



Ranganathan, Shiyali Ramamrita.
Prolegomena to Library Classification. Assisted by M.A. Gopinath. 3rd edition.
Asia Publishing House, 1967.

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This is a title in the dLIST Classics Project

dLIST Editor-in-chief: Anita Coleman

Digitization: Joy Wilcox, SIRLS, University of Arizona, Tucson.
Digitized: Fall 2006

Acknowledgments: SRELS Foundation (A. Neelameghan, K.N. Prasad, K.S. Raghavan, DRTC) and
dLIST Advisory Board Member, S. Arunachalam (MS Swaminathan Research Foundation)

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PART D

NORMATIVE PRINCIPLES

CHAPTER DA

LEVELS OF NORMATIVE PRINCIPLES

1 Introduction

Normative Principles can be postulated for work in different levels—from the level of the basic process of thinking, through the level of library science as a discipline, to the level of each of its various sub-disciplines—such as, classification and cataloguing—and even to still deeper levels.

2 Names at Different Levels

To distinguish the levels to which the respective sets of normative principles belong, they are denoted by the following distinctive terms.

SN	Level	Name of Normative Principles
1	Basic process of thinking	Basic Laws
2	Library Science	Fundamental Laws
3	Classification	Canons
4	Helpful sequence in array	Principles
5	Work of classifying	Postulates, and Principles for Facet Sequence

3 Relative Use

31 BASIC LAWS

The Basic Laws governing the process of thinking are normally invoked only when two or more Laws of Library Science or Canons of Classification lead to conflicting or different equally valid decisions.

32 LAWS OF LIBRARY SCIENCE

The Laws of Library Science, governing the various disciplines falling within the field of Library Science, are normally invoked only when two or more Canons of Classification lead to conflicting or different equally valid decisions.

33 CANONS OF CLASSIFICATION

The Canons of Classification are in conformity with the Laws of Library Science. They are normally invoked only in the design of a scheme for classification. The design work may be that of

first design or that of extension by the classificationist or even by the classifier playing the role of classificationist within a limited context (*See also* Sec XE4).

34 PRINCIPLES FOR SEQUENCE IN ARRAY

The principles for sequence in array are normally used only in the design of a scheme for classification. The design work may be that of first design or that of extension.

35 POSTULATES, AND PRINCIPLES FOR FACET SEQUENCE

The postulates, and the principles for facet sequence are used in the practical classification of subjects. They guide the work of classifying. In fact, at that time they appear almost at every step. In addition, of late, the postulates have also begun to influence the design of a scheme for classification. It is now being experienced that a scheme for classification designed on the basis of Postulates and guided by the Principles for Facet Sequence, in addition to the usual Canons and the Principles for sequence in array, is likely to be more enduring and long-lived than a scheme using the Canons alone.

4 The Laws

The fundamental laws of library science and the basic laws governing the process of thinking are explained in the succeeding chapters of this Part.

5 Canons

The Canons of Classification fall into the following groups:

- 1 Canons for the Idea Plane;
- 2 Canons for Terminology; and
- 3 Canons for Notational System.

The first two groups are explained in Parts E and G respectively; and the third group in Parts J, K, and L.

6 Sequence in Array

The Principles for Helpful Sequence in array are explained in Part F.

7 Postulates, and Principles for Facet Sequence

The Postulates, and the Principles for Facet Sequence are explained in Part R.

CHAPTER DB

LAWS OF LIBRARY SCIENCE

0 Laws of Library Science

The specific normative principles applicable to any problem arising in library science, library service, and library practice.

- 1 First Law.—Books are for Use.
- 2 Second Law.—Every Reader His Book.
- 3 Third Law.—Every Book Its Reader.
- 4 Fourth Law.—Save the Time of the Reader.
- 4I Corollary to the Fourth Law.—Save the Time of the Staff.
- 5 Fifth Law.—Library is a Growing Organism. (*See also* Chap XE).

01 FUNDAMENTAL LAWS

The Five Laws of Library Science were first formulated in Madras in 1928. In 1931, they were first published in a book [125] along with an exposition of some of their implications. These are the Fundamental Laws of Library Science. These form the Normative Principles containing in a latent form all the library practices current at any time and to be evolved at a later time. A new chapter in its second edition [126] published in 1957 shows how some of its implications not current in library practice a quarter of a century earlier had by then become current to suit the boundary conditions of Library Service set up by the pressure of the social concepts of today. In particular, the term 'Book' should be generalised in the present day context to mean a "Document" as defined and elaborated in Chap MC.

02 FINAL COURT OF APPEAL

The Canons and Principles of Classification given in Parts E to L are all implications of the Five Laws, specific to the sphere of classification. If any conflict arises between the Canons and/or Principles, it is resolved by an appeal to the Five Laws. If a problem in classifying exceeds the capacity of the Canons and Principles, an appeal is made to the Five Laws to suggest a solution. But we do not invoke the Five Laws on the occasions in which the Canons can manage the situation. The Five Laws are like the Head of a State, in whose name and on whose authority every government action is done by the ministers and the secretaries, without his explicit and immediate intervention. The Five Laws are like Lord Narayana, resting in his leafy float on the Ocean of Milk, ever-watchful and ever alert, but abstaining from visible intervention

except when the laws of the universe are over-powered by happenings not anticipated by them.

03 AGENCY FOR COMPROMISE

It occasionally happens that the Canons and Principles of Classification come into conflict with certain general Normative Principles, such as those given in the later chapters of this Part. On such occasions, a compromise is effected in the light, and with the aid, of the Five Laws of Library Science.

04 SOCIAL NECESSITY

Library techniques have been casually developing since 1870 to meet the increase in the number of books and readers. But they are no longer sufficient to meet the present day needs caused by the increasing pressure of democracy and of population. Nor can new techniques be developed in a leisurely casual way. This has brought into operation the maxim, "Necessity is the Mother of Invention". Accordingly, library technique was pushed into the spiral of scientific method about 1928 by my formulation of the above-mentioned Five Laws of Library Science. Since then, these Laws have come to be widely recognised. On the one hand, they explain the library practices of the past. On the other, they lead to the deduction of new techniques to suit the varying boundary conditions laid by the social needs from time to time. Today these Five Laws permeate and form the basis of progressive changes in practically all the library techniques—Book Selection, Classification, Cataloguing, Reference Service, Administration, Organisation of National and International Library Systems, even Standardisation in Book Production, and other fringe areas. Like the Fundamental Laws in any other discipline, the Five Laws are simple and may appear to be almost trivial.

05 PERSONAL NECESSITY

In the afternoon of Thursday 4 January 1924, I was transferred from my position as a Teacher of Mathematics in the Presidency College, Madras, to that of the newly created Office of the University Librarian in Madras. In October 1924, I joined the School of Librarianship of the University College, London. Through the kindness of W C Berwick Sayers, I picked up some practical experience by working in the Croydon Public Libraries in November and December 1924. During the next six months I visited about a hundred libraries of different kinds. I found them in different stages of development. This facilitated a comparative study of library practices. But there was no means of finding out any common point of emergence of the new trends in the different library practices.

Consequently, what could be seen was only a bundle of diverse practices, without an integral relation. It looked as if future developments were unpredictable. It all appeared to be a matter of Rule of Thumb and severely empirical. Prior experience in scientific study and pursuit induced in me a sense of revolt against having to hold in memory and deal with myriads of unrelated pieces of information and practices. Cannot all these empirical aggregates of information and practices be reduced to a handful of basic principles? Cannot the process of induction be applied in this case? Cannot all the known practices be got by the process of deduction from some basic principles? Do not the basic principles contain, as necessary implications, many other practices not current or known at present? Will they not become necessary, as and when the boundary conditions set by society change? Such questions began to simmer in the mind. It was, no doubt, realised that the subject of study belonged to the field of social sciences and not to that of natural sciences. But scientific method was applicable equally in both fields. The only difference lay in the status of the basic principles. These were hypotheses in the natural sciences and normative principles in the social sciences. But the spiral of scientific method was similar in both cases. The question to be answered was this: What are the normative principles pointed to by the observed trends in library practices and pointing to the future trends now not quite visible? This was agitating the mind from the first half of 1925.

06 FORMULATION

The pressure of organising the Madras University Library pushed this question into deeper and deeper levels of the mind. This went on for three years. The acute stage of emergence to the conscious level was reached late in 1928. It was late one evening. The pressure was reversed in direction. All other tasks had to be laid aside. The travail was unbearable. At about dusk, Edward B Ross made his usual daily call on me. I owed my intellectual being to him; he was my professor of mathematics throughout my university course; his versatility and his affection for me made him take intimate and intelligent interest in my new sphere of work. He sensed my state of distress that evening in 1928. I shared my struggle with him. He was about to get on his motor cycle. His eyes gleamed—always a sign of his hitting on something new; then came his characteristic smile of such occasions; and he said, "You mean, 'Books are for Use'; you mean that is your First Law". He went away without waiting even to see my reaction; this was quite like him. But this stroke of intuition of his landed me in a state of perfect relief. The enunciation of the other laws was auto-

matic. About three more hours were spent in filling up five sheets of paper with some deductions from the five laws in skeleton form. Their enunciation was thus complete.

07 EXPOSITION

In December 1928, the University of Madras invited me to give a course of Vacation Lectures to teachers. These were to be given at the time of the Provincial Educational Conference; that year, it met at the Meenakshi College, Chidambaram, on the eve of its becoming the Annamalai University. There were about a thousand teachers present; and many of them were personal friends. There could not have been a more congenial and sympathetic audience for the first formal exposition of the newly enunciated Five Laws of Library Science. The implications of each law were worked out in two lectures. Such of them as were in current practice were illustrated with lantern slides, diagrams, and verbal description. Some new practices were also deduced as likely to come into being; some of these have already come into being; the *Insdoc list*, started in 1954, is one of them in substance. As the audience consisted all of teachers, the educational implications of the Five Laws received great emphasis.

08 PUBLICATION

The Madras Library Association was founded in January 1928. Its first purpose was the promotion of the establishment of a state-wide library service. Nearly 400 members were enrolled within a short period. Naturally, they were all lovers of books and friends of library, but did not belong to the library profession. In fact the library profession did not have more than a dozen members in Madras State in those days. To enlist the active interest of the members of the Association, K V Krishnaswamy Ayyar, the Founder-President, asked me to start a regular Publication Series "on the technical and practical aspects of library work." It was felt appropriate to start with a volume giving a full exposition of the Five Laws of Library Science, from which all the others could stem as necessary implications. Accordingly, the first edition of the *Five laws of library science* was published in June 1931 [125]. Through God's grace, the later volumes flowed in succession, year after year, working out the implications of the Five Laws in one branch after another of Library Science. About 50 books were thus published. Some were published by the Madras Library Association; and some by the University of Delhi; a few by the Indian Library Association, and still others by other agencies.

091 APPLICATION TO LIBRARY CLASSIFICATION

Let us next see the relation between Five Laws and Library Classification. The first and the early purpose of library classification has been to arrange books in a helpful sequence—or rather, to mechanise such an arrangement of books. It is also to help mechanise the correct replacement of the books returned after use. Again, it should help fixing the most helpful place for a newly added book among those already in the library and for a newly emerging subject among those already with literary warrant. What is 'Helpful Sequence' for books? We need not waste time by examining trivialities such as arrangement by colour, size, or typography. The quality of books determining their helpful sequence in a library is none of these physical attributes.

1 Law 1 : Books Are for Use

One common method of arranging books is by the names of their authors. This sequence is undoubtedly helpful to a reader who wants the books by a particular author. But experience in libraries shows that more readers ask for books on a particular subject than for books by a particular author. It follows, therefore, that the subjects of the books should determine their helpful sequence. This is what the First Law of Library Science (Books are for use) tells us. Books are for use as embodied idea, not as physical commodities, not even as productions of particular individuals, except in the case of classics and works of literature.

2 Law 2 : Every Reader His Book**21 ALL BOOKS ON ONE SUBJECT**

When a reader seeks information in a given subject, the arrangement of the books in the library will be helpful to him, only if all the books on that subject are to be found together. He will be served better still if they are found sorted out within each subject by their languages, and if those in any linguistic group stand in the sequence of their years of publication, the latest books standing at the very end of the group. This is one of the results of the application of the Second Law of Library Science (Every Reader His Book).

22 SEQUENCE OF SUBJECTS

The Second Law would lead us to take further action. Few readers are able to name exactly the specific subjects of their interest at the moment; they usually think of a broader or a narrower one. Suppose that a reader asks for material on Public Finance. It is not sufficient if all the books on this subject are kept together. It is quite likely that the reader's wants are really more specialised than

his request suggests, and that the real focus of his interest is a subdivision of Public Finance such as the Budget, Taxation, Land-Tax, Income-Tax, Death Duty, or Public Debt. He will therefore be better helped if the books on these subjects follow closely after those on Public Finance (general). Thus the Second Law would require that the subjects themselves should be arranged according to their degree of filiation. In other words, the shelf arrangement should display the full field of a reader's interest, unexpressed as well as expressed. When he looks along the shelves of the library, he should find there what he was only vaguely conscious of wanting; indeed, it is only then that he will be able to realise exactly what it is that he wants. It is only then that he will feel a sense of satisfaction, which will, at bottom, be due to the fulfilment of an unexpressed want and to the getting of something which he had not known how to ask for. This represents a deeper function to be performed by the arrangement of books in a library, as demanded by Law 2.

3 Law 3 : Every Book Its Reader

One might say too that books are "anxious" to find the readers appropriate to them, since their destiny, so to speak, is the hands of readers. They want to be arranged in such a way that the probability of their getting their proper readers is at its highest. This will come about if subjects are arranged among themselves in the degree of their mutual relation. To illustrate: A book on Soil is likely to find its readers even amongst those who come for a general book on Agriculture, or for a book on Manuring; the chance of its finding readers will therefore be increased if the subject Soil is placed between the subjects Agriculture (general) and Manuring. Similarly, the helpful place for the subject Ploughing is after Soil and before Manuring. In the same way, too, Planting comes best after Ploughing and Manuring.

This is what the Third Law of Library Science (Every Book Its Reader) tells us. This Law joins with the Second Law in demanding that subjects should be arranged according to the degree of their mutual filiation. We shall use the term 'Filiatory Sequence' to denote such an arrangement.

31 SUBJECT ANALYTICALS

To increase the chance for a multifocal book, the Third Law would ask for each of the different subjects treated in a book to be classified and catalogued. An entry in a catalogue bringing to the notice of the reader a subsidiary subject expounded in a book is called a Subject Analytical.

4 Law 4 : Save the Time of the Reader

The Fourth Law of Library Science (Save the Time of the Reader) also suggests the same conclusion as above. In fact, all the first four Laws turn our thought to the specific subjects of books and to the need for a reasonably filiatory or helpful arrangement of them. A further need is that the books on any given subject should be arranged within that subject first by the languages in which they are written, and then by the dates at which they were published—the very suggestions of the Second Law. The Fourth Law would also support the demand of the Third Law for Subject Analytical Entries.

41 ALPHABETICAL SCATTERING

A little thought will show that an alphabetical arrangement of subjects by their names will not throw them into a filiatory sequence. It is quite easy to demonstrate this. Alphabetical arrangement will, for example, give the following sequence: Agriculture, Algebra, Apples, Arithmetic, Asparagus, and Astronomy. Surely this is far from being filiatory or helpful. Anyone can see that the Laws of Library Science would require these subjects to be arranged in the following helpful sequence: Arithmetic, Algebra, Astronomy, Agriculture, Asparagus, and Apples. Indeed, the phrase "Alphabetical Scattering" sums up the achievement of alphabetical sequence and rules out alphabetisation as a means of arranging subjects in a filiatory or helpful sequence.

5 Law 5 : Library is a growing Organism

We have seen how the books in a library should be arranged for the promotion of use. The arrangement should facilitate the service of the books needed by a reader at a moment pin-pointedly, exhaustively, and expeditiously, whatever be the size of the library or the rate of its growth or the rate of emergence of new subjects. This is the implication of the Fifth Law of Library Science (Library is a Growing Organism).

6 Current Interpretation : Documentation

During the last two decades, population pressure and economic pressure all the world over has made it necessary to supplement natural and near-natural commodities by technological substitutes. This requires not only research in the Natural Sciences, but also in the sciences of Management and Economics. Further, great social changes are taking place in most of the countries of the world. This necessitates research in the other branches of the Social Sciences and in some sectors of the Humanities also. In fact, we are no longer able to depend upon the research work done spontaneously by a

man of genius at long intervals of time. Research has to be team-research and relay-research. To conserve the research potential of the world by eliminating the unwanted and unintended repetition of investigation, it has become necessary to feed each research worker with the latest results and the nascent idea bearing on his work—pin-pointedly, exhaustively, and expeditiously. This is the intensive form which library service has taken today. It calls for the classification, cataloguing, and the service of subjects embodied not merely in the latest books but also in the latest articles in periodicals. To emphasise this new role of library service, it is called 'Documentation'. Documentation work calls for classification, and cataloguing, not only of books (that is, macro documents), but also articles, and even paragraphs in articles and books (that is, micro-documents). From this point of view, the term 'Book' in each of the Laws of Library Science should be interpreted to mean Document. This is now used as the generic term to comprehend books as well as articles and portions of a book.

CHAPTER DC

LAWS OF INTERPRETATION

0 Definition

The well-known principles of interpretation, such as the 1,008 principles of interpretation listed in the *Nyaya-kosa* [71].

1 Application to Classification

These principles have been evolved to a remarkable extent by the philosophers of the *Purva-Mimamsa* and the Nyaya Schools of Indian philosophy. These principles are widely applied in interpreting legal texts. The canons, the principles, and the rules for classification taken together look like a legal work. Any section in them should be interpreted like a legal text. If there is any conflict between them, they should be resolved with the aid of the Laws of Interpretation. Periodically the rules—and less frequently, even the principles and the canons—should be amended in the light of experience so as to remove old conflicts and reduce new ones to a minimum.

2 Example

One of the laws of interpretation is “The Principle of Burnt-Chariot-Lost-Horse”. The principle is stated as follows: Suppose, A and B are neighbours in a village X, and that they proceed together to a village Z. Each has got his own horse and carriage and he drives in it. Late in the night, they have to halt in Y, a wayside village. A is more fond of his carriage than of his horse. Therefore, he ties his horse to a pillar of a house and sleeps in his carriage. B is more fond of his horse than of his carriage. Therefore, he ties the horse inside the temple and pushes the carriage into a vacant spot outside the temple, and himself sleeps inside the temple. They both get up in the morning to resume their journey. A finds his horse stolen away. B finds his carriage burnt to ashes as he had pushed it over a heath to which the villagers had set fire late in the night without noticing the carriage. In the circumstance, they decided to tie B’s horse to A’s carriage and do the rest of the journey jointly. Here is an example of the application of this Principle to Classification.

About 30 years ago, we received a book with the title “Shakespeare in Greece”. The problem was to find a distinctive Class Number to the subject which was really, “History of Shakespearean Scholarship and Study in Greece”. We had the digit *v* for History. When *v* (history) is applied to the Class Number ‘O111,2J64

(representing Shakespeare as an English dramatist born in 1564)', the resulting number had no meaning. At the same time the subject under consideration had no number. Therefore, the digit 'v' was taken to mean "History of Scholarship" in this context. The subject was given the number 'O111,2J64v51'N3 (History of Shakespearean Study and Scholarship in Greece brought up to 1930's)'.

3 Subject for Thesis

It has been an unfulfilled ambition to scrutinise the entire *Colon classification*, *Classified catalogue code*, and *Library administration* from the angle of the Laws of Interpretation. My friend Mahamahopadhyaya Professor S Kuppaswamy Sastry was an eminent specialist in the subject. He and myself had intended to take up that work, after both of us would retire from the salary-earning stage of life. But, alas! he died before I could retire. I then sought to do the work in collaboration with an old student of his. But it did not mature. The application of the Laws of Interpretation to the Colon Classification will be an eminent subject for investigation by an aspirant to a Doctorate in Library Science.

4 Wrong Application

In UDC there is a so-called "Starvation Principle". Suppose a digit has been included in the schedule to represent an idea. If there is no literary warrant for its use for a specified period, then this digit may be used to represent some other new idea, needing to be represented. This general rule may give unhelpful results if the Idea Plane would fix some other place in the array for the new idea. In the example given in Sec DC2 the solution was accepted because the Idea Plane itself indicated the place given to the new subject in the solution provided.

5 Circumspection

Great circumspection is necessary in applying the Laws of Interpretation to a Scheme for Classification. No suggestion of these Laws to the demands of the Five Laws of Library Science should be accepted. But, their help may have to be invoked when there is conflict in the demands of the Five Laws.



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CHAPTER DD

LAW OF IMPARTIALITY

0 Definition

The principle that between two or more claimants—say, for the first position among two facets of a subject, or for the choice to be made from among the needs of different groups of readers—preference of any one should be made only on sufficient grounds and not arbitrarily.

1 Sequence of Facets

The determination of the sequence of facets in different subjects should not be left to be determined *ad-hoc* in each subject. On the other hand, if their sequence is determined by some guiding principles of a general nature applicable to all subjects, the Law of Impartiality will be satisfied. Some may hold that another ground for deciding the sequence of facets is the relative numerousness of the readers, whose needs will be satisfied by the different sequences.

2 Empty Digit in CC

From the very first edition of Colon Classification, the digit '9' has been used for long as an Empty or Sectorising Digit. But the Law of Impartiality has been always suggesting a similar thing being done also in the other species of digits --viz, Roman smalls and Roman capitals. This suggestion has now been implemented.

3 Connecting Digit in CC

From 1952 to 1963 different distinctive connecting digits were used for the three kinds of facets—Personality, Matter, and Energy—but the same one for two kinds of facets—Space and Time. This was done because punctuation marks were used as connecting digits and there were only four such marks. The Law of Impartiality had been pointing to this fault all along. At last, it was satisfied in 1963, by using the single inverted comma for Time Facet.

CHAPTER DE

LAW OF SYMMETRY

0 Definition

The principle that of two entities or situations which admit of being regarded as symmetrical counterparts of each other, if one of them is given weight in some context, the other too should be given a corresponding weight.

1 Species of Digits in CC

In CC, the ordinal value of the Roman capitals are taken to be greater than that of Indo-Arabic numerals. Since the Roman smalls were given the anteriorising quality, their position in the ordinal scale was not fixed in 1925. About 25 years later, the Roman smalls came to be used to represent Personality Common Isolates, Material Common Isolates, Energy Common Isolates, a kind of Space Common Isolates, and a kind of Time Common Isolates. In this context, the anteriorising value of the Roman smalls became defunct and therefore this species of digits had to be given a definite place in the scale of ordinal values. The Law of Symmetry suggested their being made smaller than Indo-Arabic numerals. This fitted very well with the requirements of the Idea Plane.

2 Empty and Emptying Digits

The digits 9, z, and Z were made Empty Digits to help Extrapolation of isolates in an array. But the Law of Symmetry called also for Interpolation (See Sec LD5).

3 Extrapolation at Both Ends

To balance the provision for extrapolation at the end of an array, the Law of Symmetry suggested the finding of some method for extrapolation at the beginning also. This prompting has recently led to the use of the digit '0' as an Empty Digit for the purpose (See Sec LC33). [141].

CHAPTER DF

LAW OF PARSIMONY

0 Definition

The principle that between two or more possible alternatives bearing on a particular phenomenon, the one leading to overall economy—of man-power, material, money, and time considered together with proper weightage—is to be preferred.

1 Jurisdiction

Great wariness is necessary in the application of the Law of Parsimony. It should not be allowed to over-ride the demands of the Laws of Library Science or of the Canons of Classification. Its jurisdiction is only over alternatives, if any, arising in the fulfilment of the demands of Laws of Library Science and the Canons of Classification. It will also include conflict among the Laws of Library Science.

2 Wariness

While applying the Law of Parsimony to library classification, overall economy should take into consideration the

- 1 Number of digits in class numbers and isolate numbers;
 - 2 Load on the memory of the users of class numbers and isolate numbers; and
 - 3 Number of pages required for the schedules for classification.
- Some simple examples are given in the following sections.

3 Length of Class Number

A class number has to be written in several places in the book itself, in its catalogue entries, and in administrative records. Therefore, the Law of Parsimony would recommend the class numbers being made as short as possible, consistent with the demands of the Laws of Library Science and the Canons of Classification. This recommendation of the Law of Parsimony has led to the adoption of a mixed base for the notational system, consisting of two or more species of digits.

4 Load on Memory

To secure economy in the number of digits in a class number, one may be tempted to use several species of digits—such as the Indo-Arabic numerals, the Roman capitals, the Roman smalls, and the letters in the different alphabets used in diverse languages. But to remember the letters in all possible alphabets will be too much

of a load on memory for most people. Therefore, the Law of Parsimony would not recommend such an extension of the base.

5 Length of Schedule for Classification

Experience has shown that the number of pages of a schedule for classification can be reduced considerably by replacing a single schedule for all subjects by a set of schedules for the following:

- 1 Basic Subjects;
- 2 Isolate Ideas of different kinds, such as,
 - 21 Time Isolate Ideas;
 - 22 Geographical Isolate Ideas;
 - 23 Other Isolate Ideas fit to be used as a component of many compound subjects going with many of the Basic Subjects; and
 - 24 Special Isolate Ideas likely to form components of many compound subjects going with a single or a small number of related Basic Subjects (*See Sec CR8*) [56].

6 Other Examples

Examples of the application of the Law of Parsimony are found in the following sections of this book:—

CX4, DH11, FJ1, GA0, HE3, HE43, HE53, HE63, JE6, KC1, NA3, SD3, and XH2.

CHAPTER DG

LAW OF LOCAL VARIATION

0 Definition

The principle that in any discipline and technique there should be provision for the users of them to secure, for strictly local use, results alternative to those for general use.

01 INTERNATIONAL DOCUMENTATION

Virtually giving alternative schemes, within a published scheme for classification, may not be too serious a hindrance in so far as an individual library is concerned; for it can choose one of the alternatives and stick to it permanently, neglecting the other. But if libraries in accessible neighbourhoods have chosen different alternatives, the readers happening to use many of them will be put to an inconvenience, which is worth avoiding. Moreover, a scheme offering virtually different schemes for choice disqualifies itself for use in a national bibliography and in international documentation. On the other hand, provision for a Local Collection with predominantly great use being given the first position in the sequence and provision of shorter class numbers for the documents in that collection—within a particular library or in a particular special bibliography—does not disqualify a scheme for use in international documentation.

1 Application to Classification

In Classification, the Law of Local Variation affects the Notational Plane. It also calls for the formation of special collections of documents taken out of the general collection.

2 Provision for Nationalities

The term 'Local' should be interpreted liberally so as to refer to a geographical area of any size. Thus this Law will provide, for example, for interests peculiar to the Americans, or New World interests, interests peculiar to a continent (such as European and Asian interests), interests peculiar to a country (such as English, Indian, or Japanese interests), interests peculiar to a district or county, interests peculiar to a town or village, and even interests peculiar to the library of an institution or any special library. In practice, however, except in what are known as 'Local Collections' in local libraries, the special interests will be largely of a national nature. It is this fact that has led Bliss to say, "Adaptation to nationality should, in a standard system, be liberal even to a radical

alteration. This may in some cases be modified by alternative location reserved or provided. For history and literature these provisions are specially requisite. The ingeniously adaptable Colon Classification in its 'Geographical Divisions' provides first for the 'Mother Country' and next for the 'Favoured Country' . . . This exemplifies the need in an international standard for more extensive adaptability in providing for nationalities" [21].

3 Colon Classification

31 GEOGRAPHICAL AREA

In CC, the digit 2 is set apart for the "Mother Country". In a library specialising in Local Collection the digit 3 is used for the locality in question, whether it is a district, county, town, or village. This results in a considerable shortening of class numbers and gives priority to Local Collections in shelf arrangement. In the absence of Local Collection of the kind mentioned, the digit 3 is normally used to represent "Favoured Country"—that is, the country about which there are more documents in the library than about any other foreign country. This special use of the digits 2 and 3 will provide for Local Variation in almost every subject and not merely in Geography and History, since the geographical characteristic figures as a basis of classification at some stage or other in most subjects as a means of amplifying a common subdivision digit, and in a few subjects even as a fundamental characteristic.

32 FAVOURED LANGUAGE

In grouping the books sharing the same ultimate class, it is helpful to give the first place to the group in the Favoured Language. In the arrangement of the books sharing the same class number, CC has provided for the group in the "Favoured Language" of the library to come earlier than the groups in the other languages. For this purpose, it gives the following definition: "The favoured language of a library is the language in which the majority of the books of the library are written" [109]. CC has also provided for the Literature in the Favoured Class to come earlier than the Literature in any other language [108].

33 FAVOURED PHILOSOPHICAL SYSTEMS

In CC the Geographical Device is generally used to individualise Philosophical Systems. But there is also provision of special digits for the Favoured Philosophical Systems. We have in the array of the first order in Philosophy:—

R6 Indian Philosophy

R7 Greek Philosophy

R8 Other systems (to be divided by the geographical device)

This is to suit a library rich in Indian Philosophy and Greek Philosophy. In other libraries, R6 or R7 may be used for their own favoured systems and the Indian or Greek System thus ousted may be accommodated in R8.

34 FAVOURED HOST CLASS

A library may specialise in a particular subject—say, Cycle Tyres, Geological Prospecting for Gold, Dairy Products, Cotton Spinning, Indian Constitution, Labour Disputes, Famine Relief, or Income Tax Law. Let us call it the Favoured Host Class of the library. The library is bound to have books on other subjects too; but it will be an advantage to give priority to the documents on the favoured host class and its sub-classes in both shelf arrangement and in the catalogue. In CC, this is secured by replacing the class number of the favoured host class by the digit '0'. The ordinal value of the digit '0' is fixed by the rules to be below that of α , the smallest of the semantically rich digits. Thus, the very first positions are secured for the Favoured Host Class and its sub-classes.

35 SHORTENING OF THE CLASS NUMBER

Incidentally, the several digits in the normal class number of the favoured host class are replaced by a single digit. This is a welcome shortening of the class numbers of the documents in the subject in which the library specialises. It is of great help in documentation lists covering a very specialised field of narrow extension.

CC is practically the first scheme to show such respect to the Law of Local Variation. According to a reviewer, "The supreme advantage of this synthetic type of classification scheme is that it may be utilised in various ways to suit the preferred principles of book classification. . . . Special collections can be formed at will at any point in the scheme" [79].

4 Decimal Classification

Dewey himself had recognised that DC paid little heed to the Law of Local Variation. In a letter dated 13 November 1930, he wrote to Ranganathan "Naturali the sistem 1st publisht in 1876 was from the standpoint of our American libraries. Thru the 12 editions it has constantli broadened. But we need speciali to cover *Asia* mor adequateli and hope we shall hav yur aktiv cooperation in making the decimal sistem stil mor wydli useful."

41 EARLIER ATTEMPT

An earlier attempt had been made to get DC to fulfil the Law of Local Variation. "In November 1929, correspondence with Dr Dewey was initiated by Wm Alanson Borden, who was engaged in

library work in India from 1910-13. Mr Borden had evolved an outline classification by which the libraries of any country could give to that country the place of chief prominence under those subjects in which the locality was a feature of special importance, ie religion, language, literature, history and geography. He wished, however, to take his subdivisions from DC and therefore laid the matter before Dr Dewey. The DC having already been adopted on every continent and in many countries and being used more than all other systems combined, was obviously the vehicle by which Mr Borden's idea could best be carried throughout the world and thereby accomplish his purpose. Before Mr Borden's death in November 1931, the main features of the combination had been agreed upon and on Dr Dewey's death the following month, the determination of minor details only was left to the DC editor to bring about the most serviceable results possible for a world-wide constituency" [35].

42 NO FRUCTIFICATION

Thus the wish to include Indology classes in DC was not carried out. But Indology is only one of the many possible interests to be provided for. This will not be practicable by mere additions to the categories in the schedules. A suitable notational device is necessary to take charge of Local Variation. Till that is done, the wish of Dewey will not fructify.

5 UNIVERSAL DECIMAL CLASSIFICATION

UDC inherited from DC the neglect of the Law of Local Variation. But, the provision of a digit for favoured country, language, or class is not beyond the capacity of UDC. The attention of FID is invited to the need for implementing this suggestion.

6 Bibliographic Classification

BC provides for Local Variation in the strict sense just in one place. It is in the main class Linguistics and Literature. Here W and X are used to represent the linguistics and literature of all languages, but Y is reserved for the favoured language. Actually, YA to YT are devoted to the English language. But the following permission is given: "Our classification is developed for English and American interests. For other nationalities the position may be transposed, if so desired" [16]. Again, there is similar explicit permission for further Local Variation in respect of authors: "To Chaucer and Shakespeare entire sections are assigned, YC and YF, in order to provide room for the extensive literature, much studied, and distinctive brief composite notation for the special subjects and topics. These sections might be assigned to other

authors, but that would require changing other sections involved and their notation, with corresponding changes in the index." [17]. The last part of the last sentence in this quotation shows the difficulties caused by the digits and digit-groups set apart for Local Variation to represent Favoured Ideas being used to represent any idea in the published scheme itself. It also throws light on the elegance of CC including all the ideas, without exception, in the general schedule and merely setting apart a few unoccupied digits—for example, 2 and 3 in Space Facet and the digit '0' for any isolate number in any array or for any class number whatever—to represent the Favoured Ideas arising in Local Variation. This method of providing for Local Variation involves no "changing other sections and their notation, with corresponding changes in the index."

60 OUT OF BOUND FOR LOCAL VARIATION

But BC goes beyond securing Local Variation. It exceeds the requirements of the Law of Local Variation as interpreted in this book. Four types of regions of "ex-territoriality" are mentioned in the four succeeding subsections.

61 ALTERNATIVE FACET FORMULA

BC often provides an alternative sequence of facets in the facet formula for a Basic Class. This is implied in some of the illustrative class numbers given here and there in the scheme. For example, in the page of Vol 2 beginning with the class number JS, the "Faculty of Ophthalmology in the New York Medical Centre" is given the following two numbers to be chosen according to one's interests: JTNbd,06,L and JTN06bd,L where

JTN=Individual medical school; bd = New York; and
06= Ophthalmology; L= Faculty.

This is equivalent to the prescription that Space Facet and Personality Facet may be taken in any sequence and that the Principle of Decreasing Concreteness need not be followed in the facet sequence. Is this freedom to re-permute the facets of a subject really necessary to satisfy dominant Local Interests?

62 OMISSION OF FACET

BC provides also for alternative class numbers to be got by omission of facets. This is illustrated by the following example given in Vol 3 in the page beginning with the class number YHR. "Novels of the Bronte sisters" is given the following three alternative numbers for choice.

BC Number	Facets included
YHP, B7, F	Language, Period, Form, Author
YR, B76	Language, Form, Author
YO, B76	Language, Author
CC Number 0-3	Language, Form, Author

In CC, the author number is got by chronological device; therefore, the period is contained in the author number. Form is second level personality facet; and Author is third level personality facet. According to the Canon of Modulation, the third level can be specified only after the second level. Thus there is no freedom to drop a facet in a case like this. No local interest is likely to require the alphabetical mix-up of poetry, drama, fiction, prose, and other literary forms in a single array.

63 ALTERNATIVE NUMBERS FOR SUB-CLASS

BC provides also for alternative class numbers for some important sub-classes. In tables V and VI of Vol 1, it mentions about forty sub-classes provided with alternative class numbers. Here are a few of them with remarks on each.

Category	Alternative Numbers or Places	Remarks
Constitutional Law	<i>Either RC in Political Science or SC in Law</i>	This is due to absence of clear rules on Facet Analysis. Surely the primary main class studied is Political Science and not Law.
Microbiology	<i>Either EY in Biology or FLD in Cryptogamia or FV in General Botany</i>	This is due to failure to make a firm decision in the fight between tradition and scientific collocation.
Pamphlet	<i>Either in respective subjects or 5, or 7, or 8</i>	This is a matter for collection number and not for class number.

A scheme for classification should take the responsibility of making a decision in the first two types of cases.

64 ALTERNATIVE NUMBERS FOR MAIN CLASS

BC evades responsibility even in respect of some main classes themselves. Here are the cases:

Main Class	Alternative BC Numbers			
Library Science	2	JV	Z	
Psychology	AI	I		
Religion	AJ	K	P	Z
Social Sciences	K	P		

It would be more in the fitness of things for a scheme to provide a unique number for each main class in accordance with some preferred principle for the sequence of main classes chosen as the basis, and to leave it to each library to decide the allocation of the gangways and tiers in the stack room for the several main classes. The need for this may change from time to time even in one and the same library. A library may have therefore to change occasionally the sequence of main classes in the stack room arrangement in order to fulfil the Third Law of Library Science [129]. But, class numbers need not be changed.

7 Special Collections

The provision for Special Collections to satisfy the Law of Local Variation is looked after by the Collection Number (See Chap VB).

CHAPTER DH

LAW OF OSMOSIS

0 Definition

The principle that, when a change in the Catalogue Code or in the Scheme for Classification becomes necessary in deference to the Canon of Context, on and after a chosen date

1 All the new accessions be catalogued and classified according to the new Catalogue Code and the new Scheme for Classification;

2 Just those of the old collection as are known to be in much use be re-catalogued and re-classified, with an additional temporary staff, if necessary, during the first few months;

3 The new accessions and the re-catalogued and re-classified books be kept in a New Collection and similarly their catalogue cards too be kept in a New Collection;

4 The rest of the old collection be kept as Old Collection and similarly their catalogue cards too be kept as Old Collection;

5 Readers' attention be invited by the Reference Librarian to the existence of the two collections; and

6 If any book is taken out by a reader from the Old Collection on its return by him it be re-catalogued and re-classified and absorbed in the New Collection, and similarly with its catalogue cards according to the Principle of Parallel Movement [135, 140].

1 Present Practices

Changes in the Rules of Catalogue Code and in the Scheme for Classification are at present met in one of the following two ways:

11 WASTEFUL PRACTICE

In the first way, the entire collection of a library is re-catalogued and re-classified. The cost of this is enormous. Often, to find the necessary money, active service is starved; reference service is cut out; book-fund is depleted. All this amounts nearly to a criminal waste of library fund. Law of Parsimony is therefore chagrined.

12 CAPITULATION TO THE PAST

In the second way, eyes are closed to the changes. The obsolete Code and the obsolete Scheme are perpetuated in defiance of the Canon of Context and of the Laws of Library Science, and to the neglect of readers' unexpressed needs. This amounts to tying up the future with the dead past. This capitulation to the dead past is fatal to any social institution; and library is a life-giving social institution.

2 Living the Present

The right way shown by the Canon of Context is to live the present. We should neither waste the library fund nor do disservice to readers. The Principle of Osmosis helps us to chalk out the right way.

3 Recent Documents in Active Use

Within a short period after the date of change-over to the New Catalogue Code and to the New Scheme for Classification or even in anticipation of it, the active documents of the recent past should be rapidly re-catalogued. In some cases, no change will be necessary; the only work to be done will be to pick out the volumes and their cards from the Old Collection and insert them in the New Collection. A suitable mark should be put above the class number on the tag in the spine and in the back of the title page to indicate the absorption of document in the New Collection. In some cases, only a slight change may be necessary. For example, in the change-over from Ed 6 to Ed 7 of CC, the connecting digit ":" (Colon) has to be changed in some cases into ";" (semi-colon) and the digit "." (dot) into the ",'" (single inverted comma). Further, these changes do not call for any re-arrangement of the books or their catalogue cards. And yet the changes are helpful in future development. Only in a few cases, a considerable change may become necessary. In all cases the routine of absorption should be completed for each quantum of documents dealt with at one time, as if it were a single indivisible job; otherwise, chaos will result.

4 Man-Hours Needed

The number of man-hours needed for this routine of absorption will depend upon the number of documents to be so absorbed within the short time. In a Service-Library, 80 per cent of use is estimated to be confined to the accessions of the last five years. Even this 80 per cent is likely to be distributed as follows: -

50 per cent of the current year, 25 per cent of the last year, 12 per cent of the second last year, and so on in diminishing sequence. One method of systematically picking out the documents in active use is to register for the Revision Section all the documents of the "Old Collection" going out on loan. When they are returned by readers, the documents will automatically go to the Revision Section. Top priority should be given to the routine of their absorption into a New Collection. The pressure of this work will be high only for about three months in most libraries. Thereafter, it will decrease progressively. This way of absorption of old documents in current use will require additional staff only for a short period

[55]. The number of volumes to be so treated may not exceed 10,000 in a Service-Library. The extent of extra work to be done on this kind of absorption in a National Central Library can be worked out from experience. Even there, the proportion of the special staff needed to the permanent staff and the duration for which the special staff will be needed will not be very different from that of a Service-Library.

5 Osmotic Pressure of Use

After the first few months of high-pressure absorption, the daily quota of absorption will become small. It will go on thinning almost to a vanishing point in about five years. By that time, all the "Live Books" would have been transferred by the "Osmotic Pressure of Use" from the Old Collection to the New Collection. The "Dead Books" will for ever remain in the Old Collection, without any harm to any reader. This is the Principle of Osmosis. This is a contribution of the Law of Local Variation applied in one of its extreme spheres of jurisdiction.

6 Genesis

This Principle of Osmosis suggested itself to me while visiting many aged libraries during my tour of Europe and America in 1948. The pathetic look of the younger members of the technical section of big libraries caught my eye. They were internally revolting against having to use a Scheme for Classification and a Catalogue Code of earlier centuries. But their chiefs, who had given up active classification, cataloguing, and reference service and had become mere administrators and committee men, did not have the time or the willingness to understand the urge of the juniors to change-over in order to make library service real. Or, classification and cataloguing were often done in some places by the old guards in whom mental fibrosis had set in and who did their work without any awareness of the latest thought on library service or sensitiveness to the social changes since the time their Scheme for Classification and Catalogue Code were framed. When their complacency was disturbed, they resisted the disturber, crying "Theory, theory, all theory!" This made me think out the deeper reason for such wide-spread resistance to any change in classification and cataloguing. It was found to be the cost involved in re-classifying and re-cataloguing the whole of a large collection. This simmered in my mind for sometime. The Principle of Osmosis came forth and gave a possible solution of the problem.

7 Reductio ad Absurdum

It is fortunate that, in the United States, people began to classify

books only in the middle of the nineteenth century. Suppose libraries had been formed and collections had been classified in the beginning of the Christian Era. Generation after generation would have resisted any change. Then, they would be still continuing the old system. This would mean that we should still be using the classification system of the first century of the Christian Era, and this would not be tolerable. This answer follows the method of *reductio ad absurdum*.

8 Sound Business Management

Why is it not possible to change? Cost? Take the case of the engineer. He puts up a costly machine, develops it, and exploits it. Ten years go by. By that time someone else has developed a more efficient machine. What does he do? Does he say, "How can I change the old machine? How can I throw this old one away?" Without any compunction he throws away the ten-year old machine and starts with the new machine. What is being done in costly engineering enterprises should be done in the much less costly library enterprise. But how does the engineer do it? He has a method of keeping his system of accounts. He follows the policy of amortization. He puts down the life of an engine to be ten years. If he has to change the engine, he has already recovered his original investment. Some such system is necessary in our library systems, if the library is to be a healthy, up-to-date, social institution. We can succeed in running with the modern world but keep the ancient mentality of, "How can I change, how can I afford it?" Provide some kind of amortization in library field also. This answer follows a well established principle in sound business organisation.



Ranganathan, Shiyali Ramamrita.
Prolegomena to Library Classification. Assisted by M.A. Gopinath. 3rd edition.
Asia Publishing House, 1967.

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This is a title in the dLIST Classics Project

dLIST Editor-in-chief: Anita Coleman

Digitization: Joy Wilcox, SIRLS, University of Arizona, Tucson.
Digitized: Fall 2006

Acknowledgments: SRELS Foundation (A. Neelameghan, K.N. Prasad, K.S. Raghavan, DRTC) and
dLIST Advisory Board Member, S. Arunachalam (MS Swaminathan Research Foundation)

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