



**ORGANIZATIONS
AND SOCIETY
and INFORMATION
SYSTEMS**

w. g. 8. 2.



NEWSLETTER 7

APRIL 1985

FROM THE CHAIRMAN OF W.G. 8.2

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OASIS
ORGANIZATION AND SOCIETY AND INFORMATION SYSTEMS
THE NEWSLETTER OF IFIP WORKING GROUP 8.2.
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Here is OASIS newsletter number 7. This is a rather short one I'm afraid as your Chairman has been lecturing in India for some weeks and I have not received a great deal of news from our members.

W.G.8.2. Colloquium on Information Systems Research - a doubtful science?

You will all be delighted to hear that our book of the Colloquium has now gone to the publishers. Our authors, discussants and editors all cooperated marvellously; all text was received before the deadline and the book was despatched on the date that was agreed with the publishers. I wonder if this is a record.

The book is quite long and in my view, stimulating and interesting reading. It may be perceived by some of our friends in other T.C.s as somewhat revolutionary and shocking as it questions a great many sacred cows. From the point of view of W.G.8.2. members this is a good rather than a bad thing, as one of our objectives in organizing the Colloquium was to start a debate.

If North Holland publish quickly the book may be out by the Autumn. Everything has been sent in in camera ready form and so the load on the publisher should not be great.

More thoughts about the W.G.8.2 Colloquium in Manchester

Hans-Erik Nissen has sent me comments on I.S. research methodology that he has received from D.A.Wassenaar, P.S.Seligmann and J.T.Nosek and the notes below are extracts from their papers. Those of you who were present at the Colloquium will already be familiar with John Nosek's ideas as his paper was circulated there.

Dr. Wassenaar suggests that recent research on the human brain has great relevance for our debate on 'scientific' versus 'humanistic' or 'holistic' methods. This research shows that the human brain is specialized, the logical linear functions occurring in the left hemisphere and the holistic, relational ones in the right. In the real world of I.S. systems designers have a 'left' brain mechanical orientation while most users and managers are more 'right' brain oriented. It is important that these two 'brainwave' orientations are recognised and respected, but one should not be applied where the other is better suited.

He provides two stories to illustrate this point. The first is from the Middle East.

A man called Nasrudin was searching for something on the ground. A friend came by and asked, "What have you lost, Nasrudin?" "My key", said Nasrudin. So the friend went down on his knees and began searching too. After some time the friend asked, "Where exactly did you drop it?" "In my house", answered Nasrudin. "Then why are you looking for it here, Nasrudin?" "There is more light here than inside my own house".

The second story comes from Edward de Bono who gave

one of his audiences a problem that required lateral thinking for its solution. Here is the problem.

There are 111 entrants for the Wimbledon Singles tennis tournament. As an umpire you have to try and arrange the matches so that the minimum number are played. How would you set about finding this minimum number?

According to de Bono everyone in the audience now reached for a pencil and paper. Yet the problem can be worked out mentally in five seconds if a lateral thinking approach is used. Instead of trying to work out how many matches are required to produce a winner, the solution is to see how many matches are required to produce the losers. Since there is only one winner there must be 110 losers, and since each match produces only one loser (who cannot play again) there must be 110 matches.

These stories illustrate the difficulties of problem perception. Often it is how we perceive the problem that determines our solution. This leads Dr Wassenaar to a number of questions.

1. How do we achieve a freedom of perception when we are carrying out research?
2. To what extent do our present research methods enable us to achieve this freedom?
3. How can we bring the problem owners and the problem solvers together in our research so that perception is broadened and our solutions improved?

He examines the development of ideas in organizational studies and looks for a similar development process in

information science. He sees information science as passing through the following phases.

1. The domination of the natural sciences and a concentration on computer and programming efficiency.
2. A recognition of the importance of human motivation and job satisfaction and an interest in 'participation'.
3. A recognition that there is no 'one best way' in research and a move towards a contingency approach.

Phase 3, which is where we are now, requires us to focus our debate on the changing and various environments in which research takes place, and to gain an understanding of these before we discuss our research methods.

Dr Seligmann considers the question raised by Hans-Erik Nissen in his paper. 'Do we exclude important aspects of information systems use and development by strictly adhering to traditional methods of information systems research?'

He asks a number of questions in return.

What are information systems?

What are these traditional methods?

What does 'strictly adhering to' mean?

He makes the point that we lack definitions that are

accepted and we also lack a good taxonomy of information systems.

He suggests that it is less important to consider traditional methods than to make clear in research

- which method is being used
- the conditions and context which have led to its choice
- its limitations
- any assumptions lying behind the choice of method.

In his view, a well known, strictly used method contributes to the understandability, reliability and checkability of research. However, a method is only a tool for arriving at results and a well argued reason for deviating from customary methods should always be acceptable.

John Nosek suggests the use of a framework for improving research developed by Ives, Hamilton and Davis. They suggest that complementary research methods can be chosen by examining three major groups of variables: environment characteristics, process variables and information system characteristics. Environment characteristics can be sub-divided into the user environment, I.S. development and I.S. operations. Process variables are sub-divided into development, operations and use, and I.S. characteristics are sub-divided into ISS content (data and models used), presentation form and time of presentation.

Ives, Hamilton and Davis believe that research that encompasses variables from all three groups represents the richest research setting. Research strategies can be judged by their ability to elicit information in all three areas. Methods should be chosen which are

appropriate and complementary. These may include laboratory experiments, field studies and case studies.

Dr Nosek suggests that the Ives, Hamilton, Davis framework should be used initially to develop hypotheses. If a case study approach seems to be the best means for testing a hypothesis it is appropriate to start the research with this. However the case study may itself raise problems and hypotheses, some of which can be dealt with in a laboratory environment without losing validity, others which need to be tested through further case studies. In this way the researcher uses an iterative contingency approach and changes methods to fit the problem, its environment and the social processes associated with it.

Nosek believes that there is a need for a range of research strategies. These are determined by how valid the results remain once a problem is extracted from the 'real world'. High validity means that the problem can be studied in the laboratory. Low validity means that it must be examined in its real world environment.

He suggests that W.G.8.2 takes a more active role in information systems research by:

1. Acting as a repository and disseminator of related information systems research.
2. Adopting a common framework, such as that provided by Ives, Hamilton and Davis, and asking authors to relate their information to this framework.
3. Using this framework to identify important research questions.

W.G.8.2. Task Group on Information
Systems Research Methods

This group now has seventeen members. Hans-Erik is finalising a questionnaire on information systems research that he is proposing to send to members of TC8 and TC9. This questionnaire is being tested out by Hans Klein at the State University of New York, Binghamton; by Kalle Lyytinen at the University of Jyvaskyla and by Goran Goldkuhl and Hans-Erik at the Universities of Gothenburg and Lund.

Hnas-Erik would like reponses to the ideas of Wassenaar, Seligmann and Nosek as he is anxious to keep the debate going and stimulate new ideas.

He would also welcome new members to the group. The list of present members and friends will be found on the next page.

Members/friends of IFIP WG 8.2 Task Group: Information Systems Research

1985-02-18

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News of Members

Enid Mumford has recently returned from a visit to India organised by the British Council. She was invited by Dr Nitish De, Director of the Punjab Institute of Administration in Chandigarh. Nitish was one of the pioneers of the socio-technical approach and has carried out many projects in India involving the design of socio-technical systems.

A subject of great interest to Indian managers and civil servants at present is how to introduce and use computers. She gave four seminars on this subject, at the Punjab Institute, to an audience of distinguished Sikhs, who were mainly civil servants. She also gave seminars at the University of the Punjab to the MBA programme students and post-graduate students of sociology.

She also visited the Himachal Pradesh Management Institute in Simla, which is in the foothills of the Himalayas. This was a wonderful place, a town built on a steep hillside, with much of the architecture in English style, but a population of different Indian races, including Tibetans. The Management Institute was a beautiful college, set into the mountainside. Its library is the old palace of the state ruler. The lecture theatre was much better than anything we have at the Manchester Business School.

Her last stop was Delhi where she again spoke to civil servants. Delhi is a beautiful city with hair raising drivers.

Her impression was that the Indians urgently need some help. They are about to move into the computer age in a big way. Yet without good advice they will make all the expensive mistakes which the West experienced in its early days of computerisation.

It is with great regret that we learn of the death of Douglas Campbell. Douglas was a Friend of W.G.8.2. and a teacher at the University of Monash in Australia. He had strong links with Europe and had spent time at both the London School of Economics and the Manchester Business School. He will be greatly missed by his friends.

A New Chairman for 1986

Enid Mumford's term of office expires in December 1985 and W.G.8.2. is in the process of selecting a new Chairman. Nominations are being sought and members will be asked to vote for those nominated. The election is being managed by Frank Land, the previous Chairman.

Meetings of W.G.8.2.

The next meeting of our group will be in Aarhus on September 17th and 18th. At this meeting we shall be making plans for our 1986 Conference on Information Systems Assessment.

TC 8 News

TC 8 in cooperation with the Finnish Information Processing Association is holding a conference on Office Systems. This will take place in Helsinki, Finland from 30th September to 4th October, 1985.

The conference will be in two parts. The first two days aim at a large audience from Finland and the other Nordic countries; the next three days will take the form of a more restricted symposium, to be attended by those persons who would be interested in joining a new IFIP working group on office systems that will operate under the auspices of TC8.

For further information contact:

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W.G.8.1 is holding a working conference on Environments To Support Information Systems Design Methodologies in Bretton Woods, USA, from 4th to 6th September, 1985

IFIP News

The 10th World Computer Congress will be held in Dublin from 1st to the 6th September, 1986.

IFIP
CALL FOR PAPERS
INFORMATION SYSTEMS ASSESSMENT (ISA)

xx - xx August 1986

Congress Center Leeuwenhorst, Noordwijkerhout, The Netherlands.

Introduction

This working conference is sponsored by International Federation of Information Processing (IFIP) Working Group 8.2.

It aims at addressing the crucial issue of evaluating the costs and benefits of Information Systems from the narrow technical to the broader economic, organizational and societal evaluations. This is especially relevant prior to decisions about acquisition/design, in order to select the best possible alternatives, and after the organizational implementation in order to modify the solution and learn from successes and failures.

In general one can say that the relationships between the technical solutions and the organizational consequences are not well understood. Successes are most frequently sheer luck and failures are due to accidents, because no one could foresee all the organizational consequences of certain technical solutions and the chosen technical solution did not have the anticipated consequences.

Objective

On this background, it is the aim of this conference to provide a comprehensive overview of methods and techniques for assessment of information systems, to discuss the context in which they are appropriate, and to provide practical examples of the application of these methods and techniques.

Possible issues to be addressed

The list below is by no means exclusive, and other proposals for topics are solicited:

- Scientific foundation for ISA, within and beyond the existing scientific paradigms
- Methods and techniques for doing ISA
- Process issues in doing an ISA
- Important dimensions (eg. technical, ergonomic, psychological, environmental, societal, cultural, political, ethical aspects) relevant in ISA
- Measurement problems in doing ISA
- Stakeholders/interestgroups in ISA, for whom, for what purpose and by whom
- Demonstration of real benefits of information systems, valuable success criteria for good systems
- Empirical evaluations of whether information systems are isolated islands or integrated parts of greater organizational systems
- Present industry practices of ISA - and beyond

Papers may be theoretical as well as practical. They could be concerned with inter- as well as intraorganizational systems, proactive as well as reactive evaluations, quantitative as well as qualitative aspects, and normative as well as descriptive aspects. Finally they could employ a management perspective or competing perspectives (specialist-, employee-, women-, unemployed-, trade union-, developing country-, etc.)

Case studies where efforts have been made to generalize the results/methods/techniques are especially solicited.

Administration

Those interested in submitting a paper on any of the above-mentioned topics or other topics within the general frame of the conference should send a one page description of their intention (name, address, telephone, affiliation, paper title and abstract) to the programme committee chairman by 1st July 1985.

Full draft paper must be received 15th November 85, and authors will be notified of acceptance by 15th March 86. Final, revised paper must be received in camera ready form by 15th June 86.

All papers should be typewritten double spaced - preferably on a wordprocessor - in order to allow for a delivery of a disc by the author. Maximum length of paper should not exceed 20 pages including all illustrations and references. For reviewing purposes, five copies of draft paper must be submitted by 15th November.

Letter of intent, full papers and requests for information about the programme should be addressed to
Professor Niels Bjørn-Andersen (Programme Committee Chairman)
Institute of Informatics and Management Accounting
60 Howitzvej
DK 2000 Copenhagen F
Denmark

Further information may also be obtained from
Professor Gordon Davis (General Chairman)
University of Minnesota

All information about the local arrangements and registration for the conference should be addressed to
Professor Theo Bemelmans (Organizing Committee Chairman)

Provisional list of members of the programme committee includes besides the three mentioned above

Lyn Antill, Polytechnic of the South Bank, UK
Heinz Klein, University of New York, Binghamton
Rob Kling, University of California, Irvine
Herbert Kubicek, University of Trier
Kuldeep Kumar, University of Waterloo

Morten Kyng, University of Aarhus, Denmark
Enid Mumford, Manchester Business School
Hans Oppelland, MaMaster University
Daniel Robey, Florida International University
Trevor Wood-Harper, University of East Anglia, Norwich

All conference participants will receive full documentation of all papers. Conference proceedings will be published by Narsh-Hollard.

POSTSCRIPT

I have had a letter from Nancy Bancroft saying that she is in touch with a number of people (mostly in the United States) who are involved with using technology as an O.D. intervention. She wonders if other members of WG 8.2 are interested in this topic. If anyone is, please let me know.