

*The*

# Bliss

## CLASSIFICATION BULLETIN

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### ***EDITORIAL : The way ahead?***

**T**HOSE OPEN BOOKS   which have long been used to separate sections of the *Bulletin* may be seen as symbols apposite to a classification used by librarians to arrange their printed collections in helpful order on the shelves. Is it now time to choose another symbol – a computer screen, perhaps?

No, there's life in books yet, life in libraries, and life in the fundamental ideas of analysis, specification and helpful order which are embodied in all good classification schemes, not least, we believe, in Bliss's Bibliographic Classification and even more so in its reincarnation as BC2.

For readers who labour in 'real' libraries with books on shelves, David Johnson's reflections on the problems of reclassification in a college library, both practical and theoretical, will resonate with all who have undertaken this task. For the 2006 issue of the *Bulletin* when he had not been in office very long, he gamely allowed himself

to be persuaded to record his first impressions. This year's contribution is both an update and a fuller consideration dealing with the day-to-day, internal management of reclassification, its effects on users, and questions of policies and politics in the wider context of Oxford's libraries. He is serious, but evokes wry smiles, too.

**O**NE OF DAVID'S PROBLEMS is the lack of published schedules for classes principally in demand in his and similar collections, notably History and Geography, and Language and Literature. That he has been able to see how colleagues in several Cambridge libraries have been applying these and other 'BC2' classes does not alter the fact that they have been applying their individual adaptations of elderly draft schedules. Publication of these classes is needed urgently.

A possibility, being considered by the Committee, would be to make our schedules – *including* drafts – available to all on the Association's web site. This would not only be useful for working librarians, but also provide a readily accessible resource for everyone working on revision. Dangerously public? No, *challengingly* public: all who are interested and have something to contribute could join the enterprise, whether currently members of the Association or not – library school lecturers and students, specialists, young enthusiasts, older, wiser(?) brains, others.

It might also reinvigorate our scandalously underused and static web site!

Working rules would be needed, of course, within a well-defined framework. The texts of new schedules (and much needed revisions of the earliest published classes) could hardly be presented as the result of a free-for-all. But fresh input is needed. Can *you* help, even in a minor way? Do you know others who could?

**B**EYOND DISPUTE is the fact that in its latest classes BC2 now displays a depth of analysis and detailed vocabulary going far beyond the needs of shelf arrangement, even in special libraries. Has all this additional work only served to delay completion of the scheme? If the objective had still been to produce a first-class, modern, but medium-level scheme (as envisaged in the 1970s), and nothing more, the answer would have to be *yes*. However, the potential revealed in these classes points to exciting use of BC2 in systematic depth indexing in the online environment.

Jean Aitchison's thorough and thought-provoking report on the production of thesauri from BC2 schedules which forms the major part of this issue of the *Bulletin* is not intended to be light reading. It demands and merits close study. To create (or edit) BC2 schedules so that properly structured thesauri can be produced from them automatically would require a lot of work, but the end result could be not only a series of excellent integrated thesauri but also markedly improved schedules. Jean illustrates the problems, pitfalls and possibilities clearly.

Are those computer screens alive now?



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## The Bliss Classification Bulletin

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***BLISS CLASSIFICATION ASSOCIATION***

**Annual General Meeting 2008**

Minutes of the Annual General Meeting of the Bliss Classification Association held at 2.15 p.m. on Friday 24 October 2008 in the New Seminar Room, Senate House Library, University of London, Malet Street, London.

*Present:*

Jean Aitchison (Personal member)  
Vanda Broughton (in the Chair) (University College London)  
Tony Curwen (Personal member; Hon. Editor, Bliss Classification Bulletin)  
Angela Haselton (Tavistock & Portman NHS Trust Library; Hon. Treasurer)  
David Johnson (St Peter's College, Oxford; Minutes Secretary)  
Jeremy Larkin (Action for Children)  
Helen Mackin (Barnardos)  
Marion MacLeod (Fitzwilliam College, Cambridge)  
Jack Mills (Chairman and Editor of the BC)  
Julie Robinson (Personal member)  
Elizabeth Russell (Personal member)  
Leonard Will (Willpower Information)

**1. Apologies** had been received from Eric Coates.

**2. Minutes of the previous meeting, held on 23 November 2007**

The minutes were approved and signed as a correct record.

**3. Matters arising**

There were no matters arising from the previous minutes not covered elsewhere on the agenda.

**4. Progress of BC2: Editor's report**

4.1 Jack Mills summarised progress during the last twelve months, but noted that he had been taken ill in March. He had been unable to work in subsequent months, until a few weeks before the meeting. Once he had returned to work, he had concentrated on completing the new Chemistry class.

4.2 Chemistry: Production of this class had been made more difficult because of errors discovered in 2001 by Eric Coates. This had required revisions, not just notationally but also conceptually. The class was now more or less complete and

would be sent to Eric Coates for final revisions.

4.3 Music: Jean Aitchison and Vanda Broughton were continuing to work on revisions to this class (WQ/WS). It is intended to use the schedule as a test piece for exploring the possibility for the semi-automatic production of a thesaurus.

4.4 Jack Mills also noted that during the year the BCA had received a donation of £15,000 from Chris Preddle, formerly Honorary Secretary of the Association. He extended his thanks to Chris Preddle, and also to the members of the Committee, and in particular to Angela Haselton, Hon. Treasurer, Tony Curwen, Hon. Editor of *The Bliss Classification Bulletin* and Vanda Broughton, Hon. Secretary of the Association. Thanks were also extended to Ken Best, Hon. Auditor.

4.5 On behalf of the BCA, Jack Mills thanked Marion MacLeod, a long-standing member of the Committee, who was retiring. It was hoped that she would produce an abbreviated version of BC2 which could be used in schools.

## **5. Finance and membership : Hon. Treasurer's report**

5.1 Angela Haselton reported that she was compelled to submit an unaudited version of the annual accounts because of having been unwell herself, and an illness of the Hon. Auditor

5.2 As in previous years, and in addition to the gift of £15,000 from Chris Preddle, the Association had received a gift of £600 from an anonymous donor. He was thanked for his generosity.

5.3 The cash balance which the BCA had in hand on 31<sup>st</sup> July 2008 was recorded as:

Deposit Account	8,413.74
Current Account	513.85
Reserve Account	<u>411.63</u>
	<u>£9,339.22</u>

5.4 The Treasurer noted that the Spanish bank Santander was planning to take over the Alliance and Leicester in which the Association had shares.

5.5 The National Westminster Bank had revised its scale of charges. It was now *inter alia* charging for writing cheques as well as making a monthly charge of £10.00. The Meeting agreed to authorise the Treasurer to look for another bank with more reasonable charges.

5.6 The Treasurer noted the fall in income from royalties since the publication of Class W.

5.7 Membership of the Association was reported to be more or less static. Very few members were now users of the scheme, and a greater proportion of the membership was drawn from personal members. It was not therefore as possible to rely as heavily on income from subscriptions as had been the case. The issuing of subscription

invoices was more or less up to date, and would be so by the end of the financial year.

## **6. Bliss Classification Bulletin**

6.1 Tony Curwen, Hon. Editor of *The Bliss Classification Bulletin*, extended an invitation for future contributions. He noted that he had a complete run of back issues available, and thus was able to check any outstanding queries on previous articles. He agreed to continue to act as Hon. Editor for the coming year.

## **7. Auditor's election**

7.1 Ken Best was thanked for his work as Hon. Auditor on behalf of the Association. He had signified his willingness to continue in office.

7.2 Ken Best was nominated for election as Hon. Auditor for the year 2008-9 by Vanda Broughton, seconded by Angela Haselton, and elected unanimously.

## **8. Committee elections**

8.1 Marion MacLeod had informed the Committee that, having recently retired as Librarian of Fitzwilliam College Cambridge, she would also retire as a member of the Committee. There were now several vacancies on the Committee.

8.2 Vanda Broughton, whose term of membership of the Committee had come to an end, agreed to stand for re-election and was proposed by Jack Mills and elected unanimously. Jeremy Larkin and Elizabeth Russell having previously been co-opted members of the Committee; had agreed to stand for election. Both were proposed by Jack Mills and elected unanimously.

## **9. AOB**

There was no other business.



**<http://www.blissclassification.org.uk>**



BLISS CLASSIFICATION ASSOCIATION

Consolidated Receipts and Payments for the Year Ending 31st July 2008

**RECEIPTS**

<b><u>2007</u></b>		<b><u>2008</u></b>
	<i>Balances brought forward at 1st August</i>	
6333.30	Deposit account	7488.90
208.65	Current account	679.03
394.03	Reserve account	401.93
	<i>Subscriptions</i>	
190.00	Personal	0.00
465.00	Institutional	720.00
333.34	Royalties on 2nd edition (K. G. Saur, now Walter de Gruyter)	0.00
64.40	Distribution from M & G (Charibond)	38.64
135.25	Alliance & Leicester share dividend	138.25
1400.00	Anonymous gifts	600.00
250.00	Payment for provision of training course	0.00
	<i>Interest payments</i>	
125.28	Deposit (Nationwide) a/c	186.59
<u>7.90</u>	Reserve a/c	<u>9.70</u>
<b><u>9907.15</u></b>		<b><u>10263.04</u></b>

**Current Assets at 31st July**

<b><u>2007</u></b>		<b><u>2008</u></b>
795.97	Charibond (at cost)	776.31
679.03	Cash in Current account	513.85
404.49	Cash in Reserve account	411.63
<u>7533.47</u>	Cash in Deposit (Nationwide) account	<u>8413.74</u>
<b><u>9412.96</u></b>		<b><u>10115.53</u></b>

**PAYMENTS**

<b><u>2007</u></b>		<b><u>2008</u></b>
1124.29	Committee expenses	548.25
199.38	AGM expenses	213.19
165.37	Bulletin expenses (inc. printing, post & packing)	86.13
0.00	Schedule/Website expenses <sup>(1)</sup>	66.25
0.00	Account maintenance charges (Natwest) <sup>(2)</sup>	20.00
<b>Balance in hand at 31st July</b>		
7488.90	General deposit account (Nationwide)	8413.74
679.03	General current account	513.85
<u>401.93</u>	Reserve account	<u>411.63</u>
<u>8569.86</u>		<u>9339.22</u>
10058.90		
<u>151.75</u>	Less cheques not presented <sup>(3)</sup>	
<u>9907.15</u>		<u>10273.04</u>

Notes:(1) For website subscription charges (domain hosting)

(2) Natwest have now started to charge for all account transactions for society, etc., accounts; minimum charge = £10.00

(3) 2006/2007 –Two cheques issued towards the year end but not cashed; included in the accounts for 2007/2008.

**Angela Haselton**  
*Honorary Treasurer*  
40c Morpeth Road  
LONDON  
E9 7LD

October 2008

As reported to the AGM (item 5.1), both the Hon. Treasurer and the Hon. Auditor having been unwell, it had not proved possible to present audited accounts in time for the meeting. The unaudited accounts shown here were to be audited as soon as possible after the meeting.

## **The Bliss Classification Association**

**an association to develop and promote the  
Bliss Bibliographic Classification**  
(Registered Charity no. 270580)

### **Officers and Members of the Committee 2009**

Mr Jack Mills, *Chair, and Editor of BC2*

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Mrs Jean Aitchison (*Personal member*)  
Dr David Johnson (*St Peter's College, Oxford*)  
Mr Jeremy Larkin (*NCH, the children's charity*)  
Ms Julie Robinson (*Personal member*)  
Mrs Elizabeth Russell (*Personal member*)  
Dr Leonard Will (*Willpower Information*)

\*\*\* Note!!

- Please address all enquiries about subscriptions, missing copies of the Bulletin, etc., to the Hon. Treasurer and Membership Officer.
- During the currency of this issue, it is likely that that position will be taken over by Dr Leonard Will (27 Calshot Way, Enfield, EN2 7BQ).
- E-mails addressed to [Treasurer@blissclassification.org.uk](mailto:Treasurer@blissclassification.org.uk) or alternatively [membership@blissclassification.org.uk](mailto:membership@blissclassification.org.uk) will be directed to the correct person.

**Bliss Thesaurus**  
**Progress report 2009**

*Jean Aitchison*

## **History**

The possibility of producing a thesaurus from BC2 Schedules was first broached in a paper given at the Bliss Classification Association's AGM in November 2003. The subject was pursued further in March 2004 when a seminar was held at Jesus College, Cambridge, on the compilation of a Music classification with an accompanying thesaurus, attended by several music librarians. The format of the proposed thesaurus was set out and approved by those attending. Next, a specification for the thesaurus software was made, and Paul Coates was commissioned to write it. Meanwhile a draft of *Thesaurus editor's guidelines* was devised. Paul completed the software in 2007, and it was tested on parts of the source schedule of *Class W, Arts* and on the whole of the source schedule for *Class J, Education* from 2008 to May 2009.

## **Thesaurus Editor's Guidelines**

The *Guidelines* set out rules to ensure that the terminology and structure of the Bliss schedules are in a condition that facilitates conversion to a thesaurus format. They assume that there will be a separate thesaurus for each subject field covered by a BC2 volume.

### **Terminology**

Terms must appear in a form suitable for the thesaurus. This means that they must be meaningful when standing alone apart from the context of the classification schedule.

Example:

*Incorrect:*

WDVR	African art	
WDVRA	East Africa	←

*Correct:*

WDVR	African art	
WDVRA	East African <i>art</i>	←

The term 'East Africa' alone does not imply its art context, whereas the preferred form 'East African art' makes it explicit.

Editors should follow guidelines set out in *BS8723-2 Thesaurus. Guide to structured vocabularies for information retrieval*<sup>(1)</sup> as closely as possible when deciding on the

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1 For the remainder of this article, this standard will be referred to simply as BS8723-2.



Example:

*Input file:*

JCP 04 Personnel, educational personnel  
JCRG 05 Academic support staff  
JCRH 06 Research staff

*Printed Schedule:*

JCP Personnel, educational personnel  
JCRG Academic support staff  
JCRH Research staff

*Thesaurus:*

Academic support staff JCRG  
BT Personnel JCP  
NT Research staff JCRH

Personnel JCP  
UF Educational personnel  
NT Academic support staff JCRG

Research staff JCRH  
BT Academic support staff JCRG

### **Polyhierarchical relationships: hierarchical relationships across the schedule (Method 1)**

When terms have a polyhierarchical relationship, that is, they have more than one broader term, the second broader term (BT) may appear in another part of the schedules. For example, the term ‘Black Americans’ art’ in Class W, has more than one broader term, ‘Negri-form arts’ and ‘United States art’. In the classified schedules the place for the term is at WCYBEL under ‘United States art WCY’. It is separated from its other broader term ‘Negri-form arts WC6BEL’ occurring earlier in the schedule under ‘Ethnic groups’ arts WC6BE.’ Using Method 1, the editor adds in the electronic source schedule under the main place for the term at WCYBEL, the entry ‘BT Negri-form arts WC6BEL’. The reciprocal entry ‘NT Black Americans’ arts is then WYCBEL’ added automatically by the software under ‘WC6BEL Negri-form arts’.

Schedule:

WC6BE	Ethnic groups’ arts	
WC6BEL	Negri-form arts	
	NT Black Americans’ art WYCBEL	← add
WCY	United States art	
WCYBEL	Black Americans’ art	
	BT Negri-form arts WC6BEL	← add

### **Polyhierarchical relationships: hierarchical relationships across the schedule (Method 2)**

Method 1 is used in *BSI ROOT Thesaurus* and other similar *Thesurofacet*-style thesauri, but there are other methods, including Method 2 shown here. In this case the

term ‘Black Americans’ art’ is given a place under each of its broader terms. Where the term appears under ‘Negriform arts’ it is given the further notation WC6 BEM (not found in the schedule as printed), and under ‘United States art’ its class mark is WCY:WC6BEM. This method is not catered for in the software produced for the thesaurus by Paul Coates.

Schedule:

WC6BE	Ethnic groups’ arts	
WC6BEL	Negriform arts	
WC6BEM	Black Americans’ art	←
WCY	United States art	
WCY:WC6BEM	Black Americans’ art	←

**Polyhierarchical relationships: hierarchical relationships across the schedules (Thesaurus: Methods 1 & 2)**

The thesaurus entry is the same for both methods, except that there are two class marks for ‘Black Americans’ art’ if the second method is used.

Thesaurus:

<i>Method 1</i>	<i>Method 2</i>
Black Americans’ art WCY BEL	Black Americans’ art WC6 BEM or WCY:WC6BEM
BT Negriform arts WC6 BEL	BT Negriform arts WC6 BEL
BT United States art WCY	BT United States art WCY
Negriform arts WC6 BEL	Negriform arts WC6 BEL
NT Black Americans’ art WCY BEL	NT Black Americans’ art WC6 BEM or WCY:WC6BEM
United States art WCY	United States art WCY
NT Black Americans’ art WCY BEL	NT Black Americans’ art WC6 BEM or WCY:WC6BEM

**Associatively related terms derived from the schedule hierarchy**

Not all the relationships shown by indentation in the schedules are hierarchical. The associative relationship (RT) may occur between a term and the term indented below it. The software will recognise the relationships as a Related term (RT) and not as a Broader term/Narrower term relationship (BT/NT), if the difference is clearly coded in the source file by the editor, using the symbol ‘^’ against the lower of the two entries. The code does not appear in the printed schedule.

Example:

*Schedule:*

JDXWL	Drug addiction
JDXWLN	^Stimulants

*Thesaurus:*

Drug addiction	JDXWL
RT Stimulants	JDX WLN
Stimulants	JDXWLN
RT Drug addiction	JDXWL

### **Associatively related terms scattered across the schedules**

These are associative relationships (Related terms (RTs)) occurring between terms in different arrays of the same subject area or in different subject areas across the classification. The relationship is reciprocal.

These scattered associatively related terms appear in existing classification schedules as notes in the form of 'see also' references, and are sometimes, but not always reciprocal. For example, under 'Courses' at JDT in Class J, Education, there is a 'see also' reference to 'Curriculum' at JK, but there is not a reciprocal 'see also' reference under 'Curriculum' to 'Courses' at JDT. The editor changes the 'see also' reference in the electronic source schedule to an RT reference. The thesaurus entry is always reciprocal, as when the editor makes an RT entry under the first term, as shown below, the software automatically creates the reciprocal entry. In this way the RT references take the place of the earlier 'see also' references in the schedule and thesaurus.

Example:

*Schedule:*

JEFR	Imagination	
JEFTH	Vertical thinking	
	RT Lateral thinking JEHL	←
JEH	Thinking	
JEHL	Lateral thinking	
	RT Vertical thinking JEFTH	←

*Thesaurus:*

Lateral thinking JEHL	
BT Thinking JEH	
RT Vertical thinking JEFTH	←
Vertical thinking JEFTH	
BT Imagination JEFR	
RT Lateral thinking JEHL	←

### **Node labels**

In the schedules, node labels, usually shown in italics, appear before groups of terms to indicate the principle of division employed or to show where there is a change of facet. When a node label indicates a change of facet it is sometime named as a facet label.

For example:

*Schedule:*

WHTBV	Dividing elements	
WHTC	Roofs	
	<i>Parts of roof</i>	← Node (or facet) label indicating change of facet
WHTCEU	Roofing	
	<i>Kinds of roofs</i>	← Node label indicating principle of division
WHTCQ	Flat roofs	
WHTCR	Pitched roofs	

The terms used as the node labels, that is *Parts of roofs* and *Kinds of roofs*, are omitted from the thesaurus. The entries in the thesaurus appear in the form shown below.

*Thesaurus:*

Roofs WHTC  
BT Dividing elements WHT BV  
NT Flat roofs WHTCQ  
NT Pitched roofs WHTCR  
RT Roofing WHTCEU

As was seen above under ‘Associatively related terms derived from the schedules’, the thesaurus editor would have added the code ‘^’ before ‘Roofing’ at WHT CEU in the source file of the example above, to show that it is a related term to ‘Roofs’ and not a narrower term, so that it appears in the thesaurus as an RT under ‘Roofs.’ In other words, this device indicates the change of facet shown in the schedule by a node label (in this case it could be given the name of facet label).

Since node labels do not appear as terms in the thesaurus, it is better to avoid these labels appearing in the schedules when preceding extensive arrays, as shown in the below.

Example:

*Schedule:*

W3E Works of art, artworks  
*Properties, attributes of art works*  
W3HE Content, meaning  
W3HKR Parody  
W3HM Originality  
+ 40 more terms

This is because the terms in the array beneath the node label would appear in the thesaurus as concepts related to ‘Works of art’ (RT), but scattered alphabetically among other less closely connecting related terms, too many to show in this example, because they are not drawn together in one group under a broader term or ‘containing head’.

The situation is remedied if the editor replaces the node label in the source schedule by a term, that would then translate into a preferred term in the resulting schedule and thesaurus. In the example below, the node label *Properties, attributes of artworks* would be replaced by the thesaurus preferred term ‘Art works properties’.

*Schedule:*

W3E Works of art, artworks  
W3H ^Art works properties ← *Node label*  
W3HE Content, meaning  
W3HKR Parody  
W3HM Originality  
+ 40 more terms

The thesaurus entry under ‘Art works properties’ would be:

*Thesaurus:*

Art work properties W3H  
NT Content W3HE  
NT Originality W3HM  
NT Parody W3HR  
+ 40 other terms  
RT Works of art W3E

## Problems in editing existing BC2 schedules

### **Terminology**

When Bliss schedules were first compiled, the control of the form of terms was not a priority consideration, as it is now when the production of a thesaurus is needed. It is not surprising that there was in the past a ‘free and easy’ approach to terminology, when the form of a term used was much less significant than its class mark and position in the schedule hierarchy. Also traditional users of the classification had the option to adjust the terminology in the schedules, when transferred to the index to their in-house classified catalogue, to be more specific to their needs.

The terms in the schedules at times appear lengthy and unwieldy, and cover more than one concept. For example, in *Class J, Education* at J6A there is the heading ‘Study & teaching of education’, and at JEDN ‘Tests, testing, measurement, psychological assessment, scales.’ This type of lengthy phrase would have to be split to be acceptable for the thesaurus. In addition, some headings lack clarity, while others are in breach of certain rules set out in *BS 8723*.

One of the rules in the British Standard is that qualifiers in parentheses should be used only to distinguish between homographs, for example, ‘Beams (radiation)’ and ‘Beams (structure),’ and yet it has been common practice to use these qualifiers in compound terms. For example, the compound term ‘Pipes (plastic)’ has been used instead of the preferred form ‘Plastic pipes’.

Another example of a broken rule is the ampersand (&), used regularly in the Bliss schedules, although this is not recommended in *BS8723-2, 6.3*. For example, ‘Town & country planning’, rather than ‘Town and country planning’, and ‘Trial & error learning’ and not ‘Trial and error learning’. Although the use in the schedules of singular and plurals seems to instinctively follow the British Standard rules (*BS8723-2, 6.4*), references from variant spellings to the common form of a term, recommended by the standard, have not been shown along with the synonyms following the class name. The software would allow the editor to add variant spellings in the source file, with a code indicating that they would not appear in the schedules but only in the thesaurus. The consequence of this lack of term control was that during the editing of *Class J, Education* and *Class W, Arts* it was found that far too many amendments

were needed to bring the terminology in the schedules to the standard appropriate for a thesaurus.

### **The Bliss schedule structure**

The Bliss classification with its fully-faceted schedules displaying clear structural relationships is suitable for conversion to a thesaurus format, as it meets the requirements of a type of systematic display recommended by *BS8723-2* at paragraph 10.5.2. In this type of systematic display, 'thesaurus terms are arranged by facets within subject fields' and from the schedules an alphabetical thesaurus may be derived.

However, recent research work with the *Class W, Arts* and *Class J, Education* has shown that there are features in the traditional structure of the Bliss schedules that makes thesaurus production difficult without extensive editing.

Nevertheless, it must be remembered that when the Bliss schedules were first developed, as a fully-faceted scheme for use as a traditional classification system, although the structure of the subject field was carefully analysed, main and sub-facets determined, arrays within facets grouped according to characteristics of division, and changes of facets indicated by node labels, there was not the need for the precise vocabulary control and the rigorously correct display of hierarchical levels that is now needed for thesaurus formats.

Some of the problems encountered include:

#### ***Lack of correct places for basic concepts***

There is no place in *Class J, Education* for basic terms such as 'Adolescents', 'Youth', 'Adults', and 'Older people'. These terms do appear under certain educational systems, for example, the term 'Adolescents' occurs under 'Schools JLJ', 'Youth' under 'Further education JP' and 'Adults' under both 'Further education JP' and 'Higher education JR'. In all these cases the context implies that they are educands and the terms should have been expressed as 'Adolescent school children', rather than 'Adolescents', and 'Adult students' rather than 'Adults'.

There is no basic place either for 'Women'. 'Women & girls' appears under 'Educands by sex JLEY', but this again implies 'Women students' and not the general term 'Women'. The outcome is that since there is no basic term for 'Women', it is not possible for the thesaurus user to employ the usual search practice of combining the term 'Women' with terms such as 'Paediatricians' at JCWE or 'Accountants' at JCT W to form the compound concepts 'Women paediatricians' and 'Women accountants'.

Although it is possible for the classifier to build a class mark JCWE NW for 'Women paediatricians' by combining JCWE with NW from 'Women KNW' in *Class K, Society*, as instructed at JCQ, this does not help the thesaurus user, as the term 'Women' from Class K would not be included in the Class J Thesaurus, but only in the Class K Thesaurus. However, general terms such as 'Women', 'Adolescents' and

'Adults' are included in *Auxiliary schedules Class 1A*. A possible solution might be to produce a separate thesaurus derived from the Auxiliary schedules, that would be available for use alongside all the individual thesauri for BC2 subject volumes.

Also in *Class J, Education*, there is no place for the concept 'Psychology', although there is a place at JE for the more specific 'Psychology of education'. This is regarded as the main place for Psychology in Class J, and here it is treated almost as though its connotation was that of 'Psychology' generally, and JEN 'Social psychology', is treated as if it were a narrower term of 'Psychology of education'. The term 'Psychology' occurs again at JCPAI, in the compound term 'Personnel psychology'. If the basic term for 'Psychology' had existed, the concept could have been expressed by combining 'Personnel' with 'Psychology'. The basic term for 'Psychology', of course, does exist in BC2 in *Class I, Psychology and psychiatry*, but this class would have its own separate thesaurus containing the term.

### ***Lack of connection between terms and their separated narrower terms***

Although there is a place for students at 'JG Students', in *Class J, Education*, a full array of types of students is not listed following it, but terms for these are scattered under particular educational institutions and systems, for example, 'School children' with 'Schools', 'Graduates' with 'Universities', and 'Special categories of educands' are listed at JV. These specific types of students are not linked to their broader term 'JG Students', so this connection would have to be made by the editor, in order to produce an entry under 'Students' suitable for the thesaurus.

### ***The occurrence of more than one place for a concept***

In *Class W, Arts* there is a tendency for concepts to occur more than once. For example, the concept 'Walls' appears several times, under 'Built structures design', 'Architecture', 'Boundary structures', 'Painting surfaces', 'Interior design', 'Landscape boundaries' and 'Gardens'. In some locations 'Walls' has no narrower terms, whilst in others there are arrays of narrower terms, but these are different at each location.

It should be clear what terms are available for combination with others in the thesaurus. A term should occur only once in the schedule, followed by all the narrower and related terms appropriate to it. In the case of 'Walls', the basic place for the concept would be under 'Structural parts' within 'Built structures design' at WHPG. 'Walls' should not appear elsewhere in the schedules, unless as part of a valid compound term, or when shown as an example of synthesis to represent a compound concept, as discussed below.

The *Thesaurus editor's guidelines* needs to stress that each concept/term should appear once only in the most appropriate location, and having all its narrower terms listed under it or clearly linked to it.

### **Brought-down terms and retroactive notation**

Editing of the schedules has shown that the traditional practice of bringing down terms from earlier in the schedules, using the retroactive notation, to give the user a full view of a subject field, with all concepts that could be of interest, poses problems in thesaurus production.

An example of this practice in *Class W, Arts*, under 'Painting' shows that earlier arts concepts relevant to 'Painting' are brought down and displayed, along with enumerated new concepts. These terms are shown in the electronic source schedule in angle brackets to indicate to the compiler/editor that they are 'brought-down terms'. Apart from the angle brackets the form of the terms may be in the same form as that in their original location, in other words, they do not appear as compound terms 'Painting patronage' and 'Painting competitions'.

Example:

W2F	Patronage
W2I	Competitions
WK	Painting (Operations)
WK2F	<Patronage>
WK2I	<Competitions>

The terms 'Patronage' and 'Competitions' are 'brought down' from 'W2F Patronage' and 'W2I Competitions.' The notation used is retroactive, which means that only the '2F' in the notation for 'Patronage' and the '2I' in the notation for 'Competitions' is used to combine with the notation WK for 'Painting.'

However, at times the 'brought-down terms' are combined with the existing term to appear in the form of compound terms. For instance, in the example above, the term at WK2F might be shown as 'Painting patronage', and at WK2I as 'Painting competitions' although it could be argued that these compound terms would not be acceptable here according to the thesaurus standards. Again the compound terms that do appear are often in a form with parentheses, as in 'Patronage (painting)' and 'Competitions (painting)' which is incorrect for a thesaurus, as seen under 'Terminology' above.

The research has shown that traditional classifiers and thesaurus users have different requirements of the Bliss schedules. The classifier enters the document with its combined class mark in the classified catalogue and makes an entry in the index to the catalogue.

Example:

*Classified catalogue:*  
WK2F  
JMO IFS

*Index to the classified catalogue:*  
Patronage: Painting WK2F  
Blackboards: Primary schools JMO IFS

In contrast, the thesaurus user adds terms (known as descriptors) to documents in a database as separate entities.

Examples:

Painting WK *and* Patronage W2F  
Primary schools JMO *and* Blackboards JIFS

To search for the subject 'Painting patronage', the individual terms 'Painting' and 'Patronage' are combined. Similarly, to search for 'Blackboards in primary schools' the individual terms 'Primary schools' and 'Blackboards' are combined. The same pattern operates if class marks are used in indexing by the thesaurus users. They would be entered as separate entries, 'WK' and 'W2F' and as 'JMO' and 'JIFS', and searched by combining the class marks. Here the thesaurus user is operating postcoordinately, as opposed to the classifier who is operating precoordinately.

The conclusion is that brought-down terms in Bliss schedules would be excluded from the thesaurus, apart from when, by combining with the existing term, they form a legitimate compound term. One rule, among others, for when compound terms will be acceptable in the thesaurus, is when the compound term forms the 'containing head' for an array of terms following it, if these are specific to that compound term.

Example:

W37	Techniques
WK	Painting
WK37	<Techniques> <i>Change to</i> Painting techniques ←
WK38LP	Underpainting
WK38M	Overpainting

Other rules for acceptable compound terms are found in *BS8723-2, 7*.

It will be a matter of debate whether compilers of future Bliss schedules should continue to display 'brought-down terms' that are not synthesised into compound terms acceptable for the thesaurus. Another subject for debate is the future of the retroactive notation, cherished by users of the classification for its simplicity and elegance.

It is likely that the retroactive notation will survive because of its ability to build class marks for acceptable synthesised compound terms such as 'Painting techniques' in the example above. It is also likely to continue to provide the device for creating the shortest possible precoordinated class marks for use in the traditional classified catalogue, as long as it is required for this purpose.

### ***Hierarchical levels: lack of precision***

There are several instances in the schedules where there is a lack of precision in the hierarchical levels. It is perhaps understandable that the exact level of a concept in the hierarchy in a classification schedule does not carry the same significance as in a

thesaurus, where the broader/narrower term (BT/NT) relationship, determined by the level, is supremely important.

An example of imprecise levels occurs in *Class J*. The section 'JH Teaching and teachers, teaching' is divided into three blocks each starting at the same level:

JH	02Teaching and teachers, teaching
JI	02Teaching methods & aids
JJ	02Teaching methods

(The codes 01, 02, 03 etc., in the example above, are used in the computer source file to create the layout for the printed volumes, and the Broader term (BT)/ Narrower term (NT) relationships in the thesaurus, as shown in the section on 'Hierarchical relationships' above.

The example shows that there is a failure to indicate that 'Teachers', 'Teaching aids' and 'Teaching methods' are subordinate to the concept of 'Teaching' at its broadest level of meaning. This lack of a precise hierarchy is probably not significant to the user of the classification. However, from a thesaurus viewpoint, this layout does not show the correct hierarchical relationships between the concepts. The levels have to be accurately displayed, as shown below:

JH	02Teaching
JH4	03^Teachers
JJ	03Teaching methods
JIB	03^Teaching aids

The code '^' inserted before 'Teachers' and 'Teaching aids' shows that although these terms are subordinate to 'Teaching' in its broadest sense they are Related terms (RT) and not Narrower terms (NT).

### ***Over-complex arrays***

Some of the more recent schedules appear to have a problem with some over-elaboration and lengthy arrays. Future schedules might concentrate on shorter arrays leading to greater simplicity and clarity.

### **Problems with software**

Testing has shown that although there is nothing wrong with the software designed by Paul Coates, there is a problem with the burden it places on the schedule compiler in producing a consistent schedule with all the coding correct. Editors and compilers have so many coding and formatting issues to deal with that it is very difficult to avoid errors and not to produce output which is different to what was intended.

Modern interactive input software should remove most of this burden. Software is

needed that checks the consistency at time of input, so that the schedule editor can see immediately the effect of each change. It should not allow the compiler to enter references to class marks that do not exist, for example, or to enter invalid level numbers or codes. The problems with Paul's software are still likely to exist when compiling a new schedule, such as a Music classification, although to a much lesser extent than when tackling the terminological and structural changes required to produce a thesaurus from existing schedules.

## **The way ahead**

### **Structure and terminology**

The *Thesaurus editor's guidelines* must be incorporated into a broader *Compiler's guidelines* to provide the editorial policy for future schedules and the amendment of existing schedules. The *guidelines* will follow the basic principles of the Bliss Classification, build on its framework of carefully analysed relationships and abundance of concepts, but will advocate shorter and less complex arrays, and take into account the *British standard* rules on terminology, structure and relationships. In addition, it may possibly recommend abandoning the display of 'brought down terms' that are not synthesized into legitimate compound terms. The retroactive notation would still be used to create class codes for synthesized compound terms, needed in the thesaurus, but its use in creating precoordinated class marks for complex phrases in classified catalogues may dwindle with time.

### **Software**

We need software that can handle the classification and produce a thesaurus in a form that can be readily manipulated by computer. Work is at present going forward on the development of interactive input software suitable for the web.

### **Ways and means**

It is hoped that a sub-committee might soon complete the *Compiler's guidelines* so that new schedules in the new format may be developed. However, finding persons able and willing to undertake the body of work on amending existing schedules to conform to the new format will be difficult. It has been suggested that it might be possible to open up the schedules to outsider involvement via the Bliss website. This would be a cooperative effort in the form of a "public domain" project on the Internet. This would require some effort to set up and to monitor, as clear guidance would have to be given and some editorial control would be essential.



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*[The author wishes to make it clear that this is not a final and definitive statement, but a report on work still very much in progress. Feedback is most welcome. Please send comments to [jean.aitchison@virgin.net](mailto:jean.aitchison@virgin.net) – Ed.]*

## **The Route to Bliss: adopting BC2 at St Peter's College, Oxford**

*David Johnson*

### **The Oxford library scene**

Once upon a time, Bodley's Librarian had little in common with a Marxist revolutionary. In those long-distant days, few things had the temerity to happen, and those things which did, happened slowly. Not so now. We live in an age when life is not so much 'just one damned thing after another' as several damned things every five minutes. This, apparently, is a good thing. It means, in consequence, that the similarity between our hypothetical revolutionary and Bodley's Librarian, just like the heads of many other organisations in both public and private sectors, grows ever more marked. Espousal of the cause of permanent revolution is now a default position. And, since even Oxford's more or less still independent college libraries are increasingly in thrall to its University Library Service, they, too, are swept along on the same river of change.

During the last fifteen years, Oxford University's libraries have been more or less amalgamated into a single institution. Whilst the colleges remain officially outside this network, they are progressively caught up in its administrative and organisational structure, not least because most colleges use the University's Library Management System.

The Library at St Peter's College decided in principle to reclassify its collections in the Spring of 2003. It decided to do so using BC2 a year later, in Spring 2004. Work on the project began in the Autumn of that year. Meanwhile, as is now inevitable in our age of permanent revolution, life in the rest of Oxford's libraries has moved on apace. Since all institutions, and especially perhaps libraries, are more and more inter-dependent, the impact of change in one institution is now keenly felt elsewhere.

### **Reclassification?**

Our work on reclassification must be fitted in around other jobs. When there has been some free time, we have made very satisfactory progress; but, there is not so much free time as one might have hoped. Hence the significance of the fact that we now live in an environment in which 'change' has become normalised. When the structures which support our work are unstable, the work itself becomes more difficult. In the same way that the redecoration or maintenance of the physical infrastructure of a building obstructs the day-to-day work that goes on inside it, so changes to the administrative infrastructure – however necessary – hinder the real work of the organisation which that infrastructure is designed to support.

When thinking about the process of reclassification, surely the first thing to have in mind is what a very significant change it constitutes in its own right, and what a very significant amount of work it necessarily involves. Shortly before St Peter's began its reclassification, a discussion amongst Oxford college librarians revealed that the number of colleges that would like to reclassify their collections – largely because, like St Peter's, they were still using in-house schemes which are patently inadequate, or very outdated versions of published schemes – ran into double figures. Two, including St Peter's, have since attempted it. But, in light of the amount of work involved, and the fairly minimal staffing in most college libraries, this is not to be wondered at.

Before we began reclassification, I visited several college libraries in Cambridge which had already reclassified their collections (not necessarily using BC2). The first hint that I was given by these Cambridge colleagues was that, before work began, the main classes in the existing classification scheme should be reordered as far as possible into the sequence demanded by the scheme. Reordering the stock in this way was the first job that we undertook. It was also the only time (so far) that I have completely despaired of the process.

### **St Peter's Library**

The Library at St Peter's is extremely short of space. There are currently sufficient volumes to fill approximately 110% of the available shelf-space in the reading rooms. To get the books into roughly the order expected by BC2 not only therefore required a great deal of carrying of heavy materials up and down stairs (the Library is spread over four floors in a building which, like many in Oxford and Cambridge, was not built as a library), but a great deal of shuffling and reshuffling of the contents of the Library. Lack of space meant that books had often to be moved several times before finally being shelved in the desired position.

This initial reorganisation of the stock was done over two weeks with the aid of some very willing and able students. At the end of the first week, when every room seemed to have books piled on desks or on the floor, your present correspondent found himself beginning to think that the job could never be done in the time permitted. Our workforce retained both an absolute belief in what they were doing, and an absolute determination to do it. Thrown to some large extent on their own resources, they re-shelved the whole collection on time and in correct order.

In retrospect, I still think that this decision to begin by reordering the stock before beginning reclassification was correct. It has minimised confusion during the period since then by reducing the need continually to reshuffle materials. Having said that, the old St Peter's classification had grown organically and in an entirely unplanned way. A number of what might be considered in other schemes as main classes, had been included as sub-classes, Anthropology appearing as a sub-set of Geography, for

example. The history of the Library is extremely badly documented; but, presumably, this arrangement reflects an idea that books on Human Geography and Social Anthropology had features in common so that, when the College began to collect the latter (long after it had begun collecting the former), the two were shelved together. This has meant that, although the initial full-scale reordering of the stock has minimised the subsequent need for major reshuffling of the books, it has by no means avoided the necessity of doing so altogether.

### **Users' reactions ...**

A pleasant surprise has been the way in which library users have coped with the reordering and reclassification. In fact, the whole process has seemed to cause far less confusion than we had feared. There have been occasional problems, for example the student who (quite reasonably) wanted to know why a book on Econometrics had been classed in Theology. Since the notation used for Theology in the old St Peter's scheme always began with the initial letter "T", and since class "T" is used in BC2 for Economics, the source of the confusion is obvious. But, until the reclassification is finished, it is difficult entirely to avoid similar difficulties.

We have perhaps benefited here from the fact that one of the series of changes taking place in the Oxford University Library system is the reclassification of all the open-shelf collections by Oxford University Library Service libraries to the Library of Congress Classification, a decision taken shortly after the resolution by St Peter's to adopt BC2. This has at least meant that Oxford students are often habituated to the inconveniences of reclassification. Many are used to the idea that books are shelved using two quite different classification schemes, and to the notion that books are being progressively transferred from one location to another.

### **... and views of main classes**

I am not now clear how detailed a map of our proposed work we had when we began the reclassification. However detailed it was, we have certainly not followed any route that we might have sketched out. We began the project with Philosophy, perhaps for no better reason than that it is the first main class in the classification and the schedule – another key point – was readily to hand. It soon became clear that, as we worked through the collection, we would be unable to treat the existing main classes as anything like discrete units. In part, this was a result of policy decisions. Thus, in the case of Philosophy for example, works on political philosophy were previously split between the old St Peter's Philosophy, Politics and, to a lesser extent, History classes. It was decided that Political Philosophy should be collocated in the new class 'R'. Hence, the decision to reclassify Philosophy, led us by default into class 'R', and for that matter several other main classes as well.

This rethinking of the way in which classes have been considered has so far been most obvious in main class 'R', Politics. We have tried to make our decisions on the

basis of practical considerations only (the principle instilled by Library School teachers, but often forgotten in practice, of doing that which would be most helpful to the reader), rather than using them to embody preconceived notions of how particular disciplines should be viewed. Nevertheless, there has also been a desire to embody particular views of disciplines, especially amongst a number of the academic staff. Thus, the College's senior Politics fellow suggested that, as far as he was concerned, Politics should be considered as a branch of History. This has meant in effect that the new class 'R' contains a considerably smaller range of material than the old St Peter's Politics class. Class 'R' will therefore be more or less restricted to Political Philosophy, and to books dealing with the more theoretical or conceptual aspects of the subject. Gordon Brown became History long before the opinion polls indicated he was about to become so, since all books on contemporary political events and institutions are henceforth to be classed in main classes 'L'-'O'.

One of our principal objectives in the project is the collocation of books on similar subjects. The importance of this was emphasised a couple of years ago by an undergraduate who was reading Theology and, in her finals, took an optional paper on the Reformation. After her exams were over, she spent some time helping Library staff undertake a stock-check. Whilst doing this, she discovered that the History section of the Library contained a significant collection of books dealing with aspects of the Reformation. It had not previously occurred to her that this might be the case. When preparing for her exams, she had only used books from the Theology section. Still more concerning, she had gone only to the shelves to find what was there, rather than looking at the OPAC which would have led her to relevant material however classified.

It is remarkable how often undergraduates feel that a particular area of academic study belongs to 'their' particular discipline and that, therefore, it is wrong to regard it as equally a part of any other field of academic enquiry or of interest to anyone working in a different discipline. [*Not only undergraduates, apparently! – Ed.*] The need physically to bring together books on similar subjects, so reducing the inevitable difficulties afflicting catalogue-phobic students, is thus paramount. That way at least it is to be hoped that if they track down one book, they will be led to see that the Library holds others on the same or similar areas. Since the previous classification scattered books on similar subjects, and indeed different copies of the same book, we have been inevitably led to make a rather crab-like progress through the classification. Thus, as explained above, the reclassification of only one class, Philosophy, led us into Politics, and for that matter also into other classes including those for Religion, Mathematics and Science. Having found ourselves in Politics, and having taken the decisions that we have done, we were then led to classes 'L'-'O', that is into classes which as yet exist only in draft form. Typically in a Library such as that at St Peter's, the most substantial classes are those for History and Literature. We could not, therefore, have avoided using unpublished schedules for long, but I had rather naively hoped to put off that day a little longer.

## **Using BC2 – theoretical objections and practical problems**

Talking to colleagues in other libraries, it is obvious that they doubt our choice of BC2 on two principal grounds: (i) the perceived additional cost of using a scheme for which it is much more difficult to find class marks which can be copied; (ii) the difficulty of using a scheme which is incomplete in its published form.

I am uncertain as to the significance of the first of these two points. Cost is likely to be a very significant issue for most of those bodies which manage library and information services. It is assumed that the use of LCC or DDC must be considerably cheaper because classifications can simply be copied from elsewhere. This gives no thought to the quality, or utility, of the resulting arrangement, of course, but equally I am not aware of any definitive study on the economics of classification.

Comments made by those working on Oxford's project to reclassify its University Library collections using LCC suggest that the financial savings which result from copy-classification might not be so great as has been assumed. Certainly, we have used as an aid the classifications of books assigned by Cambridge college libraries using BC2. But, obviously, although there is a degree of overlap between St Peter's and the Cambridge college collections, it is very much easier to find a book with an LC classification, than to find an equivalent BC2 classification. Moreover, since BC2 offers so many different options, and so many possibilities for different levels of detail, no library could expect to copy a BC2 class mark in the same way as is done with LCC.

The extensive need to rely on draft schedules now seems to me the most significant difficulty facing a librarian trying to reclassify using BC2. Although various drafts exist, they are not necessarily readily available or easily comparable. It would be helpful if these drafts were more easily accessible and located all in one place (for example, if they could be made available via the BCA website). This would greatly aid the work of the classifier. It would also meet at least some of the fears that librarians have about the lack of available schedules and emphasise the fact that, whilst many schedules still remain to be published, a considerable amount of work has already been done towards their completion.

In sum, I think it seems fair to say that we have begun more slowly than we had hoped, although this is not a particular concern since continuing and competing claims for attention seem an inevitable fact of life. Students have coped better than expected with the disruption. The fact that the number of loans has risen by some 15% per annum suggests that users have in no way been deterred by the reclassification. We remain clear that copying classifications has obvious disadvantages; and, unclear as to how significant is the saving in expenditure this enables. We are pleased with the progress made, but concerned as to the effect that using draft schedules may have. This is a problem which necessarily cannot quickly be resolved; but, in the meantime, it could be ameliorated.

