was mentioned that one type of information is most conveniently represented as a research monograph, another as a table, a third as a dictionary, a fourth as a graph, and so forth. That is how historically different types of documents came about. Because different types of IN are satisfied by different types of information, different types of documents are used to satisfy these types of IN. For example, to satisfy a POIN, research papers, books, and so on are used, whereas to satisfy a CIN, reference books, tables, dictionaries, and encyclopedias would be preferable.

It is obvious that all existing types of documents originated in different times, and over the course of the past several centuries (especially in the present century) they have undergone significant evolution. Books, for example, already have existed for several millennia, patent specifications for half a millennium, the scientific journal for a little more than 300 years, the journal article in its present form for just less than 150 years, and the citation index for about 40 years. Today no acceptable universal classification of documents exists. Apparently this has occurred because types of IN, as well as types of information satisfying them, are not used as a basis for classifying documents.

We will conclude our discussion of the document with its meaning for the user. In fact, it is the user who really needs the document (to try to satisfy an arising IN). Of course, the extraction of information from a document on the whole has an individual character. In other words, different users can extract different information from the same document. This depends on several factors, first of which is the tasks facing the user (whose solution requires collecting the missing information) as well as on the level of the user's knowledge and the user's ability to perceive information. The same document can be of interest to one and boring to another, or useful to one and useless to another, depending on whether or not the user obtained needed information with the help of this document.

Today documentary information serves as a basic means of satisfying IN. Therefore, in further discussions of new approaches and methods of satisfying IN, we will direct our attention to existing types of documents. Although researchers are still studying the notion of a "document" (see, for example, Schamber, 1996), the explanation given in this chapter is sufficient for understanding the rest of the chapters in this book.

2.6 Conclusion

A study of the nature of information need (IN) and its properties is one of the central problems addressed in information science. This is not surprising when one considers that any known information activity and even whole industries exist because of IN and were created to satisfy it.

Information is essential to human beings and precedes our simple actions as well as more complex actions directed toward establishing better conditions for survival in the future. For example, a person who wants to drink has to know (have information about) where drinking water is and how to drink it. This information will determine the person's behavior. If this is information is not available, then the person will need to obtain it. In other words, the person's behavior will be determined by the available information about the methods of obtaining the necessary (to have a drink) information. If such information does not exist, then the person chooses his or her actions randomly, realizing that this approach is not reliable.

The fact that IN represents a person's psychological state is important for understanding the problems related to its satisfaction. The difference in properties of different psychological states in connection with the need for information determines different types of IN. In this chapter we identified only two types of IN: CIN and POIN. To satisfy different types of IN, it is necessary to develop different systems while taking their properties into account.

In discussing the notion of information, we mentioned that it exists only because IN exists. Everything that is used to satisfy the user's IN (or some part of IN) is therefore information for this user. The notion of IN described in this chapter is crucial for understanding the proposed solutions for creating IR systems and is the basis for the mechanisms of interaction between the user and the system.

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