

gesammelten Beiträge jedoch auf ein zumindest derzeit noch vorhandenes auffälliges Ungleichgewicht zwischen divergierenden konkreten Fallstudien und den gesamten Themenbereich umgreifenden metatheoretischen Reflexionen hin. Gleichzeitig wird aber auch deutlich, daß es bei allem Bemühen, eine neue Wissenschaftssparte - eine allgemeine „Klassifikations- und Terminologietheorie“ - zu etablieren, nicht sinnvoll erscheint, zu diesem Zwecke „das Rad neu erfinden“ zu wollen. Vielmehr wären hier in einem echten Verständnis von „Interdisziplinarität“ unter Einbeziehung philosophisch-psychologischen und sprachwissenschaftlich semiotischen Gedankengutes, das jedoch keineswegs unreflektiert übernommen werden kann, in teilweiser Erweiterung bereits etablierter Disziplinen neue Ansätze und Blickrichtungen einzubringen. Ich möchte dazu abschließend den „Vater der Allgemeinen Terminologielehre“, Eugen WÜSTER zitieren, der in einem seiner bisher unveröffentlichten Briefe betont, „daß es ihm stets darum zu tun gewesen sei, sich nicht einfach über die Erkenntnisse der bisherigen Sprachwissenschaft hinwegzusetzen, sondern Unterlagen für eine teilweise Erweiterung beizubringen“ (vgl. Bühler, H. in: Muttersprache 92.5-6: 297). Tagungen und Publikationen wie die vorliegende scheinen uns hierzu der richtige Weg, und wir wollen hoffen, daß sie eine Fortsetzung finden. Hildegund Bühler

Dr. H. Bühler, Doktorberg 16/13, A-2391 Kaltenlcutgeben

RANGANATHAN, S.R.: Colon Classification Edition 7 (Basic and Depth Version). Vol. I: Schedules for Classification. Revised and edited by M.A. Gopinath. Bangalore: Sarada Ranganathan Endowment for Library Science 1987. XIV, 332p.

### 1. Introduction

The seventh edition of the Colon Classification (CC) had been announced in 1967 to be published in 1971. When S.R. Ranganathan died in 1972 his students and followers were left without guidance as what to do about the heritage of their master. It took some years for them to understand that the users of the CC had to wait for the promise of its author to be fulfilled by his successors at the Documentation Research and Training Centre (DRTC), Bangalore. From early publications of these years we can only guess that there must have been many discussions about what this 7th edition should look like. Difficulties about the location of the DRTC, its move into new quarters and many other matters may have been the reason for the inordinate delay in publishing the promised edition so that in the absence of a new edition the future of the CC had been put in a serious predicament. Publication of the 7th edition in 1987 has cleared that mystery although its shape and form has certainly endangered the survival of this system of classification.

The new edition has been revised and edited by M.A. Gopinath, previously a research assistant to S.R. Ranganathan and now a professor at DRTC, Bangalore - the laboratory of the scheme. For his long and intimate association with Ranganathan and for assisting Ranganathan in revising the *Prolegomena to Library Classification*, 3rd ed (1967), Gopinath is the most qualified

person to have undertaken this most coveted and most perilous job. Also for being the secretary of the Sarada Ranganathan Endowment for Library Science, the responsibility of looking after and perpetuating Ranganathan's intellectual heritage rests with him. He has been publishing depth schedules on different subjects in the journal *Library Science with a Slant to Documentation*. The 7th edition had in fact been heralded by another volume of M.A. Gopinath on the construction of depth versions of the Colon Classification (1), reviewed in IC in 1986 (2).

### 2. Structure

With respect to the Preface to CC7 by Gopinath the present edition has been planned in two volumes. The published Vol. 1 (under review) contains the introduction and the basic schedules; the second volume (yet to be published) will contain the index. Besides this, Gopinath also plans an auxiliary volume of illustrated practical examples. This plan is, however, a bit different from the one given on p. 110 of the book, where he says that Parts A-E form Vol. 1, Part F will become its indexes, Part G will cover the schedules of the classics and Part H the index to these schedules. It is not revealed whether Parts G and H will also be contained in Vol. 2.

According to the Preface of Gopinath, the "mould of this edition and its development was laid by him (Ranganathan) way back in 1967". Since then we had long been hearing about the structure and contents of the CC7 edition, especially through Ranganathan's preview (3), and Neelameghan's articles in the Encyclopedia (4). The published schedule is probably aimed at for shelf classification in libraries. This plan is somewhat different from what was conveyed by Mr. Gopinath in the review article by I. Dahlberg 1976/7 (5).

### 3. New Changes

CC7 inevitably brings about many elemental changes in isolates, main classes and the layout of the schedule. The readers of this journal are already familiar with some of the changes through a timely and a well written concise article by Dr. P. Dhyan (6). The purpose here is to review the book as well as the system of the Colon Classification as enshrined in the 7th ed. published on August 12, 1987 - the 95th birthday of Ranganathan.

The volume has been divided into five parts, A/E in all. Part A contains a general introduction and the history of the CC. Part B provides general tips on practical classification in addition to illustrate Ranganathan's famous eight steps for practical classification. Part C, "General Rules", chapterwise explains the different concepts, postulates, notation, and devices peculiar to the CC for constructing class numbers. It also explains the grammar of the system in the three planes of work, namely the idea plane, the verbal, and the notational plane. Part D, entitled "General Divisions and Common Isolates" contains schedules of variously named and common isolates of different nature along with the rules for their use. Inevitably, there are many changes worth noting in sections C and D.

#### 3.1 Basic Subject

The basic subjects have been increased to a mind boggling number as given in chapter DE (p. 57-66), and

inevitably they are no longer denoted by a single digit. Although their number ranges between 720 and 800, yet no exact count of them is available. Neelameghan (4) puts them at 723, PSG Kumar (7) at 646, and Dhyani (8) at 746. However, the different countings do not really matter as many of the basic subjects especially formed by systems and specials are always increasing. Moreover, in the 7th edition not all systems and specials have been enumerated. Many of the system basic subjects (BS) can be formed by the classifiers themselves, by applying the chronological device. Even the very important basic subject "z Generalia" and its ACI subdivision a/y have not been enumerated among the basic subjects.

### 3.2 Kinds of Basic Subjects

Basic subjects have been broadly divided as (1) Main Basic Subjects and (2) Non-Main Basic Subjects, also called "secondary basic subjects".

The Main Basic Subjects are the traditional main classes, such as Mathematics, Physics, Political Sciences, Economics. In addition they include also newly emerging classes such as Mass Communication, Management Science, and the fused main subjects such as Biophysics, Biochemistry, Geophysics, Geopolitics.

Non-Main Basic Subjects, called "Adjuncts of the Main Classes", are the following types:

- Canonical Basic Subjects (non-main), e.g.: Arithmetic B1, Algebra B2, Geometry B6
- Systems constituent, such as Ayurveda L-B, Allopathy L-K, Homeopathy L-L
- Special constituent, such as L-9A Specials in Medicine, L-9C Child Medicine, L-9E Adult Medicine
- Environmented Basic Subject - a basic subject studied in some extranormal environment - both social and physical: The schedule 7 "Environment Divisions" has been given once for all (chapter DD (p.54-56)). These can freely be compounded with any basic subject through the digit "9" acting as an indicator digit for the Environment Division. For example:

Food craft	(Basic subject)	MA
Airport Engineering	(Basic subject)	D4C
High altitude	(Env.Div.)	Un4
High altitude food craft		MA-9Un4
High altitude airport engineering		D4C-9Un4

In this way the number of such basic subjects can become enormously high. In addition there are two other types of basic subjects:

- Subject Bundles, such as

Surface science	AC
Soil Science	AD
Ocean Science	AP

These are mission oriented subjects comprehending subjects drawn from different disciplines. Ten such subjects have been enumerated in chapter DF (p.68).

- Agglomerates: These are the so-called partial comprehensions; generally they denote a group of consecutive basic subjects. In the CC these are denoted by an \*z, i.e. an asterisk followed by z to a class number first in the array of basic subjects. For example:

Animal Science	K*Z
Medical Sciences	L*Z
Ball games	LT1 *Z
Religion and philosophy	Q*Z

There are very many basic subjects of this kind. Many of the basic subjects have emerged out of the traditional main classes, yet others have been discovered by the intensive studies of subject formation in the universe of subjects acknowledged as another great contribution of the Indian school of thought. All these new basic subjects have been given a notation in the long array of basic subjects with the help of the Empty-Emptying Digit and the so-called Agglomerate Device.

### 3.3 Number of Basic Subjects

A. Neelameghan tabulated the approximate number of basic subjects and their kinds excluding the environment basic subject in the CC7 as against the CC6 as follows (9):

Kind of Basic Subject	6th ed.	newly added	7th ed.
Main Basic Subject(Total)	33	75	108
Traditional	33	31	64
Fused main subjects	-	28	28
Distilled main subjects	-	16	16
Non-main basic subjects	347	228	575
Partial comprehensions	9	22	31
Subject bundles	-	9	9
	389	334	723

### 3.4 Some examples of new Basic Subjects

Some of the newly listed main classes and their adjuncts are given below:

1	Universe of Subjects
3	Book Science
4	Mass Communication
8	Management
BT	Statistical calculus
BTT	Operations Research
BV	Cybernetics
BYC	Astrophysics
C5C	Geometrical Optics
CGT2	Semiconductor physics
C9DT	Reactor physics
C9E	Quark physics
CV	Space physics
EU	Synthetic chemistry
FV	Foundry
FX	Welding
GT	Cytology
GV	Microbiology
GWC	Biophysics
GWE	Biochemistry
HV	Geophysics
HV57	Oceanology
HV7	Meteorology
JX	Forestry
LT	Physical exercises and sports
MI7	Reprography
M4	Smithy
MK	Leather work
AX	Astrology
Nv	Numismatics
PW1	Calligraphy
PW6	Typewriting
PW7	Shorthand
R2	Epistemology

SY	Social psychology
TUS	Educational psychology
U3	Biogeography
U5	Anthropogeography
U6	Political geography
X2	Consumption
X3	Distribution
X44	Demand
X95	International Trade
X96	International Finance
XX	Industrial Economics

### 3.5 Basic Subjects without schedules

Some of the other important basic subjects and their subdivisions have only been listed in the chapter DE but have not been mentioned in Part E, e.g. LT physical exercise, MA Home science, and R6 Indian philosophy - to speak at random. This may be highly misleading. It means that first of all the classifiers must consult the schedule of Basic Subjects in chapter DE before going to Part E.

### 3.6 Order of main classes

Part E contains the schedule of different basic subjects and their isolates in their well known order: a/z 1/9 A-M/ $\Delta$ /N-Z. This arrangement is in the order of their increasing concreteness up to M; and from N to Z in the order of their increasing artificiality. Some of the newly created basic subjects existed in the sixth edition either as compound or complex classes. Subject bundles are those that are totally new.

### 4. Changes in Basic Subjects and their Schedules

Inevitably there are many and farfetched changes in the schedules, even in the already existing main classes. Expectedly many of the already existing and traditional main classes have been enormously expanded and drastically restructured.

The first casualty of revision is the very first main class "a Generalia bibliography" of CC6. Its long schedule has disappeared - though some of the isolates have been merged with the main class of "2 Library Science".

Biochemistry, formerly a special of E Chemistry, forms a new basic subject GX as adjunct of G Biology, while Biochemical Engineering is EX-9G.

Sports and athletics from Useful arts MY have been transformed to LT as adjuncts of L Medicine.

R6 Indian philosophy - not mentioned under R in the section E - has no full schedule and as such it has quite less subdivisions than in DDC19 at 181.4 Indian Philosophy.

Isolates in X:91 Personnel Management have now been transformed to the newly formed main class 8 Management.

International Law WYB is now an adjunct of Political Science as against formerly a subdivision of Z Law.

It looks as if CC7 has been divorced from literary warrant. Many of the subjects with high literary warrant have not been provided with an adequate schedule of isolates, e.g. the schedules of CT5 Electronics, EX Chemical Engineering, GV Microbiology, GWC Biophysics and GX Biochemistry. There is no mention of Information Science. The schedule of D Engineering in spite of its expansion, is still inadequate and provisional. In MI6 Printing its modern techniques are not

mentioned. Still there is no schedule for Computer science nor for Solar energy or Unconventional sources of energy.

On the other hand, in 2 Library science many such isolates have been enumerated having no literary warrant, e.g. ob1 chained library, 9ka by material of secondary surface: 9ka stone, 9kb metal, 9ke bark, kkjl palm leaf, and so on. CC7 is not a mapping of the entire universe of knowledge, either. The development of the schedules is grossly lopsided.

Also not all is well with basic subjects and their order - despite Ranganathan's weighty and well formulated principles of helpful sequence. Some unrelated subjects have been inaptly collocated. For instance: 3 *Book science* has been separated from MI *Book production and distribution* - the latter has been placed between MOR *Musical instrument making* and M2 *Wood working trade*. LT05 *Outdoor games* has been separated from MMI *Racing etc.*, and HU81 *Meteorology* is distantly separated from V2,7 *Climatology*. Mt *Classroom and teaching aids* has been separated from T *Education*. *Carpentry* is M21, while *Furniture design* is placed at NAX as an adjunct of NA *Architecture*. *Military science* MV is sandwiched between MNC *Cinema* and MX *Secretarial practice*.

These random examples are by no means exhaustive.

### 5. Common Isolates

Ranganathan was of the considered view that all special isolates in the universe of knowledge can be grouped under a few common isolates - transcending the main class demarcations. It requires, however, intuitive insights and is no ordinary intellectual work. As a step towards this conviction the number of schedules of common isolates of different kinds has been increased. Chapter DD (p.54-56) contains a long schedule of Environment Divisions. These are extra normal environments under which various subjects can be studied:

M272	low Pressure
M42	low Temperature
Ud1	above sea level
U3	Tropics
UK2	Desert
Us2	Islet
U8	Arctic Zone
WI	Anarchic political environment
Y31	Rural environments

Chapter DK (p.93-95) contains a schedule of common matter energy isolates denoted by initial small letters:

aa	action
ab	create, produce
aC1	mix
aD	alloying
u1	survey
x7	advise

Chapter DL (p.95-104) contains a long schedule of Common Property Isolates. According to the explanation in Sec.D221, p.104, these have been formed on the basis of the Pseudomnemonic Device, e.g. s7 *personality* in Common Property Isolates comes from S;7 *Personality* in the schedules. But the source or method of identifying these much varied isolates has not been stated.

Although the indicator digits for these common isolates remain the same, yet the situation requiring their

use and the way these are to be used have not been explained, except that in case of choice between a special isolate and a common isolate the former is to be preferred (Sec.CG22). There are no examples of their use. Chapter DM (p.104) contains a brief schedule of Common Personality Isolates without any formula for suffixing them to class numbers. Two examples given at the end (DM7) are misleading due to misprints. Chapter DN (p.105) contains a schedule with a facet formula of the different Anteriorising Common Isolates (ACI) - although some misprints dog us here with more vehemence. Now the (ACI)s are attachable with an indicator digit " (double inverted comma), which has an anteriorising value, e.g.:

	CC6	CC7
Encyclopedia of Library Science	2m	2"m
Library Science Abstracts	2am	2"a"m
International Classification(1974-)	2:5m1,N7	2'5"m1,N7

(presuming that between m and (P1) got by (GD), there is no comma).

The schedules of Time Isolates (Chapter DH) and Space Isolates (Chapter DJ) have been expanded both in number and variety. In the Time Isolate the influence of the UDC is apparent. Now we can specify some more kinds of times than ever before: meteorological time/lunar, solar time, seasons, and civil/Christian time. Christian time can be joined with other time by " " hyphen. The indicator digit for [T] remains the same: the ' , an inverted comma:

Weather in the summer of 1988 U2,71" N88-962  
 Temperature on Sunday afternoons of July 1960 U2,74" N60-9507-931-915

Two points in Christian time are connected with an arrow:

History of India 1967 to 1987 V,44' N87 ←N67 N67

A totally new provision is to connect two points in private times, e.g.

Childhood of Melvil Dewey (1851-1931) (childhood means the first 14 years of life) 2"wm5T'14 ←- 1

Similarly

Last year of Mahatma Gandhi (1869-1948) V,44" wTM69'79

Despite all this there is no provision to record the exact date in any year, for example, in CC we still cannot denote, say 15th August 1947, although August 1947 is denoted as N47-9508.

Chapter DJ (p.75-92) lists Space isolates. Here for India an enumeration up to the State level has been made. Isolates for individual cities or geographical features are to be obtained by compound isolates by " = ", e.g.:

Calcutta	44=OC
Frankfurt (West Germany)	551=OF
Ganges River of India	44=zf7OG
Main river (West Germany)	551=zf7OM
Gobi desert in China	41=z22OG

Obviously the notation is unwieldy though quite versatile.

## 6. Speciators

Another important concept newly introduced is that of speciators which, however, are not very clearly defined. According to the dictionary a "speciator"

differentiates an entity into new species. A speciator is used "whenever warranted to individualise an isolate idea forming a division of any universe of entities" (Sec.CG5). At p.291 we are told of two kinds of speciators: one introduced by the indicator digit hyphen (-), the other one, speciator of kind 2, to be introduced by = equal to.

According to rule CR1 (p.41) the components got by speciators are called "special components" of the compound isolate:

Halogen derivatives of hydrogen	E1,110=17
Dialects of German language	P,113=d
Nasal vowels	P,oz,11=f

## 7. Devices

Chapter CT (p.43) lists the famous devices of CC used to sharpen or create an isolate unprovided in the schedules. It lists only five devices including the enumeration device (ED) which is to be used by the classificationist only. A device of much use is the Super-Imposition Device (SID) whose indicator digit hyphen has not been included in the devices. (SID) as explained in CC6 can be used to connect two isolates occurring in the same facet of a main class. This device, essentially a device of depth classification, has been much used in CC7:

Facial bones - Medicine	L,181-82
Eye muscles	L,185-83
Sociology of female adults of urban areas	Y,14-21-342

Also much frequent use is made of the already existing alphabetical device (AD). It has been put to unexpectedly much use despite Ranganathan's well known apathy for the least and last preferred device for him. Not only this, in a binominal term two initial letters are connected by the indicator digit + (plus):

King Lear by Shakespeare	O,III,2J64,K+L
History of New York City	V,73=ON+Y

Also there is another, never heard before, numerical device (ND) used in *Astronomy* (sec. EBYC394, p.148). The Canon of Scheduled Mnemonics has been ignored many a time:

9b poetry in 3 Book science; and 1 poetry in O Literature to quote one example.

On the other hand, much use has been made of the pseudo-subject device:

Biophysics	GWC
Psycho-Biology	SUG
Educational Psychology	TUS
Bio-Sociology	YUG
personality in Common Property Isolates	s7

However, the new schedules warn its users to avoid making use of this device without proper instruction.

## 8. Other changes

Another noteworthy change is the recognition of three varieties of the matter category (see CG11). These are: Matter property [MP]Matter Method [MM], and Matter-Material [MM,t]. All the [E] [2P] isolates in CC6 are now recognised as Matter-Property [MP] isolates, and thus they are preceded by an indicator digit; (semicolon), e.g.:

Library classification	2;5
Human diseases	L,1;4

In the CC6 edition the category Personality was considered most elusive and difficult to identify; in CC7, it is the [MP] category which poses such problems - although this may be a personal view. It is not clear why "classification" and "cataloguing" are [MP] isolates, and not [E] isolates as they always have been. The nature of categories especially the [M] has not been explained adequately to dispel doubts. Anyhow, as a consequence of this mass transfer one rarely encounters a [2E] facet in CC7. Now the matter facet is so predominant that a librarian colleague prefers to call it a semicolon classification!

### 8.1 Notation

The notation has become highly complex and unwieldy. There are now 74 different kinds of digits altogether (60 substantive digits denoting subjects, and 14 indicator digits) belonging to six different species including the Greek letter Delta ( $\Delta$ ). The newly introduced indicator digits are: \* $\&=+$  with their ordinal value explained in section CJ6. The indicator digit \* asterisk, + plus, " double inverted comma and  $\leftarrow$  backward arrow have anteriorising value. In CC6 a kind of common isolates had anteriorising value and those were attached to the ultimate class number without any indicator digit. Anteriorising value means that whenever these are attached to a class number it will have precedence over itself. For example:

2<sup>''</sup>a will come before 2 on the shelves; and V,43<sup>''</sup>N88  $\leftarrow$  N80 will have precedence over V,73<sup>''</sup>N88.

Another all pervasive but unwelcome change is the putting of a comma between the *BS* and the *IP1*, for example:

P,113 for German Linguistics instead of PI13, and L,45 Lungs instead of L45. Such a traditional provision has been withdrawn without much gain and involving much more complexity in notation. Indeed some of the class numbers seem frightening:

Library and Information Science	
Abstracts (1952)	2 <sup>''</sup> a <sup>''</sup> m,56,N5
Public health in underdeveloped	
UN member countries	L;5.1=CN4=(Y;491)
Teaching library classification through	
AV aids methods in Frankfurt	T,L(2:51):72-31.551=OF

Other class-numbers with so many punctuation marks could be still involved and complicated. As I.Dahlberg foreseeing such a state asked: "where is the beauty of the system gone: Is it necessary that in classification ugliness must prevail as it does in many examples of modern art?" (10). Ranganathan has always been preparing us for such numbers as the inevitable price for co-extensive class numbers for micro subjects much vogue in today's world: Whatever be it -some of the complications seem without corresponding benefits and could have been avoided.

### 9. Overviewing

The entire section E has been divided into basic subjects in the order z, 1/9, A-Z. Unlike CC6, the special problems or the theory of a main class is discussed in the same chapter along with the schedule. In the theoretical part, definition, scope, and special rules for classification have been discussed. Such a part is not only essential for classifiers but very interesting for subject specialists, too. Such introduction-cum-rules in some cases precede the

Schedules (e.g. BYC Astrophysics), and sometimes are given after the schedule (e.g.: Z Law). Some of the subjects have no such introduction (e.g.: 2 Library Science, L Medicine). In some cases, e.g. 3 Book Science, 8 Management, some practical examples from published literature have been worked out. Some of the chapters seem already published depth schedules or student work which have been included here without proper editing.

### 9.1 Misprints and omissions

Introduction and rules have been explained in an easy to understand language. But the book abounds in misprints. There are even half finished sentences. Some facet formulas are misprinted, and in some cases as e.g. Common Personality isolates and book numbers, no facet formula has been given. These errors and misprints are totally bewildering. They take away much of the value and seriousness of the book. To the uninitiated they may be totally confusing. The portrait of Ranganathan given as frontispiece is rather poor in quality.

There are no chapter numbers and main class numbers at the top of the pages. Many of the chapter headings are misplaced. One does not know of which main class one is flipping pages. All this may impair the efficiency of the index as the index always refers to the main class digit or section number. At the last stages some changes have been made in the chapters without making corresponding changes in the references made to them in other parts of the book. As a result one is often referred to a wrong section. For example, in Section CT5 we are referred to chapter DF or Language schedule, whereas it is actually contained in chapter DG.

### 9.2 Non-Compatibility with CC6

It is claimed that the edition can be used to extend the schedules of CC6. With so many changes in notation, main classes, and different isolate ideas this claim is hardly practicable. This edition has not been revised in the framework of the previous one. It is the most drastically revised of all the CC editions so far. Inevitably the present users of the CC will have to face many hurdles in switching over to this edition.

### 9.3 Suggestions

It is commendable to have a CC Bulletin, as informed in the Preface. It is an important instrument to keep a scheme ever new and living, and to communicate within the family of its users. But more important is the formation of a Board to maintain the scheme. Many a time we have been hearing of a proposed Board on the CC. It is most essential as the CC could be regarded as a national property. The entire Indian library profession must lend a helping hand to Professor M.A.Gopinath to keep this scheme a harbinger of new methods, and always advancing with a sound body. For the present, a thoroughly corrected edition of this CC7 is necessary, otherwise it seems to be endangered to become neglected altogether. And this would mean that a world famous scheme and India's pride would be losing its traditional place. Let us have it!

Mohinder Partap Satija

M.P.Satija, Department of Library and Information Science  
Guru Nanak Dev University, Amritsar-143005, India