THE DEVELOPMENT
OF DECISION SUPPORT SYSTEMS RESEARCH
A BIBLIOMETRICAL APPROACH

Sean B. Eom

With a Preface by
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This book is dedicated to the following individuals who have shaped who I am today.

To My Mother, Jong Ye Won

To Dr. Sang M. Lee
Dr. Lee was my doctoral advisor.
Contents

INTRODUCTION ........................................................................................................... 1
THREE MAIN NEEDS OF MIS/DSS RESEARCH.......................................................... 3
  Clarification of Reference Disciplines.................................................................. 3
  Defining Dependent Variables............................................................................ 3
  Building a Cumulative DSS Research Tradition................................................. 4
THE PRIMARY OBJECTIVE OF THIS BOOK............................................................ 4
ORGANIZATION OF THE BOOK............................................................................... 5

CHAPTER 1 INTRODUCTION TO DECISION SUPPORT SYSTEMS ...... 7
EVOLUTION OF DECISION SUPPORT SYSTEMS ....................................................... 8
  Definition of Decision Support Systems......................................................... 11
ARCHITECTURE OF DECISION SUPPORT SYSTEMS.................................................. 11
  Decision-Making Processes and Functions..................................................... 12
DECISION SUPPORT SYSTEM SUB-SPECIALTIES ..................................................... 15
  Data/Model Management ............................................................................ 15
  User Interface Sub-Systems .......................................................................... 17
  Knowledge-Based Decision Support Systems................................................. 18
  Group DSS/Group Support Systems/Electronic Meeting Systems............... 18
  Organizational Decision Support Systems....................................................... 19
SUB-SPECIALITIES BASED ON ORGANIZATIONAL PERSPECTIVES ...................... 20
  Decision Support System Design .................................................................. 20
  Decision Support System Implementation .................................................... 21
  Decision Support System Evaluation ............................................................ 21
  Application Development Research............................................................... 22
THE FUTURE OF DECISION SUPPORT SYSTEMS .................................................... 22
  Single User Decision Support Systems ......................................................... 23
  Knowledge-Based Decision Support Systems (Intelligent DSS) ...................... 24
  The World Wide Web and Group/Organizational/Global DSS ....................... 25

CHAPTER 2 RESEARCH METHODOLOGY ............................................................. 27
WHAT IS BIBLIOMETRICS (STATISTICAL BIBLIOGRAPHY)? ................................. 27
  What Is Author Cocitation Analysis? .............................................................. 28
  Assumptions of Author Cocitation Analysis................................................... 29
  Purposes and Benefits of Author Cocitation Analysis...................................... 30
AUTHOR COCITATION ANALYSIS STEP ................................................................ 31
  Selection of Author...................................................................................... 31
  Retrieval/Generation of Cocited Author Counts (Cocitation Frequencies) ....... 34
  Input Data (Cocitation Matrix) Preparation................................................... 35
Meta-Analysis of the literature between 1970 and 1992 ........................................ 159
QUALITATIVE INTEGRATION OF GDSS/GSS/EMS EMPIRICAL RESEARCH .... 162
Qualitative Integration through Re-conceptualization by Kraemer and Pinsonneault ............................................................... 163
Pinsonneault and Kramer’s Review of the literature up to 1988 .......... 165
Qualitative Integration by George et al. ..................................................... 169
Qualitative Integration via Contingency Modeling .................................. 173
Theoretical Approaches to Integration .................................................. 180
OTHER MISCELLANEOUS RESEARCH .......................................................... 184
System and Tool Developments .............................................................. 184
GSS/EMS Application Developments ................................................... 186
Integrating GSS with Other Technologies ........................................... 187
MODEL MANAGEMENT ................................................................................ 188
Model Representation ........................................................................... 192
Model Manipulation/Integration ............................................................ 196
Modeling Language/System Development ........................................... 197
FOUNDATIONS, DESIGN, AND IMPLEMENTATION ...................................... 202
Foundations .......................................................................................... 202
Design ................................................................................................... 207
Other Area: Identification of the Intellectual Structure of DSS ...... 211
DSS EVALUATION ...................................................................................... 211
USER-INTERFACE/IMPLEMENTATION ........................................................ 216
Synthesis of Implementation Research by Zmud .................................. 217
A Review of Research on User-Involvement and MIS Success by Ives and Olson .......................................................... 218
A Field Study of Sanders and Courtney ................................................... 221
Quantitative Review of the Empirical DSS Implementation Literature.... 221
Implementation Research Focusing on User Related factors ................. 224
Implementation Research Focusing on Other Factors and Issues ........... 226
Implementation Research using Actor-Network Theory ....................... 227
Findings of Implementation Research. .................................................. 228
MCDSS/NSS ......................................................................................... 229
Categorization of MCDSS ..................................................................... 229
Negotiation Support Systems ................................................................. 233
FACTOR 7 UNNAMED ............................................................................. 237
Cognitive Fit Theory .............................................................................. 238
FACTOR 8: UNNAMED ........................................................................... 241
RESULTS OF CLUSTER ANALYSIS ............................................................. 244
RESULTS OF MULTI-DIMENSIONAL SCALING ANALYSIS .................... 252
Two-Dimensional MDS Maps ................................................................. 252
Three-Dimensional MDS Maps ............................................................... 256
REFERENCE DISCIPLINES OF DECISION SUPPORT SYSTEMS ............. 261
Cognitive Psychology ............................................................................ 267
Social Psychology .................................................................................. 273
Computer-Supported Cooperative Work (CSCW) ................................. 274
Social Psychology ................................................................. 275
Management Science ............................................................ 278
MCDM ................................................................................. 280
Organizational Communication ............................................. 282
Organization Science ........................................................... 285
Applied Information Processing Psychology ............................ 285
CONCLUSION .......................................................................... 287
Increasing Reliance on the Reference Disciplines .................... 288
Many DSS Empirical Studies Developed Corroborating Theories that Belong to Other Disciplines .................................................. 288
Cumulative Tradition and Development of Endogenous DSS Theories ................................................................. 290
Strengthen Relationships with Non-discourse Practices ............... 292

CHAPTER 6 RELATIONSHIPS BETWEEN THE DECISION SUPPORT SYSTEM SUBSPECIALTIES AND REFERENCE DISCIPLINES .......... 293

INTRODUCTION ........................................................................ 294
DATA .......................................................................................... 295
RESEARCH METHODOLOGY ....................................................... 296

EMPIRICAL INVESTIGATIONS OF THE RELATIONSHIP BETWEEN THE DSS SUBSPECIALTIES AND REFERENCE DISCIPLINES ........ 297
The Impact of Systems Science on User Interfaces and Implementation .......... 302
The Impact of Systems Science on Foundations ................................. 304
The Impact of Organization Science on Foundations .......................... 305
The Impact of Organization Science on User Interfaces and Implementation ........................................................................ 306
The Impact of Cognitive Science on User Interfaces and Implementation ................................. 306
The Impact of Cognitive Science on Model Management .................... 308
The Impact of Artificial Intelligence on Model Management ... 309
The Impact of Artificial Intelligence on Foundations .... 310
The Impact of Artificial Intelligence on MCDSS ................................. 311
The Impact of MCDM on Foundations ............................................ 312
The Impact of MCDM on MCDSS .................................................. 313
The Impact of MCDM on Model Management .................................... 314
The Impact of Group Decision Making and Other Reference Disciplines on GDSS .................................................. 315
CONCLUSION .............................................................................. 316

CHAPTER 7 ASSESSING THE CURRENT STATE OF INTELLECTUAL RELATIONSHIPS BETWEEN THE DECISION SUPPORT SYSTEMS AREA AND OTHER ACADEMIC DISCIPLINES ................................. 319

INTRODUCTION ........................................................................ 320
DATA AND RESEARCH METHODOLOGY ........................................... 320
RESULTS .................................................................................... 321
THE INTELLECTUAL RELATIONSHIP BETWEEN THE DSS SUBSPECIALTIES AND OTHER DISCIPLINES WITHIN THE BUSINESS SCHOOL ..................................................... 324
CHAPTER 8 THE CONTRIBUTIONS OF MULTICRITERIA DECISION MAKING TO THE DEVELOPMENT OF DECISION SUPPORT SYSTEMS SUBSPECIALTIES

CHAPTER 9 THE CONTRIBUTIONS OF SYSTEMS SCIENCE TO THE DEVELOPMENT OF THE DECISION SUPPORT SYSTEM

CHAPTER 10 THE CONTRIBUTIONS OF COGNITIVE SCIENCE TO THE DEVELOPMENT OF DECISION SUPPORT SYSTEM

An Overview of Contributions to DSS Areas from Organization Science.. 324
An Overview of Contributions to Multiple Criteria DSS from MCDM ...... 325
An Overview of Contributions to DSS Areas from Other Disciplines within the Business School................................................................. 326
The Intellectual Relationship between the DSS Subspecialties and Other Disciplines outside the Business School. .......................... 328
An Overview of Contributions to DSS Areas from Systems Science...... 328
An Overview of Contributions to DSS Areas from Cognitive Science.... 329
An Overview of Contributions to Model Management from Artificial Intelligence.............................................................. 331
An Overview of Contributions to GDSS from Psychology .................. 333
An Overview of Contributions to GDSS from Communication Theory ... 335
An Overview of Contributions to the DSS Areas from Other Disciplines .. 336
Conclusion........................................................................................................ 336
CHAPTER 11 A SURVEY OF DECISION SUPPORT SYSTEM APPLICATIONS (1971 - 2001) ................................................................. 381

INTRODUCTION ........................................................................................................ 381

SELECTION CRITERIA ................................................................................................. 382

ANALYSIS (1971-1994) .............................................................................................. 382

Classification By Application Areas ......................................................................... 382

Distribution of Underlying Models in DSSs ............................................................. 388

Some Other Notable Trends in Application Development ....................................... 389

ANALYSIS (1995-2001) .............................................................................................. 391

CONCLUSION AND IMPLICATIONS ......................................................................... 404

Negotiation Support Systems (NSS) ......................................................................... 405

Knowledge-based decision support systems ............................................................ 406

Web-based decision support system ......................................................................... 408

Organizational (multi-functional) DSS ....................................................................... 408

Inter-Organizational Decision Support Systems (IODSS) .......................................... 409

CHAPTER 12 THE THEORY-PRACTICE DIVIDE IN DECISION SUPPORT SYSTEMS RESEARCH ................................................................. 413

ABSTRACT .................................................................................................................. 413

INTRODUCTION .......................................................................................................... 414

THE RESEARCH MODEL ............................................................................................ 415

RESEARCH METHOLOLOGY AND DATA ................................................................. 417

FINDINGS ..................................................................................................................... 418

Structural Differences between Theory and Practice – a Big Picture ......................... 418

WHAT IS BEING USED IN IMPLEMENTED SYSTEM BUILDING? ......................... 421

INTERACTIONS BETWEEN THEORY AND PRACTICE ............................................. 423

The Impact of Theory on Practice ............................................................................. 423

The Impact of Practice on Theory Development ....................................................... 424
Illustrations

Figures

Figure 1.1 Components of the DSS ................................................................. 14
Figure 1.2 Theory, Applications, and Contributing Disciplines of Decision
  Support Systems............................................................................................ 16
Figure 2.1 Author Cocitation Analysis Steps ................................................ 32
Figure 2.2 Selecting from the Most Common Multivariate Techniques .......... 47
Figure 2.3 Scree Plot of Eigenvalues............................................................. 57
Figure 3.1 Citation Pattern............................................................................ 79
Figure 3.2 Changes in Citing Articles per Year............................................. 80
Figure 4.1 Major Factor Correlation Network .............................................. 91
Figure 4.2 Dendrogram Depicting Cluster Structure and Joining Sequences (1970-
  1990) ........................................................................................................... 102
Figure 4.3 Three-Dimensional MDS Map (1970-1990) ............................... 103
Figure 4.4 Two-Dimensional MDS Map ...................................................... 106
Figure 5.1 Contingency Perspective for GDSS Research.............................. 133
Figure 5.2 Taxonomy of GDSS Settings ...................................................... 133
Figure 5.3 The Progression to EMS.............................................................. 135
Figure 5.4 GSS Research Model by Dennis et al. (1988) ............................... 138
Figure 5.5 Potential EMS Effects ................................................................. 139
Figure 5.6 Model of Specific GDSS Effects on Influence Behavior ............... 144
Figure 5.7 The Model for the Management of Cognitive Conflict in Groups... 153
Figure 5.8 Research Model of Chidarambaram (1996) ................................. 155
Figure 5.9 Variables in the Benbasat and Lim Meta-Analysis ....................... 161
Figure 5.10 A Framework for Analyzing the Impact of GDSS and GCSS on
  Group Processes and Outcomes.................................................................. 164
Figure 5.11 Modified Reder and Conklin Model.......................................... 170
Figure 5.12 Communication Theory............................................................ 174
Figure 5.13 Linking Communication Theory to Computer Support of Groups . 174
Figure 5.14 Contingency Model based on Communication Theory .............. 175
Figure 5.15 Minority Influence Theory ....................................................... 176
Figure 5.16 Linking Minority Influence Theory to Computer Support of Groups
  ...................................................................................................................... 176
Figure 5.17 Contingency Model based on Minority Influence Theory .......... 177
Figure 5.18 Human Information Processing Theory .................................... 178
Figure 5.19 Linking Human Information Processing Theory to Computer Support
  of Groups ...................................................................................................... 178
Figure 5.20 Contingency Model based on Human Information Processing Theory
  ...................................................................................................................... 179
Figure 5.21 Major Constructs and Propositions of AST............................... 181
Figure 5.22 Tools used by GroupSystems ................................................. 185
Figure 5.23 Components of a DSS ............................................................... 204
Tables

Table 1.1 Taxonomy of Knowledge .......................................................... 10
Table 2.1 Reference of Citing Papers ................................................... 35
Table 2.2 Sample Cocitation Matrix....................................................... 36
Table 2.3 Part of The Matrix Generation System Output ...................... 38
Table 2.4 Diagonal Cell Value Adjusted Cocitation Matrix (1970-1990) .. 40
Table 2.5 Transposed Cocitation Matrix (1970-1990) ......................... 43
Table 2.6 PROC FACTOR SAS Data/Command File ......................... 50
Table 2.7 SAS Data File Stored in drive C .......................................... 65
Table 2.8 PROC FACTOR SAS Statement with an infile statement .... 66
Table 2.9 PROC CLUSTER SAS Statements ....................................... 66
Table 2.10 PROC MDS SAS Statements ............................................. 67
Table 2.11 SAS PROC G3D SAS Statements and Data .................... 68
Table 2.12 PROC G3D SAS statement with an infile statement ......... 71
Table 3.1 A List of Journals Publishing Citing Articles ...................... 75
Table 3.2 Citation Behavior ............................................................... 76
Table 4.1 Rotated Factor Correlations Matrix (1969-1990) ................ 89
Table 4.2 Interfactor Correlations (1970-1990) ................................... 100
Table 5.1 List of 119 Authors in the DSS area as Markers of the Intellectual Spaces (1991-2004) .......................................................... 117
Table 5.2 Eigenvalues of the Correlation Matrix (1991-2004) .............. 118
Table 5.3 Factor Structure Correlations (1991-2004) ......................... 121
Table 5.4 Representative Works of Authors in GSS/EMS .................. 126
Table 5.5 Levels of GDSS, Corresponding Group Problems and GDSS features .......................................................... 134
Table 5.6 Important Sources of Group Process Gains and Losses ......... 140
Table 5.7 ANOVA Results for 13 Dependent Variables ..................... 148
Table 5.8 Summary of Hypothesis Testing ......................................... 151
Table 5.9 Results of a Meta-Analysis on GSS Effects ....................... 158
Table 5.10 Summary of Findings in The Study of Benbasat and Lim .... 160
Table 5.11 Summary of Statistics for GSS vs. No_GSS Differences .... 161
Table 5.12 Impact of GDSS on Group Processes ............................... 167
Table 5.13 Impacts of GDSS on Outcomes ....................................... 167
Table 5.14 Impact of GCSS on Group Processes ............................... 168
Table 5.15 Impact of GCSS on Outcomes ....................................... 168
Table 5.16 Comparative Results of Experimental GDSS Results ....... 171
Table 5.17 Summary of Significant Findings by George et al. ............. 172
Table 5.18 Issues in Model Management ......................................... 190
Table 5.19 Comparison of Graphic Tools in Model Management ....... 191
Table 5.20 Proposed Knowledge Representation Schemes .................. 192
Table 5.21 Advantages and Disadvantages of Proposed Knowledge
<table>
<thead>
<tr>
<th>Representation Schemes</th>
<th>...</th>
<th>192</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 5.22</td>
<td>A Summary of Laboratory Studies of DSS Effectiveness</td>
<td>214</td>
</tr>
<tr>
<td>Table 5.23</td>
<td>Summary of Results of Studies that Examine User Involvement and MIS Success</td>
<td>219</td>
</tr>
<tr>
<td>Table 5.24</td>
<td>Interfactor Correlations (1991-2004)</td>
<td>243</td>
</tr>
<tr>
<td>Table 5.25</td>
<td>Comparison of the Results of Factor and Cluster analyses</td>
<td>246</td>
</tr>
<tr>
<td>Table 5.26</td>
<td>Cluster History</td>
<td>246</td>
</tr>
<tr>
<td>Table 5.27</td>
<td>Badness of Fit Criterion</td>
<td>257</td>
</tr>
<tr>
<td>Table 5.28</td>
<td>MDS Configuration</td>
<td>257</td>
</tr>
<tr>
<td>Table 5.29</td>
<td>List of 66 Authors In the DSS Reference Discipliners as Markers of the Intellectual Spaces (1990-2004)</td>
<td>262</td>
</tr>
<tr>
<td>Table 5.30</td>
<td>Eigenvalues of the Correlations Matrix</td>
<td>263</td>
</tr>
<tr>
<td>Table 5.31</td>
<td>Factor Structure Correlations (1991-2004)</td>
<td>264</td>
</tr>
<tr>
<td>Table 5.32</td>
<td>Decision Strategies</td>
<td>271</td>
</tr>
<tr>
<td>Table 6.1</td>
<td>Interfactor Correlations (1990-1999)</td>
<td>303</td>
</tr>
<tr>
<td>Table 11.1</td>
<td>Distribution of Tools</td>
<td>399</td>
</tr>
<tr>
<td>Table 12.1</td>
<td>Rotated Factor Correlations of Authors in Implemented DSS (1970-2001)</td>
<td>422</td>
</tr>
</tbody>
</table>
Preface

The field of Decision Support Systems (DSS) is relatively young. Indeed, the term “Decision Support System” itself was first introduced in an article by Gorry and Scott Morton in 1971. Since then a discipline has evolved in terms of academic research, industry applications, and software tools. As noted by Peter Keen after about 10 years of DSS research, the field of DSS needed to build an identity in terms of (i) recognizing relationships with other established reference disciplines, (ii) by identifying the key performance metrics, and (iii) by developing a cumulative record of where the field has been and where it is going. The previous edition of this book by Sean Eom took the first and third challenges directly and the second challenge indirectly. He developed an intellectual history of the Decision Support Systems by analyzing over 25,000 papers that were cited in the DSS research publications. He tried to create an overview of the DSS landscape and provided an excellent service to the discipline.

The current book is an update of the last edition of the book. It now includes articles and citations through 2004. Chapters 5, 11, and 12 have been rewritten. Chapter 5 is now based upon an enhanced bibliometric analysis of 1,488 citing articles over the fifteen year period of 1990-2004. Although the number of papers related to DSS showed a decline in the last five years, new areas have emerged both for research and practice. This edition analyzes major contribution of 119 authors in the DSS area and 66 authors in the reference disciplines. Prof. Eom’s research identified six subfields of DSS research: group support systems, model management, foundations, evaluations, user-interfaces, multiple criteria decision support systems
and negotiation support systems. The development of six DSS research subspecialties reflects the influence of a wide range of reference disciplines. These include cognitive psychology, social psychology, computer supported cooperative works (CSCW), management science, multiple criteria decision making (MCDM), organizational communication, organization science, and applied information processing psychology. Chapter 12 covers the theory-practice divide in decision support systems research. As the progress in DSS area continues, a critical issue to be examined is whether DSS theories are useful for practicing managers in guiding the integrated process of designing, developing, implementing, and evaluating the decision support system. Chapter 11 reports a wide range of DSS applications in the form of negotiation support systems, knowledge based DSS, web-based DSS, organizational (multi-functional) DSS, and inter-organizational DSS. This updated version of the book provides a current view of the DSS discipline and also presents the author’s views of where the DSS research is heading.

Volumes that provide such overall view of a discipline provide a great service to all the stakeholders in a field. It is heartening to see the role of individual contributions in a forest perspective. For the new students in DSS, it offers a great service to know where we have been and where we are going. I recommend this book to all researchers interested in Decision Support Systems.

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