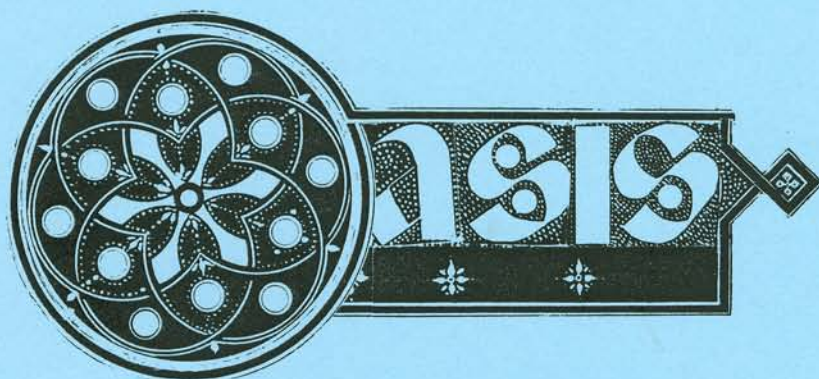




**ORGANIZATIONS
AND SOCIETY
and INFORMATION
SYSTEMS**

w. g. 8. 2.

OASIS

ORGANIZATION AND SOCIETY AND INFORMATION SYSTEMS

THE NEWSLETTER OF IFIP WORKING GROUP 8.2

FIRST ISSUE, SEPTEMBER 1983

Welcome to OASIS. Let me tell you what it is aiming to do. I believe that we are an important and influential group and that our mission is to draw the attention of other IFIP groups, and of relevant groups in our own countries, to the organizational issues associated with the ever-increasing use of computer-based work systems. We therefore need to be able to keep in touch with each other. We need to exchange ideas, to keep each other aware of exciting new research that we, or others we know of, are commencing, to pass on information about new books, articles, government reports etc., and to raise issues which group members could discuss at meetings and via the pages of OASIS.

OASIS seems an excellent name for our communication vehicle. An oasis is found in a desert; and the desert around our work is one of misunderstanding, ignorance and lack of attention to the effects of computers for people in organizations. An oasis has much to offer to the traveller. It is a meeting place where those travelling the same route can meet, exchange ideas and provide comfort and reassurance to those who are not sure which direction they should take. It is also a refuge from the harsh winds of the desert and provides protection and life enhancement. And it is a place where good things flourish and grow. A fertile oasis will prove stronger than the desert which surrounds it and will continually expand its boundaries. What could be a better analogy.

Please do write to me with any ideas, issues, information which you would like discussed in OASIS. Let me know of any articles or books which you are publishing and please comment on the points raised in OASIS.

As W.G. 8.2 has many new members and a group of individuals who have indicated that they would like to become either members or friends here is some basic information about our background, objectives and interests.

IFIP - WHAT IS THIS?

W.G. 8.2 is one of the working groups of IFIP (International Federation of Information Processing). The aims of IFIP are to promote information science and technology by:

- fostering international co-operation in the field of information processing;
- stimulating research, development and the application of information processing in science and human activity;
- furthering the dissemination and exchange of information about the subject;
- encouraging education in information processing

IFIP is dedicated to improving worldwide communication and increased understanding among practitioners of all nations about the role information processing can play in all walks of life.

IFIP has a number of technical committees and working groups. The ones whose aims overlap most with our own objectives are T.C. 3 (Education), especially W.G. 3.2 and W.G. 3.4 which are concerned with education for computers in universities and for vocational training. T.C. 6 (Data Communication) and W.G. 6.3 on human-computer interaction and T.C. 9 (Relationship between Computers and Society) which contains W.G. 9.1 (Computers and Work) and W.G. 9.2 (Social Accountability).

Our own Technical Committee 8 (Information Systems) in addition to our own T.C. 8.2 (The Interaction of Information Systems and the Organization) contains W.G. 8.1 (Design and Evaluation of Information Systems) and W.G. 8.3 (Decision Support Systems). There is also a proposed new working group on office automation.

I suggest that we send OASIS to the Chairmen of all the Technical Committees and Working Groups with which we have common interests.

T.C. 8 (Information Systems) - what does this cover?

T.C. 8 has three broad aims. A. To carry out research into the problems of using information systems in organizations. B. to carry out research into the effects of information systems on organizations and society. C. to study the specification, design, administration and utilization of information systems within organizations and society. The Chairman of T.C. 8 is G. Bracchi, Dipartimento di Elettronica, Politecnico di Milano, Piazza L. da Vinci 32, 1-20133 Milan, Italy.

WG T.C. 8.2 - what do we do?

The scope of our working group covers the investigation of the relationships and interactions between information systems, information technology, organizations and society. Our focus is on the inter-relationships between these.

- Information systems, from our perspective, are defined as information processing, the design of systems, organizational implementation and the economic ramifications of information.
- Information technology includes technological changes such as micro-computers, distributed processing, and new methods of communication.
- Organizations includes the social group, the individual, decision making and the design of organizational structures and processes.

- Society includes economic systems, society's institutions and the values of professional groups.

The Chairman of W.G. 8.2 is myself, Enid Mumford, Manchester Business School, Booth Street West, Manchester, M15 6PB, England. The Vice Chairman is Burt Swanson, Graduate School of Management, University of California, Los Angeles, California 90024, U. S. A.

How to join us

The members of W.G. 8.2 are delighted to welcome newcomers to the Group and there are two ways of joining us.

Becoming a Member

Membership implies commitment to the Group and regular attendance at meetings. If you would like to become a member you have to be invited to, and attend, two meetings and then apply for membership. Please write to me if you would like to follow this route.

Becoming a Friend of W.G. 8.2

This is simpler and requires less commitment. If you are not already on our mailing list, please write to me and I will send you OASIS and information about conferences and meetings.

THE MINNEAPOLIS MEETING, 24th & 25th AUGUST 1983.

This followed the Working conference - Beyond Productivity : Information Systems for Organizational Effectiveness - sponsored and arranged by W.G. 8.2 The Conference was held at the University of Minnesota, Minneapolis, from 22nd - 24th August. The Conference Proceedings will shortly be published by North Holland.

The Working Group meeting had three important items on the Agenda. First, to transfer the Group Chairmanship from Frank Land to myself. May I, on behalf of all members thank Frank most sincerely for all the hard work he put in for our Group. It has gained in prestige

and influence through his proselytizing efforts in IFIP. Second, to discuss the role that W.G. 8.2 could play in steering research and ensuring that researchers met high academic standards when carrying it out. Third, to learn about and discuss curricula for information science course produced respectively by an IFIP working party and a group set up by the U.S. A.C.M. (Association for Computing Machinery).

Research Methods

This discussion was stimulated by a paper from Hans-Erik Nissen of the University of Lund, Sweden. Here is a summary of the points he made in the paper.

1. There are two opinions on methods of research

There are those who wish to strictly adhere to methods of research developed within the natural sciences, and see these methods as the sole source of valid results. But there are also those who advocate other methods such as the investigation of personal experience, values, attitudes, distortions etc. This group believes that no amount of 'scientific' research can assist the understanding of how computerized information systems are related to the human action that is involved in their development and use. This understanding is required not just by specialists, but also by all people affected by I.S.

The first group believe that they are the only source of true knowledge and that the research of those who do not follow the same path lacks validity. The second group argue that strict adherence to scientific methodology produces trivial results, because scientific methodology cannot replicate real world experience. A difficulty here is that the methods of science are well established in departments of Computer and Information science.

The need for a debate

Because the research route taken has a major impact on practice and theory there is a need for a metascientific debate on the philosophy of science and W.G. 8.2 should initiate and support this debate.

Our task would be to start the debate, keep it going and to document it. We should also encourage other IFIP groups to participate. The debate might be called 'Method Monopoly versus Method Diversification'.

Starting Points for the Debate

1. - To examine what has already been written on research methodology for information systems.
2. - To summarise the main schools of thought on meta-science and see how their teachings apply
3. - To identify these areas and ideas on which both groups agree.
4. - To examine the two approaches as interdependent.

Possible Result of the Debate

Many scientists are not aware that this debate is taking place. They take the scientific approach for granted. Therefore the debate will be a way of giving both sides new perspectives. It may also persuade researchers to make their methodological values explicit. In this way research will be improved. The debate will also influence what is studied and how and, in turn, have an impact on our knowledge and teaching.

Both sides taking part in the debate will learn how to handle conflicts and the importance of historical knowledge in understanding human action.

Conclusions

This kind of debate about what is valid research when studying the use and development of information systems seems urgently needed. Yet advocates of the scientific approach may disagree. They want to improve the use of the scientific method. They will not initiate the debate.

W.G. 8.2 Discussion on Research

Hans Erik's paper stimulated an active and interested discussion in which the following points were made. The experimental, scientific approach may be politically safer in some universities, the problem with non-quantitative methods is that they do not produce replicable results. The question is what is valid research? There appear to be cultural differences here with Europe and Canada taking a broader approach than the United States.

It was pointed out that a number of research paradigms are available, where should W.G. 8.2 place its emphasis? How should it choose between, for example, experiment versus action research, qualitative research versus surveys? A suggestion here was that methodological pluralism might be advantageous. Universities differed in their approach to research. Harvard regarded case studies as valid, other universities did not.

It was suggested that there was a need to examine how other disciplines handled research. We need to decide what is valid knowledge, what constitutes a research method. We need to identify the underlying paradigms behind research projects. One way of doing this would be to examine the methodology chapter in Ph.D. theses.

It was pointed out that in order to choose an appropriate method for a research project there was a need to understand the research context. What was appropriate where. Our aim is to enrich the range of methodologies available to ourselves and our students. In order to do this we need to establish if we are asking the right questions.

We also need to find out how to develop better theories.

The discussion next considered what practical steps W.G. 8.2 could take to further the debate. It was decided to make research methodology the subject of our next working group meeting. We would ask a number of people who had published interesting research findings to come and describe the methodology which they had used for their research and the reasons for their choice of methodology. We would be particularly interested in hearing about unusual methods. After the presentation of the paper there would be a critique of the methodology by two other persons and then a general discussion. It was suggested that Professor Dick Boland of the University of Illinois, Urbana-Champaign should be one of the paper presenters. Arne Sandberg, Peter Keen and Hank Lucas should be asked to suggest speakers. This led to a discussion of how the next Working Group meeting should be organized.

Course Curriculum

This discussion was introduced by Frank Land and Rudi Hirscheim who went through a new curriculum developed by an IFIP working party. Frank and Rudi asked the meeting to consider if the curriculum met international needs? Were there any missing areas? Where any changes in emphasis required? Heinz Kleen started the discussion by providing five concepts against which the curriculum could be matched. These were:

1. Does it link with technology?
2. Does it move from design through to implementation?
3. Does it consider the impact of I.S. on society?
4. Does it relate well to reference disciplines
(e.g. business, sociology, finance)?
5. Does it cope with research methodology and philosophical issues?

This model was seen by the meeting as useful and helpful although there was a comment that practitioners might find it too theoretical.

An earlier curriculum developed in 1974, had been designed as four modules

1. Computers and information processing systems
2. Techniques of management science
3. Organization theory and practice
4. Information systems design

The new one was built around three levels and had the following structure.

Level 1 Foundation Studies

- 1.1 Basic skills/pre requisite knowledge
(maths, logic, economics etc.)
- 1.2 Basic concepts (systems, design, etc.)

Level 2 Supporting Disciplines

- 2.1 Information technology ('informatics')
(comparable to previous module 1)
- 2.2 Human organizations
(comparable to previous module 3)
- 2.3 Management science
(adapted from previous module 2)

Level 3 Central Field of Study

- 3.1 Information systems design (methodologies and techniques)
- 3.2 Information systems administration
- 3.3 Associated topics (legislation, government policy, unions, management)
- 3.4 Assignments and projects (one major project at least)

Level 3 is expected to be graduate, post-graduate or post-experience study.

The IFIP curriculum is a large document and copies can be obtained from Frank Land or Rudi Hirscheim at L.S.E. It is hoped to publish it eventually as part of a book.

Points made during the meeting were that some indication of the number of hours required by different subject areas or issues was needed. There was also a suggestion that it should be called a framework, not a curriculum. The underlying philosophy and strategy should be made clear; the order of topics was important. Theo Bemelmans suggested that it was too encyclopaedic and that it was insufficiently future oriented. It captured the state of the art now, not in the 1980s. There was also a need for specific courses for different audiences - e.g. undergraduates, computer scientists, students from other disciplines. The meeting was asked to send other criticisms to Rudi, after they had read the document.

Gordon Davis next described a curriculum for U.S. courses developed by the ACM. This was not a self contained course but assumed that related courses were provided elsewhere in the student's environment - for example, marketing, organizational behaviour etc.

There was some discussion of the differences between the IFIP and ACM courses. The ACM course stressed the importance of context but assumed someone else was providing this. It therefore had less emphasis on technology and organization than the IFIP course. IFIP was particularly strong on organization and organizational change. The ACM course was also seen as being for U.S. students while the IFIP course was for international schools. It was not thought that U.S. Schools would wish to use IFIP.

It was suggested that the two curricula should be published together so that the debate could continue.

W.G. 8.2s meeting ended with a reference to a proposed W.G. 8.4 on office automation. It was hoped that W.G. 8.2 could work closely with this new group; and with W.G. 8.1 and W.G. 8.3. All the groups in T.C. 8 had overlapping interests and close contact and exchange of information would be of great value.

PROPOSED NEXT MEETING OF W.G. 8.2

If space is available this will be held at Manchester Business School on Saturday, Sunday and Monday, the 1st, 2nd and 3rd September 1984. Our conference will immediately precede INTERACT 84 which is being held at Imperial College from 4th - 7th September 1984, which many members may wish to attend.

Our organizing committee is Enid Mumford, Rudi Hirscheim, Trevor-Wood Harper and Guy Fitzgerald.

The conference subject will be 'An evaluation of research methodologies for I.S.'

A Journal, possibly the MIS Quarterly, will be asked to publish the conference proceedings in a special issue. Gordon Davis has offered to make enquiries about this.

Please send your suggestions for speakers on 'research methodology' to any of the organizing committee. We need people who have used different approaches for their research and are prepared to describe, explain and justify these.

Papers

Pentti Kerda has given me the following two papers, Similä and Nuutinen, 'On the image of man and its implications for system-

eering and systemeering research' and 'On the analysis of the user role in the context of ADP systems implementation'.

Please write to Pentti at the University of Oulu, Finland if you would like copies.

FUTURE ISSUES OF OASIS

I am sorry if this first issue is rather dull as there has been a lot of factual information to communicate. Will you help me brighten it up by sending notes on ideas, experiences, articles related to W.G. 8.2s interests which you have found provocative, controversial or exciting.

Here are some suggestions that were made at the conference. How about discussing any of the following:

- 1) Working at home
- 2) LANS
- 3) Data base management organization
- 4) Methodologies for strategic planning for information resources
- 5) Dysfunction in design methodologies

Let me know what you think.

Also, don't forget to send in your I.S. jokes.

Members and Friends

At the Minneapolis Conference, and since then, the following have indicated that they are interested in becoming Members or Friends of W.G. 8.2. I will now put them on our mailing list.

Interested in being a Member

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Interested in being a Friend

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