

A brief Study of Colon Classification

Sunita Mittal

Assistant Librarian cum Assistant Professor, Deptt of Library Science, Desh Bhagat University, Mandi Gobindgarh, Punjab (India)

ARTICLE DETAILS

Article History

Published Online: 15 June 2020

Keywords

Colon classification, Edition, Library classification scheme.

*Corresponding Author

Email: sunitamohini2015@gmail.com

ABSTRACT

Library Classification is a process of arranging books and other reading material on a subject in a logical sequence on the shelf to facilitate for the user to locate them easily and without any difficulty. Though there are several classification theories to index library materials like books, periodicals, journals, CDs etc, some limitations were found in these schemes by S.R. Ranganathan, the author of colon classification when visited several libraries. He also noticed that the existing schemes were unable to cope with the multidimensional dynamic growth of universe of subjects. He made continuous efforts for several decades to remove such limitations so that libraries could meet the challenge of ever growing universe of knowledge. Finally colon classification scheme came into existence. The first edition of colon classification was published in 1933. Till now six more editions of CC also have been published. The present paper provides an overview of various components underlying in this scheme.

1. Introduction

Colon classification is one of the most systematic schemes of library classification. It got developed by Indian librarian S. R Ranganathan in 1933. It is general rather than specific nature and it can create complex or new categories through the use of facets or colons. It analyses the subject in its various components and places them under five fundamental categories known as personality, matter, energy, space and time. To synthesize or to connect the various components of a subject, different connecting symbols have been provided. Colon classification involves analysis and synthesis that is why it is known as analytico-synthetic scheme of classification.

2. Genesis of Colon Classification

S.R. Ranganathan, the author of colon classification was a mathematics lecturer. He was appointed Librarian of the University of Madras In 1924. He went to Britain to study library science in the school of librarianship, the University of London. In Britain, Ranganathan visited several libraries and he noticed some limitations in the existing schemes of library classification. In London he designed a layout for the new scheme and constructed the schedules of a few subjects for different facets. Thus making the idea of colon classification (CC) came into being. In 1927 schedules were completed and the scheme was ready to be printed in 1932. Thus the first edition of colon classification was published in 1933. Till now six more editions of CC also have been published.

3. Three versions of colon classification

Version 1 (1933-1950): CC1, CC2 and CC3 are included in this version. This version was highly rigid and pre determined. This version was also known as rigidly faceted version. Colon classification version 1 used the digit colon (:) as an indicator digit for every kind of isolate facet. In this version colon classification gave only short schedules of basic subjects, a few common isolates namely Time, Space,

Language and Anteriorising and a few short schedules of special isolates

Version 2(1950-1963): CC4, CC5 and CC6 belong to this version. This version was called as almost freely faceted version. Colon classification version 2 improved on version 1 by basing itself on the theory of classification developed from 1950 to 1963. One essential new feature of this version is that it implemented the postulates of five fundamental categories of Rounds and of Levels, formulated in the Idea Plane. In this version five different indicator digits were used for different facets such as:

Facets	Indicator digits
Personality	Comma ,
Matter	Semi-colon ;
Energy	Colon :
Space	Dot .
Time	Single inverted comma ' ,

Version 3 (1963-1987): 7th edition of colon classification (CC7) published in 1987 belongs to this version. It has no rigid formula for compound subject going with the basic subject. This version was considered as a freely facet scheme for library classification.

4. Different Editions of Colon classification

The Colon Classification first designed from 1924 to 1928. First edition of Colon Classification was published in 1933 by the Madras Library Association. Till now six more editions also have been published. Among all editions, sixth edition was most popular. It was published in 1960. A reprint of sixth edition was published in 1963 with some amendments contained in an annexure. 7th edition of Colon Classification released in 1987.

Editions of CC

Editions	Year
1 st Edition	1933
2 nd Edition	1939
3 rd Edition	1950
4 th Edition	1952
5 th Edition	1957
6 th Edition	1960
7 th Edition	1987

First Edition (CC1) (1933):- First edition of colon classification was published in 1933. It had three distinct parts:

- 127 pages of rules explaining the underlying principles.
- 135 pages of schedules.
- 106 pages of index.

It used mixed notation, consisting of Roman capital letters, Roman lower case letters and Indo-Arabic numerals. The colon (:) was used as the connecting symbol for joining facets. It provided schedules for different facets in each class and special schedules for common subdivisions.

Second Edition (CC2) (1939):- This edition incorporated a number of improvements. In this edition:

- Concepts of octave principle and auto-bias device were introduced.
- A new main class 8 Spiritual Experience and Mysticism came into being.
- A part fourth was added which contained about 3000 examples, which were illustrative of rules given in the 1st part.

Third Edition (CC3) (1950):- This edition provided a facet formula for each basic class in terms of fundamental categories. In this edition different kinds of phase relation each with the separate connecting symbol were introduced.

Fourth Edition (CC4) (1952): Different connecting symbols were used for five fundamental categories for facet analysis.

- , Comma for personality
- ; Semi-colon for matter
- : Colon for Energy
- . Dot for Space
- .Dot for Time

This edition also introduced the concept of Rounds and Levels.

Fifth Edition (CC5) (1957):- This edition had made several changes in the rules and in various schedules.

Sixth Edition (CC6) (1960):- Substantial changes were made in various schedules. The changes made are given below:

- Effort was made to avoid Greek letters.

- The concept of Empty, Emptying and Empty-Emptying digits was introduced.
- In the reprinted schedule (1963), the connecting symbol dot (.) for the Time facet was replaced by single inverted comma (').
- Second level of space [S2] and Time [T2] facets were introduced.

In 1963, a reprint of the sixth edition was published with a few corrections and amendments.

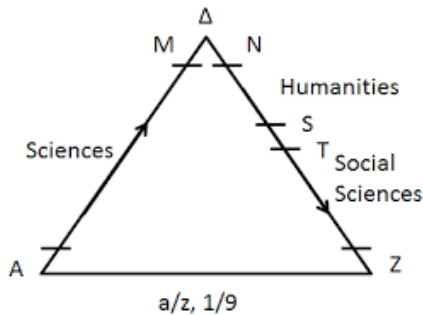
Seventh Edition (CC7) (1987):- CC7 is a freely faceted analytico-synthetic scheme. The schedule of 7th edition of colon classification has been given by A. Neelamegham, M.A. Gopinath and S. Seetharama. The number of Main Subjects/Basic Subjects has been increased in edition 7. New indicator digit "&" (ampersand) is used in place of old indicator digit "0" (zero) for Phase Relation.

5. Main Classes

The main classes in colon classification are like discipline in DDC and theoretical subject in UDC. These are traditional subjects. These classes are further split into (P), (M), (E) categories. Categories (S) and (T) are common to all the subjects in universe of knowledge. Some main classes are divided into canonical classes not directly into categories.

Main Classes	Name of the Subject
z	Generalia
2	Library Science
B	Mathematics
C	Physics
D	Engineering
E	Chemistry
F	Technology
G	Biology
H	Geology
HX	Mining
I	Botany
J	Agriculture
K	Zoology
KX	Animal Husbandry
L	Medicine
LX	Pharmacognosy
M	Useful Arts
Δ	Spiritualism
N	Fine Arts
O	Literature
P	Linguistics
Q	Religion
R	Philosophy
S	Psychology
T	Education
U	Geography

V	History
W	Political Science
X	Economics
Y	Sociology
Z	Law



- Main classes falling between B and M belong to natural sciences.
- Main classes (D, F, J) are applied sciences so it has been near to natural sciences.
- M holds all the residual applied sciences.
- Δ (Spiritual experience and mysticism) positioned between the sciences on the one hand and the humanities and social sciences on the other hand.
- Main classes falling between N to S belong to humanities.
- Main classes falling between T to Z are known as social sciences.

6. Canonical Classes

Canonical classes are traditional or classic divisions of an old main class. These classes have their own facets and isolates.

Main class	Name of Subject	Canonical Classes	
B	Mathematics	B1 – Arithmetic B2 – Algebra B3 – Analysis B4 – Other Methods B5 – Trigonometry B6 – Geometry B7 – Mechanics B8 – Physico-mathematics B9 – Astronomy	The main class Mathematics is divided into 9 Canonical Divisions
C	Physics	C1 – Fundamentals C2 – Properties of Matter C3 – Sound C4 – Heat C5 – Light, Radiation C6 – Electricity C7 – Magnetism C8 – Cosmic Hypotheses	The main class Physics is divided into 8 Canonical Classes
H	Geology	H1 – Mineralogy H2 – Petrology H3 – Structural Geology H4 – Dynamic Geology H5 – Stratigraphy H6 – Palaeontology H7 – Economic Geology H8 – Cosmic Hypotheses	The main class Geology is divided into 8 Canonical Divisions
R	Philosophy	R1 – Logic R2 – Epistemology R3 – Metaphysics R4 – Ethics R5 – Aesthetics R6 – Favored System (1) Indian Philosophy R7 – Favored System (2) R8 – Other Systems by (GD)	The main class Philosophy is divided into 8 Canonical Divisions

7. Notational System

Colon classification uses a mixed notation. The notational base of colon classification is wider ever in any classification system. It consists of:

10 Indo Arabic numerals	0-9
23 Roman small letters	a...z excluding i, l, o
26 Roman Capital letters	(A--Z)
Parentheses	()
Greek Delta	Δ
Indicator digits	* " ←) & ' . ; , - = + → (

8. Empty Digit

To increase the capacity of an array in any given facet, CC has introduced an empty digit. An empty digit has no semantic value, but it retains the ordinal value. In case of Indo-Arabic numerals, a subject is to be divided up to nine places and the tenth and subsequent divisions cannot be accommodated. To overcome this difficulty, 9 is left as an empty digit. It has no value by itself, but regains its full value when it is used in combination as 91, 92, 93 ... 98 or 991, 992, 993 ... 998 and so on. The same principle has been used while using a to z, or A to Z. In lower case letters, z is made an empty digit and in capital letters, T,V and X are postulated as empty-emptying digits and Z as empty digit.

9. Phase Relation

Colon classification recognizes three level of phase relation.

1. Inter subject phase relation
2. Intra facet phase relation
3. Intra array phase relation

1. Inter subject phase relation

Phase relation between subjects going with different basic subjects (i.e. Chemistry and Physics) is known as Inter subject phase relation.

2. Intra facet phase relation

Phase relation between two facets (i.e. Islam and Hinduism) of a subject is known as intra facet phase relation.

3. Intra array phase relation

Phase relation between two isolates (i.e. Catholics and Protestants) in the same array in facet of a subject is known as intra array phase relation.

There are six kinds of phase relations indicated in CC. These six kinds are:

- 1) General relation phase.
- 2) Bias phase.
- 3) Comparison phase.
- 4) Difference phase.
- 5) Tool phase:
- 6) Influencing phase.

The connecting symbol for a phase relation is composed of an ampersand (&) and a relation indicator as shown in the table below:

Phase relation indicators

Kind of phase relation	Inter-subject	Infra-facet	Intra-array
General	A	J	T
Bias	B	K	U
Comparison	C	M	V
Difference	D	N	w
Tool	E	P	x
Influencing	G		

10. Postulate of Rounds and Levels

Some of the fundamental categories like personality, matter and energy may manifest themselves more than one in a subject in different rounds and levels. This phenomenon is handled by introduction of the postulate of rounds and levels.

- [1P] Round 1 personality
- [2P] Round 2 personality
- [1M] Round 1 matter
- [2M] Round 2 matter
- [1E] End round 1
- [2E] End round 2
- [1P1] First level First round of personality
- [1P2] Second level First round of personality

11. Devices

Ranganathan provided a number of devices in colon classification to find appropriate places for new subjects within its framework. The devices in CC help in creating new isolates and also sharpening the existing ones giving autonomy to the classifier. The use of devices has helped in shortening the length of the schedule and avoiding unnecessary enumeration of isolates repeatedly.

The four major devices used in CC are:

- 1) Chronological device (CD)
- 2) Geographical device (GD)
- 3) Subject device (SD)
- 4) Alphabetical device (AD)

1) Chronological device (CD)

Chronological device involves use of time isolate from the time isolate schedule to create new isolate or sharpen the given ones.

2) Geographical device (GD)

Geographical device involves use of geographical numbers from the schedule of space isolate to form an isolate number or sharpen the existing isolates.

3) Subject device (SD)

In Subject devices appropriate class characteristics of other subjects are used for formation or subdivision of isolates. The part of numbers derived by subject device is enclosed in circular brackets (parentheses).

4) Alphabetical device (AD)

Alphabetical device is used taking the first or the first two or three letters of names of persons, or objects or products widely accepted for the formation or subdivision of an isolate.

12. Advantages of Colon classification

1. Owing to a sound theory and the provision of a hospitable notation, CC is capable of providing a unique number for almost every subject.
2. The systematic order and the degree of detail due to analysis and synthesis are two great advantages of CC. Consequently, it has achieved two objectives: i) provision of a helpful order in each class, and ii) facility in locating a given topic whether it is simple, compound or complex.
3. It is asserted that CC can be effectively used in a computer-aided document finding system

13. Drawbacks of Colon classification

1. The major drawback of CC is that there exists no machinery to retain the revision work as in the case of DDC and UDC.
2. The guidance available in the recently published seventh edition is not sufficient and lacks clarity at places.
3. It requires a manual with several examples to explain the application of various rules.
4. It is somewhat difficult for the users.

14. Conclusion

The sound theory formulated by Ranganathan on which colon classification is based, not only helps in designing new faceted classification schemes but also revising the existing ones.

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