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Bliss and Ranganathan: Synthesis, Synchronicity or Sour Grapes?

Abstract: The concerns of the past century follow us into the next. Despite continuing technological advancement we find ourselves overwhelmed by a virtual tidal wave of information. Instead of reinventing seemingly novel solutions, it is appropriate to reexamine the successes and failures of the past. In light of the increasing focus on faceted classification as a potential approach to the problems of organizing conceptual space, it is appropriate to direct critical attention to the convoluted nature of the interaction between Henry Evelyn Bliss and S. R. Ranganathan. Drawing upon the methods of historiography, this is a review of original documents and an analysis of primary examples drawn from the correspondence between Ranganathan and Bliss currently in possession of the Rare Book and Manuscript Library, Columbia University and Archives and Special Collections at the Morris Raphael Cohen Library, City College of New York. This analysis will serve as a springboard to further exploration of the synthetic nature of faceted classification.

1. Introduction

The concerns of the past century follow us into the next. We find ourselves overwhelmed by a tsunami of information despite continuing technological advancement and an overabundance of recycled theory masquerading as new paradigms for knowledge organization. Wry comments center upon the vast amounts of time and money being spent to rediscover what information science knew in the 1960's (Lesk, 1997 p. vi; Soergel, 1999 p. 1119). Our lamentation "Where is the information we have lost?" (Shera, 1966) bears a striking resemblance to the concerns fueling the Documentalist movement of the late Nineteenth century. "Qui sci! ubi scientia habenti est proximus -- Who knows where knowledge may be had is nearer to having it!" (Rayward, 1990 p. 25, 41). Rather than endless reinvention of seemingly novel solutions, it is time to reexamine the successes and failures of the past in search of solutions for the problems of knowledge organization today.

At a secondary level of inquiry this paper heeds the call to reexamine the history of ideas and conceptions and to search for evidence which will challenge or refute accepted assumptions and orthodoxy. Such inquiry is essential to the health of any discipline, since the process of critical illumination of the past can provide a renewed sense of vision purpose and identity (Buckland, 1996 p. 82-3; Hahn and Buckland, 1998). It is hoped that this exploration of the classification theories of Henry Evelyn Bliss and S. R. Ranganathan will add to the increasing awareness of the rich intellectual history of knowledge organization. Tracing the development of the theory of faceted structures will uncover the substructure of faceting and may provide a template for the solution of the pressing problems of knowledge organization today.

2. Overview – Henry Evelyn Bliss

Henry Evelyn Bliss, like so many members of the generation just prior to his, engaged in the pursuit of the elusive universal classification of knowledge. Rather more sanitary and ultimately safer, but no less addictive than collecting rare specimens from around the world, this pursuit nonetheless absorbed and chiefly occupied his thoughts throughout his entire life. Bliss served as librarian at the College of the City of New York from 1891 until 1940 (Bobinski et al., 1978 p. 76). Without formal training in librarianship and keenly aware of
the limitations of the current systems of classification, Bliss engaged in an exploratory study of the Expansive Classification with Charles Ammi Cutter in 1903.

Between the years of 1903 and 1912, Bliss crafted a framework for the practical application of his bibliographic principles (H. E. Bliss, personal communication, December 22 1937; Thomas, 1997). In 1908, with the relocation of the library at City College of New York into new quarters, Bliss realized an opportunity to reclassify the extant holdings of 50,000 volumes according to his evolving system of Bibliographic Classification. Publication of Bliss's scheme in an article entitled *A Modern Classification for Libraries, with Simple Notation, Mnemonics, and Alternatives* revealed a radically new approach to classification (Bliss, 1910). Emphasizing collocation of related subjects for the convenience of readers as did the Dewey Decimal Classification, Bliss's system also provided simple mechanisms for adaptability and for revisions necessitated by the expansion of knowledge. This new system drew renewed attention to the traditional conception of the universe of knowledge by emphasizing the fundamental importance of reflecting the precise composition of this universe in the classificatory structures created as organizational systems (Miksa, 1994). Placing the convenience of the reader as the paramount consideration while answering the call of William Warner Bishop (librarian of the University of Michigan) for a "clear, modern, scientific classification" (Bishop, 1906), the Bliss Bibliographic Classification relied on the educational and scientific consensus for systematic coherence (Bliss, 1910).

In 1933 a frequent correspondent, Lawrence A. Burgess of the Cardiff Public Library in Wales, wrote a letter that deeply affected Bliss. Burgess sent news of a newly published classification system by Mr. S. R. Ranganathan of Madras, India. Later that year Bliss read a *Library Journal* review of the same work (Merrill, 1933). He subsequently found the volume at the library maintained by his publisher, H. W. Wilson. Bliss wrote Ranganathan on February 21, 1934 to request a copy of the *Colon Classification* and offered a copy of the *Organization of Knowledge in Libraries* in exchange (H.E Bliss, personal communication, February 21, 1934).

### 3. Overview -- S. R. Ranganathan

While engaged in his first faculty position as an instructor of Mathematics at Presidency College in Madras, a colleague prepared and submitted an application in Ranganathan's name for the newly created position of University Librarian. Unaware of this occurrence, Ranganathan was unexpectedly summoned to interview for the position. Lacking knowledge of library issues, Ranganathan appeared bearing an armful of his own publications. As the lone candidate with research experience, he was awarded the position (Ranganathan, 1962; Ranganathan, 1972).

Training for this newly created post included a tour of foreign libraries that was to commence in England at the British Museum Library and conclude in New York at the Pratt Institute. Ranganathan presented himself in September of 1924 to the Principal Librarian at the British Museum Library. After a discussion of the antediluvian practices at the British Museum Library, it was suggested that Ranganathan study at the University College of London's School of Librarianship where Ranganathan's course work with W. C. Berwick Sayers at University College indelibly affected the structure of the resultant Colon Classification (Ranganathan, 1965; Ranganathan, 1972; Kumar, 1992). Thus Ranganathan's chosen format of Canons for the dissemination of his theories echoes Sayers' use of the same structure (Sayers, 1915).

Ranganathan notes in the *Prolegomena* that it was his study of the Dewey Decimal Classification and realization of its profound rigidity that exerted primary influence on the form of the Colon Classification. In conversations with Sayers the embryonic classification that had been inspired by the Meccano set, began to take shape (Ranganathan, 1965 p. 16-17; Ranganathan, 1967 p. 106-107). During the "enforced idleness" of the return voyage to India
in June of 1925, and with the printed catalogue of the Madras University Library in hand, Ranganathan began to experiment with his new scheme. From 1925 until 1932, Ranganathan implemented the Colon Classification at Presidency College library, submitting the completed scheme for publication in 1933 (Ranganathan, 1957 p. 420; Ranganathan, 1965 p. 16).

4. Convergence

Bliss and Ranganathan entered a time replete with classification systems with substantial but differing limitations. The works of Bliss and Ranganathan mark that moment in time when classification theory broke free from the moorings of essentialism. The break from essentialist thought that Bliss began in 1910 with his skeletal outline of a system of classification and completed in 1933 with his two volumes of theory was carefully nurtured by Ranganathan until it matured into the present-day notions of faceted classification. Bliss's original work, though essentially enumerative, does contain various synthetic and analytic elements. A reflective Ranganathan assesses the intellectual role of Bliss in his work in the introduction to the *Prolegomena of Library Classification*.

... When one is engaged on a problem, the most useful ideas occur suddenly ... It is a feature of these ideas that they always seem at first inspired ... But before long, and usually before our first notes have been developed, there comes awakening. Somebody else, we find, has thought of the same thing before, and has expressed it all in some well-known work. ... I found sleep impossible. Seeing my restlessness and probably disturbed by it, a relation ... gave an innocent piece of advice. 'Why don't you take up a book and read for awhile.'... this suggestion recalled two books which I had set aside for later study, when at the first attempt I had found them unmanageable. They were the books of Bliss on Classification. My mind was by this time so saturated with the theory of classification that so far from these two books proving difficult and causing sleep before midnight, in a single movement, I had forged through their entire range of 740 pages. My mind was pressed through these pages in so intimate and critical a way that my own book emerged clear cut as from a mould [sic] (Ranganathan, 1937 p. xii-xv).

By using as a framework Ranganathan's remarks at the Bliss Centenary Address in Bangalore on December 16, 1970 the convergent and tangled experiences of these two theorists can be explored. Analysis of correspondence during this time confirms that by November of 1935 the exchange of extant works was complete (H. E. Bliss personal communication, May 22, 1934; S. R. Ranganathan personal communication, November 9, 1935). In the Centenary address, Ranganathan stated that "These two volumes [The Organization of Knowledge and the System of the Sciences and The Organization of Knowledge in Libraries] intrigued me very much ... his language was so involved and his terminology was so unfamiliar to me that a thorough study of both the volumes was difficult." Yet in his correspondence with Bliss Ranganathan had written "I am eagerly looking forward to your book as I am made to expect from your other two books that there will be many features common between your scheme and mine" (S. R. Ranganathan, personal communication, November 9, 1935).

In reference to the commonalities that existed between the two systems, Ranganathan addressed Bliss's observations of similarity. The device termed "composite" classification by Bliss and "[synthetic] construction of class numbers by combining isolates from different schedules in the scheme" by Ranganathan is in evidence in both schemes (Ranganathan, 1971). In his own review of the *Prolegomena*, Bliss compares the similarity of the notational structures of the two systems "using the example of Overtime in Agricultural Industry in India in the 1930's -- X9J:9511:44:N [Colon] -- compared to UAGH,qY or TGH, UA, qY (depending upon the approach Economics or Agriculture) [Bliss]. This kind of complex
classification the *Prolegomena* misterms *synthetic*. Properly *synthetic* is opposed to *analytic*. The better term would be *composite*" (Bliss, 1938 p. 303).

Bliss's perception of Ranganathan's failure to acknowledge an intellectual debt to him, the rising international acclaim for Ranganathan's work and the consequent disregard of his own classification continually nettled Bliss. In a conversation with Eugene Garfield during July of 1954, at the end of his life, Bliss referred to Ranganathan as an "upstart" and criticized Ranganathan for never giving credit to Bliss for the elements of composite classification and synthesis utilized by Ranganathan (Garfield, 1974). This public display of bitterness appears to be the product of sour grapes.

There were many such instances of strong words about Ranganathan. In a letter to Lawrence Burgess dated March 1, 1938, Bliss stated "Regarding the term synthetic as applied to classification for bibliography or for librarians, I feel partly responsible for bringing it into the professional literature." He indicated that he first used this term on p. 70-7 of *Organization of Knowledge and the System of the Sciences* and featured the term synthetic in principles 9 and 10 (Bliss, 1929 p. 157). In his 1938 paper titled *Theoretic Principles of Bibliographic Classification*, prepared for the Fédération Internationale de Documentation, Bliss asserted that "my use of the term is broader and more authentic" (H. E. Bliss, personal correspondence, March 1, 1938). In his review of the *Prolegomena* for the April issue of the *Library Quarterly*, Bliss referred to Ranganathan's misuse of the word "synthetic" for complex classification and stated that the better term is "composite" as used in his own works of theory (Bliss, 1938). Though unhappy about what he saw as misappropriation, Bliss continued to correspond with Ranganathan, often poignantly, finding in him a kindred spirit embattled, ignored and often denigrated by his fellow countrymen.

Ranganathan's closing statements of the Centenary address are revealing. "Our correspondence continued now and again. But somehow or other it stopped after 1945. About 1949...I sent to him some of our new results [from the Library Research Circle in Delhi]. I was very surprised to get a letter from him which read, "I am no longer interested in all such things. I don't want to examine the paper that you have sent me." This was a great surprise to me. I was wondering what would have made him say that. Later on I heard that he had retired." Could he be referring to this letter written by a librarian in response to a query from Ranganathan about receipt of the work? "Copy of your book Reference Service and Bibliography sent to Bliss as you intended. He retired from service at the College in 1940." (unsigned personal correspondence from the Librarian at City College, October 16, 1941). A handwritten notation dated October 21, 1941 on Ranganathan's letter indicates that Bliss sent this volume back to the librarian for addition to the collection.

In the closing remarks of the Centenary address, Ranganathan discussed the tragic loss of interest in classification exemplified by the refusal of Bliss to receive Ranganathan as a visitor, "Actually I had learnt that he had retired in 1945 or so. Then I could understand why he had lost all interest in the subject. However my interest in him would not cease. I happened to visit the USA for about 7 months in 1950. ... I wrote to Bliss that I should like to meet him...I had a sad reply from him: 'I am stone deaf. It will be very difficult for us to converse. It will be very embarrassing for me. Therefore do not come" (Ranganathan, 1971 p. 223). Neither the Bliss paper collection at Columbia University nor the Bliss archive at City College of the City University of New York contains correspondence between the two men during the late 40's or early 50's. But, heeding the appeal of D. J. Campbell and C. B. Freeman to encourage the organization of libraries using the Bliss Classification and to cooperatively share the work of updating and keeping the system viable, Bliss actively served as editor of the Bliss Classification Bulletin until his death. Obviously, these are the actions of a man still firmly engaged in the issues of classification and not those of a man content to ignore them.
5. Conclusion

The classification theories of both Bliss and Ranganathan are grounded in the processes of analysis and synthesis. An unexpected aggregation of terms, the concepts of analysis and synthesis traditionally reside at opposite ends of a continuum. Analysis is "The resolution or breaking up of anything complex into its various simple elements, the opposite process to synthesis; the exact determination of the elements or components of anything complex." (Simpson/OED, 1989). In the Centenary address, Ranganathan described the Colon Classification as an analytico-synthetic scheme to reflect the dual processes of analyzing a subject into facets that are then synthesized [reassembled] into class numbers. Ranganathan described the Bliss Classification as a composite scheme or as a scheme that is "analytico-synthetic in some measure" (Ranganathan, 1971 p. 220).

Bliss and Ranganathan use these terms differently. According to Bliss (1933) "Classification for libraries proceeds structurally from the general to the special, analytically; but functionally should lead also from the special to the general synthetically" (p. 38). Bliss termed as synthetic his own devices of logical subordination and practical collocation. Logical subordination [gradation by specialty] dictates the proper relations of general to specific classes and assists in determining the successively logical structure of the Bliss Classification system. Synthesis is also in evidence in practical collocation by bringing together on the shelves materials that are "logically or scientifically unlike" but are collocated according to the needs of the readers (Bliss, 1933 p. 43; Thomas, 1997 p. 64).

Both theorists created their classifications in response to frustration with the inability of the Dewey Decimal Classification to adequately cover the subjects of complex or composite books (Bliss, 1929; Ranganathan, 1965). The first edition of the Colon Classification consisted primarily of a set of eight devices along with a comprehensive series of rules to aid in the construction of class numbers. In the case of compound subjects, the notations of various aspects of the book are linked by the use of the colon device (Ranganathan, 1933). The Bliss classification provides a list of seven "systematic schedules" for use in constructing class numbers according to the principle of "composite specification" (Bliss, 1933 p. 320-3). Both processes are nearly identical in their use of synthesis. Yet Ranganathan gives equal weight to the processes of analysis and synthesis, while Bliss provides us with primarily synthetic devices such as his "systematic schedules". Bliss also relies heavily on enumeration of alternate locations and fails to provide in-depth instructions for the process of analysis as Ranganathan does.

Synthesis, synchronicity or sour grapes? Sour grapes would be a tidy summation of the situation, but describes equally the attitude of both men. The quixotic struggle to gain recognition and acceptance in which both men were engaged at the time of their correspondence left them acerbic in their dealings with each other and those who did not agree with their theories. Synchronicity refers to the parallel development of an intellectual or physical construct by two or more individuals who are usually not in contact with one another. There are numerous instances of such occurrences. Newton, Leibnitz and the discovery of differential calculus; Edison, Gray and the telephone; and Darwin, Gray and evolutionary biology are but a few examples. Complicating this interpretation is the fact that Bliss and Ranganathan not only corresponded but also exchanged copies of their works.

But Ranganathan's true brilliance arises from his ability to synthesize the structures of others and to take them to a higher level of development, as indicated by his choice of Sayers's Canon device. In addition, the format of the first edition of the Colon Classification mimics early editions of the Dewey Decimal Classification. Ranganathan nurtured the synthetic devices created by Bliss until they flowered in his faceted structures of the 1940's.

Faceted or analytico-synthetic classification groups entities by conceptual categories through analysis and not through division. Instead of a top-down or deductive process of dividing a set of entities according to application of one immutably essential characteristic at
each level in the hierarchy, faceting allows the user to choose the characteristic(s) by which the entities will be grouped. Faceted systems result in responsive and highly adaptable classificatory structures (Williamson, 1998 p. 117-8). When used as a tool to provide dynamic and fluid access to the materials produced by the concomitant increase in interdisciplinarity and in the complexity of modern thought, faceting transcends the static representation of materials in traditional classification systems. The potential for this nonintuitive approach to knowledge organization requires further exploration of the origins of this elegant theory.

Notes
1 This statement, borrowed from Poole’s Index, appeared on nearly every publication from the Institute Internationale de Bibliographie created by Paul Otlet and Henry La Fontaine, founders of the documentalist movement.
2 Document in the Henry Evelyn Bliss archive at Archives and Special Collections, Morris Raphael Cohen Library, City College of New York.
3 “I found the enumerative scheme of DC failing to give coextensive class numbers. I could not express what fault in DC was responsible for it. I could not then say what was needed was faceted classification. But something was engaging my thought continuously. While in that condition, I happened to see a Meccano set in the Selfridges store in London. That gave me the clue. It made me feel that the class number of a subject should really be got by assembling ‘Facet Numbers’ found in several distinctive schedules, even as a toy is made by assembling an assortment of parts.” (Ranganathan, 1967 p. 106-107; Ranganathan, 1965 p. 16-17).
4 “We study things by examining their parts and components and also their relations, and we often take them apart for the purpose; we dissect or analyze them. To put the things together again—that is another matter ... Both of these processes, the composition or putting together of like components, and the construction of complex things from unlike components, both are termed synthesis, which is used— and sometimes confused— in two different senses” (Bliss, 1929).

Archives consulted
Henry Evelyn Bliss Papers, Rare Book and Manuscript Library, Columbia University in the City of New York. All personal correspondence unless otherwise noted is held at this institution. Henry Evelyn Bliss Papers, Archives and Special Collections, Morris Raphael Cohen Library, City College of New York.

References


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