INTERFIRM CONFLICT AND COOPERATION AND THE ROLE OF "THE INFORMATED BOUNDARY SPANNER"

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ABSTRACT

Organizations are more frequently looking beyond their traditional boundaries and arranging new interorganizational arrangements which are realized through the leverage of unique information interchange relationships -electronic linkages across organizational boundaries. This paper decribes how the SMARTS system (a decision support tool) was designed to stimulate interfirm cooperation and provide the users of the system with information to monitor and control other firm's behavior. By providing employees at lower levels with information that supports their tasks and the process of their interaction with other firms, decentralized decision-making is made possible. Zuboff (1988) introduced the term "informated workers" for the employees that through IT (Information Tecnology) have access to high quality information. In the case presented such "informated boundary spanners" should be able to make better decisions based on this information and become increasingly important for interfirm coordination. The study uses qualitatative data to analyze the effects that informated boundary spanners have on interfirm relationships and coordination. Interesting findings regarding the use of information across organizational boundaries are presented. The use of information has implications for both the users of the system as well as the organizations that are being confronted with the system. In addition, the paper shows that the introduction of the system has interesting implications for coordination and conflict in interfirm relationships.

1. INTRODUCTION

The traditional view of the business organization with clear boundaries, limited relationships with other organizations, and a focus on internal efficiency and effectiveness is no longer adequate. Interorganizational information systems profilerate as companies become aware of the potential of these systems to extend and transform organizational boundaries (Konsynski 1993).

It is argued that information technology by itself can only to a certain extent be viewed as a competitive tool but that successful organizations start to see *information* as a valuable strategic asset in interfirm competition and coordination (Glazer 1993). The study shows a clear relationship between the use of various IT applications in a distribution channel and the degree of conflict and cooperation in interfirm relationships.

The ability of firms to leverage IT capabilities and restructure business relationships with adjacent members in the value chain is an important competence, impacting the strategic positioning of a firm within a business network (Short and Venkatraman 1992). Information Technology has the potential to significantly affect the relationships between organizations which results in significant changes in the *boundaries* of firms (Clemons 1991, Konsynski 1993). Interfirm cooperation might be effected by the use of IT by organizational boundary spanners. This paper addresses the use of information across organizational boundaries by so called "Informated boundary spanners". It in particular will look in detail at the impact of IT on interfirm coordination. We will follow by discussing coordination across firm boundaries. Than the setting and the system will be discussed, followed by a description of the research method. In paragraph 3 the impact of the system and the implications will be discussed, followed by some concluding remarks and suggestions for further research. First however the concept of informated workers (Zuboff 1988) and the informated boundary spanner will be elaborated.

2. INTERFIRM COORDINATION AND THE INFORMATED BOUNDARY SPANNER

> *"An individual without information cannot take responsability; an individual who is give information cannot help but take responsibility" Jan Carlzon (1987)*

Zuboff (1988) has stressed that when IT is used by an employee and this "informated worker" can have an impact decisionmaking within organizations. By providing employees at lower levels with information that supports their tasks and the process of their interaction with other firms, decentralized decision-making is made possible. Information made available to employees should enable them to make better decisions based on this information.

We argue in this paper that this informated worker working on the boundaries of the organization can have serious impacts on interfirm cooperation and control. In particular DSS's (Decision Support Systems) facilitate the decentralization of decision-making to lower levels of the organization, in particular in the case of boundary spanning functions. The performance of these employees was expected to increase as a result of the availability of better quality information.

Organizations are more frequently looking beyond their traditional boundaries and arranging new interorganizational arrangements which are realized through the leverage of unique information interchange relationships -electronic linkages across organizational boundaries. This paper describes how the SMARTS system (a decision support tool) was designed to stimulate interfirm cooperation and provide the users of the system (American Airlines Salesrepresentatives) with information to monitor and control other firm's behavior.

It is now widely believed that information technology is transforming the nature of business practice (Glazer 1993; Schein 1992; Malone, Yates and Benjamin 1987). Analyses of the implementation of IT have noted a variety of factors that aid or hinder the implementation or effects that such technologies might have on organizations (Kiesler 1986; Markus and Robey 1986; Orlikowski and Robey 1991). For example, Markus (1984) notes that one can focus on 1) The limitations of the technology itself; 2) the resistance to change on the part of the individual personality, cognitive style, or position in the organization or 3) the interaction between individuals and the technology. Kraemer, King, Dunkle and Lane (1989) extend this interactionist perspectively referring to the role of "states of computing" in given companies reflecting the interaction between the interests of different organizational levels and different functional groups. Kling for example discusses that the impact of computing varies from one occupational specialty to another and can be understood best in terms of different work contingencies and information systems designs.

Herbert Simon was one of the first to address the link between computer based systems and decisionmaking in organizations. He developed the view of organizations as groups of decision makers and problem solvers (Simon 1973; Simon 1977). He argues that computer based information systems can help participants in organizations act more rationally by enabling them to compensate for weaknesses in their abilities to select and remember information (Simon 1973, 1977).

Many studies that relate computer based information systems to decision made by actors in the organization assume that there is usually a good match between the data available in computer systems and the kinds of information used to inform decisions (Kling 1980). Information technology is increasingly used across organization boundaries (Venkatraman and Zaheer 1990;

Zaheer and Venkatraman 1994; Konsynski and McFarlan 1984; Copeland and McKenney 1988). Not many studies however have addressed the role of control across organizational boundaries as a result of IT. Recently hand-held and other portable technologies have been introduced and it is expected that these technologies have a substantial impact on interfirm coordination and control. Konsynski (1993) notes:

> *"Wireless, hand- held, and portable technologies change what is possible at the point of sale, service or other limits of the enterprise. Associations between cooperating and competing corporate entities will never be the same, as information technologies change the nature of these relations"* (Konsynski 1993, p.113).

Information used as a strategic asset in channel systems can seriously impact the organization of such channel relationships and the formulation of marketing strategies in such channel settings. This important trend in new organizational alliances, boundary redefinition and market structures has not been subject of much research. Konsynski (1993) is one of the first to note the impact of IT on boundary spanning functions and enterprise extension by dramatic transformation of this marketing function. Figure 1 below illustrates the above.

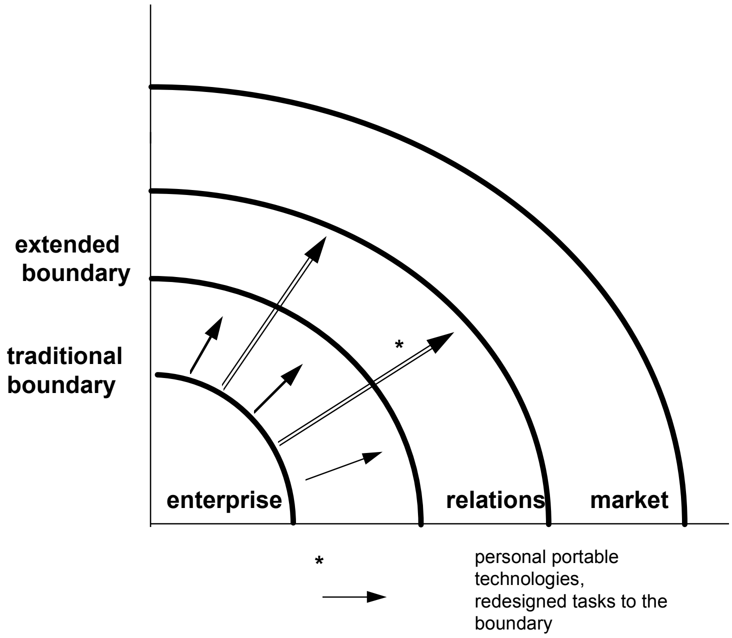

Figure 1: Technologies Transform Relationships Between Organizations (Adapted from Konsynski 1993)

From the marketing perspective only recently some interest has been paid to the value of information in inter-channel settings (Glazer 1991, 1993). We argue that when boundary spanners are equipped with technologies that provide them with detailed and high quality information, this might have serious implications for coordination and monitoring of relationships across the organizational boundary. When information about the other firm is available to the boundary spanner this provides him or her with opportunities to influence the behavior of the other organization. Specific, information based, influence strategies (Frazier and Summers 1984, 1986) can be used to pursuade the other firm to behave in a particular manner. In particular in sales situations this can obviously be very valuable. We will first turn to a description of the system and the setting the study was conducted in.

3. THE SETTING AND THE SYSTEM

In this study, the airline industry is taken as the context to study the influences of IT on the dynamics of a buyer-supplier relationship. The influence of IT on the different strategies used by airlines to monitor and influence their distribution network are key themes in this industry. The specific IT applications being studied are the SMARTS system, a DSS tool developed by American Airlines for its sales-force and the reservation system in use by the focal carrier, the Sabre system. The SMARTS system is designed to influence distribution channels by providing sales-representatives ("reps") with specific information on distribution channel business operations and then to stimulate these travel agencies through targeted incentives to recommend that particular airline to their customers. This access to information through this system, which is communicated back to the distribution channel member by the sales-rep, is presumed to persuade the distribution channel member to change its behaviour and to book more reservations on that particular carrier. The main task of the sales-rep is to visit travel agencies in her territory and built up a relationship with them that encourages the travel agent to sell that particular airline to its clients. The system identifies to which airlines market share is lost and on what city-pairs, information that can be used to develop targeted incentive programs. Traditionally, these sales-reps did not have much information about market share and other performance data of the travel agencies in his or her territory and the job consisted mainly of preserving a good relationship with the travel agent. With the SMARTS system however, this role has changed significantly for the airline's sales-rep. The system is designed to be able to organize data by city, zone, territory of the salesrep, location and national account. The system was designed to replace the paper reports that the salesreps have been using.

The system is designed to be easy to use in order to motivate the sales-reps to use the system frequently. After having created customized reports for the account the rep will be visiting, the rep brings the laptop to the travel agent and shows the reports and comparisons between the last month's bookings and those of the same month in the previous year. The system generates city- pair-specific information for bookings on all carriers, provides the top twenty city-pairs for that specific account and lists city-pairs where this account is below the carrier's city average. Specific reports highlight declining market share and identify revenue opportunities for marketing strategies. In addition, the system is believed to enhance American Airlines' image as a market leader in the use of IT, which is assumed to have positive effects on the relationship between this airline and its travel agencies. To our knowledge, there is no other airline with a comparable system or reports at the present time.

4. METHODS

The study uses multiple data gathering techniques and has both deductive as well as inductive phases. Both qualitative as well as quantitative data-gathering methods were used. Hypotheses were generated in the inductive phase where interviews were conducted and hypotheses were generated which fit the qualitative data. These hypotheses were consequently tested in the quantitative, deductive phases of the study. The specific content areas to be covered in the questionnaires were thus inspired by the fieldwork as well as by theoretical considerations. First, interviewing and participative observation are used as data-gathering methods to ground our theory in the experience of distribution channel members and users of the technology (American Airlines' sales-representatives).

This stage was seen as necessary preparation for the design of the survey and the data gathered during this fieldwork stage is also to be used for interpreting the quantitative data after analysis. This paper however will only report on the qualitative data.

We interviewed and did participant observation over a period of two years. A total of 42 sales-reps were interviewed and approximately 30 days were spent on sales-calls in five different sales- divisions in the US. During the summer of 1991, extensive field work with sales-reps was carried out. When interviews were conducted, these were recorded and transcribed to be used for further analysis. These interviews were semi-structured, a rough list of issues was covered in each of them, leaving room however for other topics during the conversation. In addition, these field studies consisted of visits and interviews with airline management, marketing management, information systems departments, and industry experts. This was in addition to sales-visits with sales-representatives and attendance of sales-meetings and training sessions. Across the boundary of the organization ,on the distributor side, a total of over 50 travel agencies all over the US were interviewed. Mostly the president of the agency was interviewed. In larger travel organizations, the Vice-president marketing or members of IS departments were interviewed. During these interviews the influence of IT on the industry and the relationship of the distributor with suppliers and competitors were discussed. In addition we had extensive discussions with industry experts both in the US and in Europe.

5. THE IMPACT OF THE SYSTEM

The impact of the system for coordination and control will be discussed from a job-level perspective as well as a inter-organizational perspective. This because we believe that individual differences have to be understood first to be able to understand the full impact of the system on interfirm relationships. Each of these will be discussed below.

5.1 Impact on the Job of the Individual Boundary Spanner

The system was an initiative of the VP for Marketing, Jack Williams, who believed the system would adopt a very different interaction process with its customers, the travel agencies because the system would enable the salesreps to make radically different decisions based on the new information available. The system analysis the market share data of the territory of each rep and shows where market share is being lost. This information previously was only available to the rep in the form of hard copies that had to be requested at headquarters. One of the marketing managers described the system as follows:

> ***" We monitor agency behavior through our systems. Every booking an agency did for that month and which carrier every booking was on is in the SMARTS system. When downloaded in the laptop we do a so called "red-flag analysis" and it goes through all those agency locations and it identifies for the rep where we are losing market share."***

As was discussed above there were several objectives underlying to the development of the SMARTS system, in addition to being a tool for influencing travel agency booking behavior. The system "informates" (1988) the rep, enabling him/her to analyze market trends and identify opportunities more easily than before. This is part of American Airlines' effort to increase each employee's set of skills. The users of the system vary in their opinion of it, as illustrated by the following quote, coming from a enthusiastic rep:

> ***" The system is great, it makes us analyzers instead of relationship-builders......"***

That not all reps were positive of the system is not surprising since much IS research showed the negative impact of the introduction of IS in organizations (Kiesler 1986; Orlikowski 1989; Orlikowski 1991). It was noticed during fieldwork that in particular the older, "computer illiterate" reps had problems with the changes the system brought about in their jobs. Some salesreps admitted they hardly used the system and only downloaded the information by modem each month, not to alarm head-quarters they were not using the system. Often the complaints did not involve the system itself but the impact it has on the job of the rep. The following quote illustrates this:

> ***" We are becoming slaves of these systems, it is an analytical tool ...... but we need sales tools"***

In general there was a lot of diversity in the type and degree of use of the system by the salesreps. Some hardly used it at all and others reported to not understand how they ever did without it. In the opinion of the author this very much seemed dependent upon the reps' analyzing abilities. We will get back to this issue in section 7 and first turn to the impact of the system on interfirm coordination and control.

5.2 The Impact Of The System On Interfirm Coordination and Control

It was noticed during fieldwork with travel agents that many travel agency owners perceived the fact that this airline apparently knew so much about their operations to be a serious intimidation and a threat to their privacy. The following quote comes from the owner of a large travel agency on the East coast after he saw the system:

> ***" The American Airlines' sales-rep knows more about my business than I do, and I need it so I do business with him"***

The exchange of information across organizational boundaries may also have very negative impacts of the perception of the party that experiences the influence attempt. The fact that apparently very detailed information about travel agencies is available to airlines' salesreps can be perceived as very negative by the owners of these agencies. It is important to realize that most travel agencies do their reservations on reservation systems but are unable to display and/or analyze their own booking behavior.

A travel agency owner expressed his concern during one of the interviews:

> ***"It is a pretty scary thought that they seem to know this much about our business"***

The fact that the salesreps knew so much about their business in some cases led to conflict in the relationship between reps and tehir customers , the agencies. In one case the agency owner told the rep never to come in with the laptop again. However these instances were very rare.

Another issue is the use of interfirm influence strategies (Frazier and Summers 1984, 1986) which can be used by the reps to influence the agencies' behavior. Reps reported to be able to use more non-coercive influence strategies as a result of the availability of high quality information. However it was noticed during fieldwork as well that sometimes just the availability of information was perceived as a strategy of a coercive nature which could lead to a conflictous situation in some cases.

6. IMPLICATIONS AND CONCLUSIONS

One of the effects of the use of these type of DSS technologies is that they can facilitate the decentralization of decision-making to lower levels of the organization. By providing employees at lower levels with information that supports their tasks and the process of their interaction with other firms, decentralized decision-making is made possible. Information made available to employees should enable them to make better decisions based on this information. The performance of these employees was expected to increase as a result of the availability of better quality information. Information quality was perceived to be higher where the system was used and satisfaction of distributors with the airline seemed higher, when the SMARTS system was involved.

The use of information at the boundaries of organizations might have serious implications for the relative power of individuals in the organization. When boundary spanners suddenly have access to specific information about the behavior of other firms that other people in the same organization do not have access to, this might improve their information power vis-à-vis these other people. These information asymmetries could lead to political action on the side of these employees. The way American airlines tried to cope with the relative increase in power of the boundary spanners vis-à-vis their superiors was by implementing performance based reward system[1]:

" Now they have all the information necessary to base their marketing strategy decisions on, we are going to hold them accountable for their decisions"

Zuboff (1988) has already demonstrated the influence IT can have on "the informated worker". Some theorists have attributed systematic and purposeful control to the managerial use of technology (Kiesler 1986). They argue that managers are interested exclusively in technology as a means of controlling, limiting and ultimately weakening their workforce (Braverman 1974).

The data presented in this paper suggest that the SMARTS technology introduced, needs to consider the ways in which it intrinsically created new qualities of experience and opportunities for the individual boundary spanners to interact in inter-firm settings in a different way based on the information available. Instead of limiting the boundary spanner, she is provided with new information to base her decisions on. In this way, firm boundaries are transformed through the employment of information technologies and the firm gains control over the adjacent stages of the value chain.

A new type of work-force can be created by providing employees with high quality information to base their decisions on and that this can be a source of competitive advantage. In the

[1] It is not the focus of this article to discuss the reward systems' implications but we do want to stress that American Airlines was aware of the power implications and dealt with it by implementing a new reward system simulanously to the introduction of the SMARTS system.

literature this shift has been described as the "new managerial work" (Kanter 1989a, 1989b, 1989c, Brynjolffson 1991). It was argued that, by providing employees with high quality information this will enable them to make higher quality decisions which will in turn lead to a better performance of these workers.

It has often been claimed that decentralization of decision-making is facilitated by IT (Applegate et. al. 1988, Drucker 1988, Leavit and Whisler 1958) but empirical results have been lacking. The use of the SMARTS system is apparently related to a perception on the distributor side of a higher quality of information being exchanged by the rep. However, the information that the system provides is not used optimally by the users of the system, the sales-reps, in their interaction with the distributors given the effect of non-coercive influence strategies.

The information provided by the system changes the job of the boundary spanner significantly: as indicated by field work and discussed before, it is the case that these boundary spanners become *"analyzers"* and influencers instead of *"relationship builders"* after the system has been implemented. The introduction of the system thus significantly changed the salesrep’s job. While the rep without system would walk into an agency with some stickers and a coffee mug to promote the airline and stress that the agency should work together with the airline to sell more tickets on American, now the rep can take things a step further and based on the information available on the agencies booking patterns in the laptop, indicate problem areas and specific markets where share could go up and tie this to specific marketing and incentive programs.

The information available to them enables them to interact in a significantly different manner with the distributors. Fieldwork however indicated that the way the information can be used has not been thoroughly addressed in sales-training according to the sales-reps themselves:

> ***"We are not really trained to link the use of all this information to targeted incentives"***

By combining insights from both marketing channel and IS research a new perspective on the influence of IT on interfirm coordination in channel settings was explored by extensive fieldwork.

Recently the role of information instead of information systems across organizational boundaries has gained more attention (Glazer 1991, 1993) This paper and earlier work (Christiaanse 1994b) showed support for the information as a strategic asset argument. It argued that the use of information across organizational boundaries should be considered essential in interfirm influence processes and that the role of "the informated boundary spanner" can be substantial on cooperation and conflict in interfirm relationships. This paper provided the results of fieldwork done with agencies and reps working with the system. Since we did gather quantitative data on these issues as well it is our intention to empirically test some of the findings of our field work. For example we measured the perception of agencies of conflict in the relationship with suppliers and would like to investigate the relationship with the introduction of the system. In addition we gathered performance data of the individual reps and since we have a matched sample of each rep with each agency we will be able to detect patterns of reps use of the system and relate this to agency satisfaction and perception of conflict.

It was shown that IT and the information available from new IT applications can be used as an influential monitoring tool across organizational boundaries, and have significant implications for channel redesign. Earlier work (Christiaanse 1994a and 1994b) tested the impact of IT on organizational performance (measured as changes in market share) and satisfaction and found a positive significant effect of information on distributor satisfaction. However, we did not yet test the effects of the exchange of high quality information on other perceptual variable such as coordination and control.

In addition, the observation that the use of such information might lead to interfirm conflict and influence strategies that might be perceived as of an coercive nature needs to be empirically tested.

We hope that this study will help to understand IT-induced coordination and cooperation in interfirm relationships and that eventhough the difficulties of conducting empirical research on interorganizational relationships and the impact of IT on interfirm coordination are substantial, research activity will increase in the near future.

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References

Applegate L. M. Cash J.I. and Mills D.Q. (1988), "Information technology and Tomorrow's Manager" *Harvard Business Review*, Nov-Dec.

Braverman H. (1974), *Labor and Monopoly Capital*, Monthly Review Press, New York.

Brynjolfsson E. (1991) "Information Technology and the 'New Managerial Work'" CISR Working Paper *MIT Sloan School Of Management,* March.

Carlzon J. (1987)*, "Moments of Truth"* Cambridge, MA: Ballinger Publishing.

Cash, J. I. and Konsysnki, B.R. (1985), "IS redraws competitive Boundaries,"*Harvard Business Review*, March-April.

Christiaanse E. (1994a), "Information as a Strategic Asset In Interfirm Relationships: IT and the Informated Boundary Spanner." *Proceedings of the Hawaiian International Conference on Systems Sciences (HICCS)*, Honululu, HI USA.

Christiaanse E. (1994b), Strategic Advantage and the Exploitability of IT: An Empirical Study of the Effects of IT on Supplier- Distributor Relationships in the US Airline Industry. *Thesis Publishers Amsterdam* 1994.

Clemons E.K. (1991) "Information Technology and the Boundary of the Firm: Who wins, who loses, who has to change", *Proceedings of Colloquium on Global Competition and Telecommunications Harvard Business School*, May 2-3 .

Copeland D. and McKenney J. (1988), "Airline Reservations Systems: Lessons from History", *MIS Quarterly*, September 1988, pp. 353-370.

Downs, A., (1967) "A Realistic Look at the Final Payoffs from Urban Data Systems", in *Public Administration Review,* 27, September 1967, pp. 204-209

Drucker P. F. (1988) "The Coming of the New Organization", *Harvard Business Review*, Jan-Feb.

Frazier, G.L. and Summers, J.O. (1984), "Interfirm Influence Strategies and Their Application within Distribution Channels", *Journal Of Marketing* Vol. 48 (Summer 1984), 43-55.

Frazier, G.L. and Summers, J.O. (1986), "Perceptions of Interfirm Power and Its Use Within a Franchise Channel of Distribution", *Journal Of Marketing Research* Vol. 23 (May), 169-76.

Glazer, R. (1991) Marketing in an Information Intensive Environment: Strategic Implications Of Knowledge as an Asset, *Journal of Marketing* Vol. 55 (October 1991), pp 1-19.

Glazer, R. (1991) Marketing in an Information Intensive Environment: Strategic Implications Of Knowledge as an Asset, *Journal of Marketing* Vol. 55 (October 1991), pp 1-19.

Glazer, R. (1993) " The Value of Information" *IBM Systems Journal*, Vol 32, NO 1, 1993.

Kanter, R.M. (1989a) "The New Managerial Work", *Harvard Busines Review*, November - December .

Kanter R. M. (1989a) "The Future of Bureaucracy and Hierarchy in Organizational Theory: A Report from the Field, "*Harvard Business School Working Paper*, 90-035, November.

Kanter R. M. (1989c) *When Giants Learn to Dance*, New York: Simon and Schuster.

Kiesler, S. (1986), "The Hidden Messages in Computer Networks", *Harvard Business Review*, pp. 46-59.

Kling,. R. (1980) Social Analyses of Computing : Theoretical Perspectives in Recent Empirical Research." *Computing Surveys* 12 no. 1 : 61-110.

Kochan , T.A., M. Useem (1992), *Transforming Organisations*, Oxford University Press, New York

Konsynski B. R.,(1993) "Strategic Control in the Extended Enterprise" *IBM Systems Journal* , Vol 32, No. 1

Konsynski B. R. and McFarlan W. (1990), "Information Partnerships-Shared Data, Shared Scale", *Harvard Business Review*, September-October.

Kraemer, K.L., J.L. King, D.E. Dunkle, J.P. Lane (1989), *Managing Information Systems*, Jossey-Bass, San Francisco

Leavitt H. and Whisler T. (1958), "Managing in the 1980s", *Harvard Business Review* 36, 6 41-48.

Malone T. J., Yates J. and Benjamin R., (1987) "Electronic Markets and Electronic Hierarchies" . *Communications of the ACM.* 30 (6) 484-497.

Marcus, M.L. and Robey D. (1988) "Information Technology and Organization Change: Causal Structure in Theory and Research." *Management Science* 34, 1988 no. 5: 583-598.

Markus, M.L. (1984), *Systems in Organisations,* Pitman Publishing, Boston

Markus, M.L. (1983), "Power, Politics, and MIS Implementation", *Communications of the ACM*, pp.430-444.

Markus, M.L., and Robey D. (1986), "Information Technology and Organizational Change: Causal Structure in Theory and Research", *Management Science*, pp. 583-598.

Orlikowski, W.J. (1989), "Division among the ranks: the social implications of CASE tools for system developers", in *Proceedings of the Tenth International Conference on Information Systems*, Boston, Massachusetts, pp. 199-210.

_____ (1991), "Integrated Information Environment or Matrix of Control? The contradictory implications of information technology", *Accounting, Management and Information Technology*, pp. 9-42.

_____ and D. Robey (1991), "Information Technology and the Structuring of Organizations", *Information Systems Research*, pp. 143-169.

Schein, E.H. (1992), "The Role of the CEO in the Management of Change: the Case of Information Technology", in *Transforming Organizations, T.A. Kochan, M. Useem (editors)*

Short, J. and Venkatraman N. (1992) "Beyond Business Process Redesign: Redefining Baxter's Business Network", Sloan Management Review, Volume 34, Number 1, Fall 1992.

Simon, H.A., (1973), "Applying Information Technology to Organizational Design", *Public Administration Review,* 33, May-June 1973, pp. 268-287

Simon, H.A., (1977), *"The New Science of Management Decision-making",* Prentice-Hall, Englewood Cliffs, N.J.

Zaheer A. and Venkatraman N. (1994), "Determinants of Electronic Integration In The Insurance Industry: An Empirical Test of The Transaction Cost Theory" *Management Science* Vol 40, No.5 May 1994.

Zuboff, S, (1988) *"In the Age of the Smart Machine: The Future of Work and Power"*, New York: Basic Books, Inc..

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