

Development of Terminologies in the Library Catalogue Codes since 1841: An Assessment Study

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By

Anupam Ghosh

Supervisor

Dr. Goutam Maity

Professor

Department of Library & Information Science
Jadavpur University

Department of Library & Information Science
Jadavpur University
Kolkata
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Cataloguing deals with the description of documents. Catalogue codes are the manifestations of rules and examples for practical cataloguing, according to some intrinsic philosophy. Like other “sciences”, a well-defined terminology is needed to communicate ideas as well as correct practice in the field of library cataloguing.

It is an inevitable component of any catalogue code. At the beginning of Cutter Rules for Dictionary Catalogue (1876), we find a separate section on terminologies. Dr. S.R. Ranganathan was one of the pioneers in the field. He tried to develop cataloguing terminologies according to some guidelines and canons. The results were published in *Classified Catalogue Code* (1934), *Headings and canons* (1955) and many others.

2. Selection of the Research Problem

To understand the meaning of terminology, let us know the word term. There are many ways to describe concepts like symbols, formulas, etc. For example, H₂O stands for water. But term is the verbal designation of a general concept in a specific subject field and terminology is the study of structure, formation, development, usage and management of terms in various subject fields. From this definition we are informed about an important character of terminology, i.e., its ever-changing nature.

According to Prasad (1983)¹ terminology is a field where changes are frequent and at the same time terminologies enrich the concerned fields of study to a better perspective.

Terminologies are very essential in growing a subject, as they express the concepts related to the subject in an organized manner. Ranganathan (1967)² in his famous book *Prolegomena to library classification* has discussed the vagueness of our natural languages

¹Prasad, K.N. (1983). *Development of terminology in the field of library classification with special reference to Indian school of thought: a case study* (Doctoral dissertation). Retrieved from <http://dspace.vidyanidhi.org.in:8080/dspace/handle/2009/4547>

²Ranganathan, S. R. (1967). *Prolegomena to library classification*. New Delhi. Asia Books.

in describing a concept. He devised some canons related to terminology, which are discussed as canons of verbal plane. He made a thrust on context, currency and reticence.

Ranganathan (1955)³ also included terminologies as an essential component of catalogue codes. According to him, “to frame a code of rules entirely in a natural language is to code trouble sooner or later.” Like other terminologies, cataloguing terminologies are also not static, but very much dynamic in nature.

Terminologies change as they grow. Cataloguing terminologies are also not exceptions. At the time of studying different catalogue codes, new additions, changes of terms as well their definitions are frequently noticed. In recent published Resource Description and Access (RDA), which may be termed as AACR III, much dispersions in terminologies from AACR II are found. Ghosh & Das (2012)⁴ have made a comparative study of terminologies in AACR II and RDA. They identified 4 cases— term changed but definition unchanged, term unchanged but definition changed, both term and definition changed, and both term and definition unchanged. Empirically, some reasons of changes are identified like irrelevancy of terms, origin of new concepts, increasing precision, etc. Rodilla (1998: 88-94) (as cited in Munoz (n.d.))⁵ mentioned three criteria for evaluating terminologies namely, precision, emotional neutrality and stability, Precision means strict definition of terms, their monosemic nature, etc. Emotional neutrality ensures the existence of a term

³Ranganathan, S R. (1955). *Headings and canon: Comparative study of five catalogue codes*. Madras: S Viswanathan.

⁴Ghosh, A., & Das, A. (2012). Concept to term approach: a terminological study of catalogue codes. In *Trends and development in library and information science* (pp. 657-668). New Delhi: Zenith Publications. (Published as the proceedings of SAARC Conference for Library and Information Professionals, 2012).

⁵Munoz, M. S. (n.d.). *Terminology: Introduction*. Retrieved April 23, 2021, from <http://ocw.um.es/cc.sociales/terminologia/material-de-clase-1/unit-i.pdf>

within a specific domain of knowledge. Stability refers the validity of a term during a long period of time.

After conducting a comprehensive literature search on LISA, ILSA, Shodhganga and various other directories of doctoral dissertations (see, Chapter-2: Literature Review), it was observed that in the domain of cataloguing, several terminologies are being used for proper communication and these terminologies underwent a substantial change from time to time.

3. Statement of the Problem and Research Questions

The problem of this research may be stated as “Assessment of the evolution of terminologies in library cataloguing codes since 1841.”

The statement of the research problem as furnished above along with a set of following relevant questions warrant to be resolved in course of this research work.

- i. Is there any change in use of terminologies in cataloguing over time? If yes, what are the changes in terminologies in library catalogue codes over time? How can they be known? What methodology should be adopted to measure such changes?
- ii. Is there any change in the definitions of the terms in library catalogue codes over time? If yes, how are the definitions changing in library catalogues over time? Are the changes capable to precisely describe the concepts? How can they be known? What methodology should be adopted to understand this?
- iii. Are there any canons or guiding principles for assessing terminological changes in cataloguing? What are those? Is it possible to examine the changes in cataloguing terms in the light of the canons or guiding principles for assessing terminologies changes in the area? How can these be known? What methodology should be adopted to comprehend this?

4. Objectives of the Study

The objective of this research was to assess the evolution of cataloguing terminologies as well as the standardization of terms by studying various catalogue codes over time.

In order to achieve the aforesaid objective, attempts were made:

- To show the evolution and occurrences of cataloguing terms in terminology sections of various catalogue codes, along with their synonyms and homonyms, and rank them according to their frequency of occurrences.
- To show the changes of terms and their definitions over time in different catalogue codes.
- To evaluate the changes in cataloguing terminologies, i.e. the changes in terms and their definitions, in the light of the canons/guiding principles prescribed by the cataloguing authorities.

5. Methodology

Survey method had been adopted to achieve the objectives of the study. Different catalogue codes, originated in different period of time, were studied for the purpose. Terms along with their definitions were collected based on some criteria. Substantial terms were sorted out based upon certain criteria. The range of variations in both designations and definitions were measured and assessed, keeping in view relevant canons/guiding principles.

5.1. Source Data: Selection of Codes

This research work made an endeavour to study catalogue codes in English language. Thirteen (13) catalogue codes, starting from RDC 1876, were chosen for the study. The selection was based on literary warrant, i.e. discussions of the codes on the literatures as well as in the syllabus of the different LIS schools in India. The British Museum code, as we know is considered the first established English language catalogue code, and is considered as a pioneer in using many relevant concepts on its famous “91 rules” like

corporate body, cross references, etc. Though the code has no separate terminology section, but almost all the concepts as used on this code were also used and defined by the later codes. So, this study started from 1841, and physically the first code covered in the study was RDC 1876. The 13 codes covered under study are listed below:

1. Rules for dictionary catalogue by C.A. Cutter, 1st edition, published in 1876, i.e., RDC 1 (1876)
2. Rules for a dictionary catalogue by C.A. Cutter, 4th edition published in 1904, i.e., RDC 4 (1904)
3. Cataloguing rules; author and title entries [AA code] published in 1908, i.e., AA (1908)
4. Classified Catalogue Code, 1st edition, published in 1934, i.e., CCC 1 (1934)
5. Classified Catalogue Code, 3rd edition, published in 1951 i.e., CCC 3 (1951)
6. Classified catalogue code with additional rules for dictionary catalogue code, 5th edition, published in 1964, i.e., CCC 5 (1964)
7. ALA cataloguing rules for author and title, published in 1949, i.e., ALA (1949)
8. Anglo American Cataloguing Rules (British Text), published in 1967, i.e., AACR 1 BT (1967)
9. Anglo American Cataloguing Rules (North American Text), published in 1967, i.e., AACR 1 NAT (1967)
10. Anglo American Cataloguing Rules, 2nd edition, published in 1978, i.e., AACR 2 (1978)
11. Anglo American Cataloguing Rules, 2nd revised edition, published in 1988, i.e., AACR 2R (1988)
12. Anglo American Cataloguing Rules, 2003 update, i.e., AACR (2003)
13. Resource Description and Access, 2016 release, i.e., RDA (2016)

5.2. Collection of Data: Selection of Terms

Terms were selected on the basis of the categorization made by Dr. S R Ranganathan⁶. They are as follows:

- Author or responsibility related: Corporate body, Sponsor, etc.
- Catalogue related terms: Union catalogue, etc.
- Document or work related: Adaptation, etc.
- Edition related terms: Title edition, etc.
- Entry related terms: Main entry, etc.
- Heading related terms: Access point, etc.
- Preliminary page related terms: Added title page, etc.
- Sections of entry related terms: Imprint, etc.
- Title related terms: Running title, etc.

A tabular data collection sheet was used for each term containing five columns, viz. Term, Definition, Type, UF, USE, and Remarks (if applicable) (See Appendix 1).

UF (used for) and USE are used for synonymous terms. If a term is connected to another term (s) by 'see' reference, then UF or USE column is filled up. If a term is individualized by a subject within a parenthesis then the term pair is considered as homonyms. For example, Chart and Chart (Cartography) are considered as homonyms.

5.3. Analysis

Analysis of data has been made with the following aspects:

5.3.1. Term Analysis

For analysis, 321 terms from 13 catalogue codes under nine categories had been selected.

1. **Used Term:** Used term means the terms having a definition against it under the terminology portion of each catalogue code. Used terms are classified in to nine

⁶ Ranganathan, S.R. (1964). *Classified catalogue code with additional rules for dictionary catalogue code* (5th ed.). New Delhi: Asia Publishing House.

major divisions Author related terms, Catalogue related terms, Document related terms, Edition related term, Entry related term, Heading related term, Preliminary page related terms, Title related term and Sections of entry related term. Occurrences of each term under each category are discussed critically.

2. **Unused Term (Synonyms):** Unused term means the terms in each catalogue code against which “see” reference has been used. In other words, unused terms are those terms which are replaced by another terms in a catalogue code. A critical study is made for unused terms also by stating their probable cause of non-preference in catalogue codes under study.
3. **Homonyms:** Homonyms are those terms individualized by a qualifier in parentheses. For example, Chart and Chart (Cartography). Few Homonymous terms are found in some catalogue codes. Their occurrences have been indicated with probable cause of occurrences.
4. **Rank Analysis of Used Terms:** Terms were ranked based on their occurrences in various catalogue codes. In 13 catalogue codes, a total of 321 terms were found under eight categories. The terms were arranged in decreasing order based on their occurrences. The rank quotients were calculated as the ratio of their occurrence with the total number of codes (i.e. 13). The core groups of terms were selected as the terms having rank quotients more than Fifty (50) percent. The core terms were examined according their types.

5.3.2. Analysis of Variations in Definitions

This section shows the variations in definitions of terms in different catalogue codes. This also shows the evolution of the concepts in different era. For the study of the definitions, the core terms having more than 50% occurrence value as used terms in 13 catalogue codes under study were taken on account. About 250 plus definitions of 27 core terms in 13 catalogue codes were found.

5.3.3. Assessment of Terminology

For the purpose, 27 terms and their 164 definitions from nine catalogue code (among 13 codes) were selected. The catalogue codes under the study were divided into five groups – RDC group, ALA group, CCC group, AACR group and RDA. For the evaluation, the first and the last codes of each group were taken into account. So, the codes selected for terminology evaluation were RDC 1 (1876), RDC 4 (1904), AA (1908), ALA (1949), CCC 1 (1934), CCC 5 (1965), AACR 1 BT (1967), AACR 2003 and RDA (2016). AACR 1 BT had been given priority over the North American text because of the closeness of the British text with the Paris principles, and Lubetzky's idea of case code (not condition code) was more than that of the North American Text⁷.

Terminology contains two parts – The designation or terms and the definition. To access a terminology under a subject domain, it is necessary to establish some parameters to access the terms as well as their definition. In this research project, an eleven-point scale is constructed by following the guidelines of ISO 704: 2000, Ranganathan's canons of terminology and Martin Scheele's Guidelines for Terminology. The eleven check points are as follows:

A. For Terms

- Homonym free: Monosemy should be maintained, i.e., one term-many concepts should be avoided, e.g., Chart and Chart (Cartography) are homonyms. [T1]
Synonym free: One concept many terms should be avoided. [T2]
- Transparency: Should be transparent in conveying the meaning. [T3]
- Consistency: Species terms should be consistent with genus term, e.g., author, personal author, corporate author, etc. [T4]
- Concreteness: Terms should be concrete as far as possible, i.e., should have better understandability that create a thrust on human mind. [T5]

⁷Tikku, U.K. (1983). Anglo-American cataloguing rules 1908-1978: a state of the art. *Annals of library science and documentation*. 30 (3-4). 151-165.

- Native language preference: Terms should be based on native language (in this case English) as far as possible. [T6]
- Linguistic economy: Terminological economy should be maintained, [T7]. Up to two worded terms, the linguistic economy value is assumed to be fully maintained. For three worded terms, it is assumed to be partially maintained. For more than three words, it is assumed to be denied totally. For example, *Library catalogue* is less economic than *Catalogue*.

B. For Definitions

For assessment of definition, four criteria have been selected, which are as follows:

1. Conciseness: Definition should be brief but to-the-point by providing a comprehensive idea about the concept being defined by coordinating all necessary components (D1).
2. Preciseness: Concept should be accurately defined. Precise definitions are generally brief, and they indicate the concept accurately with high quality of generalization, including all necessary attributes. If necessary attributes are missing, preciseness hampered if a term is defined in two senses, preciseness also hampered (D2).
3. Non Circularity: Definition should be non-circular, i.e., it should not use the term itself which is describing (D3).
4. Positiveness: Definition should be positive, i.e., it should be always affirmative in sense (D4).

C. Score Values for Scaling

For scoring each category, i.e., T1-T7 and D1-D4, a three-level scoring pattern was followed. If the criteria were fully matched, then 1 had been assigned. If the criteria were partially fulfilled, then 0.5 had been assigned. If the criteria were not fulfilled at all, zero (0) had been assigned.

6. Significance of the Study

Terminological development is the attribute of a growing subject. The study of terminological development in cataloguing is concerned with the thoughts of the experts to describe a term more and more precisely and also incorporate new ideas. Finally, it serves as a means of communication amongst the various stakeholders in the field.

Terminological research is a never-ending process. The nature of documents is evolving, as are the methods of cataloguing, and numerous metadata standards are being created to more precisely define a document. Only the small specialist's class, according to Ranganathan⁸, can grow or change the terminologies. He also remarked that cataloguing terminology is not something that can be done once and for all. We can see a variety of terms in the recently published RDA that may be labelled as AACR3, which demonstrates Ranganathan's foresight. He did advise, however, that terminologies should be altered with care, caution, and adherence to the Canons of Terminology, which are the result of scientific techniques. This research work could be a small step in the direction of this inspection.

7. Style of Referencing

American Psychological Association (APA) referencing style, 6th Edition is used for in text citations, and making references at the end of the chapters.

8. Chapters

Chapter-1 (**Introduction**) outlined the background of taking over the research project, statement of the research problem, research questions, objective of the study, research methodology, and significance of the study.

⁸ Ranganathan, S.R. (1955). Standard for lay-out of catalogue code. *Annals of Library Science*. 2 (1). 28-32

Chapter-2 (**Literature Review**) has provided a comprehensive literature on the area of the current research.

Chapter-3 (**Terminology: Concept, Component and Evaluation with Special Reference to the Field of Library Cataloguing**) deals with the concept of terminology as a whole. Components of terminological study are discussed with suitable examples. A scale for evaluation of terminology, based on the canons and guidelines as prescribed by S R Ranganathan, Martin Scheele and ISO 404:2000 was designed.

Chapter-4 (**Catalogue Codes and their Terminologies**) deals with the terms as provided in the terminology sections of various catalogue codes under study, i.e. from RDC 1876 to RDA 2016. Terms under the study were classified in to eight broad categories, like Author related terms, Entry related terms, etc. Under each category, occurrence of each individual term has been examined critically. Also shows the occurrence of various terms in various codes at various times. This chapter also discussed the synonyms and homonyms of terms found in different catalogue codes.

Chapter-5 (**Evolution of Cataloguing Concepts: Changes in the Definitions of Cataloguing Terms**) shows the variation of cataloguing concepts in different codes at different times by analysing their definitions. The variations of definitions are classified in to some broad categories like “broader to narrower”, “narrower to broader”, General to specific”, etc.

Chapter-6 (**Evaluation of Cataloguing Terminologies**) has presented the evaluation of terms and their definitions as provided in different catalogue codes by a measurement scale, as given in Chapter 3. Performance of the terms as well as the definitions are critically discussed. The codes obtaining highest values for each term and their definitions are also shown.

Chapter-7 (**Summary of Findings and Conclusion**) comes to a generalisation, based on a summary of the research findings.

9. Summary of Findings

Summary of findings is as follows:

9.1. Findings with respect to Objective- 1

Objective- 1: To show the evolution and occurrences of cataloguing terms in terminology sections of various catalogue codes, along with their synonyms and homonyms, and rank them according to their frequency of occurrences (*vide*, Chap.1, Sec. 1.3).

Findings:

The terms, as defined by the catalogue codes, were divided into nine broad categories, namely Author related Terms, Catalogue related Terms, Document related Terms, Edition related Terms, Entry related Terms, Heading related Terms, Preliminary Pages related Terms, Section of Entry related Terms, and Title related Terms. This categorization was made using S R Ranganathan's CCC-5th edition guidelines. The following reference matrix for used terms may be found if overall statistics of terms under these categories are taken from each of the codes.

RDC 1 (1876) – 12 terms, RDC 4 (1904) – 40 terms, AA 1908 – 40 terms, CCC 1 1934 – 37 terms, ALA 1949 – 48 terms, CCC 3 1951 – 40 terms, CCC 5 1965 – 89 terms, AACR 1967 BT – 49 terms, AACR 1967 NAT – 48 terms, AACR 1978 – 109 terms, AACR 2 1988 – 122 terms, AACR 2 2002 – 125 terms, RDA 2016 – 120 terms (total 879). Among these terms, 321 unique terms have been found.

Therefore, it is evident that as new editions of the codes were published, the number of terms under the chosen categories rose within the same code. There are several code families, including the RDC family (1876 and 1904) the AA family (1908 and 1949), the CCC family (1934, 1951, and 1965), the AACR family (1967, 1978, 1988, and 2002), and the reference RDA family (2016 release). In each new edition of each family, the number of terms has grown. This is a clear indication of how cataloguing is a subject that is dynamic, and as a result, new terminology has been introduced throughout time.

Changes in Terms

Changes in terms are furnished in the following (*vide*, Chap. 4).

- New terms – New terms have been coined to include new concepts or to define a traditional concept not defined earlier, e.g., Broadcaster in code 13. Most of the terms newly coined are found in RDA 2016.
- Terms used previously, but defined later, like Terms of Availability (*vide*, Chap.4, Sec. 4.8.2) — this term was defined in RDA 2016, but used without definition in many previous catalogue codes.
- Terms coined by an earlier code but not used in later codes — some terms used in earlier codes but not used by the later codes, e.g., Hanging Indention (*vide*, Chap.4, Sec. 4.8.5). The term was used by Code 2 in 1904, but it was not followed by any other code, due to the obsolescence of the concept in later time.
- Terms coined by a code and followed by the later codes, even by the latest, e.g., Title and Volume, were used by all the codes.
- Terms used by some codes only, e.g., Cross Reference Entry, was used by CCC family only (*vide*, Code 4, 6, 7, (*Vide*, Chap.4, Sec.4.5.3). Similarly, Parallel Title was used by AACR family only. The judgments of the code makers played the role here.
- Terms used in earlier codes, unused in middle codes but used by but latest codes with changing context – The term, Collector, was used in code 2 and code13. But the scope of the concept was increased in the latter codes (*vide*, Chap.4, Sec.4.1.1.1).
- Terms used in middle-aged codes only, e.g., Facsimile Edition (*vide*, Chap.4, Sec.4.4.2) was used only in code 8 and 9 (i.e., AACR 1).
- Term replaced by more generic term, e.g., Editor was replaced by Author and Collector was replaced by Author (*vide*, Chap.4, Sec.4.10.14).
- Terms replaced by more specific term, e.g., Author was replaced by Personal Author (*vide*, Chap.4, Sec. 4.1.1.8).
- Term assigned, Non-Preferred at earlier, but was used as Preferred Term in later time, e.g., Editor at the earlier stages was replaced by author, but was used in later

codes. The literary warrant of the edited document increased with the time, and as a result, the term was used as the preferred term in later codes. *vide*, Chap.4 Sec.4.10.14).

- For more transparency – Overhead Projectural was replaced by Overhead Transparency (*vide*, Chap.4, Sec.4.10.18), Filing Title was replaced by Uniform Title (*vide*, Chap.4, Sec.4.10.16).
- Due to Canon of Reticence or Euphemism – Bastard Title was replaced by Half Title (*vide*, Chap.4, Sec. 4.10.6).

Homonyms – Some homonyms are found, e.g., Chart and Chart (cartography) (*vide*, Chap. 4, Sec. 4.11).

Synonyms – Many synonyms are found in the study. They are connected by “see” references at the terminology sections of the catalogue codes. Transparency and Concreteness are found two important characteristics for choosing the preferred terms over many synonyms. Some instances are as follows:

- Analysis was replaced by Analytical Reference (*vide*, Chap.4, Sec.4.10.1).
- Analytical was replaced by Analytical Reference (*vide*, Chap.4, Sec.4.10.1).
- Audio Captioning was replaced by Audio Description (*vide*, Chap.4, Sec.4.10.2).
- Chart (cartography) was replaced by Map (*vide*, Chap.4, Sec. 4.10.8).
- Cine Film was replaced by Motion Picture (*vide*, Chap.4, Sec. 4.10.9).
- Closed Score was replaced by Condensed Score (*vide*, Chap.4, Sec. 4.10.10).
- Cross Reference was replaced by Reference (*vide*, Chap.4, Sec.4.10.13).
- Engineering Drawing was replaced by Technical Drawing (*vide*, Chap.4, Sec. 4.10.15).
- Filing Title was replaced by Uniform Title (Chap.4, Sec. 4.10.16)
- Standard Title was replaced by Uniform Title (*vide*, Chap.4, Sec.4.10.16).
- Overhead Projectural was replaced by Overhead Transparency/ Transparency (*vide*, Chap.4, Sec.4.10.18).

- Secondary Entry was replaced by Added Entry (*vide*, Chap.4, Sec.4.10.19).
Some other instances are also found for choosing the preferred terms:

- Author was replaced by Personal Author and Corporate Author (*vide*, Chap.4, Sec.4.10.4) (here the broader term is replaced by the narrower term).
- Collector was replaced by Author (*vide*, Chap.4, Sec. 4.10.11).
- Editor was replaced by Author (*vide*, Chap.4, Sec.4.10.14).
- Computer File replaced by Electronic Resources (*vide*, Chap.4, Sec. 4.10.12).

In these cases, generic terms were given preferences over specific terms.

In some cases, peculiarities have been found, where terms having less transparency are chosen over more transparent terms:

- Subject Analytical has been replaced by Cross Reference Entry, though the first term has more transparency than the latter.
- Thesis has been replaced by Dissertation, Academic.
- Author Title Added Entry has been replaced by Name Title Added Entry.
- Author Title Reference has been replaced by Name Title Reference (*vide*, Chap.4, Sec.4.10.20 and 4.10.21).

Canon of Reticence is followed in some cases for choosing more polite terms over a noisy term like-

- Bastard title was replaced by Half Title (*vide*, Chap.4, Sec. 4.10.6).

Ranking of Terms – Among total 879 terms, 321 terms are found as unique terms, some terms are found to be occurred in more than one code, and some terms also found to be occurred only in a particular code. The rank analysis (*vide*, Appendix1A) shows the occurrence of a particular term in different catalogue codes, i.e., their existence in different times. From this rank analysis it is also clear that during the evolution which terms have occurred with high frequency in different codes, and which terms have occurred with moderate frequency, and also the terms, which have occurred with very low frequency.

There are 321 ‘Used Terms’ or ‘Preferred Terms’, which has been found in the study of various categories (as discussed in Chap.1, Sec. 1.4.2) (For rank list of terms according to their occurrences, see Appendix-1A). The occurrence percentage of the terms are shown in the following matrix.

- 100% occurrences - 2 terms (Title and Volume)
- 99%-50% occurrences - 25 terms (Serial 3-27)
- 50%-30% occurrences - 49 terms (serial 28-76)
- 30%-20% occurrences - 54 terms (serial 77-130)
- Below 20% occurrences - 191 terms (serial 131-321)

So only two terms are found, to occur in all the thirteen codes under the study. These are: *Title* and *Volume*. (For details term occurrence, please see Appendix- 4A) There are 191 terms having occurrence percentage below 20%, occurring once or twice. This is a clear indication that most of the terms in library catalogue codes are newly coined terms by the code makers. In RDA 2016, 66 terms (like variant title, etc.) coined newly whereas in CCC5, 1965, 46 newly coined terms found (like Speaking Book, etc.). It is also to be noted that, some terms like, Commentator, etc. although have been used in various earlier catalogue code and their rules, but they are defined in RDA2016 for the first time. The probable cause behind this is that RDA tried to clear each concept without any confusion to help the cataloguer assigning the designation of an entity in web cataloguing environment. CCC 5, 1965 is a classified catalogue code with additional rules for dictionary catalogue. So, new concepts and terms are needed to satisfy the need of classified catalogue, as well as dictionary catalogue. For example, Number Entry (for classified part), Specific Added Entry (for dictionary part).

Core Terms

The terms having more than 50% occurrence in the catalogue code selected are designated as core terms (*vide*, Chap.4, Sec. 4.12, Table 4 and 23). There are 6 Author related terms— 1 catalogue related terms, 6 document related terms, 4 entry related terms, 1 edition related terms, 2 heading related terms, 2 preliminary pages related term, 4 title related terms, and 1 'sections of entry' related term in the above table. This analysis reflects that among 50% occurrence group, representatives

of all nine categories are present. Author and Document related terms have the same occurrence value (6 among 27) followed by the Title and Entry related terms (4 out of 27). But among total 321 terms under study, Author related terms are 37, Catalogue related terms 15, Document related terms are 162, Edition related terms are 8, Entry related terms are 44, Heading related terms are 7, Preliminary page related terms are 7, 'Sections of entry' related terms are 14, and Title related terms are 27 (*vide*, Appendix 6). So, the occurrence probability value of Author related terms is 0.162 (i.e., 6 among 37 = $6/37$), whereas for document related terms, it is 0.030 (i.e., $6/162$). This indicates that the repeatability of document related terms in different catalogue codes is much less than compared to other categories of terms. In other words, most of the Document related terms are newly coined in new codes and are not repeated by the later codes. It is also to be noted on the other hand that Documents related terms cover more than half of the total term sample (162 out of 321). As the new document types are emerging time to time, new document related terms are also being coined and included in the codes.

9.2. Findings with respect to Objective- 2

Objective- 2: To show the changes of terms and their definitions over time in different catalogue codes (*vide*, Chap.1, Sec. 1.3).

Findings:

For the purpose of this study, 27 core terms having occurrence percentage more than 50 had been chosen. The 253 definitions of these 27 terms, occurring in 13 catalogue codes under the study, were analysed. The following facts are revealed:

- Negative Definitions- i.e., defined the term as “negative sense of something”, e.g., *Added entry* (*vide*, Chap.5, Sec 5.1.1).
- Ambiguous Definitions- some definitions are ambiguous in the sense that they do not distinct the concept from similar terms, e.g., *Title page and Added title page* (*vide*, Chap.5, Sec.5.2.1).
- More Elaborative with the Time- the scope of the definition(s) increased with the time. e.g., *Alternative title* (*vide*, Chap.5, Sec.5.3.2), *Atlas* (*vide*, Chap.5, Sec. 5.4.2), *Corporate body* (*vide*, Chap.5, Sec. 5.10.1).
- Narrower Definitions- some definitions become narrower in the size with the time, e.g., *Reference* defined in few earlier codes in an elaborative way,

but in later codes it has become more generalized and shorter (*vide*, Chap.5, Sec.5.21).

- Varied Definitions- some definitions stated differently in different codes under the study, e.g., *Binder's title* (*vide*, Chap.5, Sec 5.6.1) stated the position and the provider of Binder's title differently in different codes.
- Definitions become more Generalized with the Time- e.g., *Catalogue* (*vide*, Chap.5, Sec.5.7.2), *Collection* (*vide*, Chap.5, Sec. 5.8.2), *Compiler* (*vide*, Chap.5, Sec. 5.9).
- Definitions sometimes come later than the Coining of the Term- some terms coined earlier by defined later as the related documents emerged sometime later of the coining of the term, e.g., *Corporate body*, though coined by the British Museum code in 1841 but defined for the first time in CCC 1 1934 (*vide*, Chap.5, Sec 5.10.1).
- More than one Definition for the Same Term in the Same Code- some terms are defined in two ways or more in the same code, e.g., *Author* defined in two ways in the same code of AA1908 and ALA1949. (Chap.5, Sec.5.5). *Catalogue* defined in two senses in AACR2R1988 and AACR2002 (*vide*, Chap.5, Sec.5.7).
- Definitions Supported by Examples- some definitions are supported by suitable examples, e.g., definitions of *catalogue* exemplified in AACR1988 and AACR 2002 (*vide*, Chap.5, Sec.5.7). As per ISO: 10241 this style should be followed.
- Definitions Started with a Concept, Changed in Middle Ages and at the Latest Stage Went Back to the First Concept- e.g., *Edition* (*vide*, Chap.5, Sec.5.11.2).
- More Generalized but Less Expressive- e.g., *Entry* (*vide*, Chap.5, Sec.5.13.2).
- The Definition Changes the Flavour, but the Term remain Unchanged- e.g., *Joint author* (*vide*, Chap.5, Sec. 5.17) defined in later codes with more increased purview as the producer of a document by authoring, editing, translating with other persons. So, the flavour changed from Joint

authorship to Joint collaboration, but the term remains unchanged.

- Definitions showing the Merging of Two Concepts – unlike splitting up the concepts, some definitions show the merging of two related concepts, e.g., Monograph and treatise (*vide*, Chap.5, Sec. 5.19), Serial with periodical (*vide*, Chap.5, Sec.5.20).
- Definitions remain Totally Unchanged for a Long Period of Time (more than a century) - e.g., Reference (*vide*, Chap.5, Sec.5.21).
- Definitions too Short – some definitions are too short in some codes- e.g., Title defined in too short in CCC5 (*vide*, Chap.5, Sec. 5.24).
- Definitions Create Confusion between Two Terms- e.g., Definitions of Title page sometimes make confusion with Title Leaf (definitions of codes, *vide*, 5,8,9,11 and 12 of Chap.5, Sec. 5.25).

9.3. Findings with respect to Objective- 3

Objective- 3: To evaluate the changes in cataloguing terminologies, i.e., the changes in terms and their definitions, in the light of the canons/guiding principles prescribed by the cataloguing authorities (*vide*, Chap.1, Sec. 1.3).

Findings:

Ranganathan stated that terminologies are not static. They should get change with the changes in their subject contents over the time. Terminologies have two components – the term (Designation) and the Definition of the term. There are two sets of Canons/Guiding Principles for assessing the changes in cataloguing terms. These Canons are introduced by S. R. However, for assessing the definitions, a guideline has been introduced by ISO704: 2000.

Based on the aforesaid canons/guiding principles, two sets of parameters were developed and used to assess the changes in terms and their definitions. They are as follows:

- For terms – Homonym freeness, Synonym freeness, Transparency, Consistency, Concreteness, Native language preference and linguistic economy (*vide*, Chap.3, Sec. 3.16.1).

- For definitions – Conciseness, Preciseness, Positiveness and non-circularity (*vide*, Chap.3, Sec. 3.16.2).

The study covered nine Catalogue Codes. These nine codes were RDC 1 and 4 (Code Nos. 1 and 2) from the RDC family, AA 1908 and ALA 1949 (Code Nos. 3 and 5) from the ALA family, CCC 1 1934 and CCC 5 1965 (Code Nos. 8 and 12) from the CCC family, AACR 1967 BT and AACR 2002 (2003 update) from the AACR family, and RDA 2016 release (Code Nos. 8 and 13) from the RDA family. As core terms, the top 27 terms with an occurrence frequency of greater than 50% (see Appendix 1A) were chosen. The Code, AACR 1967 BT, and AACR 2002 were determined to contain the most occurrences of these terms.

It is revealed from the study that the most of the core terms have appeared in AACR Codes. Despite the fact that only 17 out of the 27 core terms in CCCs are present, the first edition of the CCC received the highest rating for term evaluation due to its 17 occurrences. Similar scores were obtained by RDA 2016 and ALA 1949. According to the frequency of the highest score, each code received greater than 80% for the term evaluation. The presence of 1 homonym and 2 non-transparent terms among the 27 terms in the nine Codes is another observation. Native language preference has been denied in this case because there is only one term that is detected that is in the other language, namely *Atlas*.

For the definitions, AACR2002 received the highest score of 58 percent, which it received for 14 out of the 24 definitions (*vide*, Chap.6, Sec.6.28) As a result, none of the codes define every term in accordance with the model criteria.

There are 164 definitions for the 27 core terms, 9 of which were not concise, 41 of which were not precise, 6 of which were negative, and 5 of which were circular in nature. As a result, most of the time the definitions' precision was compromised (*vide*, Chap.6 Sec.6.1 to 6.27 and Appendix 5). The most important code that defines the terms more systematically than others is AACR 2002.

How have cataloguing terminology and their definitions changed throughout time? - was the initial research question. Following the completion of the study, it was observed that

cataloguing terms are evolving over time. Old terms become outdated and are no longer used in later times, whereas new ones are created in the new era. There are very few terms with a high frequency of occurrence (greater than fifty percent as per the study). There are homonyms and synonyms for some terms. The definitions of the same term have occasionally changed and occasionally remained constant. The creation of new terms, the disappearance of useless terminology in later eras, or the change of the designations of the same concept in contemporary days demonstrate the dynamism of the subject cataloguing.

The evaluation study of terms and definitions demonstrates that the majority of cataloguing terms were created using linguistic concepts. As a result, library cataloguing has used a systematic approach to coin and define terminology in a variety of contexts, just like other established fields in the sciences and humanities.

Given the foregoing, it may be claimed right here and now that the objectives of this research study have been met in light of the findings and deliberations presented above.

10. Scope of Further Research

Future researches may focus on the following areas:

- A study may be undertaken to determine and identify the cause of changes in cataloguing terminology in cataloguing codes.
- Research might be done to create terminology standards for vernacular languages.