The natural language and its unsuitability in the context of usage in libraries and the advantages of technical/artificial language are mentioned. The various aspects of classificatory language and its components such as significant digits, connecting symbols, canons and principles underlying its grammar are discussed.

NATURAL LANGUAGE

The natural language has arbitrary systems of vocal symbols by means of which human beings, as members of a social group, interact and communicate. The languages may be divided into two categories viz., natural language and artificial (technical) language. Language has been defined as a medium of communication. The word 'natural' is used to denote the language of the masses used by a community or different races or masses of the population distinct from the languages designed for special purposes for a special class of profession.

One normally does not understand or communicate through the language of other regions or races unless he knows it. In a way it can be stated that all human beings, animals or even aves (birds) use language in some form or other to express themselves. Generally, animals interact by means of sounds and body movements. Human being uses the natural language which has sounds arranged into grammatically significant sequences accompanied by vocalization. There are about more than 5000 languages including dialects in the world. Most of them have also developed systems of writing and reading. Language has two forms - visible and invisible. When something is spoken out, it is understandable only by its sound pattern. Hence it is non-visible. When it is put in the shape of a script such as written, it is visible. Thus both sound and orthographic representation become important. As far as artificial (technical) language is concerned it is developed by various professions and specialists to attain efficiency by creating their own terminology. A jargon made of such a terminology is not a part of natural language, but of an artificial (technical) language. These are not languages of the common masses, but are designed for a specific purposes such as, secrecy, brevity, unambiguity, mechanization of thought processes and so on. The chemists have developed their own symbolic language to express chemical relations. The mathematicians have designed an artificial language of symbols and mathematical formulae for their own purposes. Likewise, traffic signs are meant for motorists, telegraphic language for sending messages etc. Similarly, the library profession has also developed its classificatory language of ordinal numbers for the systematic arrangement of documents in the library. Dr. S.R. Ranganathan says that a verbal description of a phenomenon often clouds communication. The essence gets hidden. An artificial language of diagram, histogram and graphs has been developed for this purpose. Such systems have greater potency. An artificial language of ordinal numbers may be designed for mechanising the seating arrangement of large gatherings in a predetermined sequence. Dr. S.R. Ranganathan regards this arrangement as magical.

CLASSIFICATORY LANGUAGE

Kent and Lancour in Encyclopaedia of Library and Information Science, Vol. 5 mentions that "The totality of class numbers constructed according to a scheme of classification may be taken to constitute a classificatory language of ordinal numbers." It is an artificial (technical) language; its creation and development are entirely dependent on the classificationists. In other words, an artificial (technical) language
which is designed to represent and systematically organise any specific subject is a classificatory language.

**NEED FOR A CLASSIFICATORY LANGUAGE**

In the old times documents, readers and subjects were few and knowledge had not grown much; hence any arrangement of ordinal numbers which provided shelf number, room number, stack number could serve the purpose of shelving and locating documents. As a result of the growth of knowledge this system of ordinal numbers could not serve the purpose. A given isolate idea can be denoted by different terms in different languages. Different terms are also used in one and the same language. But it is more helpful and convenient to use a single code symbol for the same isolate idea irrespective of the different terms used to denote it in the natural language.

Arranging a set of entities in a store alphabetically by their names in a natural language seldom produces a helpful sequence. To achieve this, the classificatory language is not only essential for arranging the documents, but also for replacing them after their use. The very purpose of this language is to mechanise a preferred arrangement without intellectual effort every time. The need of classificatory language is also to translate the names of a subject into the artificial (technical) language to provide the most helpful place for the subject. In brief, it can be said that the classificatory language is needed just to replace a natural language which is comprised of various attributes like synonyms, homonyms etc.

**QUALITIES OF CLASSIFICATORY LANGUAGE**

A classificatory language has a number of attributes. It has the grammar, phonemes, parts of speech, morphology and dictionary of its own, like the natural language, by which it tries to avoid ambiguous expressions. A classificatory language has brevity, flexibility, expressiveness and mnemonic qualities; its synthetic processes are free from homonyms and synonyms and are capable of specifically expressing the existing and new ideas.

The phonemes of this artificial (technical) language are ordinal numbers; its parts of speech are substantives and connectives; its morphology is simple. Syntax depends solely on functions by position. The meaning of digits of any class number may vary with the pattern of class number. It is an agglutinative language. To classify means to translate from natural language into such preferred artificial language of ordinal numbers which may consist of alphabets, numerals and other symbols. Its grammar consists of the general rules of canons for the notational plane, i.e. the choice of digits (corresponding to the natural languages) and assembling of the digits (corresponding to the methodology of the sentences). A grammar of classificatory language was conceived and written by Sayers. Bliss and Ranganathan have been elaborating this grammar. Thus, having all the qualities of the natural language, it avoids the drawbacks inherent in the natural language.

The field of knowledge is infinite. Therefore, the classificatory language should have the provision of translating every bit of knowledge of the past, present and accommodating the future. Not only the translation of the new subjects is sufficient but it should secure exact position among the already existing ones. This is possible if there is generosity in notation, in arrays and in chains. Various devices and techniques have been provided in the modern classificatory languages such as, those of the octave notation, decimal fraction notation, zone and sector notation, empty and emptying digits, subject device, alphabetical device, phase relation, mnemonic device etc., which make the classificatory language a freely faceted analytico-synthetic one. All these qualities have been provided elaborately and applied in Colon Classification designed by Dr. Ranganathan.

Using a classificatory language as a meta language, an artificial machine language can also be developed for retrieval of entities. Thus, classificatory languages can act as a bridge between the natural language and the meta language.

**COMPONENTS OF CLASSIFICATORY LANGUAGE**

Like the natural language, classificatory language has also its components in the form of digits, substantives and connectives - with a grammar in the form of postulates, canons and principles by which these digits are combined to translate the specific subjects into a class number. The
ancient and medieval philosophical system of classification did not have the system of class number. The first classificatory language was devised by Melvil Dewey who used these components in the form of decimal fractional Indo-Arabic numerals. Thus, the history of classificatory language is only about a century old.

Notational system forms the base of the classificatory language. Bliss states that notation is a system of symbols maintaining the structural order of a classification and for locating terms or subjects in the classification. Thus, notation is a type of symbol used in such a language to mechanise the arrangement of the subjects. Symbols can be of many types such as alphabets, numerals, words, models, punctuation marks or any sign designed to represent some ideas.

Need of Notation

Arrangement of subject alphabetically by their respective names in a natural language will not give the filiatory order of subjects. For example, the alphabetical sequence of the subjects, mentioned below is non-filiatory and unhelpful.

<table>
<thead>
<tr>
<th>Agriculture</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra</td>
<td>Philosophy</td>
</tr>
<tr>
<td>Forestry</td>
<td>Political Science</td>
</tr>
<tr>
<td>History</td>
<td>Religion</td>
</tr>
</tbody>
</table>

But, arranging them in a non-alphabetical sequence such as,

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Religion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra</td>
<td>Philosophy</td>
</tr>
<tr>
<td>Agriculture</td>
<td>History</td>
</tr>
<tr>
<td>Forestry</td>
<td>Political Science</td>
</tr>
</tbody>
</table>

is more or less filiatory and helpful. To preserve this sequence of subjects, the representation of each subject by a distinct ordinal number is essential. Thus the need for ordinal notational system arises.

Indicator Digit

This is also a species of notation, but semantically poor and meant for indicating the manifestations of the facets that follow and also for the purpose of connecting the facets. Ranganathan states that there are various types of notations, such as linear, right handed, left handed, vertical, downward, and upward etc. The notations generally practised in libraries are right handed.

Grammar

As already mentioned, the general theory of library classification on the principles and canons governing the work of designing the classificatory language is its grammar.

MAJOR CLASSIFICATORY LANGUAGES

A number of classificatory languages have been designed for knowledge classification and book classification. These are mainly enumerative, facetted and analytico-synthetic.

The major languages available are:

1. Dewey Decimal classificatory language of Melvil Dewey.
2. Expansive classificatory language of Charles Ammi Cutter.
3. Universal Decimal Classification of F.I.D.
4. Library of Congress classificatory system.
5. Subject classificatory language of J.D. Brown.
8. Rider’s International Classification.

The Colon Classification language is said to be the best of the published schemes exemplifying the most original and the most creative thinking in the field. This scheme is truly facetted and Analytico-synthetic. The mapping of the universe of knowledge is most logical.
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