Preface

Communication lies at the heart of research. It is as vital for research as the actual investigation itself, for research cannot properly claim that name until it has been scrutinized and accepted by colleagues. This necessarily requires that it be communicated. Again, the support of research is costly. Such funding is wasted unless the results of the research are presented to their appropriate audiences. Whichever way one looks at it, efficient and effective communication is an essential part of the research process.

I first became interested in the nature of research communication back in the 1960s. Research activity, especially in science, was then expanding rapidly in the Western world. The question inevitably arose—how much longer can this expansion continue? Extrapolation suggested that by the end of the century—where we are now—something would have to give. Growth in funding, and consequently in the number of researchers would have to slow down. The follow-up question, though asked less frequently at the time, was this: Given that funding would be affected, how could the money available be used to produce the maximum amount of high-level research? At that stage, I was working in the Department of Printed Books and Manuscripts at the British Museum (now a part of the British Library) in London. What interested me was a particular aspect of this problem: How could the communication of research be handled most efficiently as funding slowed? The answer again seemed obvious. Computers were already being used for information handling in the 1960s. Their future development would surely allow the rapid manipulation of large quantities of information and make them increasingly effective tools for the communication of research.

After the British Museum, I returned to academic life, working in astronomy, the history of science, and, finally, information and library studies. The first two fields provided an interesting contrast in how researchers in the sciences and those in the humanities handle information. Researchers in these two fields see the world from different angles; their ideas on the nature of acceptable knowledge differ, and their research communities are organized

differently. Consequently, their handling of information is dissimilar. Changes affecting the world of research as a whole do not necessarily have identical impacts on research communication in the sciences and on that in the humanities. Such differential change influences, and is influenced by, the activities of intermediaries in the communication chain—publishers, librarians, information scientists, and so on—who try to link authors and readers. They, more than anyone else, need to be aware of new means for improving the efficiency of communication between researchers and their audiences.

Exploring this theme—changes with time acting differentially across research fields—provides my main motivation for writing this book. We are near the end of the 20th century. The expectations of the 1960s are being fulfilled, and research and its communication are under increasing pressure. The essential question that needs answering has now become this: How can the communication activities of researchers best be catered to in a rapidly changing technological environment? The following pages outline some of the main themes of communicating research: what its position is at present and how it has been reached, what factors have been at work, and how these factors can interact with developing information technology to enhance the future of research communication. The main emphasis throughout is on academic research. This bias derives in part from my own background, yet there is some justification for it. In the first place, it is only in the academic environment that all branches of knowledge are pushed forward together, so that a proper comparison is possible. Second, the academic marketplace is both more open and more complex than others in terms of communicating research. It has, correspondingly, been the subject of more intensive study. Several such studies are mentioned throughout the book. It should be remarked, however, that they are used primarily as examples. No attempt has been made to provide a comprehensive survey of what is now a very large and widely scattered literature.

We are currently in a period of transition, which may be interesting, but is rarely entirely pleasant, for those involved. Decisions made now can help or hinder the transition to a more effective handling of research information. Making helpful decisions depends on an understanding of the factors at work. The purpose of this book is to provide some of the background needed for that understanding.

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