Chapter 1
Exploring Meaning: The Implications of a Hyphen for Socio-Technical Theory and Practice

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ABSTRACT
In this paper, the authors explore the hyphenated spelling variant on papers taken from the Business Source Complete (BSC) repository. This paper finds that the hyphenated spelling variant is popular with more recent authors and that in total, socio-technical article publishing has recently recovered from the relative decline of the 1980s and 1990s. Within the socio-technical area, the topics of Work and Technology are receiving increased attention and studies of Behaviour, Change and major Stakeholder Groups are waning. The authors have critiqued the articles that indicated in their BSC Subject terms that their contents are related to Methodology but have found that few actually consider the socio-technical methodologies. Systems and socio-technical theory papers are critiqued, including papers by Enid Mumford and her work. Also discussed are lessons learned when using online repositories, such as the need to save search results to manage the surprising level of volatility of such academic databases. Finally, opportunities for future analysis are discussed, including trends; changes of emphasis within topics; researching into other academic search engines; and US based analysis.

INTRODUCTION
This paper is the second of a series looking at trends in socio-technical publishing. Our overall aim as discussed in Paper 1 (referred to here as P1 - see Volume 1, Edition 1 of this journal) is to provide a meta-analysis of academic ideas related to the socio-technical field, as demonstrated by their output in journals, books and published book reviews. In this paper we discuss the search conducted on Business Source Complete for the hyphenated variants of the spellings. We draw on published work from 1959 to June
2009 to highlight the major areas of concern; the research domains; the theories and frameworks utilised in research; the social and technological emphasis; the underpinning understanding of socio-technology; the journals most favoured for publication; and the most prolific authors within selected fields of expertise.

We draw conclusions on our searches of Business Source Complete (BSC), the largest international database of academic publications (10,000 journals) available within the UK, looking at the spelling variants socio-technology and socio-technical. As explained in Paper 1, the reason for splitting the search is the large numbers of papers under consideration. Additionally, we have drawn on the analysis of our first paper to assist in developing the analysis of the further papers and to enable comparisons.

In this paper we start by discussing the search methodology and our results for the top publications and then consider what our results mean in terms of publishing trends. This is followed by a term analysis and a discussion of papers that look at the Subject topic Methodology. We then discuss the papers using the hyphenated spelling that consider Systems and related theory as we did in P1 and compare our results. Finally we draw our conclusions, discuss our future planned papers in this series and indicate future research requirements.

**HOW THE RESEARCH WAS UNDERTAKEN: METHODS AND SOURCES**

In this current paper we consider the results of a meta analysis of the BSC repository for the second of the most commonly used spelling variants: socio-technology and socio-technical.

The meta search was carried out on the complete repository with no filters engaged. This repository contains academic journals, trade publications, magazines, books/monographs, and book reviews (usually published in journals). The search was conducted in two phases but here we report on the second search. Search number one looked in all abstracts for the term socio-technology and socio-technical – see P1 - and in Search number two we replicated the search using the hyphenated forms socio-technology, socio-technical. The abstract was chosen as the search field as it is here that authors, in particular in academic journals, state the field of study that the article uses for theory input. The searches were undertaken during late 2008 up to June 2009. Note that access to the journals and abstracts may have been limited by the terms of the chosen (University of Westminster) repository link to Business Source Complete.

During our late 2008 search of the hyphenated terms we found that BSC now offered both Subject classification of the academic papers and a Thesaurus classification. Very few papers were now given a Subject listing but most were now given a Thesaurus listing. Thesaurus terms, as used by the BSC Repository do not match the Subject terms. Keywords for some articles are also available but only when so identified by an author. Thus a typical Repository entry will include the publication details; the authors and their abstract – although this is not always complete if it is considered too long; Thesaurus terms; Subject terms; and keywords if provided. There can be multiple terms of course. We thus can find several articles classified under multiple Thesaurus terms. Additionally, it should be noted that the Thesaurus terms are volatile and change with great regularity – thus we make no claims for the validity of these findings on publication only on the research dates when we searched the repository – in fact some changed during the process of research e.g., Industrial Management and Business Enterprise were Thesaurus terms in October 2008 but not in June 2009 and Human Engineering and Information Science had been added. Subject terms had also changed. While the validity of the conclusions is not affected, the total