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Introduction and overview

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1 INTRODUCTION

This book presents a selection of contributions to the conference on *Decision Support in Organizational Transformation* held in La Gomera, Canary Islands, in September, 1997. The conference was organized by the International Federation of Information Processing's Working Group 8.3 on Decision Support Systems and the Organisational Research Group of the London School of Economics and Political Science. (LSE). The Programme Committee for the Conference comprised Patrick Humphreys, LSE, Sabino Ayestaran, Universidad del Pais Vasco, Andrew McCosh, University of Edinburgh and Bill Mayon-White, LSE. The chairperson of the organising committee was Lucia Sell, LSE. The programme committee members served also as the editors of this book.

Working group 8.3 was formally established in 1981 on the recommendation of IFIP's Technical Committee on Information Systems (TC8). The scope of the working group covers:

“Development of approaches for applying information systems technology to increase the effectiveness of decision makers in situations where the computer system can support and enhance human judgement in the performance of tasks that have elements that cannot be specified in advance.”

The principal aim of the working group is:

“To improve ways of synthesising and applying relevant work from reference disciplines to practical implementations of systems that enhance decision support capability.”

This book has its origins in ideas that have travelled within the decision support community for a number of years, and led, in 1990, the formation of the Task Group on Organisational Transformation within Working Group 8.3. Conversations at the IFIP WG8.3 conference on Decision Support System Experiences and Expectations, held at INSEAD, France, in 1992 (Jelassi and Mayon-White, 1992) led to the plan for this book. Invited and contributed papers were sought, reviewed, and presented at an WG8.3 conference held in San Sebastian (Basque Country) in 1994. The dialogue continued at the 1996 IFIP WG8.3 conference on Implementing Systems for Supporting Management Decisions held at LSE (Humphreys *et. al.*, 1996), Selected papers from the San Sebastian conference were revised and refined, and three additional, papers were specially commissioned to ensure a consistent coverage across the topics considered in the book, which has now emerged in its published form for the 1997 conference in La Gomera.

In the early 1990s, two strong themes were observable in different parts of the decision support community. The first of these themes was attention to the concept of change. In business schools across Europe and the USA there was an observable and growing pre-occupation with the theme of change. Prompted by the pace of economic and political change, academics appeared to be searching in either the organisational development (OD) literature, or to be referring work in strategic and corporate planning. Little genuinely new thinking emerged, but the literature was abundant, and the popular management texts at the airport book stalls seemed to be replete with recipes for change.

The second theme was an emerging debate within the Decision Analysis and Decision Support community which appeared to reflect a growing sense of unease with the traditional offerings of this field. Part of this debate was reflected in plenary panel discussions at the 1992 INSEAD conference. On this occasion, a polarisation of views surfaced between US speakers and those from Europe. The essence of this debate focused on the role of decision support in organisations. A "North American" view of the decision maker emerged: a positivist view of the decision maker as the rational actor, pre-disposed to use discrete decision analytic tools, and working within a rational organisational setting. This was strongly countered by the view generally held in both East and West Europe, and probably in most of the world, which considers "decisions" as merely one expression of the unfolding web of the organisation, which itself exists and operates within an irrational, unpredictable, and dynamic socio-political setting.

In this discussion, the positivist view of decision making as represented in the "rational" literature was argued to be unrealistic and narrow, perhaps representing a

organisations as some managers and decision analysts might wish it to be, but patently wrong and misleading for the majority of settings. But what would the alternatives look like? How does decision making take place in a highly politicised environment? What role, if any, does the positivist view retain in such circumstances?

Such contrasting views are necessarily polarised, but they serve us well as the beginning of an exploration of the ambiguous challenge posed by the title to this volume: "Decision Support in Organisational Transformation". Two challenges set by this title are, firstly, the potential and role of decision support in the aiding and helping those in the midst of organisational change, and, secondly, the prospect of using examples of organisational change as a source of new models of decision making.

The first challenge suggests a test for our decision support tools and techniques: if they are indeed reliable sophisticated quality products, then they should be capable of helping groups and individuals to shape, structure, and manage decisions concerning the future shape of their organisations. This view then leads on to a hypothesis that if such tools were indeed appropriate and relevant we should be able to find evidence widespread use of the products of the decision support community, and to ask if this is so.

We can also examine the second challenge: do the observable processes and facts of organisational change or transformation prove to be a rich arena for research? if so they should show the student of change how groups in organisations, under the stress and pressure of change, really react to the problems of making and implementing decisions. Understanding how such groups go about decision making should, in principle, tell us a more about those characteristics which we should endeavour to build into our decision tools.

This volume is part of the response to these challenges and issues. The authors are drawn from a range of countries and cultures and reflect on their experiences of change and decision making. They are well placed to offer commentary on these trends and developments. The collection should thus be of considerable value to students and researchers from both of the traditions described above, and it is hoped that this volume will serve to mark a turning point in our views on decision making in organisations.

The is one other theme underlying this collection. It concerns the role of technology in today's organisations, both as an essential component which is itself shaping and controlling organisational form, and as a vehicle which embodies much of our thinking about decision making and about efficient decisions. For example, the credit rules used by a bank are managed and mediated via networks of computers. Customer service centres, or call centres, have emerged as the hub at the core of telephone banking in the UK and the USA. With these has come a delegation of decision making. A lending decision is now no longer made by a "bank manager", instead it is derived from a decision support system used and operated by a clerk cum telephonist dealing directly with customer queries. This new form of service replaces the old, and brings with a new organisational form

with a flatter structure within which employees enjoy greater responsibility for decisions, and are supported and enmeshed within a complex technological environment.

This one example serves to illustrate the intertwining of decision support and organisational transformation. There are many others such examples and cases in the collection in this volume. They are all intended to stimulate debate and to challenge some of our pre-conceptions about decisions and about change. The contributors are all experts in the field with real-life experience and expertise in the process of organizational transformation and implementation of decision support. The frameworks presented represent a synthesis of the wide range of experience gained in practice during the 1990's. The cases are written by those people who played key roles in them. This helps to convey to the reader a (justified) sense of immediacy, richness, timeliness and reliability. The cases and examples span many countries, including Chile, France, Russia, Germany, Great Britain, Hungary, Italy, Spain, Sweden, and the USA. They are described in a consistently accessible style, providing both intrinsic interest in their variety and the possibility of inter-sectoral and inter-cultural comparisons.

2 OVERVIEW

In chapter 2, the scene is set by Osvaldo Garcia and Renato Orellana, who provide a comprehensive critique of current approaches to the design of DSS, stating from the concerns of managers within organisations, viewed as human activity systems, who must take care of the organisation in the midst of a changing environment. They describe the structural, conversational and emotional adjustments which are necessary so that DSS can be reinterpreted as conversational devices that trigger the language and emotional processes of the community sharing the concerns of the manager.

An important type of change in the environment is where a company or other organization faces a major change in the way it is perceived by the public, in a situation where the change is in the company's stance on an ethical question. In chapter 3, Andrew McCosh notes the problems companies can have with ethical episodes, (something not considered before in the DSS design literature) and makes a preliminary attempt to derive a DSS which will predict the path of an ethical episode, for the guidance of corporate transforming agents.

In chapter 4, Patrick Humphreys and Eric Nappelbaum investigate the organisational perspective generally adopted by top management, in Eastern Europe and elsewhere, and explore the consequential stresses generated throughout organizations in the attempt to implement the ensuing prescriptions for change. On the basis of the model for problem formulation and choice developed by Nappelbaum (presented in chapter 15) this situation is examined to the issue of implementation design for strategic decisions taken by the upper management. Team building is shown to be an important part of this process, involving every

echelon in participative management. This imposes new requirements on organisational communications and on computer support for organisational change. DSS design guidelines conventionally assume that the Decision which the system is attempting to support will be the “right” one.

In chapter 5, Maurice Schlumberger challenges the hegemony of this assumption in the context of organisational transformation, showing how it leads to people in the organisation focusing on getting good figures for reporting, in contrast to making a “reasonable” decision, such that personnel focus on getting the deed done as well as possible, supported by mechanisms to monitor the outcome of the decision and to support the improvement of both this outcome and the decision making process itself.

In chapter 6, Gerard de Zeeuw notes that efforts to develop DSS still seem to be based on decision theory as a theory of rational action (hence the tendency in DSS design to focus on supporting the “right” decision), whereas, as Schlumberger also stresses, there is a need to return to the original notion of support to improve action. DSS design can still draw profitably on decision theory, reconceptualised to provide languages that support the improvement of individual and collective actions.

In chapter 7, Liam Bannon shows how GDSS (Group DSS) design and implementation has also persevered with the rational cognitive model of decision making activity criticised by de Zeeuw, and extends the critique comprehensively within the context of GDSS, in the light of concerns within the field of Computer-Supported Cooperative work (CSCW). Key concerns are reframed, and topics which it might be fruitful for the CSCW and GDSS communities to jointly explore and debate are identified, i.e., pluralism in conceptual frameworks, decision making, information use in organisations, understanding groups, the role of models, (mis-)use of tools, communication or conversation?

In chapter 8, Sven Carlsson points out that the majority of DSS in organisations are no longer built by DSS professionals, but by the DSS manager-users themselves. Most of these DSS are developed using evolutionary approaches, stressing continuous development of decision tasks. This has the drawback that it can lead to the exploitation of old tasks instead of exploration of new possibilities which, in the long run, can be harmful to an organization. Two approaches to improve manager-user developed DSS Design are presented, with case studies. The first approach (strategic opportunistic design) has the aim that managers should become more strategically oriented in their secondary decisions as well as their DSS building activities. The goal of the second approach (redesign of decision processes) is to challenge and strive for radical changes in an organisation’s current decision processes.

In chapter 9, Piero Migliarese and Claudio Ferioli draw on research on dynamic networks in organizations to propose a new method, the Organisational Relational model, for the analysis of innovative organisational models. Its basic elements are nodes (organisational units or agents) and links among nodes (organisational relations, communication channels, etc.). The importance of IT, and

especially GDSS, in providing tools for innovative organisations, is conceptualised in terms of extending the autonomy of nodes, and providing instruments for supporting links between nodes and illustrated in case studies.

Organisations have had links with others and have operated globally for decades. However, while previously these links were at arm's length, information systems linking organisations are now emerging with a new impetus due to developments in communications and networking, and to management initiatives, like outsourcing, joint ventures, etc. In chapter 10, Claudia Loebbecke and her colleagues discuss inter-organisational systems (IOS) and identify why managers need to consider them differently from other, internal, information systems. Different types of IOS are considered in terms of functional scope and IOS-autonomy, IOS-induced business transformation and issues of IOS planning and design. New business opportunities are outlined, afforded by combining strategies for cooperation between mutually interdependent organisations and IOS which span corporate boundaries.

In Chapter 11, Anne Davies and Trevor Campbell present a case study of a strategic partnership in outsourcing a central government computing service in Northern Ireland. The partnership was held to be successful due to mutual reliance between the organizations involved. However, the study also revealed that the wider issues of information stewardship and informatization in public administration may be undermined by outsourcing.

In chapter 12, Andrew McCosh reviews the history of DSS use by investment and merchant banks in dealing with mergers and acquisitions, finding little change in the financial models, except for database availability due to the improvements in communications technology reviewed in previous chapters. Problems of organisational fit, personnel policy and organisational structure are identified as continuing areas of serious difficulty during merger operations. These are not addressed in conventional model-based DSS design, but could receive new impetus through the alternative DSS design approaches outlined above.

In chapter 13, Zita Paprika describes results from the decision-making sub-project of the of the research programme, "In Global Competition - Microeconomics Factors of Competitiveness of the Hungarian Economy", which starts from the premise that the method of making decisions in the microsphere is one of the strategic factors of any market economy and addresses the question, on the basis of interviews with Hungarian and Spanish managers, of whether they have the proper attitudes and skills to implement the change of the economic system or not.

In chapter 14, Sabino Ayestaran and his colleagues analyse the different ways of handling conflicts within organisations in relation to the local organisational culture, analysed in terms of the degree of identification of the members with the objectives of the organisation, the degree of power distance in the organization, and whether it functions as a closed or an open system. A case study in the Basque Public Health service illustrates how transformation, from a style of resistance and process control in transactions between an organizational group and the central

authorities in this institution, to one based on compromise and negotiation was achieved through cultural change involving transformation of the internal dynamic of the group, reduction in the degree of hierarchical organization of the institution by creating channels of dialogue and negotiation, and separation of the group's task from the negative emotions associated with conflict with the authorities.

In sum, this book draws on methods, approaches and theories from many disciplines and provides cases in many contexts and from many countries, but care has been taken to avoid jargon and assumptions of prior knowledge of particular methods and theories on behalf of the reader. Technical discussions have been kept to a minimum and we hope that the book will appeal easily to a wide range of academic, professional and business readers.

3 REFERENCES

- Humphreys, P. C., Bannon, L., McCosh, A, Migliarese, P. and Pomerol, J-C. (1996) *Implementing Systems for Supporting Management Decisions: Concepts, Methods, Experiences*. Chapman and Hall, London.
- Jelassi, T and Mayon-White, W. (1992) *Decision Support Systems: Experiences and Expectations*. Elsevier, Amsterdam.

4 BIOGRAPHIES

Patrick Humphreys is a founding member of IFIP working group 8.3. He is Professor of Social Psychology at the London School of Economics and Political Science, where he convenes graduate courses on Organisational Social Psychology, Decision Making and Decision Support Systems and the Social Psychology of the Media. He led the LSE teams on CEC ESPRIT projects on *Functional Analysis of Organisational Requirements* and on *Project Integrated Management Systems* and directed the CEC TEMPUS project *BEAMS - Business Economics and Management Support* and many other projects on decision making, organisational process modelling, networking and communication support. His books include *How Voters Decide*, *Analysing and Aiding Decision Processes*, *Effective Decision Support Systems*, *Exploring Human Decision Making* and *Software Development Project Management: Process and Support*.

Bill Mayon-White is an independent adviser on technology and change to both government and private sector organisations. Having previously worked as a scientist in government, and as a senior academic in universities in the UK and overseas, he now holds the position of Visiting Fellow at the London School of Economics. He divides his time between consultancy, writing and research into problems of innovation and change.