Is IS Research on GSS Relevant?

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“In most business organizations today, when groups of executives meet, they gather in a room that is little different from the one in which their predecessors met a hundred or more years ago. Technology is evident only in the electric light, the air conditioning, and perhaps a telephone. The information available during the deliberations is a few memoranda or a notebook of financial and other reports. They may receive verbal briefings made with the aid of charts or slides. However, as discussion proceeds around the table and various alternatives are considered, the decision makers have to rely principally on what is in their heads and what has been told them.” (Gray et al. 1981 in one of the early papers on GSS/GDSS research). After more than a decade of advances in GSS research the above description is still accurate in most companies. If relevancy strictly means having a significant impact on the business world then GSS research appears to have had minimal impact. In this paper we try to understand the reasons for the low impact, point out areas of success, and look for directions for the future. Several of the points raised in this article are well known and some of our recommendations are already being implemented independently by many researchers. The contribution of this article is in presenting a comprehensive and formal discussion of the “state of the GSS field” based on an analysis of IS research on GSS. Our goal is to motivate constructive forward-looking debate on this important topic. To promote such debate we have prepared a working paper on a web site to allow readers to further explore our GSS literature database (see Appendix A).

Group Support Systems

GSS is an acronym for Group Support Systems. The term refers to systems that provide computer and communications support for decision making in organizations. A large percentage of GSS research focuses on same-place, same-time decision oriented meetings, with a few efforts focusing on asynchronous and distributed collaboration. Early definitions of GSS/GDSS include “A GDSS combines communication, computing, and decision support technologies to facilitate formulation and solution of unstructured problems by a group of people” (DeSanctis and Gallupe, 1987, p. 589).

This paper focuses on GSS as an area of research in the information systems (IS) community. GSS work in IS started more than 15 years ago from an interest in same-time, same-place meeting rooms, organizational and group decision making, and information sharing. Computer science, organizational behavior, psychology and other related communities also study groups and computer-based support for group work.

Research Methodology

We are interested in analyzing the relevancy of IS research on GSS. There are several ways to accomplish such a goal including surveying practitioners, tabulating examples
of high usage, calculating citation frequency of research articles in business journals, estimating funding levels and others. In this article we take an “introspective” approach, looking at the profession and analyzing relevance by examining and categorizing the actual research: recent publications in major refereed IS journals (1990-1995). Archival research of this type is a relatively standard approach for examining the “state of a field.” We analyze relevance in terms of:

- Theoretical basis - are the theoretical foundations narrowly focused or broadly applicable?
- Task studied - are the tasks and subjects studied relevant to organizations?
- Methodology employed - will the methodologies employed produce interesting and relevant results?
- Usage - is there a match between the technology that we are studying and the technology that is being used?
- Tools and Features — are the tools and features applicable to the organizational context?

Several archival studies already exist on GSS research. However, all of these studies focus on some subset of the field. For example, Benbasat and Lim (1993) focus on experimental studies that compare GSS and No-GSS conditions while Fjermestad and Hiltz (1996) focus on the methodology used in controlled experiments. Most of the remaining studies only examined a small number of articles and/or were conducted in an earlier time period (e.g., McLeod 1992; Gray et al., 1990; Pinsonneault and Kramer, 1990). Our goal is more ambitious than previous efforts. We are interested in the “field of GSS research” as a whole.

A total of 101 GSS articles were published in the 7 journals listed in Table 1. We have limited our study to these major journals rather than attempting to find every last GSS paper. GSS research is also published in journals outside the discipline (e.g., Small Group Research has published many GSS articles). However, we believe that the size of our sample is sufficiently large and representative to provide insights on GSS research in IS.

Management Science and Communications of the ACM are prestigious monthly journals that publish articles from many different fields. These journals publish only sporadically on GSS. The other five journals (JMIS, DSS, Journal of Organizational Computing, MISQ, and ISR) are mainline MIS journals. They publish from 4 to 8 articles per issue. Two of these five (DSS and JMIS) averaged five GSS articles per

<table>
<thead>
<tr>
<th>Journal</th>
<th>Frequency of publication</th>
<th># of GSS articles</th>
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<tbody>
<tr>
<td>Communications of the ACM</td>
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<td>4</td>
</tr>
<tr>
<td>Decision Support Systems Journal</td>
<td>Quarterly</td>
<td>30</td>
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<tr>
<td>Information Systems Research</td>
<td>Quarterly</td>
<td>4</td>
</tr>
<tr>
<td>Journal of Management Information Systems</td>
<td>Quarterly 1990-92</td>
<td>33</td>
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<tr>
<td></td>
<td>Bimonthly 1993-95</td>
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<tr>
<td>Journal of Organizational Computing¹</td>
<td>Quarterly</td>
<td>13</td>
</tr>
<tr>
<td>Management Science</td>
<td>Monthly</td>
<td>7</td>
</tr>
<tr>
<td>Management Information Systems Quarterly</td>
<td>Quarterly</td>
<td>10</td>
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</tbody>
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Table 1: GSS Research in Major IS Journals (1990-1995)

Figure 1: Annual GSS Publications in Seven Major IS Journals (1990-95)
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