

# The Bliss Classification Bulletin

c/o Commonwealth Institute, Kensington High Street, London, W.8

Vol. V, No. 3, December 1973

## F O R E W O R D

This Bulletin, apart from the usual report of the A G M etc., consists of accounts of the major classes of which draft revisions have been prepared in the past year. These should give readers who are receiving only, particularly requested schedules a better picture of the full operation.

As can be seen in the report of the A G M, the proposed date for handing over the camera-ready copy to Butterworth has been put back to late 1974. Although we greatly regret this, and are aware that it must disappoint those librarians who are waiting to make use of the new scheme, it would be spoiling the ship for a ha' porth of tar to reduce the quality of the remaining schedules in order to speed progress. Meanwhile, the drafting of detailed rules for final presentation of the schedules (which will be in two columns on A4 size papers) is nearly complete and final typing will soon begin.

There is still much scope for assistance to be given to the finalising of schedules by sending the Hon. Editor detailed criticisms of any parts of draft schedules received. For example, the very large schedules of Places of the Ancient and Modern World (for Classes L/O and Schedule 2) have not so far generated much feedback. We would like to think that this is because it has no errors, but cannot believe this to be likely. So once more we appeal to anybody who is concerned to see that the new BC really is an outstandingly thorough and accurate work to let us have their comments, however slight, on any parts or features of the drafts they see. Where a librarian has access to a subject specialist to comment on particular sections it would be a good help to us if they approached that specialist to scan the relevant section for any slips.

### The numbering of Bulletin issues

We have to confess to considerable embarrassment over a succession of errors in numbering recent Bulletins. The 1970 issue began it by being printed as vol. IV, No.3, which was the same as the 1969 issue (the page of which had been followed for layout). A note appeared in the 1971 issue apologising for this and correcting it to Vol. IV, No.4.

The 1971 issue was duly numbered Vol. V, No.1, but the 1972 issue again erroneously followed the previous year's numbering and also appeared as Vol. V, No.1. It should, of course, have been Vol. V, No. 2.

It may be noted that, until 1966, the general pattern had been of each volume containing three numbers. As from 1967 and beginning with Volume 4, each volume will contain four numbers. (and the 1974 issue will be Vol. V, No. 4).

J MILLS  
Hon. Editor.

School of Librarianship  
The Polytechnic of North London

## BLISS CLASSIFICATION ASSOCIATION

## Minutes of the

## Annual General Meeting

held at the King's Fund Hospital Centre, 24 Nutford Place,  
London W1 at 3.00 p.m. on November 23 1973.

Present: Mr J Mills (Chairman/Hon. Editor)  
Mr A Maltby (Hon. Treasurer )  
Dr D J Cambell (Hon. Secretary )

the five other members of the Committee and twelve other members and delegates. Apologies for absence had been received from Miss A Bunch (Scottish Hospital Centre).

1 The minutes of the last A G M held on 10 November 1972 were approved and signed.

2 Matters arising from the minutes (not already on the agenda).

2a Miss Dean (Bishop Grosseteste College, Lincoln) said that she had written to Mr Mills contesting the statement in the minutes of the 1972 A G M that 'no promise had been made during the appeal that donor libraries would get such a benefit' (i.e. copies of the 2nd edition free or at reduced prices). She said that libraries which gave £75 or more in all had been promised one free copy. Mr Mills agreed that this was true and apologised for the misstatement. No provision for free copies (beyond twelve to the B C A) was in the contract with Butterworths, but he thought that some of the twelve could be given free to libraries which had given £75 and which pressed their claims. Miss Dean accepted this as 'perfectly fair'.

2b Miss Dean also asked if future A G Ms could be held earlier than 3.00 p.m. to allow people from a distance to get back the same evening. It was agreed that future meetings should be at 2.15 p.m., with the preceding Committee meeting before lunch.

3 The Chairman's report

Mr Mills said that he was continuing to shed responsibilities (in particular, responsibility for two courses) to allow more time for work on B C. The Polytechnic of North London (PNL) was appointing another research assistant, part of whose responsibilities would be to help in the revision, e.g. preparation of indexes.

3a Publication plans

The date for delivery of camera-ready copy had had to be put off, from October 31 1973. Butterworths had been realistic about the time needed for a large work of this sort, but had asked for a new, firm date. The Committee, meeting in June, had agreed on private dates of June 30 1974 for completion of schedules and August 31 for the index, but agreed to give Butterworths a final date of September 30 for delivery of copy, as August 31 would be a difficult deadline because of holidays. Butterworths had accepted this. Mr Mills thought that meeting this date would be very hard work, but he thought it could be done.

3b State of the revision

A progress chart passed round showed 'final drafts' complete for classes A-AL, D-DF, J, M-O, S and V-Z. 'First drafts' had also been done for schedules 1-4 and classes AM-AZ, C, H, I, L and R and 'vocabulary complete' also for E and F. This left the anterior numeral classes, B, DG-DZ, G, K, T and U. 'Preliminary analysis' had been done for all these except the anterior numeral classes. 'Final drafts' had been circulated for comment to all interested, and Mr Mills begged all those who wished to comment to do so soon.

On class B the Chairman said that the work of Mr Coates of British Technology Index and the INSPEC schedules would be very useful. Mrs Broughton had done some work on E-G. The Wessex Classification of the Health Sciences by Miss Ruth Daniel was 95% complete and was designed to fit into H and I. Final drafts for these would appear early in 1974, and that for L was nearly finished. Classes K, T and U were the last real difficulties and schemes providing much analysis in these fields were available.

Mr Jolliffe (Royal Holloway College) said that the College had pressed for production of various final drafts, notably mathematics and biology. Interest had not diminished and he was under heavy pressure to provide new schedules. Early availability might decide whether the College stayed with B C or changed to L C. Mr Mills said that when he had received the College's comments on the mathematics draft sent to them he would do his utmost to issue the final draft.

3c Form of publication

Mr Mills produced two alternative forms of publication of the schedules in two columns; one included old B C class-marks, the other did not. It was agreed not to insert old (1st ed.) numbers but to leave space for old modified numbers to be inserted. Otherwise the first specimen was approved. The Hon. Secretary suggested leaving reasonable space at the bottoms of pages; libraries with many notes and modifications could have copies rebound with blank pages interleaved: a delegate suggested that libraries should be able to buy unbound sheets. Mr Mills promised to look into this.

Copies of a specimen of the A/Z index in three columns was circulated and this format was approved.

4 Hon. Treasurer's report

Mr Maltby produced a financial statement for the year ending 31 July 1973. This showed a 'working balance' of £190.36 (income £233.62, expenditure £43.26) but this took no account of a special payment to PNL of £200 towards administrative costs of the revision. Mr Maltby said that membership had fallen a little, and that the Association was eroding its savings, which he thought should be built up to permit production later of a 3rd edition without appealing for funds. He suggested a drive for new members and, as none of the officers had time for this, the appointment of a Publicity Officer to do this. Mr Mills said that Mrs Broughton's salary was paid entirely by PNL, but that that of the new research assistant, it was planned, would be partly paid by B C A. The report was approved.

5 Increase in subscriptions

It had been pointed out, in notes supplementing the agenda and sent to all members a week before the A G M, that the Retail Price Index had gone up 51% since the present subscriptions and Bulletin charges had been fixed in 1967. After discussion it was agreed to increase subscriptions and charges for 1974-75 by 50%, though this would not cover further inflation. The appointment of a Publicity Officer was approved. There were no volunteers.

6 Changes in the rules

The Committee had been asked to consider the rules and propose changes, particularly to enforce changes in the Committee. The changes proposed had been set out in notes supplementing the agenda.

Rule 1 It was agreed to insert 'the' before 'Bliss Classification'

Rule 3 It was agreed to replace the second 'and' by 'or'.

Rule 5 It was agreed to replace the old rule by the following:

'The Committee shall consist of nine members, three of whom shall (from 1974 onwards) resign each year. No member of the Committee shall serve for more than six consecutive years from 1973 unless co-opted. Nine Committee members shall be elected in 1973, and, in order to establish a rotation, at the 1973 annual general meeting, the newly elected Committee shall (except to the extent that they agree among themselves when they shall retire) draw lots to decide which members shall retire after one year, which after two, and which after three years.' The Committee shall have power to co-opt not more than two persons each year to serve until the next annual general meeting. This is mainly to enable a person who has served as an honorary officer, and who is still willing to serve as one, to remain on the Committee instead of being compulsorily retired'.

7 Election of the Committee

Mr C B Freeman (Hull University Institute of Education) who had to leave the meeting early, had offered to resign, but had suggested the need for a link with the School Library Association. Miss Dean and Mr R Davidge (Royal Holloway College) were elected to bring the number up to nine; Mr Freeman's off. was accepted with grateful thanks for his most valuable past services, The Hon. Secretary said that the Committee had agreed that, as far as possible the three main honorary officers should come up for re-election to the Committee in different years. It had been agreed for obvious reasons that Mr Mills' term would end in 1976. Mr Maltby said that he would probably have to retire as Hon. Treasurer next year, so he agreed to be elected for one year, and the Hon. Secretary for two years. The drawing of lots it was agreed to leave to the Committee meeting after the A G M. The results were as follows: Elected for three years: Mr R Hughes (Commonwealth Institute) and Mr S Green (National College of Food Technology).

Elected for two years: Mr G Ge ghegan (University of Reading School of Education) and Mr R Davidge (Royal Holloway College)

Elected for one year: Miss S Dean (Bishop Grosseteste College) and Mr K Morton (King's Fund Hospital Centre).

8 Any other business

Mr Mills described a meeting held by Aslib and the British Library to consider possible classifications for the Library, which would have about a quarter of a million books on open access. Speakers (one per classification) had been invited from users of BC, DC, LC and UDC. Miss M F Smith (Senate House Library, University of London) had been invited to speak on BC but though it inappropriate that she should speak on the first edition, which her library used, when a radically revised version was nearing completion. Nobody else was invited to represent BC. Mr Mills and Mrs Broughton attended the meeting, and BC had a good airing. He did not think that the chance of BC being adopted was high, but considered that it was by no means impossible. The decision would be influenced very strongly by considerations of standardisation and the provision of centralised indexing services.

Mr Mills also mentioned a meeting which he and Mrs Broughton had with Mr A J Wells of the British National Bibliography. Mr Mills claimed that on all the theoretical points the new BC would be the best general classification. Mr Wells had made no promises, but clearly had an open mind.

## THE BLISS CLASSIFICATION ASSOCIATION

Financial statement for the year ended 31st July 1973INCOME

	£	p	£	p
Membership subscriptions				
Personal	8.92			
Primary/Secondary Schools	5.00			
Other Institutions	192.05			
				<hr/>
			205.97	
Sales of Bulletin			11.50	
Interest on current account			1.38	
Interest deposit account			14.77	
			<hr/>	
			233.62	
			<hr/>	

EXPENDITURE

Bliss Bulletin - printing, distribution etc.			23.34	
Committee expenses			13.20	
Stationery & Postages			5.22	
Bank charges			1.50	
			<hr/>	
			43.26	
			<hr/>	

Working balance for 1972/73      £190.36

Note A special payment to Polytechnic of North London  
towards administrative costs for revision of BC  
was also made in December 1972.      £200.00

Cash in bank at 31st October 1973

Current account	£ 46.45
Deposit account	£750.13
	<hr/>
	£796.58
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19th November 1973

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A. Maltby  
Hon. Treasurer

Class AA - AK Philosophy

A penultimate draft of this was issued in the summer. It was almost entirely the work of Kenneth Bell a philosopher on the staff of the School of Librarianship, PNL, who, luckily for us, is also a teacher of classification.

It is a fully faceted scheme, which should be able to handle the largest collections in the subject. The citation order is variable, that for General Philosophy and Western Philosophy being somewhat different from that for Oriental Philosophy.

The following summary outline should give some idea of the structure of the new schedule and the argument behind it. Remember that the filing order is 'inverted' and so synthesis of compound classes is achieved by building the class numbers retroactively: e.g.

AFH is Mode of thinking in Western Metaphilosophy;

ADe is Great Britain;

ACH is Empiricism

So AFH DeCH is Mode of thinking in British empiricism.

		<u>Existing BC</u>
AA	PHILOSOPHY	AA
AAC	Viewpoints, doctrines, systems, schools <u>Divide like AC</u>	
AAD	History: Periods *General studies only: <u>divide like AD</u>	
AAF/H	Branches, fields, problems and topics <u>Divide like AF/H</u>	
AB	WESTERN PHILOSOPHY	
AC	Viewpoints, doctrines, systems, schools	
ACE	By individual philosopher from whom derived (e.g. Thomism)	
ACF	Rationalism and related topics	AGA
ACH	Empiricism and related topics <u>etc.</u>	AGB
AD	History: Places *General studies only: <u>divide like Schedule 2</u>	
ADA	History: Periods	AA
ADB	Ancient	AAC
ADC	Greek	AAF
ADM	Medieval	AB
ADQ	Modern	AC
AE	Individual philosophers *May be collected here, but prefer subordination	AE

	<p>[*May be collected here, but prefer subordination to Period and Place Branches, fields, problems, topics</p>	
AF	Metaphilosophy: nature and methods of philosophy	AFA/B
AG	Relations with other subjects	
AH	Metaphysics	AH
AHH F	Ontology	AHB
AHK	Cosmology	AHK
AHP	Epistemology	AHP
AHR	Philosophy of language and logic = Philosophical logic	
AHT	Philosophy of mind and action = Philosophical psychology AHI, AHN, AHW	
AHV	Ethics	
	*Alternative to colloacting with Religion at PC	AJ
AHX	Aesthetics (general studies only)	
AHY	Axiology (general studies only)	AHV
AI	EASTERN, ORIENTAL PHILOSOPHY	
AIB	Individual philosophers	
	*May be collected here, but prefer subordination to Place and Period	
AID	By Period	
	<u>Divide like AD</u>	
AIF/H	Branches, fields, etc.	
	<u>Divide like AF/E</u>	
AIJ	Viewpoints, doctrines, systems, schools	
	<u>DIVIDE like AC</u> (By Place)	
AIL	Persian	
AIM	Indian	AAW
AIM K	Hindu philosophy	
AIO	Other schools, A/Z	AAZ

Class AM - AX Mathematics

This has proved to be by far the most difficult area which we have dealt so far, and progress has been very slow, not least because of the difficulty in obtaining subject specialist advice on the preliminary draft. The combination of mathematical expertness and familiarity with the indexing problems raised (of citation order, for example) is not easily formed. The following outline structure has been established, but a number of theoretical problems are outlined below.

## Mathematics

Common subdivisions

Common facets

Sign

Quality, property

Dimensionality

Etc...

Algebra

Set theory

Number theory

Algebraic structures, systems

Groups

Fields

Rings

Lattices

Algebras

Theory of equations

Invariants

Algebraic forms

Determinants

Matrices

Vectors and Tensors

Analysis, calculus

Differential calculus

Integral calculus

Differential and integral equations

Theory of functions

Geometry

Euclidean, plane geometry

Topology

Analytical geometry

Descriptive geometry

Trigonometry

Mensuration and metrology

Facet analysis'

It should be remembered that the categories and the citation order which are being used in the revision of Bliss were developed largely in the fields of technology and the natural sciences; the success with which these methods have been applied to the Humanities and the Social Sciences is evidence of their further validity, but it is a mistake to assume that they hold good for all situations and for all subjects. Although they have proved useful in ordering some areas of mathematics, on an overall scale the highly abstract nature of the terminology and of the relationships between terms has made it nearly impossible to analyse terms on the basis of the categories normally employed (Thing, Kind, Part, Property, Process, etc).

This has two consequences:-

- i) it throws much greater responsibility on the compiler of the scheme, who is working outside accepted guidelines.
- ii) the citation order is achieved by more pragmatic and literature-oriented criteria than is normally the case (although of course these are significant factors in the construction of all schedules).

The resulting schedule has, therefore, a more traditional, enumerative appearance than do most of the new Bliss schedules.

Additions and omissions

Mathematics is not unique in exhibiting a dichotomy between two approaches to the subject, though is perhaps unusual in that the division is between elementary and advanced, rather than older and more recent (as in the case of say, Physics). The traditional division of the subject into Arithmetic, Algebra and Geometry is not a valid basis for a classification of the modern subject, but does continue to operate at the elementary level. Dewey's solution of providing for 'Pedagogical aspects' at the end of each major subdivision seems clumsy and not necessarily very useful. It may be more appropriate to include a section on Elementary Mathematics at the beginning of the class, which would contain school books and similar works, as has been done in the Language and Literature classes for text-books, primers, etc.

Most of the schedule for modern algebra is new; some of this area is hinted at in existing Bliss but there is by no means a coherent treatment. Since the principles and ideas of modern algebra underlie much of mathematical study today, it seemed important to have this properly scheduled, and the first four pages of the algebra schedule therefore represent new ground as far as Bliss is concerned.

Class C Chemistry

The first of the natural sciences to be taken to an advanced stage, this has fulfilled expectations that facet analysis would be easier to apply in these subjects, and progress has been good. A detailed draft has been prepared, an outline of which is given below.

## Chemistry

## Special subdivisions

Technical data, chemical calculations, stoichiometry

Nomenclature

Classification

General chemistry

## (Operations)

Analytical chemistry, chemical analysis

## (Processes)

At elementary particle level

At molecular level

(Physical processes)

Thermochemistry

Radiochemistry

Photochemistry

Electrochemistry

Magnetochemistry

(Chemical processes = chemical reactions narrowly)

(By nature of change)

(By nature of product)

(Matter, substance)

(Properties)

(Parts)

Structural parts

Bonds

Spatial arrangement, isomerism

(State of matter)

Crystals, crystallography

Mineralogy

(Kinds of matter)

Inorganic compounds

Non-metals

Metals

Metallurgy

Organic compounds

Acyclic, linear

Homocyclic

Aromatic

Heterocyclic

Carbohydrates

Biochemistry

Polymer chemistry

## Applied chemistry and chemical technologies

Chemical engineering

Chemical technologies

Fats, oils and waxes

Pigments and dyes

Fuels and explosives

The major departure from existing Class C is the inclusion of parts of Class U in chemical technologies. Any industry loosely defined as one in which processing of raw materials is the central activity (as opposed

to those in which processed materials are assembled) now appears in Class C. Notable examples are the paper industry and food technology. The major exception is Mining, which because of its strong associations with Engineering and because this does not 'process' materials in the same way as the others, remains in Class U.

In conjunction with a greatly increased synthetic nature of new Bliss, detailed rules have been developed for synthesising class-marks for chemical compound. The rules for Organic compounds are based on those in the Construction Industry Thesaurus, (Roberts, M.J. and others. Construction Industry Thesaurus; development edition. London (Polytechnic of the South Bank, Ferndale Road, S.W.4) 1972) but are given in a somewhat modified and simplified form. Synthesis of class-marks depends on an analysis of the molecular formula of the compound, according to prescribed rules, which, it is hoped will be operable by non-specialist indexers. The main functional groups are however, enumerated, together with a number of ready synthesised class-marks for certain compounds, and it should be possible to achieve a fair degree of specificity without resort to the more complex rules, by handling the concepts verbally only.

As is usually the case we have found that existing Bliss conforms fairly closely to the pattern achieved by facet analysis, but expansion has been greater than in some other classes. Most of Physical chemistry has a greatly enlarged vocabulary and in some areas this has resulted in a departure from Bliss's original rather weak structure (e.g. Crystallography, Atomic theory). As in previous cases (Classes L/O and W/Y) we have attempted to maintain the existing notation for the first cited facet, in this case Chemical Substances. Bliss's arrangement here was in the main accurate and there is unlikely to be any major change.

Classes E/G Biological Sciences

Work has recently begun on these classes, and satisfactory progress is being made. We are fortunate in having at our disposal (as mentioned in the Bulletin 1971) a faceted classification for this subject compiled by a Brazilian student, Jandira de Assuncao, for her Master's degree in Information Science, on which we are able to draw for **vocabulary and structure.**

The intention, at the time of writing, is to establish a unitary class E, Biological Science, with the taxonomic classifications of plants and animals occupying Classes F and G respectively, as before. It is felt that with the changing emphasis in Biology, from the organism studied to the phenomenon/process studied, there is a strong case for keeping, say, all Genetics and all Embryology together rather than distributing according to organisms. (Although where the organism is the obvious focus of interest the normal retroactive synthetic principle will allow for the full detail of the biological schedule to be enumerated under a specific organism.) Careful scope-notes will be essential to help maintain the correct citation order; for example, in a work on "Chromosomal variation in *Drosophila*", *Drosophila* will need to be introduced by the phase relation 'Study sample' or 'Exposition phase', in order to bring Chromosomal variation into position as first-cited element, as this is the point of interest to Geneticists. (A similar situation exists in Linguistics, where minor languages are often used to illustrate linguistic principles).

Taxonomic classification presents a major problem in this class, especially that of the plant kingdom. Existing Bliss is a mixture of various systems, but we feel that it is better policy to use a single system, however imperfect this may be. Specialist opinion seems to indicate that it is not of major significance which system is chosen as long as it is reasonably up-to-date, but we would naturally like to establish that which would be the most generally acceptable. Engler's "Syllabus der Pflanzenfamilien", which forms the basis of existing Bliss, appears to enjoy wide acceptance, and is therefore the most likely to be chosen.

Classes H/I Physical Anthropology, The Health Sciences

Some preliminary details of this high class were given by Ruth Daniel in the Bulletin of December 1971.

Readers will remember that Miss Daniel has been engaged on compiling a major classification of the Health Sciences for the Wessex Regional Hospital Board (under a grant from the BMA). The Wessex scheme is a self-contained special classification and therefore contains classes covering Physics and Chemistry, the National environment, and the Socio-Economic environment as well as the 'core' subject of medicine and Psychology. For the purpose of the BC, only the latter schedules are relevant, but they constitute a complete classification fitting exactly into classes H/I, with the notation agreeing very closely indeed with that of Wessex. The full scheme is now complete and is being tested on a number of collections and when finalised in a few months time the BC classes will be issued in the normal way. The detail will be somewhere reduced in places but structurally it will be exactly the same.

The outline below, read in conjunction with the explanation in the 1971 Bulletin should give an idea of the final scheme.

O U T L I N E

HA	Anthropology
HB	Physical anthropology
HD/G	Anatomy and physiology
	*Alternative to subordinating to medicine
HH	Health Sciences
HHC	Demography
HHE	The State
HHK	Public health and safety (broadly)
HHL	Environmental design
HHM	Infrastructure
HHT	Public health engineering
HI	Public health and safety (narrowly)
HJ	Hazards (Environmental, Physical, Chemical, Biological)
HKE	Protective clothing
HKE	Food, Feeding, Dietetics
HL	Social welfare
HLU	Personal health
HI	Medical sciences
HM	State medicine
HM	Internal organisation
HM	Practice of Medicine
HO	Hospitals, Patients, Nursing
HP	Medicine
HPCL	Anatomy
HPD	Physiology
HPFB	Parts, Organs, Systems
HP	Pathology
HPD	Symptomatology
HPJ	Signs, Manifestations
HU	Causal agents
HUE	Physical and Environmental
HUEB	Chemical
	Biological
HUT	Clinical medicine
EX	Dependent conditions, processes,
EXC	operations

HXK	(Diagnosis)
HXM	Treatment
HXMB	Environmental
HJ	Physical phenomena
HXO	Mechanical/Manipulative/Operative
HXY	Diet/Drugs/Medicaments (Chemical, Biological)
HYI	Social (Medical social) therapy
HYJ	Traditional
HYK	Quack
HYQ	Medical jurisprudence
HYR	Environmental medicine

