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PART F

PRINCIPLES FOR HELPFUL SEQUENCE

CHAPTER FA

LIST OF PRINCIPLES

1 Introduction

In Chap EP, it was stated that some guiding principles should be used to implement the Canon of Helpful Sequence.

2 List of Principles

The following is a list of such guiding principles:

1 Principle of Later-in-Time
2 Principle of Later-in-Evolution
3 Principle of Spatial Contiguity
31 Principles for Entities along a Vertical Line
311 Principle of Bottom Upwards
312 Principle of Top Downwards
32 Principles for Entities along a Horizontal Line
321 Principle of Left to Right
322 Principle of Right to Left
33 Principles for Entities along a Circular Line
331 Principle of Clockwise Direction
332 Principle of Counter-Clockwise Direction
34 Principles for Entities along a Radial Line
341 Principle of Periphery to Centre
342 Principle of Centre to Periphery
35 Principle of Away-from-Position
4 Principles for Quantitative Measure
41 Principle of Increasing Quantity
42 Principle of Decreasing Quantity
5 Principle of Increasing Complexity
6 Principle of Canonical Sequence
7 Principle of Literary Warrant
8 Principle of Alphabetical Sequence

CHAPTER FB

LATER-IN-TIME

1 Principle of Later-in-Time

If the subjects in an array of subjects or the isolates in an array of isolates have originated in different times, they should be arranged in a parallel progressive time sequence, except when any other overwhelming consideration rules it out.

11 COLON CLASSIFICATION

In CC, the use of the Chronological Device secures automatic conformity to the Principle of Later-in-Time (*See* Sec NB3).

2 Religion

SN	Subject	CC	DC Ed17	UDC	BC	RIC
0	Religion	Q	200	2	P	C
1	Vedic	Q1	294.1	294.11	PIA	CWA
2	Post-vedic	Q2	294.5	294.2		
3	Jainism	Q3	294.4	294.35	PIV	CWN
4	Buddhism	Q4	294.3	294.3	PJ	CX
5	Judaism	Q5	296	296	PL	CT
6	Christianity	Q6	220/289	21/28	PM/PV	CE/CS
7	Islam	Q7	297	297	PK	CU

CC follows the Principle of Later-in-Time. BC comes next; its only fault is putting Islam before Judaism. The other schemes give favoured treatment to Christianity. DC and UDC have violated the Principle in respect of the religions of Indian origin.

For another example *See* Sec KD2

CHAPTER FC

LATER-IN-EVOLUTION

1 Principle of Later-in-Evolution

If the subjects in an array of subjects or the isolates in an array of isolates belong to different stages of evolution, they should be arranged parallel to the evolutionary sequence, except when any other overwhelming consideration rules it out.

2 Botany

SN	Subject	CC	DC Ed 17	UDC	LC	BC	RIC
0	Botany	I	581	58	QK	F	TJ
1	Thallophyta	I2	589	582.22	QK564/635	FLA	TJK
2	Bryophyta	I3	588	582.32	QK534/563	FMB	TJG
3	Pteriodo-phyta	I4	587	582.35	QK520/532	FMJ	TJB
4	Gymnos-perm	I6	585	582.42	QK495.G9	FNA	TFJ
5	Monocoty-ledon	I7	584	582.52	QK643.M7	FT	TI
6	Dicotyledon	I8	583	582.61	QK643.D7	FOE	TG/TH

3 Medicine. Specials

SN	Subject	CC	DC Ed 17	UDC	LC	BC	RIC
0	Medicine	L	610	611			U
1	Embryo	L9B	611.013 612.64	611-013	RG600 etc	EE	UDR
2	Child	L9C	618.92	616-053.2	RJ	HU	UOU
3	Adolescent	L9D					
4	Old	L9E	618.97	616-053.9	RC952/954	HPPR	UOR

BC and RIC violate the Principle of Later-in-Evolution. No purpose appears to be served by interpolating "Geriatrics" between "Embryology" and "Paediatrics"

4 Political Science

SN	Subject	CC	DC Ed 17	UDC	LC	BC	RIC
0	Political science	w	320	32	JC	R	M
1	Anarchy	w1					
2	Primitive	w2	321.12	321.2	JC(369)/(392)	RBF	MAK
3	Feudal	w3	321.3	321.3	JC101	RBM	MAL
4	Monarchy	w4	321.6	321.61	JC374/393	RBG	MAS
5	Oligarchy	w5	321.5	321.5	JC419	RBL	MAM
6	Democracy	w6	321.8	321.7	JC421/458	RBC	MAW

5 Economics

SN	Subject	CC	DC Ed 17	UDC	LC	BC	RIC
0	Economics	x	330	33	HB/HL	T	L
1	Communi-cation	x3	381/384	383/384	HE6000etc	BONRR	LAS
2	Transport	x4	385/388	385/388	HE1/5990	TN	LAS
3	Commerce	x5	381/382	381/382	HF	TP/TQ	LK/LL
4	Credit	x6	332.7	332.7	HG201/7933	TR	LIA
5	Public finance	x7	336	336	HJ	TTF	LM/LO
6	Insurance	x81	368	368	HG8011/9970	TS	JP/JT

For another example *See* Sec KD2.

CHAPTER FD

SPATIAL CONTIGUITY

1 Principle of Spatial Contiguity

If the subjects in an array of subjects or the isolates in an array of isolates occur contiguously in space—roughly along a unidirectional line or a radial line, or a circle—they should be arranged in a parallel spatial sequence, except when any other overwhelming consideration rules it out.

This is really a bundle of the principles listed in category 3 of Sec FA3. There, the principles occur in antithetic pairs such as, the Principle of Bottom Upwards and the Principle of Top Downwards except in category 35. The choice between the antithetic pairs will depend upon the context if they are not equally helpful. If they are equally helpful either may be used with due respect to the Canon of Consistent Sequence (*See* Chap EQ).

2 Entities along a Vertical Line

21 PRINCIPLE OF BOTTOM UPWARDS

If the subjects in an array of subjects or isolates in an array of isolates can be conveniently taken to occur along a vertical line, they may be arranged from Bottom Upwards, if it is helpful.

211 BOTANY. REGIONAL ORGANS

SN	Subject	CC	UDC	LC	BC	RIC
0	Botany	I	580	QK	F	TD
1	Root	I,3	581.43	QK644	FCA	TDJ
2	Stem	I,4	581.44	QK646	FCF	TDK
3	Leaf	I,5	581.45	QK649	FCL	TDL
4	Flower	I,6	581.46	QK653	FCP	TDH
5	Fruit	I,7	581.47	QK660	FCU	TDH
6	Seed	I,8	581.48	QK661	FCV	TDH

22 PRINCIPLE OF TOP DOWNWARDS

If the subjects in an array of subjects or isolates in an array of isolates can be conveniently taken to occur along a vertical line, they may be arranged from Top Downwards, if it is helpful.

211 MEDICINE. REGIONAL ORGANS

SN	Subject	DC Ed 17 and UDC	LC	BC	RIC
0	Medicine	61	R	H	U
1	Head	611.91	RD521	HDO	UAJ
2	Face	611.92	RD523	HDO	UAJ
3	Neck	611.93	RD531	HDO	UAJ
4	Thorax	611.94	RD536	HDQ	UAK
5	Abdomen	611.95	RD546	HDS	UAL
6	Pelvic Region	611.957/959	RD549	HDT	
7	Upper Extremities	611.97	RD557	HDV	UAM
8	Lower Extremities	611.98	RD560	HDW	UAN

DC consistently follows the principle of Top-Downwards in Botany as well as Medicine.

23 CONSISTENCY IN SEQUENCE IN CC

SN	BOTANY		ZOOLOGY		MEDICINE	
	CC Ed 7	Organs	CC Ed 7	Organs	CC Ed 7	Organs
1	I,3	Root	K,3	Lower extremities	L13	Lower extremities
2			K,3T	Pelvic Region	L13T	Pelvic Region
3			K,3X	Tail	L	
4	I,4	Stem	K,4	Abdomen	L14	Abdomen
5	I,5	Leaf	K,5	Thorax	L15	Thorax
6	I,6	Flower	K,6	Upper extremities	L16	Upper extremities
7	I,7	Fruit	K,7	Neck	L17	Neck
8	I,8	Seed	K,8	Head	L18	Head
9			K,92	Joint	L192	Joint

24 INCONSISTENCY IN OTHER SCHEMES

Comparison of the tables in Sec FD211 and FD221 shows that UDC, LC, BC, and RIC violate the Canon of Consistent Sequence.

3 Entities Along a Horizontal Line

31 PRINCIPLE OF LEFT TO RIGHT

If the subjects in an array of subjects or the isolates in an array of isolates can be conveniently taken to occur along a horizontal line, they may be arranged from Left to Right, if it is helpful.

32 PRINCIPLE OF RIGHT TO LEFT

If the subjects in an array of subjects or the isolates in an array of isolates can be conveniently taken to occur along a horizontal line, they may be arranged Right to Left, if it is helpful.

33 HIGH WAY

The following is a helpful sequence of the lanes and other items on a high way.

1 Crown;
2 Motor cars;
3 Heavy Motor vehicles;
4 Bicycle way;
5 Cart way;
6 Pedestrian way;
7 Kerb; and
8 Loop line for rest.

4 Entities Along a Circular Line

41 PRINCIPLE OF CLOCKWISE DIRECTION

If the subjects in an array of subjects or the isolates in an array of isolates can be conveniently taken to occur along a circular line, they may be arranged in the clockwise direction, if it is helpful.

42 PRINCIPLE OF COUNTER-CLOCKWISE DIRECTION

If the subjects in the array of subjects or the isolates in an array of isolates can be conveniently taken to occur along a circular line, they may be arranged in the counter-clockwise direction, if it is helpful.

43 ZODIACAL SIGNS

The twelve Zodiacal signs may be arranged in the following sequence:

1 Aries
2 Taurus
3 Gemini
4 Cancer
5 Leo
6 Virgo
7 Libra
8 Scorpio
91 Sagittarius
92 Capricornus
93 Aquarius
94 Pisces

5 Entities Along a Radial Line

51 PRINCIPLE OF PERIPHERY TO CENTRE

If the subjects in an array of subjects or the isolates in an array of isolates can be conveniently taken to occur along a radial line of a circle or a cylinder, they may be arranged from Periphery to Centre, if it is helpful.

52 PRINCIPLE OF CENTRE TO PERIPHERY

If the subjects in an array of subjects or the isolates in an array of isolates can be conveniently taken to occur along a radial line they may be arranged from centre to periphery, if it is helpful.

53 MEDICINE. ORGANS

SN	Organ	CC	DC Ed 17 and UDC	BC	RIC
1	Bone	L82	611.71	HDJ	UBB
2	Muscle	L83	611.73	HDL	UBF
3	Connective Tissue	L86	611.74	HDL	UAD
4	Skin	L87	611.77	HVA	UBJ
5	Hair	L88	611.78	HVA	UBJ

RIC puts connective tissue in the beginning.

6 Principle of Away From Position

If the subjects in an array of subjects or the isolates in an array of isolates can be conveniently taken to start from a certain point and diverge away from it roughly along a line, they may be arranged from the starting point along the diverging line, if it is helpful.

61 ASTRONOMY. PLANETS

SN	Planets	CC	DC Ed 17 and UDC	LC	BC	RIC
1	Mercury	B941	523.41	QB611	DFR	QCP
2	Venus	B942	523.42	QB621	DFP	QCQ
3	Mars	B943	523.43	QB641	DFM	QCR
4	Asteroid	B944	523.44	QB651	DFL	QCS
5	Jupiter	B945	523.45	QB661	DFJ	QCX
6	Saturn	B946	523.46	QB671	DFH	QCT
7	Uranus	B947	523.47	QB681	DFF	QCU
8	Neptune	B948	523.481	QB691	DFD	QCV
9	Pluto	B9491	523.482	QB701	DFC	QCW

BC follows a reverse sequence. RIC puts Asteroid at the end.

7 Geographical Contiguity

The divisions of the surfaces of the Earth—such as continents, countries, provinces, districts or counties or other administrative divisions—lie on a surface and not on a line. Therefore, contiguity cannot be uniquely determined. Further, the divisions may be different in different cases. Therefore, more than one of the principles mentioned in the earlier sections may have to be used together. In using them together no definite rule can be given to suit all patterns. Judgement is necessary in each case.

71 JAPAN. STATES

SN	States	CC Ed 7	DC Ed 17 and UDC	BC
1	Kyushu	421	522	sj
2	Shikoku	423	523	si
3	Honshu	425	521	sa
4	Hokkaido	427	522	sl

72 AUSTRALIA. STATES

SN	States	CC Ed 7	DC Ed 17	UDC	BC
1	Queensland	81	943	943	uj
2	New South Wales	82	944	944	uf
3	Australian Capital territories	82T	947	944.9	
4	Victoria	83	945	945	uc
5	South Australia	84	942	942	um
6	Western Australia	85	941	941	ug
7	Northern Australia	86	9429	948	up
8	Tasmania	87	946	946	ue

CHAPTER FE

QUANTITATIVE MEASURE

1 Principle of Increasing Quantity

If the subjects in an array of subjects or the isolates in an array of isolates admit of quantitative distinction, they may be arranged according to their increasing quantity, if it is helpful.

11 Universe of Boys

If the universe under consideration comprises the "Boys in a class room" and the classification characteristic is "Age", it is convenient to arrange the Age-classes in the increasing sequence of their age rather than in any random sequence.

12 Geometry

In classifying the universe "Geometry" on the basis of the characteristic "Number of dimensions", CC arranges the resulting isolates in the sequence—Line, Plane, Three dimensions, Four dimensions, Five dimensions, and n dimensions. This is in conformity to the Principle of Increasing Quantity.

13 Political Science

In classifying the universe "Organs of a State in Political Science" on the basis of the characteristic "Number of persons constituting the organ", CC arranges the resulting isolates in the sequence—Head, Executive, Legislature, Party, and Public. This is in conformity to the Principle of Increasing Quantity.

For another example *See* Sec KD5.

2 Principle of Decreasing Quantity

If the subjects in an array of subject or the isolates in an array of isolates admit of quantitative distinction, they may be arranged according to their decreasing quantity, if it is helpful.

Example. World Library. National Library. Regional Library. Constituent State Library. District Library. City Library. Here, the quantity is the area or the size of population served.

CHAPTER FF

INCREASING COMPLEXITY

1 Principle of Increasing Complexity

If the subjects in an array of subjects or the isolates in an array of isolates show different degrees of complexity, they should be arranged parallel to the sequence of increasing complexity except when any other overwhelming consideration rules it out.

2 Linguistics

In classifying the universe "Linguistics" on the basis of the characteristic "Element", CC arranges the resulting subjects in the sequence Isolated Sound, Syllable, Word, Phrase, Clause, Sentence, Piece of composition, Reader as practising material. This is in conformity with the Principle of Increasing Complexity.

3 Geography

In classifying the universe "Geography" on the basis of the characteristic "Subject of Study", CC arranges the resulting subjects in the sequence Mathematical Geography, Physical Geography, Bio-Geography, Anthropo-Geography, Political Geography, Economic Geography. This is in conformity with the Principle of Increasing Complexity.

For another example *See* Sec KD6.

CHAPTER FG

CANONICAL SEQUENCE

1 Principle of Canonical Sequence

If the subjects in an array of subjects or the isolates in an array of isolates are traditionally referred to in a specific sequence, although no underlying principle is discoverable, it will be convenient to conform to this traditional sequence.

It may even happen that no specific characteristic can be isolated as forming the basis of the derivation of the classes, except that they are simply those into which their immediate universe had been traditionally divided. In CC such classes are known as Canonical Classes.

The classes of many arrays in almost all schemes for classification are arranged only in Canonical Sequence. The reason is that the classification characteristic does not lead to classes admitting of temporal, evolutionary, spatial, quantitative, or any other relational sequence. Examples are given from two schemes.

2 Colon Classification

In CC the foci in the following arrays are in canonical sequence.

1 The subjects of "Mathematics"—Arithmetic, Algebra, Analysis, Other methods, Trigonometry, Geometry, Mechanics, Potentials, Astronomy.

2 The subjects of "Physics"—Properties of matter, Sound, Heat, Light, Electricity, Magnetism, Cosmic hypotheses.

3 The subjects of "Geology—Mineralogy, Petrology, Structural geology, Dynamic geology, Stratigraphy, Palaeontology, Economic geology, Cosmic hypotheses.

4 The precious stones given under "Mineralogy", *viz*, Diamond, Ruby, Sapphire, Opal, Topaz, Spinel, Pearl.

5 The physical characters of minerals given under "Mineralogy", *viz*, Density, Hardness, Touch, Taste, Smell, Thermal characteristics, Optical properties, Electrical properties, Magnetic properties, etching.

6 The forms of "Literature", *viz*, Poetry, Drama, Fiction (including short stories), Letters (literature written in the form of letters), Orations, other forms of prose, *Champu*.

3 Decimal Classification

In DC, the foci in the following arrays are in canonical sequence.

1 The fruits in "Agriculture", *viz*, Pome fruits, Stone fruits, Citrus fruits, Minor fruits, Nut fruits, Palmaceous fruits, and

Small fruits.

2 The Departments of the United States Government, in the subject "Administration", *viz*, State department, Treasury department, Interior department, Post office department, Justice department, War department, and Navy department.

3 The subjects of "Law", *viz*, International law, Constitutional law, Criminal law, Martial law, Private law, and Church law.

CHAPTER FH

LITERARY WARRANT

1 Principle of Literary Warrant

The subjects in an array of subjects or the isolates in an array of isolates may be arranged in the sequence of the decreasing quantity of the documents published or anticipated to be published on them, except when any other overwhelming consideration rules it out.

The term 'Literary Warrant' was introduced by Wyndham Hulme about half a century ago [61].

The application of this principle needs care and judgement. In an international scheme for classification, this principle should be applied without any bias to the country of origin of the scheme.

2 Agriculture. Food Plants

SN	Plant	CC	DC Ed 17 and UDC	LC	BC	RIC
0	Seed as Food	J38	633.1	SB189	UAQC	VDO
1	Rice	J381	633.18	SB189.R5	UAQN	VDP
2	Wheat	J382	633.11	SB189.W5	UAQD	VDS
3	Oat	J383	633.13	SB189.O2	UAQJ	VDQ
4	Rye	J384	633.14	SB189.R9	UAQH	VDR
5	Corn	J385	633.15	SB189.K3	UAQT	VDT
6	Barley	J386	633.16	SB189.B2	UAQL	VDU
7	Millet	J387	633.17	SB189.M5	UAQP	VDU

DC, UDC, and RIC can be seen to conform to the Principle, except for Rice in the first two and Wheat in the last. The conformity of CC is better. LC prefers alphabetical sequence; CC reserves the use of alphabetical sequence for the cultivars of each crop plant enumerated in the array of the next higher order. The Principle behind the sequence in BC could not be seen (*See also* Sec KB5).

CHAPTER FJ

ALPHABETICAL SEQUENCE

1 Principle of Alphabetical Sequence

When no other sequence of the subjects in an array of subjects or of the isolates in an array of isolates is more helpful, they may be arranged alphabetically by their names current in international usage.

Generally, alphabetical sequence is not helpful. Therefore, the Principle of Alphabetical Sequence restricts its field of application only to a context in which no other sequence is more helpful. In such a case, the greater ease of using alphabetical sequence than any other should naturally be exploited. This is a demand of the Law of Parsimony (*See* Chap DF).

See Sec KB5, Sec NE3 to NE5, and Sec TB2.

2 Temporary and Limited Context

In many a temporary and limited context, alphabetical sequence may satisfy the canon of Relevance (*See* Chap ED). Examples are: arrangement of students in class room or of persons in a general seating arrangement—which are all temporary.

3 Permanent and Universal Context

On the other hand, it is well known that the Canon of Relevance will be flouted by alphabetical sequence in the arrangement of subjects (*See* Chap HA). Therefore, this sequence is not used in a context of permanent and universal nature—in the classification of subjects in particular except in a few contexts satisfying prescribed conditions.

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