used in many libraries as there is no agency to bring them up-to-date from time to time. E. C. Richardson's Classification, Theoretical and Practical contains an essay on the bibliographical history of systems of classification. There are no less than 161 systems mentioned by him. But, as has been already said, it is only two of these that have stood the test of time.

I have constructed a new scheme known as the Colon Classification. It is adopted in the Madras University Library and in a few other Indian libraries which are beginning to classify their
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books. The notation of the scheme is a mixed one and has taken full advantage of the flexibility of the decimal use of digits. It has also many mnemonic features. The conscious use of multiple characteristics as basis of classification, without leading to cross classification, has made its classes greatly elastic. The next volume of this series will give an account of this classification.

Before proceeding further, it may be advantageous to mention here a practical detail which should be borne in mind along with the Fifth Law. The call number which individualises the book, has to be written in practice in a dozen places, viz., the back of the title page of the book, the date label pasted in the book, the back of the book, the book card, the shelf-register, the accession register, and each one of the catalogue-cards corresponding to the book—and we have already stated that the average number of catalogue-cards is six per book. This should make it plain that it is no ordinary matter to change the classification of a library. The labour, the time and the cost involved will be prohibitive.

This practical difficulty should dissuade libraries from adopting a scheme in part. It is not uncommon for libraries, that have not realised the full implications of the Fifth Law, to mutilate the chosen scheme—say, to three figures of Dewey or four figures of Dewey as they desire. But as the library grows the need for fuller details would arise and it would be no easy matter to change or extend the call numbers of all the books. An equally dangerous course is to modify the chosen scheme here and there; but one should not venture such modifications without seeing far into the future and examining whether the modifications proposed will not, at some time or other, come into conflict with the mnemonic features of the notation, or with the methods of division into classes. It is not enough if the modifications appear to be feasible with the existing classification. A mutilated scheme, that may appear to work well under certain conditions of size, will seldom work successfully as the library grows. In Engineering, it is a well-known fact that the construction of small models is often quite an easy matter, whereas to develop them on a large scale presents serious technical problems which can often be solved only by some new method of attack. So it is with classification. As A LIBRARY IS A GROWING ORGANISM, there is a great need for prudent planning on account of the difficulty of changing the scheme later. The wisest course is to adopt a tried scheme as it is, without modifying it here and there.

Readers and Issue of Books

We shall next consider the increase in the number of readers in the light of the following factors:

(a) the size of the reading room;
(b) the issue method; and
(c) certain safeguards.

[Page 51]
Taking the size of the reading room first, it is seldom that the Fifth Law does not outwit the library authorities. To take an example, the Managing Committee of a certain library stated, in 1911, that it would be satisfied with a reading room 60' × 24'. But, by 1926, it had to ask for rooms measuring, on the whole, 220' × 35'. If the present rate of increase of its readers persists, it may not be long before it will have to ask for additional accommodation for readers. The generous way in which the Yale University has met the demands of the Fifth Law in this matter can be seen from the following account:—"The reading rooms included a general room seating 260 readers, and shelving 15,000 reference books; a reserved book room, seating 220 readers, and shelving 25,000 volumes of duplicates for class use, with provision in the basement for as many more volumes, a periodical room, seating 120, with wall shelving for 2,000 different current serials; a special room for undergraduates, seating 165, and shelving 30,000 of the best books in English on all subjects. A 'commuters' study' in the basement shelved 1,000 of the most important reference books, and provided 90 seats". Thus, this library has made provision for nearly 1,000 readers.


VII] Scope for Increase in Issue

ISSUE METHOD

Increase of readers leads to increase of issue. Here are some figures showing the rate of increase of issue in certain University Libraries:

<table>
<thead>
<tr>
<th>Name of Library</th>
<th>In year</th>
<th>No. of Vols. issued (in round figures)</th>
<th>No. of Vols. issued (in round figures)</th>
<th>Amount of increase.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madras</td>
<td>1914</td>
<td>5,000</td>
<td>1925</td>
<td>113,000</td>
</tr>
<tr>
<td>California</td>
<td>1910</td>
<td>184,000</td>
<td>1925</td>
<td>896,000</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>1905</td>
<td>21,000</td>
<td>1925</td>
<td>134,000</td>
</tr>
<tr>
<td>Columbia</td>
<td>1905</td>
<td>222,000</td>
<td>1924</td>
<td>1,206,000</td>
</tr>
<tr>
<td>Michigan</td>
<td>1910</td>
<td>204,000</td>
<td>1925</td>
<td>477,000</td>
</tr>
<tr>
<td>Minnesota</td>
<td>1910</td>
<td>105,000</td>
<td>1925</td>
<td>441,000</td>
</tr>
</tbody>
</table>

The following table, relating to some British Municipal Libraries, not only shows the magnitude of the issue work as it is now, but also throws some light on the scope for a still greater issue. As the Second Law would not be satisfied until the percentage of borrowers to population reaches 90, it follows that there is much room for increase in issue in almost all the towns mentioned in the table:

<table>
<thead>
<tr>
<th>Town</th>
<th>Population</th>
<th>Borrowers</th>
<th>Percentage of Borrowers issues to Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wigan</td>
<td>91,296</td>
<td>8,002</td>
<td>8.7</td>
</tr>
<tr>
<td>Twickenham</td>
<td>34,790</td>
<td>4,404</td>
<td>13.0</td>
</tr>
<tr>
<td>York</td>
<td>84,030</td>
<td>12,116</td>
<td>14.7</td>
</tr>
<tr>
<td>Walthamstow</td>
<td>139,960</td>
<td>19,043</td>
<td>14.7</td>
</tr>
<tr>
<td>Cheltenham</td>
<td>50,430</td>
<td>9,030</td>
<td>18.0</td>
</tr>
<tr>
<td>Willesden</td>
<td>177,973</td>
<td>29,192</td>
<td>16.3</td>
</tr>
<tr>
<td>Swinton and Pendlebury</td>
<td>34,730</td>
<td>5,814</td>
<td>16.7</td>
</tr>
<tr>
<td>Southend-on-Sea</td>
<td>128,500</td>
<td>22,628</td>
<td>17.0</td>
</tr>
</tbody>
</table>
The Fifth Law

<table>
<thead>
<tr>
<th>Town</th>
<th>Population</th>
<th>Borrowers</th>
<th>Percentage of Borrowers to Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chorley</td>
<td>30,581</td>
<td>5,663</td>
<td>18.5%</td>
</tr>
<tr>
<td>Kirkcudby</td>
<td>45,000</td>
<td>9,916</td>
<td>22.0%</td>
</tr>
<tr>
<td>Stockport</td>
<td>123,315</td>
<td>26,794</td>
<td>21.4%</td>
</tr>
<tr>
<td>Northampton</td>
<td>90,255</td>
<td>19,694</td>
<td>21.8%</td>
</tr>
<tr>
<td>Royal Lamington Spa</td>
<td>29,450</td>
<td>7,107</td>
<td>24.1%</td>
</tr>
<tr>
<td>Darwen</td>
<td>38,200</td>
<td>11,733</td>
<td>30.6%</td>
</tr>
<tr>
<td>Montrose</td>
<td>10,479</td>
<td>6,624</td>
<td>62.3%</td>
</tr>
</tbody>
</table>

This great increase in issue has to be borne in mind in planning the issue methods. When the issue amounts to hundreds per day, the old-fashioned method of making an attendant pick out the books asked for and dole them across the counter would require the full-time service of about twenty attendants. As the issue grows further, the staff of attendants would stand in need of proportionate strengthening. Such an indefinite increase of men, for doing the mechanical work of issuing, is considered uneconomical and the library authorities are being driven to recognise that the 'open access' system is the only method of meeting the Fifth Law.

Further the ledger method of issue simply breaks down. The average number of volumes issued is usually double the number of readers visiting the library. The number of operations involved in the issue of a volume by the ledger method has been indicated in the last chapter. It can be seen from these data that the process of making the entries in the ledger method of issue would involve the employment of several counter clerks, and even, with them, it would be hardly
practicable to cope with the situation in rush hours. Evening hours, just before the library is to close, are usually rush hours. The accompanying plate shows a portion of the reading room of a library in such hours. Most of the readers would be leaving the library in the last few minutes of the day and the ledger method of issue would become simply impossible. On the other hand, the crowd can be handled most expeditiously by the ‘reader’s ticket-book card’ method mentioned in the last chapter.

Further, this method automatically solves the problem of identifying the borrowers. This problem becomes serious, as the number of borrowers increases. It becomes impossible to depend on one’s memory for faces. Big colleges and popular public libraries find it increasingly difficult to handle this problem. The introduction of the reader’s ticket transfers the responsibility from the counter-staff to the reader’s themselves. Each reader is made responsible for the books drawn on his tickets and it is his business to keep the tickets in his personal custody and prevent their use by others.

Further, the issue of as many tickets as the number of volumes which the reader is entitled to and the locking up in the library of one ticket against every book in his possession automatically secures that he does not remove from the library at any one time more volumes than he is entitled to. It is hardly practicable to secure this in the ledger method as the number of readers increases.
Again, as the reader’s tickets coupled with corresponding book-cards are arranged behind the date guide in accordance with the call number on the book-cards, the different statistics of the daily issue are obtained with the least loss of time and labour. On the other hand, in the ledger method, in which the books will be entered only in the order of issue, the collection of these statistics will involve much labour and inconvenience and may become impracticable as the daily issue grows in bulk.

Even Floors

The issue aspect of the Fifth Law has some bearing on library design also. Increase in issue implies also increase in the number of volumes to be replaced. In the earlier stages, the few volumes to be replaced can be conveniently carried by hand. But, as the issue increases, it may not be convenient to do so. It will become necessary to carry them on a book-trolley. It means that the room of the library should be devoid of raised thresholds and that the floor should be throughout even and in one level, so as to admit of the wheeling of the book-trolley to any part of the floor. If there be more than one floor, they should be connected by a lift large enough to carry the book-trolley.

Safeguards

As the number of readers increases, the problem of preventing unauthorised removal of books from the library becomes acute in open access libraries. It is not practicable to watch

VII Safeguards in an Open Access Library

Every reader unless certain safeguards are introduced. The safeguards should really secure that all the readers can leave the library only one at a time through a particular door, at which a vigilant clerk is posted. The safeguards consist of the following arrangements:

Entrance to the library must be by one and only one gate and exit also must be by one and only one gate. The gates should be normally in the locked position. They should open only if the counter-clerk releases the catch. The moment the reader leaves it, it should automatically lock itself. The gate way should be big enough to allow one and only one reader to pass through it at a time. All other doorways and windows should be fitted with jali-work shutters or expanded metal shutters, whose meshes are too small for a book to be passed through. Further, no reader should be allowed to replace the books on the shelves.

The great need for such safeguards may not be realised when the number of readers and the issue are small. But it will become serious as the library grows, particularly as the issue grows. Perhaps, the greatest disservice to the open access system is done by the imprudent enthusiasts who introduce the system without the necessary safeguards. As the library grows, loss exceeds a reasonable limit and the system is hastily condemned. Such mistakes should be avoided from the very beginning, i.e., even when the library is small—as the LIBRARY IS A GROWING ORGANISM,
which grows constantly and by imperceptible degrees.

Staff

We now turn to the third factor—the staff. Even those, who realise the truth of the Fifth Law in regard to the books and the readers, fail to recognise the need for the growth in the third factor. The safeguarded open access system and the modern issue method eliminate the need for growth in the counter staff and considerably minimise the need for growth in the number of attendants. But, the book section, the periodicals section, the cataloguing section, the binding section and the reference section have to grow as the library grows. Of these five sections, the growth of the first three depend only on the rate of growth of the first factor—books. But, the growth of the last two sections depends not only on the growth of the stock but also on the growth of the number of readers. The Fifth Law would urge library authorities to remember that the efficiency of a library cannot be maintained at the proper level, unless provision is made for the necessary growth in all these five sections of the library staff.

Granting that the library authority provides for the growth of the staff to the needed extent, the growth of the staff brings, in its train, certain new problems of organisation. With a large staff, more machinery of supervision and more records become necessary. With a staff of one efficient person, we get maximum results. With a staff of two equally efficient persons we may perhaps get twice the work done. But, with a staff of ten, we cannot get ten times the work; the ratio is bound to be much less. It is the task of the organiser, the man at the head, to keep this ratio as high as possible. A recognised method of doing this is to seize the opportunity for specialisation which size undoubtedly brings with it. Such specialisation should be carried one step further, every time the staff are increased.

As soon as a library increases the staff from one to two, the counter work and reference work should be separated from all other items of work and assigned to one of them. At the next stage, it may be desirable to form three sections—the administrative section, the technical section (classification and cataloguing) and the counter section. At the next stage, a reference section may be formed. If the staff are increased still further, the administrative section may be split up into order section, accession section, periodicals section, binding section, accounts section, correspondence section and so on, as opportunity presents itself. Similarly, the technical section may be bifurcated into classification section and cataloguing section. It may further be a great advantage if the members of the reference section specialize in different subjects, as the section grows in strength.

When the library staff are divided into many sections, it is necessary to determine carefully the
section to which each member of the staff is best fitted, physically, academically, and temperamentally. While periodical inter-sectional transfers may be desirable from the point of view of the staff, such transfers should primarily be subject to the principle that the library should get the best service which each person is capable of.

**Staff-Council**

In a library with a large staff, it may be useful to form a staff-council. The council may be made up of the librarian, the heads of sections and one representative of each section. The staff-council may advise the librarian—

1. in the systematization of the work of the sections with due regard to efficiency and economy of energy and time;
2. in solving problems involving inter-sectional relationship;
3. in developing the book resources of the library in a harmonious manner;
4. in devising methods for improving the service to the public; and
5. in organising extension work of all kinds.

Incidentally such a council will develop good comradeship and *esprit de corps* among the members of the staff and train the junior members in organisation and original thinking. It will also develop in them a sense of responsibility and

**The Spirit of the Hive**

As a library has to work on all days and for long hours, the organisation of the reference section and the counter section requires the greatest skill and care, so that there may be absolute continuity in the work and that the change of shift could be effected smoothly and quickly with the least dislocation of work. Indeed the readers should not be able to perceive that a change in personnel had come. The details of this organisation and the machinery that has to be set up to secure proper control and co-ordination will be discussed in later volumes. But there is one factor that may be mentioned here. That is the spirit of the staff. The members of the staff should be on the most cordial terms among themselves. They should be willing to co-operate with one another in every possible way. There should not be the least trace of jealousy or envy. The propensity to claim credit exclusively to oneself should be completely got over. Self should be suppressed to such a degree that every member is prepared to pass off
all work as anonymous. Maeterlinck's picture of the work in the bee-hive contains the most vivid and accurate description of the spirit that should come over a library staff, as it inevitably grows in accordance with the Fifth Law, if it is to function with maximum efficiency.

"She ..., like the foundresses, abruptly departs and abandons her model. Her place is taken at once by an impatient worker, who continues the task that a third will finish, while others close by are attacking the rest of the surface and the opposite side of the wall; each one obeying the general law of interrupted and successive labour, as though it were an inherent principle of the hive that the pride of toil should be distributed and every achievement be anonymous and common to all, that it might thereby become more fraternal"."1

The spirit of the hive should prevail among the library staff if the inconveniences due to the Fifth Law are to be avoided.

**Evolution**

So far, we have dealt only with the consequences of growth in size. We shall now turn to the other attribute of a growing organism, viz., variation and evolution of new forms.

In the earliest days, a library is said to have been denoted by a word which meant a place for hiding books in. Later on they seem to have been literal prisons for books. That prison life of the books appears to have been much more rigorous than that of even some of the C class prisoners of to-day. I believe it is not every C class prisoner that is kept chained all the hours of the day; but the libraries of the medieval days kept their books perpetually in chains. It was only in the seventeenth and the eighteenth centuries, that the inhuman aspect of this way of preserving books appears to have been realised. Even then the freedom that was first given to the books was only comparable to the freedom given to A class prisoners. That is to say, they were given freedom of movement only within the four walls of the library, even as an A class prisoner is perhaps permitted to take his constitutional walks within the boundary of the prison walls. Then came the period of grudgingly lending them out. In that period the libraries appear to have devoted their main attention to the stock-taking process, to the number of books lost, to the number of books damaged—never mind even if it was due to the wear and tear of legitimate use—to the fixing up of the responsibility for such loss or damages, and to such other factors almost to the exclusion of the statistics of issue, the statistics of membership, the percentage of the community that was still keeping out from libraries and the means of bringing them under the influence of the libraries. But the slow change that began to appear at the turn of the present century attained a huge amplitude as a result of the Great

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1 MAETERLINCK (Maurice): *The Life of the Bee*; Tr. Alfred Sutro, Chapter III, Section 54.
War and the highly differentiated and complicated character of the organisation of the library of to-day makes it as far different from the ancient Chinese "place to hide books in" as the human group is from the protozoa group or the Atlantic Liner of 60,000 tons is from Columbus's 'Santa Maria'.

What further stages of evolution are in store for this GROWING ORGANISM—the library—we can only wait and see. Who knows that a day may not come—at least Wells has pictured a world in which dissemination of knowledge will be effected by direct thought transfer, in the Dakshinamurti fashion, without the invocation of the spoken or the printed word—that a day may not come when the dissemination of knowledge, which is the vital function of libraries, will be realised by libraries even by means other than those of the printed book?

**Variety of Forms**

Without indulging in such speculations, we may have a look at the variety of forms into which the library organism has differentiated itself in our present day. We have the Municipal or City library, the Rural or District library, the academic libraries such as the School library, the College library and the University library, the Business library, the Commercial library, the Seafarers' Library, the Children's library, the Intermediate library—a species that is just beginning to appear—the library for the blind and many other special libraries. Each one of these species has problems and peculiarities of its own, in addition to certain common features. It will take us beyond the scope of this book to deal with each of them in a detailed manner. There are special treatises that deal with each such species.

**The Vital Principle**

But the vital principle of the library—which has struggled through all the stages of its evolution, is common to all its different forms and will persist to be its distinguishing feature for all time to come—is that it is an instrument of universal education, and assembles together and freely distributes all the tools of education and disseminates knowledge with their aid. This vital principle—'the spirit of the library'—persisting through all its forms is like the inner man; and to it are applicable the words of the Lord:

As a person casts off worn-out garments and puts on others that are new, so does the embodied soul cast off worn-out forms and enter into others that are new.

Weapons do not cleave him; fire does not burn him; water does not make him wet; nor does the wind make him dry.

---

(1) **Wells** (H. G.): *Men Like Gods.*

(2) According to a traditional verse, Siva, as Dakshinamurti, is said to sit under a banyan-tree in the midst of his disciples and to resolve all their doubts by the eloquence of his very silence.

He cannot be cloven; he cannot be burnt; he cannot be wetted; he cannot be dried; he is eternal, all-pervading, steadfast and immovable; he is the same for ever.

APPENDIX

SPECIFICATION FOR A TEAKWOOD BOOK-RACK

The standard unit-rack that I have designed for the Madras University Library has two faces. Each face has two bays, so that the unit rack is a four-bayed rack—two bays on each side. While the height may be 7 ft. in adult libraries, it should not exceed 5 ft. in children’s libraries.

The detailed dimensions of and specification for an adult library unit are as follows:

(a) External dimensions 6’ 6” × 1’ 6” × 7’.

(b) Three uprights, each 2’ × 1’ 6” × 7’.

(c) Seven shelf-planks, each 3’ × 8½” × 1”

Two of the shelf-planks are to be fixed ones—one near the top and the other near the bottom. The other five are to be movable ones supported by Tonk’s fittings, so that they can be adjusted to an inch. It may be an advantage to provide two spare shelves for each unit.

(d) The book rack is to have sanitary bottom, i.e., the lowest shelf is to be fixed at a height of 6 ins. from the floor to facilitate cleaning the floor beneath the rack and easy vigilance. The topmost shelf is to be fixed 6 ins. below the top of the uprights.

F—53
Ranganathan, Shiyali Ramamrita.  
The Five Laws of Library Science.  
(Sarada Ranganathan Endowment for Library Science).  
Madras Library Association, 1931.  
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