Information requirements and use in the social sciences

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PUBLISHER

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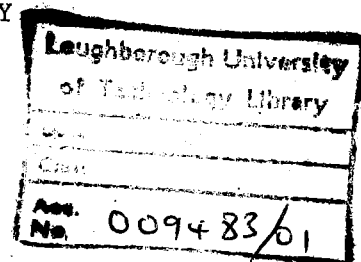REPOSITORY RECORD

Brittain, John Michael. 2021. "Information Requirements and Use in the Social Sciences". Loughborough University. https://doi.org/10.26174/thesis.lboro.14900121.v1.

SUBMISSION FOR A HIGHER DEGREE

OF

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

BY

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1. Introduction

   The monograph, research report, and six published articles submitted form
   part of the research effort by the candidate since 1968 (see Appendix 1)
   when he became Senior Research Fellow on the DES sponsored research
   Investigation into the Information Requirements of the Social Sciences
   (INFROSS), and subsequently Senior Research Fellow on the British Library
   Research and Development Department sponsored research Design of
   Information Systems in the Social Sciences (DISISS). Prior to 1968 he
   has since graduation in 1963 been a Fulbright Scholar in the United
   States, a Research Assistant in the Centre for Comparative
   Psycholinguistics at the University of Illinois, and a Research Fellow in
   the Department of Psychology, Southampton University. The research
   reported in the documents submitted has been continued during the
   candidate's present employment as Senior Lecturer in the Department of
   Library and Information Studies since January 1975.

2. The application of methods of assessment developed in the study of
    science information requirements to the social sciences

   In the monograph Information and its Users (reference 1) the state-of-
   the-art of user studies in science was surveyed, followed by a review of
   the then existing studies, which were very few in number, in the social
   sciences. Five problem areas were identified in the study of social
   science information requirements. The monograph provided a framework for
   research and writing for the next decade. It outlined the discontent
   then beginning to be expressed about the unsuitability of traditional
   methods of assessing information requirements when applied to the social
   sciences, especially to practitioner areas in the social sciences. In
   the years that have followed the publication of the monograph the
   candidate has been active in researching these four problem areas.

   The other seven documents submitted deal with the four problems and
   topics outlined in the 1970 monograph; they are as follows.

       a) The inappropriateness of the traditional methods of the
           questionnaire and interview in the assessment of the
           information requirements of practitioners who are not
           usually bibliographically and library oriented
           (references 2 and 3).

       b) The absence of a theoretical framework in this area of
           research, and the consequent problems related to the
           growth of a body of knowledge about user requirements and
           user information seeking behaviour. The absence of
           strong theories (which can integrate and unify seemingly
           unrelated and disparate empirically derived findings) has
           meant that it is difficult to compare the results of one
           user study with another, and to generalise findings from
           samples of users to the wider population of users from
           which the samples are drawn (references 2 and 4).

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c) The problem of the application of the results of user studies to the design of new information services and the improvement of existing services (references 4 and 6).

d) The almost total neglect on the part of librarians and information specialists of the function of information in (i) problem solving; (ii) the creation of new knowledge; and (iii) the ways theories and hypotheses are verified (or nullified) in the social sciences (references 5, 6 and 8).

During the period 1970-1984 these problems were researched and written about in the eight publications submitted. The major themes and work are outlined below.

3. <u>Empirical study of the information requirements of the social sciences</u>

A large scale enquiry in the major social sciences and related applied fields was conducted by questionnaire and interview between 1968 and 1971. The survey included academics, researchers, practitioners, administrators, government officials, educators, school teachers, and social service staff. The results were analysed, discussed and reported in INFROSS Research Report No. 1 (reference 2), written by the candidate, in conjunction with the other two members of the research team. The objective was to provide a comprehensive and overall assessment of information needs in the social sciences, using the same methods one social science to another, thereby facilitating comparisons of information requirements both within the social sciences and between social science disciplines and fields outside. In this way it was hoped to avoid the rather piecemeal approach that had been in evidence in studies of information needs in science a decade before.

The traditional methods of user enquiry - questionnaire and interview - which had worked reasonably well in many areas of science were seen to be inappropriate in assessments of the information requirements of social science practitioners, although the methods were reasonably successful in studies of social science academics and researchers. The special problems involved in assessing information requirements in applied social science were researched into and reported in other INFROSS reports, and the special problems of practitioners in social welfare were discussed by the author in a separate publication (reference 3).

4. <u>Application of the results of user studies</u>

By the time the results of INFROSS had been reported and disseminated in the middle 1970s there was already much discontent with the ways in which the results of user studies had been (or indeed could be) applied, in both science and social science, to the design and development of new information and library services, and to the improvement of existing ones. This problem was discussed in reference 4; it was concluded that there were two major reasons for the difficulties experienced in applying results of user research. First, many of the then current user studies provided findings of a general nature, such that they increased the understanding of the communication habits of scientists and social scientists but were pitched at too abstract a level for relevance and application in individual libraries and information services. Second, the methods of assessment were inappropriate if the major objective was the application of results (which most practising librarians had assumed all along, but which researchers had gradually departed from since the early days of user studies in the period immediately following world war

II when user studies of a modest dimension were carried out in local libraries with the sole objective of improving the service). Many alternative methods were explored. It was concluded that fundamental changes were required in what was researched. This problem was explored in the candidate's subsequent work and publications (references 4, 6, and 7).

5. A change in theory and philosophy

Since the middle 1970s the candidate has concentrated upon two fundamentally different approaches to the assessment of information requirements. First instead of concentrating upon the stated information requirements of users (and during the INFROSS enquiry it soon became clear that many users were in no position to gauge accurately their information requirements) attention has been focussed upon the work tasks and problem solving activities of users and the information required to carry out these tasks and solve problems. Second, the candidate has argued the case that it is necessary to research into the structure of literature and the ways in which knowledge is created in the social sciences in order to obtain a more accurate and better understanding of the function of information in the social sciences. The candidate analysed (in reference 5) the citations in eight relatively well developed areas of psychology, education, and sociology. Four concepts were explored: the substitutability of documents and information; the penalties for ignorance in the social sciences; the way in which knowledge accumulates (or does not) to form a body of knowledge upon which each new generation of social scientists can build; and finally, the extent to which consensus develops in the social sciences about paradigms of research, theories, principles, and applications. It was concluded that the function of information (and by implication, the documents and databases in which it is contained) in the social sciences is quite different from its function in science. As this becomes better understood during the next decade, it was argued, there will be considerable pressure for the development of a new generation of library and information services specially developed for the social sciences.

6. Current developments

In the early 1970s the candidate published a review of the state-of-the-art of user studies in science and social science (reference 1). A decade later in 1981, in another review (reference 6), attention was given to current problems and the new approaches and methods then being developed. The review concluded by outlining the most fruitful areas of research in social science information during the next decade. Since 1981 two lines of enquiry suggested in the 1981 review have been followed up (in references 7 and 8).

The problems involved in the empirical assessment of the information rquirements of a wide variety of professional users of libraries and information services were examined, suggestions made about the ways in which the problems can be avoided, and alternative methods of enquiry were outlined, including some relatively neglected approaches (reference 7).

In a publication in a North American journal (reference 8) fundamental problems involved in the storage, transfer, and use of information in the social sciences were considered. The data from the INFROSS and DISISS studies of a decade earlier were re-analysed to demonstrate that contrary to widely held beliefs, a great deal of social science information is parochial, and that only a small fraction is truly international in the

sense that it is sought, used, and cited the world over. The
implications for the development of international information services
were examined. This work opens up possibilities for future research on
the problems of the transfer of information across cultures and
countries; the problems involved in the selection of information for
computer-based national and international services; and, finally, the way
in which information and data in the social sciences accumulates to form
a body of knowledge.

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4. Skin resistance response to ideational and sensory stimuli (Research Report No. 2 to the Home Office) Psychology Department, University of Southampton, 1968.

5. Cardiovascular responses to ideational and sensory stimuli (Research Report No. 3 to the Home Office) Psychology Department, University of Southampton, 1968.

6. Semantic structure in criminal populations (Research Report No. 4 to the Home Office) Psychology Department, University of Southampton, 1968.

7. The differentiation of verbal stimuli by the skin resistance response (Research Report No. 5 to the Home Office) Psychology Department, University of Southampton, 1968.

8. The nature of the HR response to verbal stimuli (Research Report No. 6 to the Home Office) Psychology Department, University of Southampton, 1968.

9. The relationship between specific and non-specific electrodermal activity following the presentation of verbal stimuli (Research Report No. 7 to the Home Ofice) Psychology Department, University of Southampton, 1968.

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