PREFACE

Working on this thesis has been a rewarding experience. It gave me two-fold experiences. Experience of absorbing new developments in the structure and development of interdisciplinary subjects and of the problems encountered in the application of Ranganathan's theory to the facet analysis of the interdisciplinary subjects.

The identification of problems for research was itself a hunt. I was looking at a glass and not a mirror. Things looked transparent. But I found that persons who were taught to recognise the manifestations of the fundamental categories were not sure of the recognition. One side of the coin showed that problems lie in the definition of the fundamental categories. In particular, the category Personality. The other side of the coin lies in the roles of the idea denoted by a term. A specific term could convey different roles of the same idea in different contexts. The roles vary in the association of ideas. For example, the idea 'Knife' is a cutting tool. It aids surgery in Medicine; it is an industrial product in Commodity Production Engineering; it is an archaeological piece in Social History; it is a form of steel in Steel Production Technology; it is a shape in Topological studies; and an armament in Weapon Production Technology.

Thus, the role of the idea 'Knife' varies according to sphere of activities. It may be a qualifier to category Energy 'Surgery' - a tool for action; it is a Personality in 'Commodity Production Engineering';
it is a qualifier to Personality 'Steel' in Steel Production Engineering - as an output shape of Steel; it is a qualifier to the Personality 'Civilization' in Social History - as a medium indicating the stage of civilization; it is a qualifier to the Personality 'Shape' in Topological studies - as a type of shape; and knife is a 'Personality' in Weapon Production Technology. This kind of changing role of an idea is increasing in the development of knowledge. The interdisciplinary research and associations have increased the instances of the multiple roles of the same idea in different subject contexts.

The nodes and relations in the semantic networking in the memory of individuals as expressed in recorded knowledge has to be simulated in the social memory - that is, a document, a library or an information system. In order to simulate this process efficiently, a hierarchic structure in the form of library classification is adopted. The design and implementation of this classification system based on facet analysis according to Ranganathan's postulates became the focus of this study. The resilience of the parameters posed in these postulates are analyzed. Statistical analysis of the sample data indicated that there is a kind of correlation between the modes of formation of interdisciplinary subjects and the kinds of problems in the recognition of manifestation of the fundamental categories.

The dissertation has evolved a set of principles to overcome these problems. But in this problem-solving process the mind has been in a condition of 'to be' or 'not to be'. About my decision on 'to be', I take
consolation from A N Whitehead's saying. "There remains the final reflection; how shallow, puny and imperfect are efforts to sound the depths in the nature of things. In philosophical discussions, the merest hint of dogmatic certainty as to finality of statement is an exhibition of folly" (157).