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CHOICE OF TARGET AUDIENCE IN IS RESEARCH:

A Resource-Dependence Perspective

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ABSTRACT

The IS field prides itself on its closeness to practice and needs to ensure its relevance under growing pressures from governments and business for improved utilisation of research results. In this paper we consider choice-making in the research activity from the perspective of Resource-Dependence Theory, with a particular focus on the choice of target audience for research results. IS leaders in UK universities were interviewed to gain insights into the influences affecting such choices, taking a broad view of the research process, the researchers themselves and the stakeholders of IS research. The paper aims to provide insights for IS researchers as they reflect on their own individual practice of research and to encourage the explicit inclusion of choice-making into IS theory. For practitioners it may provide some illumination on the world of academia.

Key words: Resource Dependence, Target Audience, IS Research, Leaders, UK

I. INTRODUCTION

This paper is part of the process of self-reflection for the IS community on its practice of research. The particular issue of interest is the choice of target audience for the results of IS research. This is relevant to the discussions hosted in the Communications of the AIS during the past year, in terms of the core concepts of IS, the nature of the IS academic community, its themes and methods, the state of the field and its relevance to practice, the consideration of possible future scenarios and the changes required within the community to achieve them [Alter, 1999], [Farhoomad and Drury, 1999], [Lucas, 1999], [Watson et al, 1999], [Westfall, 1999]. Such debate is part of a longer term process of reflection on the field and the community, evidenced in the literature over the past 10 years or so, which acknowledges the emergent nature of the area and the rapidly changing nature of the technology around which it has developed ([Keen, 1991], [Checkland and Holwell, 1994], [Galliers, 1995], for example).

The research presented here encourages IS researchers to reflect on their own individual practice of research. It provides insights into choice-making within IS theory, particularly in the area of choice of target audience for research results and possible effects of resource-dependent relationships between researchers and the various stakeholders of their work. The IS field prides itself on its closeness to practice and finds itself increasingly in a socio-political context which emphasises the need to utilise research for the benefit of public and private organizations [Zmud, 1998], [Benbassat and Zmud, 1999], [Davenport and Markus, 1999], [Lee, 1999], [Lyytinen, 1999], [Markus, 2000]. In the light of IS research into the sharing and management of knowledge within and across organizations ([Alavi and Leidner, 1999] among others), it would seem timely to look at our own practice of sharing of the results of IS research with the wider community. The findings presented in this paper arise from a project which considered the dissemination of IS research through interviews with IS leaders in UK universities. The discussions considered the broad area of research in IS, acknowledging possible influences on the dissemination of research from the process of research, the environment in which it is conducted, and the backgrounds and perceptions of the leaders themselves. The results provide more than a snapshot of the leaders beliefs and behaviours in that important issues emerge of a more general nature concerning IS theory and the practice of research. In this paper we consider the influence of resource-dependence relationships between researchers and the stakeholders of IS research which impact on the choice of target audience for research, particularly in an environment of limited resources or a narrow range of sources. The resources considered here include research finance, issues influencing career success for researchers, and access to the practice of IS in organizations.

The issues raised by the paper are of interest to both IS practitioners and researchers. The interviews were conducted by a recent practitioner looking in on the research community who had discovered a veritable 'treasure trove' of IS literature relevant to her experiences as a systems developer in organizations. The perspective, therefore, is from outside the academic frame and assumes a strongly positive view of the relevance of IS research to practice. Schon's [1987/91] reflection-in-practice included the notion that practitioners learn by adding to their repertoire of ideas and strategies. Some of the IS academic literature may relate well to an individual's experiences or reflections on practice, some may cause them to critically examine their views of organizational situations and the choices and alternatives available to developers ([Axtell et al, 1995], [Hirschheim and Newman, 1991], [Orlikowski, 1993], [Walsham, 1993], [Wastell, 1996] for example). Awareness of, and access to, such research, including the means of filtering and sifting the huge quantities of work, are essential if practitioners are to find the results which 'strike a chord', open up a line of thought, create cognitive dissonance about accepted ideas, or directly

provide a solution to some problematic situation. By generating an awareness of practitioners tacit framing of situations and roles, by providing critical appraisals of new technology or management 'fads', and by identifying insights into the reflective process itself, the literature is a rich resource for reflective practice [Boland, 1991], [Lee, 1999]. In this paper, we provide an opportunity for practitioners to get behind some of the myths that are held about the academic world and to identify some personal and group strategies to improve access to, what should be, an important resource for their work in organizations.

As we move into the new millennium, the field of IS is still developing, the academic community is still unsure of its identity and research agenda. Surveys within the community provide information on the activity of dissemination, noting journals used and topics involved, but often provide little insight into the motivations and influences, or the manner of choice-making in the research process and the consequences of such choices [Walstrom et al, 1995], [Galliers et al, 1997], [Farhoomad and Drury, 1999]. In an area which prides itself on its closeness to practice, IS researchers need to reflect on their own rhetoric and identify whether their practice actually works towards their stated aims. The findings discussed here are generated from the views of IS leaders in UK universities. They provide a valuable resource for researchers new to the field, who often find themselves operating under economic or political pressures which may leave them confused or even disoriented. For researchers with personal motivations to share their learning with practitioners the findings may provide some useful insights.

From the perspective of the funders of research, whether public or private, there is an interest in utilising research, benefiting from the investment in terms of improved business performance and competitiveness [UK Research Councils]. Business managers and policy makers want access to relevant and timely work, which is in a form to be comprehensible and usable.

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The IS literature talks of information being gathered, processed, stored and made available to interested parties, however, it is not always explicit about the socio-political aspects of these activities. In particular, there is little discussion of the means of making choices, the affects of limited resources, or of the influence of stakeholders at all stages of an IS. As we shall identify later, some discussion has been fruitful in the area of systems development but this is not always reflected in the IS theory itself.

The main aim of the paper is to encourage IS researchers to reflect on our own practice and the relationships which influence the many choices we make during the process of research, and to cause us to consider the nature of IS theory in an environment of limited resources and prioritisation of choices. The findings may provide an opportunity to compare and contrast choice-making in information systems across a range of IS applications and in other cultural contexts.

The next section identifies the context in which the research was conducted, considering the IS academic community within the environment of UK universities and business during the 1990s. The focus them moves to some of the literature which formed the framework for the project and the research approach. The choice of leaders, the data collection and the analysis process are described, with a discussion of the limitations of the work. This is followed by a summary of the findings which relate to the choice of target audience for IS research in terms of Resource-Dependence Theory.

II. THE CONTEXT

For business and organizations in the UK, the 1990s was a time of radical change. The global economy, cyclical world recessions, an intensification of competition and an increasingly sophisticated consumer population led to changes in business. Within the UK mixed economy, mass privatisation of public sector organizations brought the influence of the market place into many

institutions which had until then been relatively unaffected and stable. Advances in technology had played a large part in organizational reform during the previous 10 years, but were now leading to more radical thinking. Business process reengineering arose as the means to radical restructuring and downsizing in large companies. The powerful position of the trade unions, had been greatly reduced under Margaret Thatcher's leadership of the Conservative government during the 1980s, with considerable impact on collective bargaining and work-place democracy. There were growing concerns in organizations about business ethics and inter-organizational relationships.

During this period, business journals, bookshops and the general media were full of the work of management 'gurus'. Consultancy firms and business schools were booming. Organizations were desperately looking for ways to survive in an increasingly competitive marketplace. Globalisation and technologyenabled change were starting to have a major impact on the cultures and values of organizations [Giddens, 1999]. The rhetoric of the gurus was for empowerment of employees through learning organizations, flatter hierarchies, shared visions and changing roles of management [Micklethwait and Wooldridge, 1996].

In the UK, the Government enacted a number of policies and initiatives with the intention of improving the benefits to the economy from higher education, in terms of both teaching and research [OST, 1993], [POST, 1993], [DTI, 1994], [OPSS, 1994], [OST, 1995]. Initiatives were put in place which sought to increase business awareness of the importance of the research base in the 'wealth and well-being of the nation', to improve the diffusion of research and technology across the UK industrial sector, with an emphasis on small and medium sized businesses which were seen as a potential growth area. These initiatives were supported and supplemented at the European Union level by a number of Framework Programmes for research and technology development, which again encouraged the sharing of information and joint projects between universities and industry [OST, 1996], [ISI, 1998].

Public evaluation of the higher education sector in 1992 resulted in an effective doubling of the number of universities which now found themselves competing for public and private research funding. The public funding was available from two main sources: a number of Research Councils which allocated funding for individual projects on the basis of refereed research proposals; and in the form of a block grant from the Higher Education Funding Councils. This block grant was to be determined every five years through a Research Assessment Exercise, based on peer assessment of the quality of research in individual university departments. The IS community often faced problems in acquiring money from the various Research Councils due to its cross-disciplinary nature, encouraging researchers to attach themselves to more traditionally accepted projects based within either computer science or management areas.

For IS academics in UK universities, the 1990s was a time of introspection about the field and of the creation of formal bodies for the community. The community was fragmented, with individuals working in isolation or in small groups within departments of computer science, management, or the growing number of business schools. It found itself continually in competition for courses and research funding with academics from other disciplines. There was much debate about the identify of the field, centred on a seminar hosted by the UK Systems Society in 1994. The UK Committee of IS Professors was established to gain recognition for IS and, in 1996, the UK Academy for IS was formed [UKAIS].

To summarise, the interviews with leaders took place at a time of radical change in business organizations, which was filtering through into public sector institutions. IS researchers, confused about their academic identity, fragmented across university departments and disciplines, were beginning to form a community, their leaders looking to raise the academic profile of the field in order to build a discipline. This fledgling discipline found itself competing for research funding among a newly enlarged university sector, and under pressure from a

newly established, government-initiated but peer-controlled, evaluation process. At the same time, public and private funding sources were becoming more insistent on value for money and utilisable outputs from research.

III. CHOICE-MAKING IN IS THEORY

In this paper, IS research is viewed as an information system itself, and investigated from the perspective of IS theory. The choice-making of particular interest here is IS researchers' selection of the target audience for their research results. Keen [1991] suggested that the choice of target audience for a piece of research established the relevance of the work. There has been much debate in the IS literature about the relevance of research to practice, the desirability of it, the challenge to maintain academic rigour, and the evaluation of relevance [Mumford, 1991], [Galliers, 1995], [Benbasat and Zmud, 1999], [Davenport and Markus, 1999], [Lee, 1999], [Lyytinen, 1999], [Westfall, 1999]. Our concern here is to identify some of the possible influences affecting a researcher's choice of target audience, which in turn may impact on the relevance of research to practice, and, indeed, provide us with some insights into what we actually mean by 'practice' and how we define 'relevance'.

Increasingly definitions of an IS include mention of the environment or society in which the people involved undertake the activities of data gathering, processing, storage and dissemination [Davies and Wood-Harper, 1990], [Walsham, 1996], [Klein and Myers, 1999, [Lyytinen, 1999]. Some contributors to IS theory explicitly indicate that there are choices to be made within an information system which affect its purpose, its processes and its audience or users. This is mostly evident in the literature on IS development, which itself could be viewed as an IS, and has arisen through action research and case study research in particular ([Checkland, 1981], [Avison and Wood-Harper, 1990], [Flood and Jackson, 1991], [Mitroff and Linstone, 1993], [Walsham, 1993], [Avison et al, 1998] are notable examples). It can be argued that much of this work on choice-making in IS development has not fed back explicitly into the theory of IS in general, although some of the ideas may be assumed to apply implicitly in sociological definitions of an IS. Interpretations and choices are made by individuals and groups in all aspects of an IS, in terms of: what is to be done?; how?; by whom?; and for what purpose? The judgement of the relevance of information to potential audiences or groups of users is interpretive: who judges?; who determines the benefits available and to whom?; and what benefits are accrued by those actually involved in the various activities within the IS? The work of Mason et al [1995] brought together some of these ideas in looking at possible ethical issues in the management of information. In this paper, we argue that socio-political and resource influences are brought to bear on all such choice-making in an IS.

The incorporation of Stakeholder Theory into the IS literature and thinking ([Mitroff and Linstone, 1993], [Mitroff, 1983] among others) has encouraged a move away from a narrow technological view of IS to one which includes the individuals and groups who may be affected by, or affect, the activities of an IS. Identification of stakeholder groups, and the surfacing of assumptions about such groups, provide systems developers with tools which may increase their awareness of the multiple perspectives of an IS. Case studies have identified stakeholder influence on the process and acceptance of computer systems, often noting structural or political influences as causes for the failure of development projects ([Orlikowski and Gash, 1994], [Waterson et al, 1995], [Wastell, 1996] as examples).

In a broader sense, the notion of exchange relationships between individuals or groups within an organization, and between an organization and its stakeholders, has been developing in the organizational control literature since the work of March and Simon [1958/67]. Various researchers have noted the interdependencies created by such relationships, the emergent power differentials, controls and influence, and the role of managers in the maintenance of coalitions of support for the organization through the management of incompatible demands by different groups [Emerson, 1962], [Blau, 1964], [Katz and Kahn, 1966/78], [Pfeffer and Salancik, 1978], [Freeman, 1984], [Goodpaster, 1991], [Willer et al, 1997], [Mitchell et al, 1997], [Frooman, 1999].

The influence of the environment on an organization can be viewed as being based on a set of complex interconnections and resource-dependent relationships, built upon notions of exchange. Internal stakeholders create an 'enacted environment' within the activities and values of the organization, through their perception and representation of their external environment [Pfeffer and Salancik, 1978]. A 'resource' can be considered as anything as actor perceives as valuable, and 'dependence' arises where one actor in a relationship relies on the actions of another to achieve particular outcomes. 'Power', which is seen as an attribute of the relationship not of the stakeholders themselves, may be viewed as the structurally determined potential for obtaining a favoured pay-off in relations where interests are opposed [Mitchell et al, 1997], [Willer et al, 1997], [Frooman, 1999]. 'Resource-dependence' is most likely to occur where a resource is necessary for the functioning of one actor in the relationship, where the resource is in short supply, or where suppliers of the resource are few in number [Frooman, 1999]. In such circumstances, an awareness of their dependence relationships and of the potential influence strategies of stakeholders must be an advantage to an organization.

To summarise, we suggest that IS theory does not explicitly reflect the range of choice-making involved throughout all aspects of an IS. So far the contribution that has made socio-political and personal issues most explicit has emerged from action research and case studies of IS practice, where the richest pictures of individuals' beliefs and behaviours are considered. We propose that it is useful to look to theory in organizational control, specifically in the area of resource-dependence relationships, to gain some understanding of the

influences on choice-making in IS research, and that this will contribute to our notions of relevance and choice of target audience for IS research.

In the next section, we provide a brief description of the research project underpinning this paper and some of the choices made during its conception and activity.

IV. THE RESEARCH

The research project involved interviews with 35 academic leaders in IS in UK universities during 1996. The interview model included a view of the leaders themselves, their activity of IS research and the context in which it took place. The interviewer was an experienced IS practitioner, who had recently joined the IS research community. The leaders were chosen as members of the UK Committee of IS Professors, or were recommended by interviewees during the research process to bring a broader perspective to the issues under investigation. A small number of Committee members could not be contacted, but all who were agreed to be involved in the research. The interviews were semi-structured to allow the leaders to raise issues they considered to be pertinent to the dissemination of IS research, and were generally of an hour's duration. Pilot interviews were carried out in advance with four senior researchers to refine the model, the interview format, timing, use of the recording equipment and the interactive approach as a whole.

The research process itself is important in this work, particularly in that it makes explicit the choice-making of the researchers [Checkland, 1981], [Galliers, 1991], [Keen, 1991]. The research method chosen in this case reflects the underlying philosophy of the researchers, taking an interpretive and critical approach to understanding the choice-making of individuals through a process of interaction and exploration. The research situation was viewed as a social system in which meanings were being constantly interpreted and redefined by individuals and groups, and where there would be unequal relationships between

individual researchers and stakeholders of IS research with whom they interacted [Boland, 1987,91], [Hirschheim and Klein, 1989], [Alvesson and Willmott, 1992], [Walsham, 1993], [Kaplan and Maxwell, 1994]. There are strong arguments for more critical and interpretive research in IS, since it is better suited than positivist research to the nature of many of the phenomena under investigation and in order to reflect on the role of IS, and IT, in the maintenance of social order and power relations in organizations [Wastell, 1993], [Walsham, 1995], [Doolin, 1998].

The investigation of the broad area of the researchers, the research context, and the relationships with the stakeholders of IS research was utilised to illuminate the narrower focus of actual choices made concerning target audiences for research results [Mason and Mitroff, 1973], [Kling, 1987], [Avison and Wood-Harper, 1990], [Mitroff and Linstone, 1993], [Walsham, 1993]. The interviewer and the leaders were each active participants in the semi-structured interviews, reflecting the interpretive approach and the need to explore meanings and relationships providing a richness not found in more tightly structured survey approaches [Lawler et al, 1985], [Dalhbom and Mathiassen, 1993], [Holstein and Gubrium, 1995], [Walsham, 1995]. The interview approach enabled the interviewer to bring to the research her strengths and skills from systems analysis, as well as providing an opportunity for interaction and exploration of ideas between researchers and a practitioner.

The research project was the first phase of a larger programme investigating the sharing of research results between academia and practice, with the next phase considering the means by which IS practitioners acquire information to develop their professional knowledge and expertise.

In choosing IS leaders to interview, the research reflects a practitioner's view of the academic community. The leaders were seen as representatives of 'excellence' among the IS academic community, where promotion is decided by

peer review and encourages the continuation of research activity, as opposed to the business situation where leaders are generally 'managers', removed from the experience of IS practice. In this context they were seen to be exemplars of good practice across the spectrum of academic perspectives, as 'leaders' rather than as 'managers', people who were looking to influence the way others think about what is desirable, possible and necessary, rather than having the managerial concern with the here and now [Kotter, 1990], [Bryman, 1999]. Some of those interviewed had managerial roles within their institutions, as well as leadership roles within the IS community. The group of leaders was not expected to represent the IS academic community directly, however it was anticipated that as leaders in that community they would have stories to tell which would illustrate the diverse and complex experience of IS research in the UK [Holstein and Gubrium, 1995]. It was also assumed that the leaders would be involved in setting the agenda and directions for the community as a whole.

The choices made early in the research concerning the approach and the method were reflected in the analysis, where the qualitative interview data was sifted and sorted to find a means of identifying and understanding the emergent issues. The data analysis included content analysis based on the interview model, stakeholder analysis which included leaders perceptions of stakeholder groups, and an audience analysis. The issue of resource-dependent relationships and their influence on researchers' choice of target audience emerged from the data. Links were identified between the area of interest and the broader situation of the IS research environment and the researchers themselves [Kling, 1987]. The activities and circumstances of IS research and development were compared and contrasted in the findings.

The insights presented in this paper are necessarily informed by the authors' perceptions and underlying philosophical standpoints, and by the interactions as they occurred between the interviewer and the leaders at that time [Suchman, 1995]. As with all learning, the interview data was analysed

against a backdrop of experience and knowledge of the authors, and understood in relation to schemas and concepts already in place. Another interviewer would have identified issues in accordance with their own schema, as will the reader. The findings are presented to the reader as a useful interpretation of the data which will provide insights and cause reflection on the reader's own experiences of the research process. This is a strength of the approach as well as a limitation, and the research aims to add to the insights presented by quantitative surveys by bringing out a richness of understanding about motivations and pressures involved in IS research, and about the leaders' personal views and perceptions of potential audiences.

V. THE FINDINGS

Where evidence from the interviews is presented in this section it should be read as an illustration of a point and not as representative of the whole interview group. The breadth of opinions and ideas generated during the interviews was large, covering a full range of views and oppositions. No attempt is made to summarise these, merely to show some of the variations noted. 'While the leaders are the source of the issues, the authors are responsible for categorising and organising the issues and putting the differences of opinions in perspective' [Watson et al, 1999].

BACKGROUND OF THE LEADERS

Each interviewee was invited to talk about their background, both educational and professional, to build up a picture of the experiences which have informed them in their current role. The 35 leaders were located within 26 higher education institutions, universities or business schools in the UK. All but one of those interviewed were male. Almost half of the leaders had studied a science subject at first degree level, mostly mathematics, with the remainder split between business and humanities subjects. About a third moved into computing subjects for higher degrees. A third of the group had over 10 years' business experience, and another third had over 5 years', with nearly half of the leaders having experience as IS practitioners. Most of those interviewed had been in academia for over 10 years, and about half engaged in consultancy in that role. Departmentally, the leaders were divided fairly evenly between i) computer science departments, ii) management departments or business schools and iii) an assortment of other areas including IS and systems departments. Three quarters said they were currently active in IS research and all but two were teaching. Just over half supervised doctoral students.

Many of the leaders were keen to be an influence for change, whether in their academic community, in education, in business organizations or more generally in the world at large. Individuals identified either an interest in all these groups, or a specific interest in some and a quite definite disregard or lack of interest in others. General statements made by leaders which indicated that some wanted a broad influence included: 'changing the world – for fun – in no particular direction'; 'open up people's thinking'; 'interaction with people to cause change'; 'can't be sure who you influence – just do your best with multiple audiences - talk to anyone'. Several leaders talked of being catalysts for change with students, believing that they would be the ones to go out and effect change in the world. Several were concerned to 'send students out with more confidence' and took a long-term view 'to educate students to be reflective practitioners'. Their responsibilities towards undergraduate and postgraduate students involved the inclusion of research findings into the university curriculum, particularly in business schools where the teaching was aimed at managers, both business and technical, and executives.

Influencing and being part of the change process in organizations was the prime motivation for a number of the leaders. Approaches to the achievement of their aims varied across those interviewed, with both direct and non-direct action being favoured. Several leaders were very vociferous about the need to be 'disrupters' in order to create change, to challenge peoples' thinking through cognitive dissonance, confronting individuals with new ideas or negative consequences of their old ideas – not to lead them into change but to stir them to take their own new directions. One interviewee expressed the futility of 'tinkering with lower levels' in organizations, since real change was only effected through senior management. In practice some of the leaders were engaged in the introduction of new ideas into business, where they could be tried out and developed for competitive advantage. Others looked to the empowerment of managers and practitioners to be reflective about their experiences, reaching them through courses, consultancy and action research, encouraging 'self sufficiency in learning organizations'.

A number of the interviewees expressed a strong interest in changing the academic world, through participation in its institutions and processes and by engaging others in the task through professional bodies. Most were supportive of attempts to encourage the field's acceptance in the academic world, although not all agreed about whether IS was, or should be, a discipline. Concerns about their personal status or credibility within the IS academic community, in addition to any notions of sharing knowledge within their field, meant that leaders employed their main dissemination effort in that direction, via academic journals and conferences. Several of interviewees mentioned the existence of power groups within the IS community in the UK. There was talk of 'mafias': groups of academics who had working together in the early days of IS; groups who had undertaken postgraduate studies together or under early pioneers in the field; and groups working in large research teams or centres of excellence. In a community where jobs, promotion and publishing are controlled by the peer group, the power of professors, senior researchers, journal editors and reviewers is significant.

Leaders talked of the importance of networking in both the academic and business communities. In some cases, the criticism of poor quality academic research or publications, and of a perceived practitioner desire for 'short term solutions' and 'quick fixes' appeared to speak about a gap between 'good' and 'bad' researchers, or 'good' and 'bad' practitioners, rather than a gap between the two communities – a hierarchical or elitist difference, where some leaders felt they had more in common with business leaders than with lower levels, or less competent, members of either community. Leaders talked of the desirability of talking with people with whom they had 'shared agendas'. IS academics would appear to be 'bound' more by possible limitations of research methodologies and the requirements of academic publishing than by a common IS education and apprenticeship or shared goals [Kuhn, 1977].

In talking of the IS academic and practitioner communities, it is important to note that we are not considering mutually exclusive sets of people. Almost half of the leaders interviewed had experience in both communities, and many were, or had been, engaged in consultancy or action research within their academic roles. The two communities overlap, the edges are blurred. Some leaders noted the necessity of keeping up-to-date with business issues in order to maintain credibility within that community. More blurring of boundaries was evidenced: by representatives of sponsoring stakeholders joining research teams; by the combination of the roles of leader and manager by some of the interviewees: and by the teaching of students who were also managers or IS practitioners.

To summarise, the findings show that IS leaders in UK universities came from a wide variety of backgrounds and worked within a range of institutional situations. They voiced a strong desire to be influencers of change, whether in academia or the world of practice. The boundaries between the academic and business communities were shown to be blurred due to the experience of many leaders in both their previous and current roles. Leaders identified themselves as scholars, researchers, teachers, and employees. These roles sometimes resulted in conflicting requirements on their time and efforts and were prioritised by individuals, or institutions, according to the pressures obtained from the various stakeholders in their environment

RESOURCE-DEPENDENCE RELATIONSHIPS

Stakeholders of IS research were identified as part of the interview process and analysed in terms of the researchers' perceptions of them as influencers on IS research and on their choice of target audience for results. Major stakeholder groupings identified in the interviews included: individual IS researchers themselves and their academic community; funding bodies; universities or research institutes; students; IS practitioners and managers; sponsoring and collaborating organization; and the media.

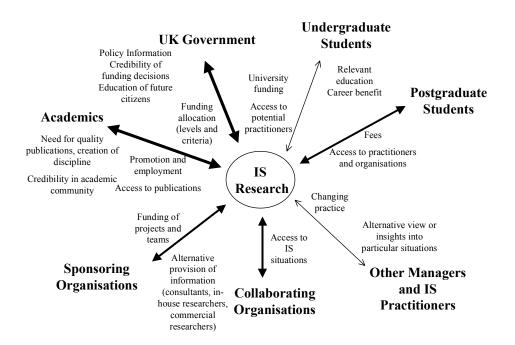


Figure 1. Possible Resource-Dependency Relationships between Researchers and the Stakeholders of IS Research

Leaders talked of the influence stakeholders had over their activities in three main areas: the provision, or withholding, of funding to enable research; the power to control access to academic publications for the dissemination of research and for the achievement of personal or career credibility; and access to business situations for research and dissemination activities.

Figure 1 shows possible resource-dependencies between IS researchers and the stakeholders of their work, as identified by the IS leaders interviewed. It is important to note here that IS researchers are not an homogenous group. Amongst the interviewees there were a wide variety of approaches to research, and also to the need for, and sources of, funding. The figure provides an overview of that variety, rather than any kind of shared or commonly held view.

RESEARCH FUNDING

Funding for IS research was seen as a critical resource by many leaders, with access to funders being complex, highly competitive and requiring considerable effort. The acquisition of funding was used as a measure of success in terms of the Research Assessment Exercise (RAE) and institutional evaluation of research. It was perceived to be linked to the need for relevance in IS research, and to personal academic and business credibility. A variety of funding sources were available to the IS researcher: directly from university funds; from public funders such as Research Councils or charities; through consultancy; or via sponsoring organizations. The value attributed to the various funding sources was dependent on the type of institution in which an individual researcher was employed, the perceived ease of access to the funding, and criteria established within the research community itself.

A small proportion of the IS leaders relied on internal university funding, including postgraduate fees, for their research, particularly where the money was only required for expenses or for 'buying out' teaching time. For a number of leaders, the pressing issue was for funding to maintain a research team, for others a 'commercial return' was required for whole departments within their institutions.

Around a third of the leaders gained grants from public funding bodies such as UK Research Councils, Government departments or the European Union. The view was expressed that IS often lost out in this area because of it's lack of recognition as a discipline, its broad and cross-disciplinary nature, and where there was a need to fund people rather than the purchase of equipment. Networking and personal contacts were identified as an advantage in obtaining public funds, with one leader commenting that one 'needs to be in the clubs' to get the grants. Several leaders were critical of the process of applying for such grants, noting that 'you need to almost do the job before they'll agree to fund it', and that 'the amount of effort to get funding outweighs the value of the money'. Some did not attempt to 'get involved in trying to satisfy' such bodies, identifying a 'culture clash between Government directives and Research Council funders'. Even at the professorial level, IS researchers were often refused funding for projects after a long bureaucratic process of application, possibly because the IS 'research area is outside the 'norm', therefore not generally understood by those making funding decisions'. Public funding is increasingly dependent upon a commitment by researchers to disseminate results to professional groups or more widely in the business sector [UK Research Councils].

Consultancy provided income for many of the leaders, having the added advantages of enabling them to maintain current knowledge and experience in business situations and of opening up opportunities for future collaborative research. It was occasionally used to top-up academic salaries to enable the academic life to be an affordable option to those used to higher commercial salaries. Access to organizational sponsorship of research was often dependent on researchers', and institutions', credibility in the business world. This could be achieved through the existence of large research teams, from reputations as 'centres of IS excellence', or through individual publication strategies and networking. Around half of the leaders had involvement in sponsored research, either with individual companies or sponsoring groups. Formal contracts were usually drawn up which identified requirements for the reporting of results to the organizations' management.

Interviewees talked of the 'client remaining in control' and stressed the need to maintain a sense of 'responsibility to the sponsors' in order to build trust and a professional approach. Much of the client reporting, as with collaborating organizations, was in the form of verbal, rather than formal, written reports. Both the content and form were identified to satisfy the needs of the audience. In most cases, a 'twin-track' publishing route was pursued, with academic publishing via academic journals in the 'public domain' following the initial feedback to sponsors. There were some concerns expressed by the interviewees, however, particularly with regard to 'short-termism' in business and a perceived lack of interest on the part of managers in 'sociological ideas'. Leaders variously voiced the views that: mangers hide results of research which they reject; that they are 'not interested in research, only soundbites'; and that they are often 'reluctant to discuss why they do things', 'choosing what they want irrespective of the decision making process'. One leader suggested that it was 'a fantasy that we have a close relation' with business, and a number made comments about the UK's cultural hostility to education.

ACADEMIC PUBLISHING AND PERSONAL CAREER

Virtually every leader interviewed talked of the importance of academic publishing in terms of their employment requirements or career prospects, with almost half identifying academics as their main audience for research. Only one world-renown figure commented that, since the young researchers with whom he worked needed the academic publications, he focussed on the business writing. Others, although sometimes very critical of the quality or requirements of IS journals, acknowledged the centrality of their academic publishing for a variety of reasons: because of RAE or academic credibility requirements; taking a view of papers as a means of sharing ideas which provide the 'most important source of information' for their own work; or in order to 'raise the standards of publications by participation, providing a positive alternative' for the community. Strong criticisms were made of the power of journal editors and their use of publishing as a means of control over the community, one leader noting that confidential refereeing sometimes blocked radical views from being espoused by well respected figures, another that the politics of publishing did not allow for intellectual argument. Most agreed that academic journals were rarely read by business people and practitioners, emphasising issues such as the long delays in publishing times, the rules regarding the form of articles and their lack of relevance to business.

The requirement of publishing within the RAE generated a large number of comments during the interviews: one leader talked of the 'need to get 'brownie points' by publishing academic papers; it was noted that the RAE effort took priority over other dissemination efforts, since 'papers produced for practitioners don't usually count; and some researchers were under pressure to publish in academic journals outside of IS, since the panel under which they would be assessed would not be able to judge the quality of another discipline's journals. One leader made the comment that they were pushed into academic publishing for promotion purposes, another that as a late entrant to the academic world the requirement to publish was high in order to achieve credibility. The RAE was seen as 'forcing publishing to have a more dominant role than the usual one of career promotion'. There was an added frustration that, until some institutions started dropping out of research, the backlog of papers held by journal editors would allow them to be more selective - having the dual outcome of, possibly, higher quality articles being published and of researchers spending increasing amounts of time and effort in submitting to journals to meet their institutional and personal career requirements.

ACCESS TO BUSINESS SITUATIONS

In a field that describes itself as being close to practice, the generation of research results which are relevant to organizations implies a need for access to

organizational situations. Many areas of IS are best studied via action research, case studies and in-depth survey, or through consultancy and reflection, all of which require access to organizations and the involvement of managers and IS practitioners as collaborators in projects. Leaders noted that access to business situations was dependent upon several factors: the credibility of the researchers in terms of their reputation as academics; experience in other collaborations; and the perceived likelihood of them providing results in a format and within a time-scale which would be useful to the collaborating organization. The latter was considered by several leaders to be a major problem for most academics.

Influencing business practice was cited as one motivation for doing research, and leaders identified a variety of routes to reaching that audience. Direct routes to managers and IS practitioners which were suggested included consultancy, networking, and speaking at professional and commercial conferences and seminars. Engagement in research activity and feedback sessions with sponsoring or collaborating organizations provided another opportunity to talk directly with practice. Concerns were expressed about access to IS practitioners and 'operational' managers, and problems with dissemination to senior management, as were noted earlier.

Access to practice via students was considered important by a number of the leaders, with more than 10% of those interviewed identified this as their main audience for research results. Some leaders, however, were critical of students receptivity to research issues. One leader proposed that undergraduates were 'a distraction from the business of research', since 'students' interests were different from managers'. Several interviewees commented that as undergraduates finished their courses, in particular after a number of years working in organizations, they began to appreciate the relevance of the content of the teaching. Research dissemination was more likely to occur at the postgraduate level, where students were less likely to be looking for 'checklists of words' and more likely to already have some relevant experience in organizations. Use of the mass media for dissemination to IS practitioners and managers was generally rejected by the interviewees, although a few used this route regularly and effectively. The concern expressed was two-fold: firstly that the press and television were not interested in IS; and secondly that the leaders felt they lacked the skills to attract and manage the media. A need for mediators was mentioned, to 'translate' research results into a media friendly form and to deal with the sensationalist tendency of the press. Leaders noted that one needed to 'be credible' for the press and television, both in terms of content and style, it was necessary to network - 'once you are known they come back to you for your opinion'. Similar requirements were identified for access to Government and public policy makers.

VI. CONCLUDING REMARKS

The research presented in this paper illuminates some of the complexity of choice-making in IS research. It discusses some of the possible influences on researchers in choosing target audiences for the results of their work, through the perspective of resource-dependence relationships with stakeholders of IS research. The influence of stakeholders is greatest where they provide resources which are critical to those researchers. If the supply of such resources is limited, or the acquisition of the resource is included in measures of success for the researcher, the influence of the stakeholder increases [Pfeffer and Salancik, 1978], [Frooman, 1999]. The relative influence of researchers over the stakeholders of IS research may depend upon the availability of the information, service or products they provide from alternative sources, such as commercial research organizations, consultants and academics in other universities.

IS leaders found themselves in a variety of resource-dependence relationships with stakeholders who provided resources in the areas of research finance, academic publication and career progression, and access to business situations and practitioners. Several of the leaders talked of having insufficient time or funds to disseminate to all audiences who may be interested in their work. With limited resources, competing demands on their time and specific dissemination requirements of funders, institutions and peers, dissemination to the broad management and IS practitioner audience was generally seen to be a low priority. Where leaders talked of a personal commitment to share results with practitioners, they were more likely to utilise both direct and indirect routes to reach them. Amongst members of the IS academic community as a whole, the personal motivations of researchers, their stakeholder relationships and the importance, and availability, of any given resource will vary greatly. However, the choice of target audience will almost certainly include a process of prioritisation and, from an IS practitioner's viewpoint, there is a danger that this group will always be the least-advantaged because of the low-interdependence of their resource relationships with IS research.

The findings in this paper provide more than just a snapshot of the views of IS leaders in the UK. It is hoped that the discussion will encourage IS researchers to reflection on their own practice of research and the influences, and affects, of their choice-making. If the choice of target audience really does ensure the relevance of our research, then it is important that we are aware of the choice-making activity throughout the whole process of IS research.

We suggest that this is a fertile area for future research, across a broad range of IS applications and in a variety of cultural contexts. Choice-making, particularly in situations of limited resources, should become an explicit part of IS theory and may illuminate questions of purpose and ownership of information systems in organizations and society.

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