

CAPITALIZING ON A PAST INVESTMENT: WHY WE NEED BIBLIOMETRIC STUDIES OF SOCIAL SCIENCE LITERATURE AGAIN*

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Abstract: Describes a bibliometric study carried out in the 1970's which examined the size and structure of the literature of the social sciences. It is suggested that the project should be replicated, and indicates the benefits that could be gained from the earlier investment.

Introduction

The 1970's was an important decade for research into library and information science. Governments around the world, particularly in North America and Western Europe, made funds available for projects at a higher level than in the past. Obtaining research funds was easier in many respects. The funding agencies were willing to examine proposals for investigations which were often of an exploratory nature. At the same time the library and information schools were expanding and developing research programmes backed by their universities and polytechnics. It was also a time when methodology was becoming important.

Project INFROSS investigated the information needs of social scientists. Towards the end of the project, discussions took place between Maurice Line, Michael Brittain, Stephen Roberts and other members of the research team at Bath University and David Nicholas, Maureen Ritchie and Patricia Layzell Ward at the School of Librarianship at the Polytechnic of North London which laid the foundation for collaboration on a project known as DISISS – Design of Information Systems in the Social Sciences. The work was carried out between 1971-1975 and funded by the British Library Research and Development Department and the Polytechnic of North London. The aim of DISISS was to isolate some significant questions about published secondary services – "because they exist in large numbers, they cost in total a great deal to produce, buy and use,

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they are grossly underused...” (Line, 1980, 2). It involved a series of sub-studies that examined the literature of the social sciences. Maurice Line has drawn attention to features of social science information that distinguish it from the sciences, this includes instability and imprecision since they are concerned with the behaviour of human beings. He considered that there ”can be no general consensus, over time or place, on the classification and terminology of the social sciences” (Line, 1980, 1).

What the investigation produced was a set of reports that examined the nature of the literature of the social sciences in the mid-1970’s. The suggestion that lies behind this paper is that perhaps it is time to revisit the data collected and capitalize on the investment made in DISISS.

Why re-visit the data?

In the early 1970’s, when the project commenced, the professional literature was carrying papers on the information explosion. There was a view that this growth might continue – and so - how could users of the literature keep up with this continuing flood of publication? Given the level of investment in R & D in all disciplines at this time in the Western world, this was perceived to be a major problem. At the same time the computer was becoming a useful research tool in the field of library and information science, and Gene Garfield at ISI was producing the *Science Citation Index* and the *Social Science Citation Index*.

Maurice Line, in writing of the future output of social science information, commented that during the course of the project there were the ”first real signs ... of the possible effect of the combination of economic crisis and technological advance on an unprecedented scale”. He drew attention to the ‘paperless society’ or ‘electronic journal/book’, and commented that it remained to be seen how far-reaching this change would be (Line, 1980, 22).

Today we know that, whilst we may still not be working in an entirely paperless society, electronic access has changed dramatically the way in which we can identify and use social science information. At the same time we are also aware of the changes that have taken place within the disciplines that comprise the social sciences. Interest has grown in some fields such as politics, environmental planning, law and management – in others there may have been a decline.

As a profession we need to know what is happening in the environment in which information and library services operate, particularly in the field of publishing. Such information is needed to both provide a service to users, and also for securing the funding to support the services. An awareness of what has happened

together with current trends would be a valuable contribution to strategic planning. The DISISS project yielded a snapshot of the literature of the social sciences as it was in the mid-1970's that could be compared with a snapshot of what is happening now, twenty-five years later. It might answer such questions as:

- Has there has been a decline or growth across the whole social science discipline?
- Has there been decline or growth in the sub-fields?
- Have some new fields emerged; have any died?
- To what extent has the electronic journal replaced the paper-based journal?
- Are the secondary services covering the primary literature as effectively as they did in the 1970's?

Gathering data twenty years on

Collecting data in 2000 would be easier and less costly than it was in the 1970's. Just to give an indication of the challenges of the 1970's, SPSS had recently become available and was used for the analysis of part of the data. One problem was that we had limited experience of using SPSS. The sight of the first batch of printout being wheeled in on a trolley gave a first indication of the benefits of being able to easily write a program that would check all possible variables in relationships between citations. The problem that emerged was of being able to read through all of the print-outs. Another challenge for one of the sub-studies was the need to check copies of social science journals for the total number of pages and number of articles. Willing students beavered away in the basement stacks at the British Library of Political and Economic Science at one point working by torchlight during the major power cuts that took place at that time.

Today we could take advantage of technological development and be able to gather and analyse the data much more easily, and at a far lower cost.

The nature of the data available for comparison

In this short paper it is only possible to give an indication of the richness of the data collection. Amongst the facts which emerged:

- world production of social science monographs 1961-70: a rise from 66,530 to 106,159

- output by country: in 1970 of the world's monograph production the USSR published 18%, followed by West Germany at 13%
- output by subject in the UK: in 1970 21% in economics, followed by 14% in modern history
- current social science serials: in 1820 there were 22; by 1920 - 694; by 1950 - 1806; in 1970 - 3490.
- In 1901-10 148 new titles were created and 5 ceased; in 1961-70 there were 1154 new titles and 134 ceased.
- In 1970 the USA published the highest number of serials – 340, followed by France – 199.
- In 1970 by subject there were 711 serial titles in economics, followed by 270 in political science.
- One example of a sub-study: coverage by secondary services in criminology – 2 primary serials were covered by 6 secondary services; 31 were covered by 3, and 531 were covered by only 1 service.
- The time lag between the publication of a primary journal in criminology and coverage in a secondary service varied between 4 and 27 months, with most intervals being between 8 and 16 months.
- From a careful analysis of citations US titles were more productive of references than British titles.
- Economics, psychology, linguistics and education showed high concentrations of citations within the subject field, while environmental planning, librarianship and political science had a wide scatter.
- The monograph authors most cited by serials were: Lenin, Marx, Engels, Freud, Parsons, Friedman and Pavlov.

The situation today

With developments in technology it is now possible for the secondary services to provide a speedy individualised service to subscribers. This has been of great benefit to researchers and practitioners. But there is still a need to examine some of the fundamental questions that DISISS set out to answer. These include:

- How much literature is there to cover?
- How much of this needs to be covered?

- How many services in a field should there be?
- How much overlap is necessary or desirable between service?
- How should subject access be provided – by classification or linguistically?
- How can the key literature of the past be identified?

These are some of the questions that should be answered. One critical question that is of continuing concern to researchers in the social sciences is the coverage of their subject field in languages other than those they have access to; and can read. The language barriers still exist. As nationalism increases across the globe this may grow.

The benefits to be gained from replicating DISISS

It would yield a snapshot that could be compared with a database developed by a project that employed robust methods of data collection and analysis. DISISS took the methodology of bibliometrics and moved a step forward through the use of a careful definition of terminology.

The question of replicating the project would also contribute to research in information and library science, for there has been limited replication of methods to date.

The original project was well documented. Much debate is taking place today concerning the extent to which electronic resources are replacing paper-based journals. More hard information is needed for decision-making. And here there is an investment from which we could capitalize. Is there a wider interest in a new look at social science information sources?

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