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Colon Classification: Notational System: Towards a Plan for Its Productive Use.
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[Sections a to h and j to y recapitulate the terminology in use, the progress made in the theory of Library Classification, and the increase in the versatility of the Notational System of CC. Sections 1 to 8 emphasise the need for a planned use of the rich versatility of the notational system. Sections A to D centre round a new method of design of classification, using Push-Bicycle as an illustration. Sections E to L mention some features of the new method of design used in Sec A7. Sections M to S consider the allocation of Sectors to different levels of (1P), and the advantages thereof. Sections T to Y emphasise the need for cooperation between DRTC and the librarians of Industrial Houses in applying the new method of design for constructing Depth Schedules for the classification of commodities and their parts.]

Results, Relevant to this Paper Got Till 1971
a Terminology
The definitions of some of the terms (16) used in this Paper are given below:—

1 Idea.— A product of thinking, reflecting, imagining etc, got by the intellect by integrating with the aid of logic, a selection from the apperception mass, and/or what is directly apprehended by intuition, and deposited in memory.

2 Subject.— An organised or systematised body of ideas, whose extension and intension are likely to fall coherently within the field of interest and comfortably within the intellectual competence and the field of inevitable specialisation of a normal person.

3   Isolate Idea.— Any idea or idea complex fit to form a component of a subject, but not by itself fit to be deemed to be a subject.

4   Basic Subject.— A subject without any Isolate Idea as a component.

5   Compound Subject.— A subject with a basic subject and one or more isolate ideas as components.

6   Facet.— A generic term to denote any component — be it a basic subject or an isolate idea — of a compound subject.

61   Facet Idea.— An Idea manifesting itself as a Facet of a compound subject.

62   Facet Term.— A word or word group in the preferred natural language denoting a Facet idea.

63   Facet Number.— A number in the preferred classificatory language of ordinal numbers representing a Facet idea.

64   Facet.— A generic term to denote Facet idea, Facet term and Facet Number.

Note:—The term 'Facet' is a homonymous generic term used in the two senses mentioned in Sec 6 and 64. This homonymous use of the term 'Facet' may cause refraction in communication. Therefore, we must be on the look out for a way of resolving this homonym.

7   Main Subject.— No Main Subject can be expressed in terms of two or more Main Subjects. In any scheme for Library Classification, Main Subjects are usually postulated as such and enumerated in the Schedule of Main Subjects. A Main Subject may have some canonical divisions. A Basic Subject may be a Main Subject by itself or a Main Subject taken with any one of its canonical divisions.

8   Non-Main Basic Subject.— A Main Subject taken along with any one of its canonical divisions.

9   Macro Subject.— A subject of great extension and small intension, usually embodied in a whole book — single volumed or multi-volumed.

10   Macro Document.— Usually a book — single volumed or multi-volumed.

11   Micro Subject.— A subject of small extension and great intension, usually embodied in an article in a periodical, or in a part of a book.

12   Micro Document.— A document, such as an article in a periodical or a part of a book, not having an independent physical existence.

13   Host Document.— A periodical or a book viewed in relation to a micro document contained in it.

14   Book Classification.— A scheme for the classification

of macro subjects, usually presenting not more than five facets, including the basic facet.

15 Depth Classification.— A scheme for the classification of Micro subjects, presenting a large number of facets unlike a Macro subject.

16 Universal Classification.— A scheme designed for use in book classification as well as in depth classification.

17 Special Classification.— A scheme designed for the depth classification of micro subjects going only with one and only one specified subject field.

b Universal Scheme *Vs* Special Scheme
b1 SPELL OF DC

The influential, pioneering, non-science-based (without an explicitly stated theory), pure-notation using, monolithic DC, designed for and suited mainly to book classification, has led to the spell of the belief that for the depth classification of micro subjects, special schemes must be designed.

b2 INABILITY OF UDC TO BREAK THE SPELL OF DC

In spite of its having a dash of polylithic structure, UDC has not been able to dispel the belief due to DC, because of its not being science-based and of it still hanging on, for its core on the DC schedule of compound subjects.

b3 CC DEVELOPS A FULLY POLYLITHIC STRUCTURE

CC broke new ground in its First Version of 1933. In this, its core schedule did not have any compound subject. Therefore, it had a fully polylithic structure.

b4 CC IS A SCIENCE-BASED SCHEME

CC is now science-based that is, based on an explicitly stated theory. Its present science-based Faceted Version has broken the rigidity of its First Version.

b5 CC BREAKS THE SPELL OF DC

By its two new qualities mentioned in Sec b4, CC has demonstrated the practicability of a Universal Scheme. This is like an elephant being capable of uprooting and picking up a whole tree with its trunk, and it is at the same time capable of picking up even a tiny pin with its delicate finger-like formation at the end of its trunk. Thus the spell of DC has been broke by CC.

c Universe of Subjects
c1 EVER GROWING NATURE OF THE UNIVERSE OF SUBJECTS

The Universe of Subjects is ever growing. Many new

subjects had taken shape in the past; some are taking shape at present; and many more will take shape in the future. Even today the number of subjects is uncountably large; and it will become more so in the future.

c2   PROBLEM IN LIBRARY CLASSIFICATION

The purpose of Library Classification is basically the helpful linear arrangement of all subjects. If the number of subjects is 10, the number of their possible arrangements is 'Factorial 10' = 3,628,800. To prefer one of these as a helpful arrangement and keep on to that arrangement all through the future will be tantalising if not impracticable. In general terms, if the number of subjects is n, the number of possible arrangements will be 'Factorial n'. As n increases the number of arrangements will increase at an inordinately steep rate. Therefore, the basic problem of Library Classification will become unbearably tantalising and impracticable, if it is attempted at the phenomenal level of the subjects.

c3   DESCENT TO THE NEAR-SEMINAL LEVEL

Therefore, the only practicable course has been found to be to descend, from the phenomenal level of an uncountable multitude of subjects, to the Near-Seminal Level.

c4   FIVE ULTIMATE GENERIC IDEAS

As we descend from the Phenomenal Level towards the Near-Seminal Level, millions of isolate ideas found in many millions of compound subjects get absorbed and assembled, re-absorbed and re-assembled more and more, until only five ultimate generic isolate ideas or seminal ideas are found at the bottom. They are denoted by the term 'Five Fundamental Categories'.

c5   POSTULATION OF FIVE FUNDAMENTAL CATEGORIES

The five Fundamental Categories are denoted by the terms 'Personality, Matter, Energy, Space, and Time' (PMEST). These are specially postulated for use in Library Classification (25).

c6   NOT THE FUNDAMENTAL CATEGORIES OF ARISTOTLE

The five Fundamental Categories postulated for use in Library Classification have no metaphysical significance. In particular, they are not the Fundamental Categories of Aristotle.

c7   ADDITIONAL POSTULATES

In association with the postulate of five Fundamental

Categories, there are also a few other postulates such as those of Rounds (27), and Levels (28), formulated for use in Library Classification. The total number of postulates is 13.

c8 FREEDOM OF COMPOUND SUBJECT

The postulates for Library Classification show that the Facet structures of all Compound Subjects have a similar pattern. And each Compound Subject going with any Basic Subject can present its own facets, in its own sequence. No restriction is put in this matter except that the first facet should be the Basic Facet.

c9a FACET, COMPOUND SUBJECT AND BASIC SUBJECT

Isolate facets can belong only to a Compound Subject. It is wrong to speak of the facets of the Main Subject or of the Basic Subject with which the Compound Subject goes.

c9b FACET FORMULA AND FACET STRUCTURE

For convenience, we may associate with a basic subject, a " Facet Structure"— in other words, a Facet Formula — in order to indicate a set of facets and of their sequence likely to be found in the Compound Subjects going with it. It may be repeated here that this practice does not amount to taking the facets to belong to the Basic Subject.

d Separation of Planes of Work

d1 TWO PLANES OF WORK

It has been found convenient — nay, necessary — to separate the work of Library Classification — be it the designing work of the classificationist or the application work of the classifier — into work in the Idea Plane and work in the Notational Plane.

d2 RESULT OF FAILURE TO SEPARATE THE PLANES OF WORK

Failure to separate the work of Library Classification into work in two planes, has prevented the development of DC, from keeping pace with the unending formation of new subjects. Practically all the earlier schemes had suffered from this defect.

d3 CC AND THE BENEFIT OF SEPARATION OF PLANES OF WORK

The necessity for the separation of the two planes of work was sensed in 1944 (15). Thereafter, CC based its further development on this finding. It has immensely benefited itself by this.

e Practical Classification

e0 ANALYSIS AND SYNTHESIS

The procedure in the practical classification of a subject

includes Analysis in the Idea Plane and Synthesis in the Notational Plane (30).

e1   ANALYSIS IN THE IDEA PLANE
      The work in the Idea Plane should analyse a Compound Subject into its Basic Facet and Isolate Facets.

e2   IDENTIFICATION OF FUNDAMENTAL CATEGORY
      The work in the Idea Plane should identify the Fundamental Category of which each isolate facet is a manifestation.

e3   DETERMINATION OF ROUND
      The work in the Idea Plane should determine the Round to which each isolate facet belongs.

e4   DETERMINATION OF LEVEL
      The work in the Idea Plane should determine the Level to which each isolate facet within each Round belongs.

e5   REARRANGEMENT OF FACET TERMS
      The work in the Idea Plane should rearrange the facet terms in accordance with the findings arrived at in the Sec e2 to e4.

e6   PARAMOUNTCY OF THE FINDINGS IN THE IDEA PLANE
      The result of the analysis and the arrangement of the Facet Terms in the Idea Plane is paramount.

e7   QUALIFIER OR SPECIATOR
      An attribute usually forming a characteristic may figure either as (MP) or as the basis for the sub-division, often of a (P) isolate (and occasionally of any other isolate). In the former case it is an isolate. This factor should be borne in mind during the analysis in the Idea Plane. In the latter case, the attribute is denoted by the term 'Qualifier' or 'Speciator'.

e8   QUASI-ISOLATE
      It is found helpful to insert, at the beginning of the schedule of division, based on it, the name of the characteristic — that is, qualifier or speciator — as if it were itself an isolate. Because it is not a true isolate, it is denoted by the term 'Quasi-Isolate'.

e9a   USE OF QUASI-ISOLATE IN THEORY
      In the discussion of deeper levels of the Theory of Library Classification, the characteristic to be used as the basis of a schedule

occasionally comes up for consideration. Till now, there has been no comfortable means of accommodating the characteristic, with a number of its own among the items of discussion. But our making the characteristic of division of Quasi-Isolate gives it an Isolate Number. This gets over the difficulty mentioned above.

e9b SYNTHESIS IN THE NOTATIONAL PLANE
e9b1 *Translation of Facet Terms into Facet Numbers*
      The work in the Notational Plane should translate each Facet Term into its Facet Numbers.

e9b2 *Synthesis of Facet Number*
      The work in the Notational Plane should synthesise the Facet Numbers with the appropriate Indicator Digits prescribed for each facet.

e9c *Procedure for Reclassification by a New Scheme*
      A Scheme for Library Classification cannot be eternal. Developments in the Universe of Subjects may, at intervals, call for change in the Scheme of Library Classification used in the library — either modifications in the scheme in use or change over to an altogether new scheme. The change should be governed by the Law of Osmosis (18).

f **Foundation for the Science of Library Classification**
f1 FOUNDATION FOR THE WORK IN THE IDEA PLANE
      The work in the Idea Plane is governed by
      1 Five General Laws of Thinking (17), applicable to every subject;
      2 Five Laws of Library Science (14), forming the basis for the theory and practice of every branch of Library Science;
      3 Thirteen Postulates;
      4 Fifteen Canons; and
      5 Thirty-five principles.

f2 FOUNDATION FOR THE WORK IN THE NOTATIONAL PLANE
      The work in the Notational Plane is governed by
      1 Five General Laws of Thinking, applicable to every subject; and
      2 Twenty-one Canons.

f3 ADVANTAGE OF A SCIENCE-BASED SCHEME FOR LIBRARY CLASSIFICATION
      The basing of Library Classification on the Normative Principles and the postulates associated with the Fundamental

Categories, given in the *Prolegomena* (1967), have till now been found to yield a unique helpful sequence of all subjects, and also a unique similar pattern of the facet structure of all Compound Subjects, without any need for thinking of them *ab-initio* in each case. This is the advantage of a Science-based Scheme for Library Classification.

f4 DELAY IN GENERAL AWARENESS OF THE NEED FOR THEORY
General awareness does not appear to have developed yet among librarians in general and classificationists in particular of the need for a general theory of Library Classification.

g Helpfulness of the Result of Work in the Idea Plane
g1 COMMON TO ALL SCHEMES
The results obtained in the Idea Plane on the basis of the Postulates and the Normative Principles, given in the *Prolegomena* as foundation for work in the Idea Plane, reflect at bottom the way in which a majority of intellectuals think. They are also compatible with the work done by Philosophers on Classification. The resulting Facet Syntax is conjectured to conform to the Absolute Syntax of Ideas (32). Therefore, it is expected that these results can be followed by any Scheme. If this expectation is true, schemes for Library Classification cannot differ in the Idea Plane.

g2 ALTERNATIVE THEORY MAY BE TRIED OUT
It is open to a Classificationist to build up an alternative theory for work in the Idea Plane and base his scheme for Library Classification on its results. If there are two or more alternative theories for work in the Idea Plane, schemes for Library Classification may differ from one another in the Idea Plane.

h Need for Research by Different Schemes in Their Respective Notational Planes
h1 DIFFERENCE BETWEEN SCHEMES FOR LIBRARY CLASSIFICATION
So long as there is one and only one Theory for work in the Idea Plane, one scheme for Library Classification can differ from another only in the Notational System devised by it to implement in the Notational Plane all the findings of the Idea Plane.

h2 VERSATILITY OF NOTATIONAL SYSTEM
The versatility of the Notational System of a scheme for Library Classification should be rich enough to implement every finding in the Idea Plane.

h3 RESEARCH ON INCREASING THE VERSATILITY OF NOTATIONAL SYSTEM

In the immediate future — till a second alternative Theory for work in the Idea Plane is established — research on any particular scheme for Library Classification should be mostly turned on increasing the versatility of its Notational System. This is what is being constantly done, by the DRTC (Documentation Research and Training Centre) Research Team in respect of the Notational System of Colon Classification.

h4 OBSTRUCTION BY A NON-VERSATILE NOTATIONAL SYSTEM

The history of Library Classification is in essence the history of the obstruction, caused by a non-versatile Notational System, to the Idea Plane in spreading its wings fully, as it were, and the successive removal of such obstructions.

h5 SUGGESTION TO UDC

The methods used in CC for enriching the versatility of its Notational System, occasionally throws suggestions to UDC. For example, the Octave Device of CC has been adopted by UDC (37).

Relevant Results on the Notational Plane of CC obtained till 1971

Non-Anteriorising Digits Used in the Notational System of CC

j1 SUBSTANTIVE DIGIT AND ITS SPECIES

Substantive Digit.— Each of the Roman smalls, Indo-Arabic numerals other than "0" (Zero), and Roman Caps. Each of these sets of digits forms a Species of Digit.

j2 EMPTY DIGIT

Empty Digit.— Each of the digits z, 0, 9, and Z; and when warranted, also each of the digits m, y, M, and Y.

j3 SECTORISING DIGIT

Sectorising Digit.— Each of the Empty Digits other than Zero.

j4 KINDS OF DIGITS

Communication is facilitated by the use of the following terms, assuming that the number of digits in an Array Isolate Number is not more than three:

1 Singlet.— A single substantive digit;
2 Doublet.— One Empty Digit followed by a single Substantive Digit;

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3 Triplet.— Two Empty Digits followed by a single Sub-
stantive Digit; and
4 Bracketed Digit.— A single Substantive Digit enclosed
within Circular Brackets.

j5 INDICATOR DIGITS FOR PMEST
The Indicator Digits for the five Fundamental Categories,
PMEST, are prescribed as follows:

Fundamental Category	Indicator Digit
Personality	, (Comma)
Matter	; (Semicolon)
Energy	: (Colon)
Space	. (Dot)
Time	' (Single inverted comma)

The Indicator Digits are given above in the descending sequence
of their Ordinal Values.

k Anteriorising Indicator Digit
k1 Two ANTERIORISING INDICAOTR DIGITS
The following two Anteriorising Indicator Digits are used
in CC:—
1 Anteriorising Indicator Digit for each Anteriorising Common
Isolates.— The digit " ., " (Double inveited comma);
2 Anteriorising Indicator Digit for a Quasi-Isolate.— The
digit " * " (Asterisk) (4); and
3 Anteriorising Indicator Digit for indicating range.— The
digit " ← " (Backward arrow).

k2 ORDINAL VALUES OF ANTERIORISING INDICATOR DIGITS
The Ordinal Values of the two Anteriorising Indicator
Digits are postulated to be as follows:—
1 The Ordinal Value of the digit " " " (Double inverted
comma) is greater than that of the digit " * " (Asterisk);
2 The Ordinal Value of the digit " ← " (Backward arrow)
is greater than that of the digit " " " (Double inverted comma).
3 There is no need for fixing the relative ordinal value between
the Anteriorising Indicator Digits on the one hand; and the Non-
Anteriorising Indicator Digits on the other. For, the addition of
an Anteriorising Indicator Digit after any host substantive digit
places the resulting number anterior to the host Substantive Digit.

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On the other hand the addition of any Non-Anteriorising Indicator Digit after the said host Substantive Digit places the resulting number posterior to the said host Substantive Digit. The following examples show the use of the Anteriorising Indicator Digits and the arrangement got by fixing their Ordinal Values.

SN	Class Number	Subject
1	F,all*Z	Technology by State of matter of Commodity
2	F,all"a	Bibliography in Technology of Solid Commodity
3	F,all	Technology of Solid Commodity

k3 USE OF THE SINGLET "1" TO REPRESENT QUASI-ISOLATE, AS FIRST ATTEMPT

In the first attempt, the Singlet "1", all by itself, was used to represent a Quasi-Isolate if that digit was vacant in the Schedule. But it could not be kept vacant in many Schedules.

k4 USE OF THE DOUBLET "0Z" TO REPRESENT QUASI-ISOLATE, AS SECOND ATTEMPT

In the second attempt, the doublet "0Z" was used to represent a Quasi-Isolate.

Example. — "0Z By Community" in the Schedule of (1P1) isolates for "Z Law".

This often failed when the digit-pair "0(...)" had to be brought into use. For, this separated the doublet "0Z" from the substantive isolate number coming after it.

Example. — "0Z By Community" in the Schedule of (1P1) isolates for "Z Law".

k5 USE OF DOUBLE INVERTED COMMA, AS THIRD ATTEMPT

In the third attempt a triplet consisting of

1 The digit representing the first isolate based on the characteristic;
2 The digit "," (Double inverted comma); and
3 The digit "Z"

was used

k6   USE OF ASTERISK, AS FOURTH ATTEMPT
      This brings the Quasi-Isolate after a Class Number consisting of
   1. The first isolate number in the schedule;
   2 Double inverted comma; and
   3 Any Anteriorising Isolate Number a to y.
This is unhelpful. (For the helpful sequence, see Sec k2). In the fourth attempt now being made of the Indicator Digit "•" (Asterisk) is used in the representation of a Quasi-Isolate. This gives a helpful sequence as shown in Sec k2.

m   ZONE
      Communication is facilitated by the concept of "Zone in an Array of Isolate Numbers". Five Zones can be recognised in an Array. Only Singlets, Doublets, and Triplets are allowed in an Array.
The following table gives an account of them.

Zone Number	Range of Zone	Symbol of Zone
1	The range of isolate numbers beginning with a Roman small	(Z — a)
2	The range of isolate numbers beginning with a "0" (Zero)	(Z — 0)
3	The range of isolate numbers beginning with an Indo-Arabic Numeral other than "0" (Zero)	(Z — 1)
4	The range of isolate numbers beginning with a Roman cap	(Z — A)
5	The range of isolate numbers beginning with "(" (Starter bracket), used in isolate numbers enclosed between "(" (Starter bracket) and ")" (Arrester bracket)	(Z — (..)

n   Sector
n0   INTRODUCTION
      Communication is facilitated by the concept of "Sec in a Zone in an Array of Isolate Numbers".

n1   TABLE OF SECTORS FOR SPECIAL ISOLATES WITHOUT USING
      m,y,M, AND Y AS SECTORISING DIGITS

SN	Sector			Zone		SN
	Symbol	Range	Capa-city	Capa-city	Symbol	
1	(S — za)	za ... zy	22			
2	(S — zza)	zza ... zzy	22			
3	(S — zz1)	zz1 ... zz8	8			
4	(S — zzA)	zzA ... zz Y	23			
5	(S — z0a)	z0a ... z0y	22			
6	(S — z01)	z01 ... z08	8			
7	(S — z0A)	z0A ... z0Y	23			
8	(S — z1)	z1 ... z8	8			
9	(S — z9a)	z9a ... z9y	22			
10	(S — z91)	z91 ... z98	8			
11	(S — z9A)	z9A ... z9Y	23			
12	(S — zA)	zA ... zY	23			
13	(S — zZa)	zZa ... zZy	22			
14	(S — zZ1)	zZ1 ... zZ8	8			
15	(S — zZA)	zZA ... zZY	23			
				267	(Z — a)	1
16	(S — 0a)	0a ... 0y	22			
17	(S — 0za)	0za ... 0zy	22			
18	(S — 0z1)	0z1 ... 0z8	8			
19	(S — 0zA)	0zA ... 0zY	23			
20	(S — 00a)	00a ... 00y	22			
21	(S — 001)	001 ... 008	8			
22	(S — 00A)	00A ... 00Y	23			
23	(S — 01)	01 ... 08	8			
24	(S — 09a)	09a ... 09y	22			
25	(S — 091)	091 ... 098	8			
26	(S — 09A)	09A ... 09Y	23			
27	(S — 0A)	0A ... 0Y	23			
28	(S — 0Za)	0Za ... 0Zy	22			
29	(S — 0Z1)	0Z1 ... 0Z8	8			
30	(S — 0ZA)	0ZA ... 0ZY	23			
				265	(Z — 0)	2
31	(S — 1)	1 ... 8	8			
32	(S — 9a)	9a ... 9y	22			
33	(S — 9za)	9za ... 9zy	22			
34	(S — 9z1)	9z1 ... 9z8	8			
35	(S — 9zA)	9zA ... 9zY	23			
36	(S — 90a)	90a ... 90y	22			
37	(S — 901)	901 ... 908	8			
38	(S — 90A)	90A ... 90Y	23			
39	(S — 91)	91 ... 98	8			
40	(S — 99a)	99a ... 99y	22			
41	(S — 991)	991 ... 998	8			
42	(S — 99A)	99A ... 99Y	23			
43	(S — 9A)	9A ... 9Y	23			

SN	Sector			Zone		SN
	Symbol	Range	Capacity	Capacity	Symbol	
44	(S — 9Za)	9Za ... 9Zy	22			
45	(S — 9Z1)	9Z1 ... 9Z8	8			
46	(S — 9ZA)	9ZA ... 9ZY	23			
				273	(Z — 1)	3
47	(S — A)	A ... Y	23			
48	(S — Za)	Za ... Zy	22			
49	(S — Zza)	Zza ... Zzy	22			
50	(S — Zz1)	Zz1 ... Zz8	8			
51	(S — ZzA)	ZzA ... ZzY	23			
52	(S — Z0a)	Z0a ... Z0y	22			
53	(S — Z01)	Z01 ... Z08	8			
54	(S — Z0A)	Z0A ... Z0Y	23			
55	(S — Z1)	Z1 ... Z8	8			
56	(S — Z9a)	Z9a ... Z9y	22			
57	(S — Z91)	Z91 ... Z98	8			
58	(S — Z9A)	Z9A ... Z9Y	23			
59	(S — ZA)	ZA ... ZY	23			
60	(S — ZZa)	ZZa ... ZZy	22			
61	(S — ZZ1)	ZZ1 ... ZZ8	8			
62	(S — ZZA)	ZZA ... ZZY	23			
				288	(Z — A)	4
63	(S — (a))	(a) ... (y)	22			
64	(S — (1))	(1) ... (8)	8			
65	(S — (A))	(A) ... (Y)	23			
				53	(Z — (...))	5
	Total Numbers in an Array		1,144	1,144		

Note.— 1 The Sector (S — a) is omitted in the above table, as it is reserved for the representation of the Common Isolates.

2 The three Sectors in Zone 5 are indicated only as for their use in Enumeration Device, excluding other uses, such as Subject Device, Style Number, Brand Number etc.

3 The Sector (S — A) is available in full only for Array 1 in the Schedules of Main Subjects and of Isolates.

4 In Array 2 onwards, only a part of this Sector — that is, (S — A to S) is available, because the digits T to Z are used as Emptying and Empty-Emptying digits. This will modify the capacity of Array 2 onwards.

n2 DISTRIBUTION OF DIFFERENT KINDS OF SECTORS AMONG ZONES

Zone Number	Number of Sectors			Total
	Singlet	Doublet	Triple+	
1	0	3	12	15
2	0	3	12	15
3	1	3	12	16
4	1	3	12	16
5	0	0	3	3

The above table shows the distribution of the 65 Sectors available for the representation of Special Isolates among different levels.

p Additional Sectors
p1 WITH m, y, M, AND Y AS SECTORISING DIGITS
By using the digits m, y, M and Y as additional sectorising digits, an additional number of 80 more sectors can be added.

p2 THEORETICAL POSSIBILITY
The experience till now leads to the conjecture that even all the 65 sectors mentioned in Sec n1 may not have to be brought into use. The data in Sec p1 is given only to know the theoretical possibility of the number of sectors in an Array of CC.

q Empty Digit for Sectorising
q1 THREE EMPTY DIGITS OF KIND ONE
The digits z, 9 and Z have been postulated to be Empty Digits of Kind One (34).

q2 USE OF EMPTY DIGITS OF KIND ONE
Each of the three Empty Digits of kind one — z, 9 and Z — has been used as Sectorising Digit. The 60 sectors formed with the three Empty Digits of kind one have been indicated in the Table in Sec n3.

q3   EMPTY DIGIT OF KIND TWO

The digit "0" (Zero) has been postulated to be an Empty Digit of kind two (5).

q4   USE OF EMPTY DIGIT OF KIND TWO

The Empty Digit of Kind Two — Zero — has been used as the first digit for Zone 2. The 15 sectors formed with this Empty Digit of kind two have been indicated in the Table in Sec n2.

q5   EMPTY DIGIT OF KIND THREE

The digits m, y, M and Y are postulated to be Empty Digits of kind three.

q6   USE OF EMPTY DIGIT OF KIND THREE

The Empty Digit of kind three — m, y, M and Y — may beus ed as Sectorising Digit. This breaks the long sector (S — A) into the two shorter sectors (S — A to L) and (S — N to X).

q7   ADDITIONAL SECTORS WITH SINGLET IN ARRAY 1

The use of the digit "M" as Empty Digit makes it fit to be used as Sectorising Digit. The use of the Digit "M" as a Sectorising Digit gives rise to one and only one additional sector of singlet in the Array, as the other singlet sector formed has to be set off against the earlier sector (S — A). This increases the number of singlet sectors in Array 1 from two to three.

q8   ADDITIONAL SECTORS WITH DOUBLET IN ARRAY 1

The use of the Empty Digit of kind three — m, y, M and Y — increases the number of doublet sectors from 12 to 30.

q9a   ADDITIONAL SECTORS WITH TRIPLET IN ARRAY 1

The use of the Empty Digit of kind three — m, y, M and Y — increases the number of triplet sectors from 51 to 133.

r   **Emptying Digit**

r1   THE THREE DIGITS POSTULATED TO BE EMPTYING

The digits T, V and X have been postulated to be Emptying Digits (12). But, in the case of singlets these digits do not have emptying values.

r2   USE OF EMPTYING DIGITS FOR INTERPOLATION

Each of the three Emptying Digits make possible the interpolation in between any two already existing consecutive coordinate Basic Subjects, of a new coordinate Basic Subject as and when demanded by the Idea Plane.

s Partial Comprehension Digit

s1 'Z' USED AS PARTIAL COMPREHENSION DIGIT

In addition to its being used as Empty Sectorising Digit the digit "Z" is also used as Emptying Digit to represent a Partial Comprehension.

s2 USE OF PARTIAL COMPREHENSION DIGIT

The result of adding the digit "Z" as Emptying Digit will be to make the Number ending with it to represent a Partial Comprehension of some of the succeeding Basic Subjects or Isolates, as the case may be.

t Empty-Emptying Digit

t1 THE THREE DIGITS POSTULATED TO BE EMPTY-EMPTYING

The digits U, W, and Y have been postulated to be Empty-Emptying Digits (13). But, in the case of Singlets these do not have Empty-Emptying value.

t2 USE OF EMPTY-EMPTYING DIGITS FOR INTERPOLATION

Each of the three Empty-Emptying digits make possible interpolation, in between any two already existing consecutive coordinate Basic Subjects, any number of new coordinate Basic Subjects as and when demanded by the Idea Plane.

u Compound Isolate

u1 FORMATION OF A COMPOUND ISOLATE

A Compound Isolate is formed by the combination of two or more isolates belonging to one and the same Schedule (8).

u2 INDICATOR DIGIT FOR COMPONENTS OF A COMPOUND ISOLATE

The Indicator Digit for the second and later components in a Compound Isolate is "-" (Hyphen).

u3 SEQUENCE OF COMPONENTS IN A COMPOUND ISOLATE

The sequence of the Components of a Compound Isolate should conform to the Wall-Picture Principle.

u4 SEQUENCE OF ISOLATES IN A SCHEDULE OF A LEVEL-BLOCK

To conform to the Principle of Inversion (2), the sequence of the isolates in a Level-Block should conform to the inverse of the Wall-Picture Principle.

u5 MEASURE OF ECONOMY

If there are eight isolates — 1 to 8 — in an Array, the following 28 Compound Isolates are possible. Here Compound Isolates having only two components are considered.

8–1, 8–2, ... 8–7	=7
7–1, 7–2, ... 7–6	=6
... ...	...
3–2, 3–1	=2
2–1	=1

Therefore, by enumerating eight and only eight isolates in an Array and allowing Compound Isolates we can have Isolate Numbers for 36 Isolates. This gives an idea of the measure of the extent to which a schedule can be enriched with Compound Isolates, without enumerating each of them. This satisfies the Law of Parsimony in the length of the schedule.

v   Compound Basic Subject
v1   FORMATION OF A COMPOUND BASIC SUBJECT
     A Compound Basic Subject consists of a Host Main Subject followed by a combination of its Canonical Constituent, Specials Constituent, System Constituent taken two or three at a time, as warranted (9).

v2   COMPOUND CONSTITUENT OF A (BS)
     A Compound Constituent of a Basic Subject.— A combination of a Canonical Constituent, a Specials Constituent, and System Constituent of a Specific (MS), taken two or three at a time, as warranted.

v3   INDICATOR DIGIT FOR COMPONENTS OF A COMPOUND CONSTITUENT
     The Indicator Digit for the second and later Constituents of a Compound Constituent of a Basic Subject is "- ' (Hyphen).

w   Special Component to Form Compound Isolate
w1   DEFINITION OF SPECIAL COMPONENT
     A Special Component is an Idea which by itself cannot be an Isolate Idea, but it can form a Component of a Compound Isolate Idea (10).

w2   INDICATOR DIGIT FOR SPECIAL COMPONENT
     The Indicator Digit for a Special Component is "= ' (equal to).

x   Mnemonic Value of Digits
x1   FOUR KINDS OF MNEMONIC VALUE OF DIGITS
     The following four kinds of Mnemonics (33) have been used in the Notational System of CC:
     1   Alphabetical Mnemonics;

2 Scheduled Mnemonics;
3 Systematic Mnemonics; and
4 Seminal Mnemonics.

x2 CHOICE OF KIND OF MNEMONICS
The choice of the kind of Mnemonics in a particular subject context will be determined to be the earliest of the above four, sufficient to serve the requirements of that subject context.

y **Enumeration Device**
The use of any of the Mnemonics may be inapplicable or may not give a more helpful sequence of the isolates of an Array than a mere enumeration of them. In such a case the isolates are merely enumerated, guided by literary warrant or any other factor — sometimes even in an arbitrary sequence. They are then said to be got by Enumeration Device (24).

**Colon Classification: Notational System,
Richness of its Versatility**

1 **Measure of the Versatility of the Notational System of CC**
A measure of the versatility of the Notational System of CC may be given as follows:—
1 The possibility of dividing an array into 5 Zones;
2 The possibility of dividing an array into 66 sectors, if each long sector is used as it is;
3 The possibility of dividing an array into 108 sectors, if each long sector is broken into two short sectors; and
4 The capacity of each array for special isolates being 1,166. if each long sector is used as it is:
5 The possibility of extrapolating as many zones as mentioned in category 1, by the use of doublet "a*" in an array of order greater than one and of the use of the doublet "Z*" in array of order 1 in a Schedule of isolates.

2 **From Scarcity to Plenty in Sectors**
During the last one century, scarcity has given place to Plenty in the number of sectors in the Notational System. The Notational System of DC (1876) had only one sector in an array. The 108 sectors in the Notational System of CC may be described as "Plenty in Sectors".

3 **From Scarcity to Plenty in Isolate Numbers**
During the last one century, scarcity has given place to Plenty in the capacity of an Array in the Notational System. In the Notational System of DC, the capacity of an array was

only as small as ten. In the Notational System of CC, the capacity of an array is as large as 1,166.

4 Danger of Plenty

The Plenty of Sectors and of isolates in the Notational System of CC, may lead to as much risk as plenty of any useful commodity. As the saying goes, one may get drowned in "Plenty".

5 Planned Utilisation of the Sectors

To avoid the danger of plenty of sectors, a plan must be designed for the helpful utilisation.of as many sectors as possible likely to be demanded by the Idea Plane in the context of each Basic Subject.

6 Alternative Plans for the Utilisation of Sectors

The planned utilisation of the Sectors in an array in the context of each Basic Subject should provide for the utilisation of additional sectors as and when demanded by the Idea Plane, though not anticipated at the time of the earlier design.

7 Planned Utilisation of the Isolate Numbers

To avoid the danger of Plenty of Isolate Numbers, a plan must be designed for the helpful utilisation of as many Isolate Numbers as possible likely to be demanded by the Idea Plane in the context of each Basic Subject.

8 Alternative Plans for the Utilisation of Isolate Numbers

The planned utilisation of the Isolate Numbers in an array in the context of each Basic Subject should provide for the utilisation of additional Isolate Numbers as and when demanded by the Idea Plane, though not anticipated at the time of the earlier design.

Ideas for a Planned Utilisation of the Sectors and Isolate Numbers of the Notational System of CC

A Illustrative Schedule to Provide Examples for the Later Sections
A1   CONVENIENCE OF BEGINNING WITH AN ILLUSTRATIVE SCHEDULE FOR SOME SUBJECT

It is convenient to begin the development of the ideas for a planned utilisation of the Notational System of CC, with a provisional draft schedule for some subjects, as an illustrative schedule, to facilitate the citing of concrete examples in later sections.

A2 RESTRICTION OF ILLUSTRATIVE SCHEDULE TO (1P)
For the sake of definiteness, but without loss of generality, the illustrative schedule is confined to (1P) — that is, manifestations of Personality in Round One only.

A3 RESTRICTION OF ILLUSTRATIVE SCHEDULE TO APPLIED NATURAL SCIENCE
For the convenience of concreteness and of recognition by sensory organs, but without loss of generality, the illustrative schedule is confined to a Basic Subject in an Applied Natural Science.

A4 A HOST SUBJECT TAKEN AS IF IT WERE A BASIC SUBJECT
For the sake of simplicity, a Compound Subject is used as if it were a Basic Subject. It is denoted by the term "Host Subject".

A5 DRAFT ILLUSTRATIVE SCHDEULE
The provisional draft schedule, taken as an illustrative schedule, is the one going with the Host Subject "Production of Push-Bicycle".
A methodology for designing a depth schedule was formulated in 1964 (11). It has been refined in subsequent work. Several depth classification versions of CC for subjects going with different Basic Subjects have been worked out using the methodology. The methodology of design described in this paper is different in some respects. The difference arises particularly in deeming the subject "Production of a Commodity" which is an organ of another commodity, as going with the Host Subject "Production of the Whole Commodity" of which it is an organ. This appears to be helpful particularly when a commodity is an organ more or less specific to another commodity deemed to be the whole commodity in the context concerned (36).

A6 THE OLD AUGMENTED SCHEDULES FOR THE LEVELS OF (1P) GOING WITH THE HOST SUBJECT "PUSH-BICYCLE"

D8,5125 Production of Push-Bicycle
Facet Formula of Special Facets in (1P)
D8,5125, [1P1], [1P2], [1P3], [1P4]
D8,5125, [Type of Cycle], [Organ of Remove 1], [Organ of Remove 2], [Organ of Remove 3]

Schedule

Schedule of		For "1 Wheel"	
(1P1)	Type of Cycle Isolates	in (1P2)	
1	Child	1	Tyre
4	Adult	2	Tube
...		3	Rim
		4	Spokes
Schedule of		For "4 Driving mechanism"	
(1P2)	Organ of Remove 1 Isolates	in (1P2)	
1	Wheel	2	Pedal
...		3	Chain
4	Driving mechanism		
...		Schedule of (1P4)	
6	Fork	Organ of Remove 3 Isolates	
...		For "2 Pedal"	
		in (1P3)	
Schedule of		1	Foot rest
(1P3)	Organ of Remove 2 Isolates		

Note.—

1 For convenience of demonstration, Schedules for additional Levels have been improvised according to Systematic Mnemonics though the earlier editions of CC do not contain them.

2 To save space only such of the isolates as are wanted for examples in the later sections have been enumerated.

A7 PROVISIONAL SCHEDULE OF [1P] GOING WITH THE HOST SUBJECT "PUSH-BICYCLE"

D8,467 Production of Push-Bicycle

Facet Formula of Special Facets in (1P)
D8,467, (1P1), (1P2), (1P3), (1P4)
D8,467, (Type of cycle), (Organ of Remove 1), (Organ of Remove 2), (Organ of Remove 3).

Schedule

	Schedule of (1P) isolates	1	Child
	Basic Level	4	Adult
	Type of Cycle		
1•ba	*By Height and Weight*	5•Z	*By Sex*
1•b64	*By Height*	5	Female
	Divisions by System	6	Male
	by (AD), unit by		
	(AD), and Measure	9M2•Z	*By Surface quality*
	(*Illustrative*)	9M21	Hard
1•b64MC55	55 cm	9M22	Rugged
		9M25	Smooth
1•c11	*By Weight*	9M26	Soft
	Divisions by System	9M27	Muddy
	by (AD), Unit by	9M28	Sandy
	(AD), and Measure		
	(*Illustrative*)	Z(...)•Z	*By Brand*
1•c11MK22	22 kg		Divisions by (GD)
			(For Generic
1•Z	'•*By Age*		Treatment₂ only)

Code	Organ / Division
	(*Illustrative*)
Z (44)	Indian brand
	Divisions by (AD)
	(*Illustrative*)
Z (H)	Hind
	Later Level
	Organ of Remove 1
0A	Wheel
0Ab642*Z	*By Diameter*
0Ab642	Small
0Ab643	Normal (Favoured)
0Ab644	Large
0Ab645*Z	*By Measurement*
	Divisions by System
	by (AD), Unit by
	(AD), and Measure
	(*Illustrative*)
0Ab645MC15	15 cm
0A1	Front wheel
0A2	Back wheel
0B	Stand
0C	Axle
0D	Driving mechanism
0E	Fork
0F	Mud-guard
0G	Danger light
0H	Holder of airpump
0J	Air pump
0K	Tool box
0M	Carrier
0N	Frame
0P	Lock
0Q	Steering mechanism
0R	Light
0S	Bell
0T	Horn
0U	Brake mechanism
0V	Saddle
	Later Level
	Organ of Remove 2
	For "0A Wheel"
	of the Earlier Level
01	Tyre
01A*Z	*By Material*
	Divisions by (AD)
	(*Illustrative*)
01P	Plastic
01R	Rubber
01 (...) *Z	*By Brand*
	Divisions by (GD)

Code	Organ / Division
	(For Generic
	Treatment only)
	(*Illustrative*)
01 (56)	British brand
	Divisions by (AD)
	(*Illustrative*)
01 (D)	Dunlop
02	Tube
02 (...)*Z	*By Brand*
	Divisions by (GD)
	(For Generic
	Treatment only)
	(*Illustrative*)
02 (44)	Indian Brand
	Divisions by (AD)
	(*Illustrative*)
02 (K)	Kailas
03	Rim
04	Spokes
05	Hub
06	Bearing
	For "OD Driving
	mechanism" of
	the Earlier Level
09a	Crank wheel
09b	Pedal
09c	Chain case
09d	Chain
09d (...)*Z	*By Brand*
	Divisions by (GD)
	(For Generic
	Treatment only)
	(*Illustrative*)
09d (44)	Indian Brand
	Divisions by (AD)
	(*Illustrative*)
09d (D)	Diamond
09e	Gear wheel
	For "0E Fork" of
	the Earlier Level
09n	Prong
091	Left prong
09q	Right prong
09r	Stem
	For "0M Carrier" of
	the Earlier Level
09t	Platform
09u	Clamp
	For "0N Frame"
	of the Earlier Level

091	Front tube
092	Top tube
0921	Female cycle
093	Seat tube
094	Bottom tube
095	Back tube

For "0Q Steering
mechanism" of
the Earlier Level

096	Handle
097	Handle grip
0971	Left grip
0972	Right grip
098	Vertical member

For "0R Light"
of the Earlier Level

09A	Front glass
09B	Outer case
09C	Oil container
09D	Burner
09E	Bulb
09F	Switch
09G	Reflector
09H	Wire
09J	Dynamo

For "0S Bell" of
the Earlier Level

09K	Outer case
09M	Striker
09N	Lever
09P	Clamp

For "0U Brake
mechanism" of the
Earlier Level

09Q	Brake pad
09R	Pad holder
09S	Communicating rod
09T	Pressing end

For "0V Saddle" of
the Earlier Level

09U	Spring
09V	Seat
09W	Seat covering

Later Level
Organ of Remove 3
For "02 Tube" of
the Earlier Level

| 0a | Tube proper |
| 0b | Nipple |

| 0ba*Z | *By Material* |

| 0bc | Steel |
| 0be | Aluminium |

For "03 Rim"
of the Earlier Level

0e	Flat part
0f	Hole
0g	Groove part

For "09b Pedal"
of the Earlier Level

| 0n | Foot-rest |

| 0p | Connecting rod |

For "096 Vertical
member of steering
mechanism"
of the Earlier Level

| 0t | Holder for light |

For "09J Dynamo"
of the Earlier Level

0v	Electromagnet
0w	Brush
0x	Spring lever

B Level Block

The schedule of the isolates enumerated within a major block in a total schedule of isolates.

Example.— In the schedule given in Sec A7, each of the following is a Level-Block:—

1 The part of the schedule under the names '*Basic Level*'; and

2 The part of the schedule under each of the names '*Later Level*', succeeding the Level Block '*Basic Level*'.

C Quasi Isolate Block

C1 MAJOR QUASI ISOLATE BLOCK

The schedule of the isolates enumerated within a major

block, if any, within a total Level-Block in a total schedule of isolates.

Example.— In the Level-Block under the first of the names *Later* '*Level*' in the schedule given in Sec A7, the part of the schedule from "0Ab642*Z By Diameter" to "0Ab645MC15 15 cm", is a "Major Quasi Isolate Block".

C2   MINOR QUASI ISOLATE BLOCK

The schedule of the isolates enumerated within a Major Quasi Isolate Block, if any, within a total schedule of isolates is a Level Block.

Example.— Within the Major Quasi Isolate Block, mentioned as example in Sec C1, the part of the schedule from "0Ab645*Z By Measurement" to "0Ab645MC15 15 cm" is a "Minor Quasi Isolate Block".

C3   AND SO ON

And so on for Sub-Minor Quasi-Isolate Blocks etc.

D   Comparison of CC with DC and UDC
D1   COMPARISON WITH DC

According to its present editor, it has been decided to make DC fit only for Book Classification and not to expand it for use in Depth Classification (1). It often continues to put the isolate numbers belonging to different facets in one and the same Array. Here the facets may be different Levels of (1P) or even those belonging to different Fundamental Categories. This is on account of its monolithic structure and having only one Sector. Therefore, it is not fair to take DC for comparison with the present version of CC.

D2   COMPARISON WITH UDC

UDC has not yet worked out a detailed schedule for the depth classification of "Production of Push-Bicycle". Nor is it possible for us to anticipate what will be done by the Body in charge of UDC and to improvise our own detailed schedule. For, there is no evidence of UDC basing its development on any objectively stated Normative Principles for the Idea Plane (3, 30). Further, even when the detailed schedule is provided in UDC, it can make use of only one, two, or three sectors — (S–1), (S–91). (S–991). Even this statement is made on the assumption that the Authorities of UDC have firmly accepted and begun to use the Octave Principle recommended by me during the Brussels Conference (1955). But even with this limited number of Sectors, UDC can use its "Colon Device" to get over the difficulties, and provide co-extensive Class Number to any depth subject.

The consequential increase in the length of the UDC Class Number has been frequently shown (35).

E   No Ordinal Numbers to Denote the Names of Level Blocks in the New Design
E0   NAMES OF LEVELS IN THE SCHEDULE
     The schedule of (1P) isolates is usually presented in successive Level-Blocks. The first Level Block is named "Basic Level". The second Level-Block will have the name "Later Level". The third Level-Block will also have the name "Later Level". So also is the name of each of the successive Level-Blocks to the very last. For example see Sec A7.

E1   ONE LEVEL FACET ONLY
     A Compound Subject may present one and only one Level Facet. The Focus in it may happen to be taken from any one of the Level-Blocks given in the schedule — from the Basic Level-Block down to the last one. In any such Compound Subject it will become Level 1 (P) — that is, [1P1], irrespective of the Level-Block in the schedule of (1P), contributing it. And it will be so named.

E2   TWO LEVEL-FACETS ONLY
     A Compound Subject may present two and only two Level-Facets. The Foci in them may happen to be taken from any two of the successive Level-Blocks given in the schedule of (1P) isolates — from the Basic Level-Block down to the last one. Among these two Level-Facets,
     1   The one with its Focus taken from the Earlier of the two Level Blocks will become Level of 1 of (P) — that is, [1P1], and it will be so named; and
     2   The one with its Focus taken from the later of the two Level-Blocks will become Level 2 of (P) — that is, [1P2], and it will be so named.

E3   THREE LEVEL FACETS ONLY
     A Compound Subject may present three and only three Level-Facets. The Foci in them may happen to be taken from any three of the successive Level-Blocks given in the schedule of (1P) isolates — from the Basic Level-Block down to the last one. Among these three Level-Facets,
     1   The one with its Focus taken from the earliest of the three Level-Blocks will become Level 1 of (P) — that is, [1P1]; and it will be so named;
     2   The Focus taken from the second of the three Level-Blocks

will become Level 2 of (P) — that is, [1P2]; and it will be so named; and

3 The Focus taken from the third of the three Level-Blocks will become Level 3 of (P) — that is, [1P3]; and it will be so named.

The illustrative schedule for "Push-Bicycle" given in Sec A7 does not yield an example for this.

E4 FOUR OR MORE LEVEL-FACETS
And so on.

E5 ALL POSSIBLE LEVEL-FACETS

Let it be assumed that the total number of Level-Blocks in the Schedule of (1P) to be n. A Compound Subject may present all the n Level-Facets, the Foci in them being taken respectively from each of the successive n Level-Blocks. Among these n Level-Facets,

1 The Focus taken from the Basic Level-Block — that is Level-Block 1 — will become Level 1 of [P] — that is, [1P1]; and it will be so named;

2 The Focus taken from the Level-Block 2 will become the Level 2 of [P] — that is, [1P2], and it will be so named;

3 The Focus taken from the Level-Block 3 will become the Level 3 of [P] — that is, [1P3], and it will be so named;

4 And so on; and

5 The Focus taken from the Level-Block n will become the Level n of [P] — that is, [1Pn], and it will be so named.

F Relativity of Level-Blocks in the Schedule

There is a contingency of any one Level-Block or any two, or any three etc in the Schedule of (1P) contributing to the Foci in the Levels of (1P) in a Compound Subject. This makes it meaningless to give serial numbers to the successive Level-Blocks of (1P) as 1,2,3 etc in the Schedule of (1P) itself. For this reason each of them, except Level-Block 0, is named "*Later Level*". This emphasises the relativity of the sequence of the Level-Blocks of (1P) in the Schedule.

G Relativity of Levels of [1P] in the New Design

There is a contingency for the number of Levels of (1P) in a Compound Subject to be 1 or 2 or 3 etc. There is also the contingency for the same isolate taken from the schedule of (1P) becoming (1P1) or (1P2) or (1P3) etc in different Compound Subjects. These contingencies make it impracticable — even impossible — to name in advance the Level in (1P) — among the Facets of (P) in Round 1 — of the Focus in a Compound

Subject taken from any particular Level-Block as (1P1), (1P2), (1P3) etc. Therefore, it is not possible to give in advance the serial number to each of the Levels likely to appear in the (1P) of any Compound Subject. The giving of serials numbers to the Levels of (1P) has, therefore, to be relative to the context of their occurrence in the Compound Subject concerned.

H   Definiteness of Facet Structure in a Compound Subject with all the Facet-Levels
The Facet Structure of a Compound Subject having all the Facet-Levels, and each Facet-Level having one or other of the isolates in the corresponding Blocks of the isolates of (1P), will be definite both in the number of Facets and in their sequence.

J   Definiteness of Facet Formula
In view of the statement given in Sec H, the Facet Formula for the Levels of (1P), for a Compound Subject going with a Basic Subject, will be as it would be when all the Facet-Levels occur. For example, see the Facet Formula given in Sec A7.

K   Relativity of Facet Structure
The Facet Structure of a Compound Subject not having all the Facet-Levels with their respective Foci taken from each of all the Level-Blocks of the Schedule of (1P) cannot be described in advance. It will be relative. For example see Sec M3.

L   Old Method of Designing the Schedule of [1P] Isolates
L1   USE OF SECTOR (S–1) ONLY
In the old method of designing the schedule of (1P) Isolates, the isolate numbers for all the Level-Blocks of (1P) were generally taken from the Sector (S–1). For example, see Sec A6.

L2   RESULT IN COMPOUND CLASS NUMBER
The following Class Numbers are taken as examples:—

Note.— For brevity in presentation the Host Class Number is replaced by a "—" (dash) in the following table.

SN	Class Number	Subject
1	— ,,4,2,1	Foot rest of a Push-Bicycle
2	— ,,1,4	Spokes of a Push-Bicycle
3	— ,,6	Fork of a Push-Bicycle
4	— ,4	Push-Bicycle for Adult

L3 CLUTTERING OF INDICATOR DIGITS
In the old design the cluttering together of the Indicator Digits is obvious in the first three of the Class Numbers in Sec L2. This is rather repulsive to the mind.
If the Schedule for none of the first three Levels were differentiating ones, and only the Isolate Number in Level 4 occurs, there will be four commas cluttering together.

L4 LAW OF PARSIMONY
In the old design the cluttering together of Indicator Digits in a Class Number lengthens it — that is, increases the number of digits in the Class Number. The Law of Parsimony would be better served if this could be avoided.

M New Method of Designing the Schedule of [1P] Isolates
M1 WORK IN THE IDEA PLANE
In the new method of designing the Schedule of (1P) Isolates, the work in the Idea Plane consists of the:
1 Conjecture on *a priori* basis, the maximum number of anticipated Levels likely to arise in (1P);
2 Arrangement of the Levels, in conformity to the Canon of Modulation (19), the Wall-Picture Principle (28), and the Whole-Organ Principle (29), as far as practicable;
3 Check up the result arrived at in Category 2, with the aid of published documents, and making any necessary amendments;
4 Consultation with specialists about the helpfulness of the result arrived at in Categories 1 to 3; and
5 Finalisation of the provisional Facet Structure of the Levels.

M2 WORK IN THE NOTATIONAL PLANE
In the new method of designing the Schedule of (1P1) isolates, the work in the Notational Plane has to begin with the allocation of the Sectors to the Schedules in different Levels.
Experience shows that the allocation of Sectors to different Levels should be in such a way that the sequence of the Ordinal Value of the Isolate Numbers in the successive Sectors should be inverse to the sequence of the Ordinal Numbers of the different Levels to which they are allocated. For example See Sec A7.

M3 CONFORMITY TO THE WALL-PICTURE PRINCIPLE
The allocation of Sectors prescribed in Sec M2 secures conformity to the
1 Wall-Picture Principle in the sequence of the Level-Facets of (1P); and
2 Helpful sequence in the arrangement of documents as a result of the Principle of Inversion (2).

M4 ALLOCATION OF SECTORS: A MATTER OF JUDGEMENT

In following the prescription given in Sec M2, the allocation of the 65 sectors to the different Levels is a matter of judgement. Judgement cannot be helped by objectively stated Rules. The reliability of the judgement will depend upon the experience brought to bear on the subject. Therefore, much depends upon the experience of the classificationist in exercising his judgement in the allocation of the Sectors to the different Levels in as helpful a way as possible, in the context of many Basic Subjects.

M5 NUMBER OF SECTORS TO BE USED

The number of Sectors to be brought into use will vary with the Host Subject. In the case of "Push-Bicycle" only 9 out of the 65 available sectors have been brought into use. In this connection see Sec p and its subdivisions.

M6 RESULT IN COMPOUND CLASS NUMBER

Class Numbers for the same Compound Subjects as those given in Sec L2 are taken as examples.

Note.— For brevity in presentation the Host Class Number is replaced by a " —" (dash) in the following table:

SN	Class Number	Subject
1	—, 0n	Foot rest of a Push-Bicycle
2	—, 04	Spokes of a Push-Bicycle
3	—, 0E	Fork of a Push-Bicycle
4	—, 4	Push-Bicycle for adult

M7 ELIMINATION OF CLUTTERING OF INDICATOR DIGITS

In the new design, the cluttering together of the Indicator Digits occurring in the old design (See Sec L3) has been eliminated by the allocation of different sectors to different Level-Blocks.

M8 AVOIDANCE OF MENTION OF DIFFERENTIATING ISOLATE

In the new design, the need for mentioning the Host Isolate of a Differentiated Isolate is eliminated by different Sectors being allocated to Schedules of different kinds and Levels of the differentiated isolates corresponding to each isolate in the differentiating schedule.

N Law of Parsimony and the New Design
N1 ELIMINATION OF CLUTTERING TOGETHER OF INDICATOR DIGITS.
In the new design the elimination of the cluttering together·
of Indicator Digits in a Class Number shortens it.
This satisfies the Law of Parsimony.

N2 ELIMINATION OF THE DIFFERENTIATING ISOLATE NUMBERS
In the new design the Class Number is shortened by the·
elimination of the need for the differentiating Isolate Number
preceding a differentiated Isolate Number in a Class Number..
This satisfies the Law of Parsimony.

P CLASS INDEX NUMBER IN THE OLD DESIGN
The following examples show the length of the Index.
Numbers for the Classes in the old design:
Adult D8,5125 (1P1), 4
Foot rest D8,5125 (1P2), 4 (1P3), 2 (1P4), 1
Fork D8,5125 (1P2), 6
Spokes D8,5125 (1P2), 1 (1P3), 4

Q CLASS INDEX NUMBERS IN THE NEW DESIGN
The following examples show the length of the Index.
Numbers for the Classes in the new design:
Adult D8,467 (1P),4
Foot rest D8,467 (1P1),0n
Fork D8,467 (1P1), 0E
Spokes D8,467 (1P1), 04
The Index Number for a Class Index Entry in the new design is
shorter. This satisfies the Law of Parsimony.

R REVERSE OF WALL-PICTURE PRINCIPLE IN THE ENUMERATION·
OF ISOLATES IN A LEVEL-BLOCK
In experience, provision for Compound Isolates is com-·
monly found to be possible and useful in the Schedule of Personality
Isolates, of any Level. For this reason, the sequence of the Sectors·
used to represent the isolates in a Level is in the increasing sequence
of their ordinal values.   This is the reverse of Wall-Picture Principle..

S Use of Enumeration Device and Mnemonics
S1 SEQUENCE OF PREFERENCE
The design of the Schedule for each Level should be
based upon that one of the earliest of the following principles which.
gives as helpful a sequence as any of the later ones.
1 Enumeration Device, based on the volume of existing or
anticipated literary warrant or Traditional Sequence or even any·
Arbitrary Principle;

2   Alphabetical Mnemonics;
3   Scheduled Mnemonics;
4   Systematic Mnemonics; and
5   Seminal Mnemonics.

S2   MNEMONIC VALUES FOR THE LITERAL DIGITS
      The Mnemonic Value of a Literal Digit is the same as that
of the Indo-Arabic Numeral Digit occurring in its horizontal
Line in the following table (6, 7):

Roman Smalls		Indo-Arabic Numeral Sector	Roman Caps	
Sector 1	Sector 2		Sector 1	Sector 2
a	n	1	A	N
b	p	2	B	P
c	q	3	C	Q
d	r	4	D	R
e	s	5	E	S
f	t	6	F	T
g	u	7	G	U
h	v	8	H	V
j	w		J	W
k	x		K	X
m	y		M	Y

:S3   LITERAL DIGITS WITHOUT MNEMONIC VALUE
      The above table shows that no Mnemonic value has been
fixed as yet for the Literal Digits j, k, m, w, x, y, J, K, M, W, X,
and Y. (*See also* Sec q6).

S4   EXAMPLE
        In the illustrative schedule in Sec A7, the isolates in the
schedules of different Level-Blocks are arranged according to
Systematic Mnemonics based on the appropriate Principle of
Spatial Contiguity (20) — the Principles of Bottom-Upwards
(21) or of Left to Right (22) or of Periphery to Centre (23) — as

warranted by the context. It is found that Systematic Mnemonics gives as good a result as Seminal Mnemonics and a better result than the other kind of Mnemonics.

T A Baffling Problem of 1959

In 1959, the Industrial House, HMT Ltd (Bangalore) consulted me in the design of Code Numbers for the different types of Machine Tools, their respective parts of Successive Removes, and their respective Drawings. At that time the potentiality of the Mixed Notational System of Colon Classification had not been realised. Therefore, the number of digits in the Code Number for a part increased with the degree of its remove from its parent machine. Therefore, we often reached at Code Numbers too long for inscription on the parts and in their respective Drawings — too long for convenience and use. Therefore, we had to design Code Numbers arbitrarily, without making them meaningful and integrated with one another. This failure has been working in the sub-conscious level all these 12 years.

U Solution at Long Last

At long last the ideas developed, during the last 10 years for exploiting the potentiality of the mixed notational system of CC and thereby increasing its versatility have given a solution for providing short numbers for the parts of a Machine and their drawnings.

V Advantage of Short Numbers in a Trade Catalogue

The short Class Numbers of the parts of a commodity will give elegance in the arrangement of the entries in a Trade Catalogue of the Machine Tools and their respective parts of different removes.

W Application of the New Methodology

The methodology outlined and illustrated in the earlier sections can now be applied with advantage to construct Class Numbers and Code Numbers, to the different kinds of Machine Tools and their respective parts of different removes.

X Cooperation Between Industry and DRTC

The new system can be experimented upon by cooperation between DRTC and a commodity industry such as HMT. The Documentalist of the industry will be able to furnish his detailed knowledge of the materials to be classified. The DRTC can provide the technique of the new methodology. By their working together, useful results can be obtained.

2

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10   Sec w1   ——. ——. (——. Sec A8).

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13   Sec t1   ——. ——. (——. Sec A82).

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17   Sec f1   ——. ——. Chap DC to DH.

18   Sec e9c   ——. ——. Chap DH.

19   Sec M1   ——. ——. Chap ET.

20   Sec S4   ——. ——. Chap FD.

21   Sec S4   ——. ——. Chap FD21.

22   Sec S4   ——. ——. Sec FD31.

23   Sec S4   ——. ——. Sec FD31

24 Sec y   RANGANATHAN (SR) Prolegomena to library classifiication. Ed 3. 1967. Chap NF.
25 Sec c5 ——. ——. Chap RB.
26 Sec c7 ——. ——. Chap RH.
27 Sec c7 ——. ——. Chap RJ.
28 Sec M1 ——. ——. Chap RM.
29 Sec M1 ——. ——. Sec RN1.
30 Sec e0 ——. ——. Chap SB.
31 Sec D2 ——. ——. Chap SQ.
32 Sec g1 ——. ——. Chap XJ.
33 Sec x1 ——. ——. Part K.
34 Sec q1 ——. ——. Sec HC73.
35 Sec D2 —— and NEELAMEGHAN (A). Basis for study of compatibility of Colon Classification with Universal Decimal Classification. (Lib sc. 7;1970. Paper E).
36 Sec A5 RANGANATHAN (T) and NEELAMEGHAN (A). Air vehicle wing production: Depth classificatioin (Annual Seminar, (DRTC). 4;1966; Paper P; Sec 32).
37 Sec h5 SAYERS (W C B). Manual of classification for librarians and bibliographers. Ed 3. 1955, Sec 306.

AY
Y Index
Note.—1 The Index Number is the number of the Section of the occurrence of the item indexed.

2 The following contractions are used
   def = defined
   irt = in relation to

Absolute syntax g1
Allocation of sector M4
Alphabetical mnemonics x1 (1)
Anteriorising digit k
Aristotle c6
Asterisk k1 (2)
   Ordinal value k2 (1)
   Use k6

Basic
   level B (1)
   subject a (4)
Book classification a (14)
Bottom upwards S4
Bracketed digit j4 (4)

Canons for
   idea plane f1
   notational plane f2
CC *irt*
   Polylithic structure b3
   Science-based scheme b4
   Separation of plane of work d3
Class index number in
   new design Q
   old design P
Classification Research Group f5
Cluttering of indicator digit L3
   Elimination of M7
Code number T
Compound
   basic subject v
   constituent of a (BS) v2
   isolate u
   subject a (5)

Postulate of
  fundamental category c5
  level c7
  round c7
Practical classification e
Principle of
  bottom upwards S4
  inversion *irt*
    New method M3
    Sequence of isolates u4
  left to right S4
  periphery to centre S4
  spatial contiguity S4

Qualifier e7
Quasi isolate block C

Reclassification e9c
Relativity of
  level block F
  level (1P) G
Round e3

Scarcity to plenty in
  sectors 2
  isolate numbers 3
Scheduled mnemonics x1 (2)
Science-based scheme f3
Sector n
  Utilisation of
    Alternative plans for 6
    Planned 5
Sectorising digit j3
Seminal
  level, Near c3
  mnemonics x1 (4)
Singlet j4 (1)
Spatial contiguity S4

Special
  classification a (17)
  component w
  scheme b
Speciator e7
Species of digit j1
Subject a (2)
Substantive digit j1
Systematic mnemonics x1 (3)

Terminology a
Trade catalogue V
Triplet j4 (3)

UDC
  Core of b2
  Notation in h5
Universal
  classification a (16)
  scheme b
Universe of subjects c
Utilisation of
  isolate number
    Alternative plan for 8
    Planned 7
  Sector
    Alternative plan for 6
    Planned 5

Versatility of CC 1

Wall-picture principle
  and destng M3
  and isolates R
Work in the
  idea plane M1
  notational plane M2

Zone m