Managing networks

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INTRODUCTION

The main aim of the paper is to bring together some ideas of "What we know about networks" and present these as a model of Managing in Networks. The paper uses a case study based on the well known retailer, IKEA to illustrate the model. We then draw from this model a series of ideas on the dynamics of business networks and what these mean for the concepts of management and strategy.

THE CHARACTERISTICS OF NETWORKS

Before examining the model of managing in networks, it is important to make clear some ideas on nature of business networks that will affect that management. We can outline these ideas as follows:

Interaction, interdependence and incompleteness

We believe that three common myths have affected ideas on the nature of business behaviour and challenging these has been a major part of IMP Group activity over the years. These myths and our alternative views can be described as follows:

1. **Problems, Interaction and Solutions:** The *Myth of Action* sees business as a process of action by one company and reaction by another. Marketers tend to see themselves as the active party with customers in a reactive role. Purchasing people have the opposite view. Our view is to see companies as members of a business network consisting of a large number of *active* and heterogeneous companies each *interacting* with others and seeking *solutions* to their different problems. One important outcome of this approach for managing in networks is

that these interacted solutions are likely to affect several of the involved companies.

2. **Inter-dependence and Limits to Discretion:** According to the *Myth of Independence*, a company can carry out its *own* analysis of the environment in which it operates, develop and implement its *own* independent strategy based on its *own* resources, taking into account its *own* competences and shortcomings. Our counter-approach is based on the interaction between companies in relationships. These companies are *inter-dependent* for sales, supplies, information, technology development and for access to other companies elsewhere in the surrounding network. This means that companies have limited discretion to act or to build independent strategy. The *outcomes* of their actions will be strongly influenced by the attitudes and actions of those with whom they have relationships. Interaction between inter-dependent companies involves simultaneous elements of cooperation, conflict, integration and separation in the companies' relationships. A company's position in the network is based on its total set of relationships and that position changes through interaction with other companies in different positions in the network. Inter-dependence means that the management of a relationship is essentially similar for both of the companies involved in them.

3. **Incompleteness:** The *Myth of Completeness* arises from the view that a company is self-sufficient and is able to develop a strategy that marshals its own resources into a unique approach based on its own internal competencies and shortcomings. Our counter-approach is that no company *alone* has the resources, skills or technologies that are necessary to satisfy the requirements or solve the problems of any other and so is dependent on the skills, resources and actions and intentions of suppliers, distributors, customers and even competitors to satisfy those requirements. One important outcome of this is the formation of structures of relationships in networks to provide access for companies to the resources of others.

MAKING SENSE OF THE NETWORK

A network consists of companies and the relationships between them. A network is not restricted to the set of companies with which a *single* company deals, or even to the companies that they deal with. Nor is a network simply the set of companies with which a company has formal or informal agreements about some co-operation. Any view of a network centred on a single company, or defined by the company itself is inevitably restricted and biased and gives an incomplete view of the world surrounding that company. A company-centred view of the network provides an inadequate basis for understanding the dynamics within that world or for helping the company to understand the pressures that are or may affect the company or the opportunities open to it. Despite this, the view of a network that is limited to the set of other companies that the single company knows of, thinks of or deals with is common in the managerial literature. Such a view is often associated with the illusion that the company then *controls* that network or more simply that it is their own network[1].

The network surrounding a company is difficult to define and delimit. It has no objective boundaries and its contents will be affected by both the purpose of the analysis and the starting point for that analysis. For example, if we were concerned with issues of the location of technologies in different companies and the processes of technological development and exploitation, then the network we examined would have to include a wide range of companies in different industries, serving different applications of particular technologies. Our "focal" company would probably have no contact with many of these or even knowledge of them. If we were concerned with issues of logistics, then the network we examined may be much more circumscribed to those companies involved in using or providing logistical services, perhaps of a particular type. But even here, we would have to include companies with no direct relationship with those that our company dealt with, particularly if their role in logistics was different or innovative and if the companies or their methods could affect our focal company. Even if we are concerned with a narrowly defined issue such as component or service supply we would need to extend our view of the network from that of a single

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[1] The fallacy of this view can be readily seen when asking a number of companies, listed as being part of a certain company's network if that view coincides with their view of their position. They will often suggest that rather than being in someone else's network they actually have their own one, of which the first company is simply a part!

company to that of other principle companies and their relationships. This issue can be seen very clearly when we consider companies on the "boundary" of a network. Such boundaries are essentially artificial, so that if we looked at the network from the perspective of a company on that boundary, we would see that it would be well within a different network with different boundaries and so on.

> *There is no single, objective network. There is no "correct" or complete description of it. It is not the company's network. No company owns its. No company manages it, although all try to manage in it. No company is the hub of the network. It has no "centre", although many companies may believe that they are at the centre.*

One important consequence of this is that the outcomes of the actions of any company in the network cannot just be related to that single company. – many of them will be more or less collective.

In fact all of the actors involved in a particular issue in the network will have their own different "picture" of the network. This picture is the basis for their perceptions of what is happening around them and of their actions and reactions in the network. Network Pictures have a central role in our model as we will see below.

The model of managing in networks

Having outlined some of the issues that affect our view of networks and management in them, we can now look at the model itself. The model is illustrated in Figure 1 and we will examine each of the three basic elements of the model using the IKEA catalogue case for illustration.

> ### *The Ikea Catalogue and "Green" Paper*
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> *IKEA produces more than 100 million copies of its catalogue each year. This requires a lot of paper, approximately 40,000 tonnes per year. IKEA believed that its customers were becoming more environmentally aware and it was keen to show an environmentally friendly image itself. Its catalogue was an obvious place for this and in the early 1990's the company started to investigate the use of "green" paper for the catalogue. This required it to do some active networking (Hakansson and Waluszewski, 2002).*

Figure 1. A model of managing in networks
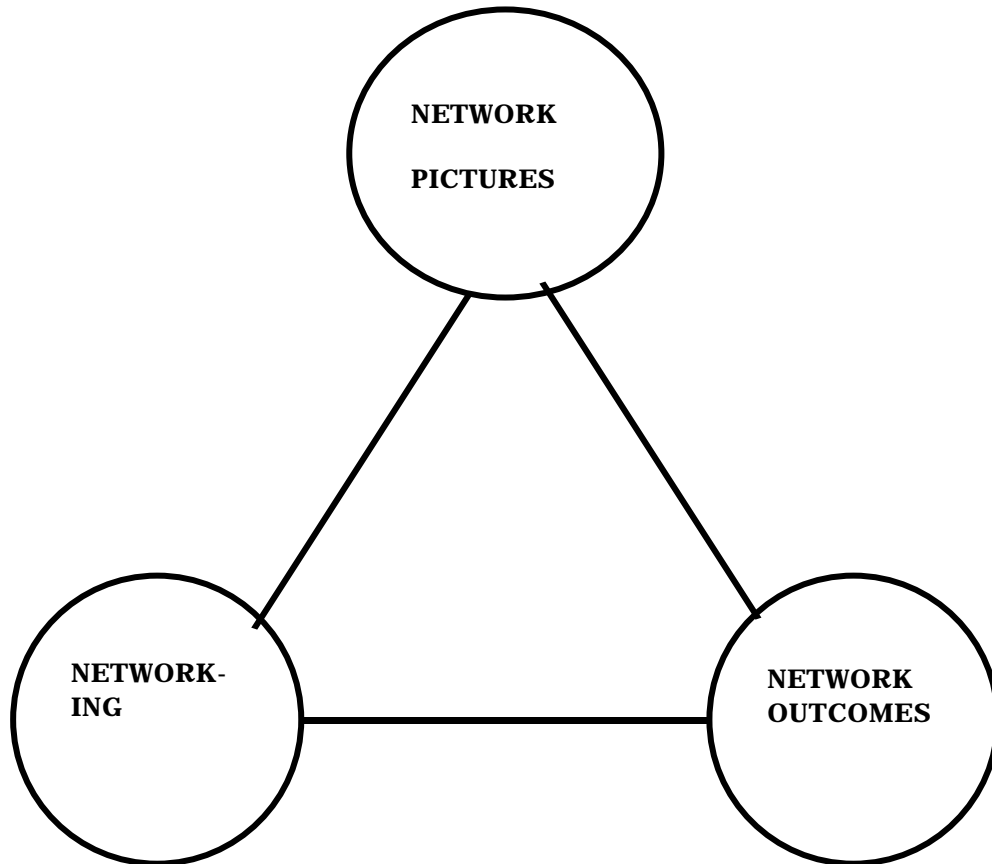
NETWORK PICTURES

Network Pictures refer to the views of the network held by participants in that network. There is no single, objective network and different companies and the individuals within them will each have a different picture of the extent, content and characteristics of the network. This picture forms the basis for their analysis and actions. Their network picture will depend on their own experience, relationships and position in the network and will be affected by their problems, uncertainties and abilities and by the limits to their knowledge and understanding.

Common Views and Stereotypes: In many cases, a common view of the nature and dynamics of a network will be held by a number of participants in it. These common views can lead to inertia in the network and form the basis for joint action for or against

change. Broad stereotypes that can affect thinking include the view of the network as a "supply chain" or "distribution channel". More specific stereotypes include the view of "who should do what" and "who should deal with whom" that are common across networks. Sometimes, many participants see a network as something that is controlled by a single powerful company, or that the network is only a group of companies that work together on some specific project. These network pictures arise from interaction and participants' experience in specific relationships and the corporate wisdom of each company.

"Types" of Network: A common network stereotype involves identifying different "types" of network. However, these types are generally the picture of a network as seen from a particular perspective or those held by a particular company. But these same networks are of a different type if seen from a different perspective and it is important to emphasise that there are no absolute or objective network types and all networks will have different elements, characteristics, possibilities when seen from different perspectives or when parts of the network outside their considerations of any one company are included.

> *In the IKEA case there was a clear stereotype picture of the network held by the paper producers. In this view, they were the dominant players and they chose which of the existing types of papers they should produced. These choices were based on their existing production structure. They defined the needs of the users in terms of strength, run-ability (for printing), and brightness of the paper. IKEA's network picture was different. They were closer to the final consumer and had a wider picture of the network, of which these consumers were part. They had also noticed an increased interest in environmental issues from these consumers. They felt that they needed a "green" paper. IKEA formulated an environmental policy where it was stated that the catalogue should use a paper based on TCF (Total Chlorine Free) pulp with at least 10% of recycled fibres. The first reaction from the producers, especially the German producer Haindl that had been the main supplier to IKEA, was to refuse. They said, "It is impossible to produce such a paper". At that time there were just a few producers of TCF pulp in Europe and none who could produce a catalogue paper using recycled fibres. IKEA now had to start to mobilise paper producers*

in a number of countries, as well as suppliers of equipment and chemicals. In other words, it had to expand its picture of the network in order to find a solution.

This example illustrates the importance for a company of examining the network pictures of others. These pictures will be different and may appear "outdated", "unrealistic" or "unfair" to the company, but they are the reality on which these other companies will act or react. In this case, the pictures of the paper producers were based on the importance to them of existing operations, investments and relationships. The example also shows that for a company to create change, then its own network picture, as well as those of others, have to be challenged. But these pictures cannot be changed instantly or completely and change requires both time and a systematic approach.

NETWORKING

This second element of the model is closely related to the network picture held by each individual or company. This affects what they can or might wish to do. Networking encompasses all of the interactions of a company or individual in the network. Networking has the following characteristics:

- **Networking is Interactive:** Networking by any company affects and is affected by the actions of others. Networking isn't something carried out by a single company that "manages its network" or something that is done "to" some other companies. All companies are networking by suggesting, requesting, requiring, performing and adapting activities, simultaneously. The outcome is the result of *all* those interactions! This means that the outcome of any action by a single company is seldom restricted to the company's original aims or wholly in accordance with the wishes of any of the involved companies. Accordingly, companies have to adapt their goals and ambitions continuously.

- **Networking is based on Restricted Freedom:** All companies in the network have restricted freedom to act. Much of their networking will involve reaction to the actions of others and all of it will have to take into account the reactions of others and will be moderated by these reactions.

- **Networking is not defined by Conventional Company Categories:** Wholesalers, retailers or manufacturers will not each behave in a particular way and cannot be

treated in common. From a network point of view they are all "middle-men". Each will build their activities on those of others and produce an output that will be used by someone else. Each will behave in a unique way.

- **Networking Involves Combined Cooperation and Competition:** Networks involve simultaneous combinations of working with, through, in-spite of or against others. Also, the classical roles of suppliers, customers and competitors are less clear and sometimes totally blurred. For example, the offering of a supplier may be produced according to the design of a customer. Another customer may make an offering for itself according to the design of a supplier. Two competitors may cooperate to design a new product or buy some of the products that they sell from each other.

- **Position and Experience are Central Factors in Networking:** A company's networking will be based on a view of its own position in the network, the positions of others and their likely reactions. In the same way its networking will be affected by earlier experiences and by the actor bonds, resource ties and activity links between the company and its counterparts.

- **Networking is based on Incomplete Knowledge:** The inadequacy of each company's knowledge means that "learning by doing" is an important aspect of networking.

- **Networking Copes with the Network Paradoxes:** Finally, companies network to cope with the three paradoxes of business networks, as we discuss below.

THE THREE ASPECTS OF NETWORKING

We can distinguish between three aspects of networking. Each involves managerial choices for a company and each relates to the three *paradoxes* of networks that we have introduced elsewhere (Hakansson and Ford, 2002).

The First Aspect of Networking: Choices Within Existing Relationships:

This aspect of networking relates to the first network paradox:

> *A company's relationships are the basis of its current operations and development. But those relationships also restrict that development.*

A company's relationships are major assets and are the basis of its current activities. Without them it could not operate. These relationships arise from investments made by

all companies in current practice. Any change in operations may produce benefits, but always involves costs for each company and the loss of the benefits of current ways of working.

A company's relationships are also liabilities that tie it to its current operations. Even though one company may wish to change a relationship, its counterpart will also made investments in the relationship and may resist change.

The first aspect of networking centres on a company's existing relationships and what these really mean for it. It involves choices of when to **Confront** the status quo of accepted ways of operating and when to **Conform** to particular ways of operating into which it is tied by its relationships.

These choices may have to be made by a company several times each day and are an integral part of its day-to-day interactions with counterparts. Each company will be questioned by its counterparts or will try to initiate changes itself in such things as the content of an offering for a customer, its method of fulfilment, the components bought from a supplier etc. At the same time, other aspects of the company's relationships will be held constant, such as the price charged to the customer or the supplier's relationship with an intermediary. Similarly, a company may negotiate a change in the offering it buys from one of its suppliers whilst keeping overall volumes constant. Making the choice between conforming and confronting requires an understanding of the evolution of both the surrounding companies and the relationships between them. Some aspects of this evolution will be positive for each company and some will be negative. Consequently, each has to try to enhance the positive ones, but also work against the negative ones. This is a continuous process, but it will be especially important when one of the companies tries to achieve a major change. Because this first aspect of networking may appear mundane or routine, it is possible that a lack of understanding or analysis of the minor changes within different relationships may lead to a drift into an unsatisfactory state. Alternatively, the process of confronting the status quo may sour the atmosphere of a relationship.

> In the IKEA case, the company wanted to achieve a substantial change and had to **confront** the supplier. When the supplier refused to cooperate, IKEA had to show that it was a serious demand and had to try to find someone that was prepared to **comply** with its demand. IKEA tried to find a supplier that already

had both the facilities and the experience to work within its requirements for both chlorine free and recycled paper. But, before changing supplier, IKEA first had to try with the existing one. It found that it was impossible for Haindl to conform because it was also imprisoned by its relationships. Haindl knew that only small amounts of pulp were totally chlorine free. If it had chosen to fulfil IKEA:s demand then a number of other important German customers would have been very upset as they also wanted to show an environmental friendly approach. Haindl wanted to avoid confronting these other customers.

The connections between existing and new relationships leads us to the second aspect of networking.

The Second Aspect of Networking: Choices about Position:

The second aspect of networking relates to the second network paradox:

> *It is equally valid to say that a company defines its relationships or that a company is defined by those relationships.*

Companies face important choices between accepting their current network position, defined by their existing relationships, or using their existing or new relationships to change that position. A company's existing relationships, its network position and the company itself are the outcome of its past interactions. A company can accept this existing position and actively work to stabilise it by using the first aspect of networking (above) to improve efficiency and effectiveness.

Alternatively, the company can seek to systematically change its position by combining its existing relationships in new ways or by building new relationships. The second aspect of networking involves the choice for a company between when to **Consolidate** by stabilising and strengthening its existing network position or **Creating** a new position by changing the combination of its existing relationships or developing new ones.

This second aspect is not simply a choice between whether to keep existing relationships or to develop new relationships. Instead, it is concerned with how the company combines its relationships into a network logic. New and existing relationships can be used for *both* consolidation and creation. Thus:

- **New relationships for consolidation and creation:** A company may seek to consolidate its existing position by adding new customers or suppliers that are

similar to its existing ones. Alternatively, it may try to change its position by adding developing new and different relationships.

- **Existing relationships for consolidation and creation:** Existing relationships can be used to create a new network position by for example, developing new technology in those relationships so as to radically alter their content, or enable new relationships to be developed. Alternatively, the company can simply seek to consolidate its existing position by operating in the same ways as before in its existing relationships, but with increased effectiveness (as in the first aspect of networking).

    IKEA did not initially want to change its network position, it just wanted to get another paper. But due to the reactions from the suppliers it had to change position in order to get a changed product. Earlier IKEA had been one of the larger buyers. It was a respected buyer that was expected to choose between existing types of paper. Now it suddenly demanded something else. In order to follow IKEA a supplier had to see IKEA in a new position as a "lead user". IKEA realised this and one of its strongest arguments in its discussions with suppliers was that it used 8-10 of the largest printers in Europe. Thus, anyone coming up with the new paper could, through IKEA have that paper tested and used by these printers. IKEA used its existing relationships with printers to "market" itself to the paper producers. At the same time IKEA established contacts with producers of paper-making equipment. Through these contacts IKEA gained a better understanding of the issues involved in producing the new paper. The outcome of this networking was that IKEA did get the new paper that it wanted.   But then it ran into the third aspect of networking.

The Third Aspect of Networking: Choices about how to Network:

Companies face decisions on networking both within and between their relationships. They also must consider *how* to network with their counterparts and this involves them in facing the third network paradox. This states:

> *Companies try to control the network and want the benefits of control, but control has its problems and when it becomes total, it is destructive.*

Companies in networks are incomplete and depend on the resources and skills of others. They also depend on the *initiative* of others to generate change and improvement.

Companies inevitably try to get their counterparts to do what they want, in such things as the offerings exchanged between them, the price charged, or direction of development or the attention given to counterparts' other relationships. But if counterparts do what the company wants, they are acting on the basis of the company's ideas alone. They may have to disregard their own wishes and wisdom and the relationships will not have the benefit of the initiative of those counterparts. Thus the development of the company's relationships will be limited by the company's own wisdom and its counterparts may become unwilling participants. Hence companies face the choice of when to **Coerce** others to do their wishes and when to **Concede** to the wishes and initiative of others.

Again, this is not a dichotomous choice. Companies are likely to simultaneously attempt to control some counterparts whilst concede to others or do both in different parts of each relationship simultaneously. The ability to coerce counterparts depends on the respective capabilities of the companies involved. For example, one company may be able to insist on the technological direction of a particular relationship based on its own technological capabilities whilst the counterpart, based on the volume of business that it transacts may be able to determine the price that is charged. Conceding may not be absolute and may involve informing or persuading, or simply accepting the decisions of the counterpart, with good grace. Conceding is in line with a realistic view of business networks and the restriction on company's abilities to take decisions for themselves as well as for others. Management in networks is not a linear process of achieving and maintaining control. A company's networking has to take into account of its dependence on others, its inadequate picture of the network, the diverse perspectives, approaches, requirements and aims of those around it and the need to accommodate and work with these and to coerce them when appropriate. In contrast, an approach based solely on coercion infers a self-centred view of the network. A company that sees the network in its own terms and only as a way of solving its own problems will fail to understand both the motivations and problems of others, the dynamics of the network and the interface between the well-being of others and itself.

> *This became clear in the next phase of the IKEA case. IKEA managed to get an Italian and two Finnish suppliers to produce the new paper. All of them had production difficulties about including the recycled material. But there was also*

another problem with this material. All Nordic producers have to import recycled paper as all that is collected in the Nordic countries is already used. Thus, waste has to be transported back from Germany and the UK and added to the pulp. Another big user, the Springer press group realised that this would increase the costs of production. Thus, when Springer formulated its environmental policy a year after IKEA it also included Chlorine-Free Paper, but specified that only suppliers situated in the centre of Europe should include waste in their paper. Instead Springer added "good forestry" as a new demand. This led to a problem for IKEA. If they tried to coerce suppliers to follow their specification for the new paper they would probably be the only company buying it and they would have to pay the full capital, development and operational costs of the suppliers. Another possibility was to downgrade the specification of the paper to one that is easier to use with re-cycle fibres. IKEA chose to concede to the new situation and encourage the overall development of environmental paper by accepting the lower specification of others.

The three aspects of networking are summarised in Table 1.

Table 1. The three aspects of networking

THE FIRST ASPECT OF NETWORKING	CHOICES ABOUT WORKING WITHIN RELATIONSHIPS	COPING WITH THE FIRST NETWORK PARADOX	CONFORM OR CONFRONT
THE SECOND ASPECT OF NETWORKING	CHOICES ABOUT NETWORK POSITION	COPING WITH THE SECOND NETWORK PARADOX	CONSOLIDATE OR CREATE
THE THIRD ASPECT OF NETWORKING	CHOICES ABOUT HOW TO NETWORK	COPING WITH THE THIRD NETWORK PARADOX	COERCE OR CONCEDE

NETWORK OUTCOMES

Networking is a universal phenomenon undertaken by all companies simultaneously as they conform/confront, consolidate/create and coerce/concede. This means that every network is continuously producing *network outcomes* for each single participant in the network both individually and collectively. But we can never be sure that a specific

outcome for a specific company to a single networking activity because each company is subject to multiple, simultaneous networking outcomes and networking always affects more than one company. Still less can we say with certainty that the outcomes of a particular networking are positive or negative in terms of revenue or profit, now or in the future. Because of this, no company can ever operate on the basis of a complete analysis of the outcomes of all the networking in which it is involved. Each company will observe, assess and respond to only a subset of the networking outcomes that affect it based on its particular *network picture*.

Despite the difficulties, it is important that companies try as far as possible to decide which networking actions are important for them and to examine the different outcomes of these actions. Because network outcomes affect the network pictures of individual actors, they often lead to increased uncertainty. They also form an important basis for each company's own networking. Negative outcomes may lead a company to change some of its networking activities and/or its network picture. Positive outcomes may encourage the company to extend actions to reinforce the outcomes.

A useful way to cope with the multi-faceted and multi-layered nature of network outcomes is to examine them along the three dimensions; actors, activities and resources.

Outcomes and Actors

An outcome is by definition "for" somebody and the "somebody" can be on three levels: Firstly, it can be for a single actor, a company, another organisation or an individual. Secondly, it can be for those in a single relationship, which has its own "substance" and identity. Thirdly, it can be an outcome for a network as a whole. It is important for managers to examine the outcomes of networking on each of these three levels, as follows:

Outcomes for Single Actors: Network outcomes directly affect each single actor in the network. So each company needs to examine the outcomes of networking for other significant actors, as well as examining outcomes for itself. The financial aspect of these network outcomes is important, but so are others such as what each company learns from the outcome of networking. It is also important for a company to examine network outcomes for single actors *in relation* to other actors in the network. For example, one

outcome of networking may be to give a company better access to the resources of other companies, *when compared with those around it*.

Because a company is part of a network, it is subject to multiple outcomes and needs to examine each *in relation to others*. A company must consider how networking within a number of different relationships affects the *individual* outcomes from each. It must also examine the respective outcomes it can expect from within different relationships in its portfolio. Its task is to maximise the value to it from the outcomes from within its portfolio of relationships as a totality.

> *The IKEA case illustrates how the outcomes for a single actor are the result of relationships working together. Haindle refused to supply IKEA because it could not combine its existing relationships with other customers with the new type of relationship required by IKEA.*

The particular network outcomes that each company focuses on will strongly affect both its network picture and its own networking.

Outcomes for a Single Relationship: The outcomes of networking for each relationship need to be assessed by those involved in it. The outcomes for a relationship are of two types: The first concerns what is accomplished in the relationship - its effectiveness and the second is concerned with how well the processes work within it - its efficiency. These outcomes will affect the views of the participants about the direction of the relationship and its value. This overall evaluation is of course subjective, but it is critical for the enthusiasm and involvement of the participants in the relationship.

Companies need to evaluate the value and processes of each of their significant relationships on a regular basis, from their own perspective *and that of their counterpart*[2].

> *The outcome of IKEA's relationship with Haindl was a disaster in terms of both what was accomplished and also how the relationship worked. Neither of the counterparts managed to understand the other's views and the relationship broke up. Some time later, Haindl tried to re-establish the relationship but was then turned down.*

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[2] A useful way to conduct this evaluation is by a Relationship Audit, (Ford et al, 2002, 116-119).

Outcomes for the Network: There are outcomes that can be identified for whole sets of actors and relationships. Change or stability in one or more relationships can lead to wider outcomes in the network as a whole. For example, a technological development in one relationship may change the way that a whole network operates. Each company must therefore develop the skills to scan more widely than its immediate relationships and assess the dynamics of the network and of technologies within it.[3].

> *Network change was the outcome of IKEA's dramatic change of supplier relationships and the technological development this led to. The new chlorine-free paper became widely established and this had dramatic effects on a number of both pulp and paper producers.*

Network outcomes also have an important collective element. This refers to outcomes that are observed by all the participants and that explain to them how the network operates. In other words, these outcomes contribute to "what everyone knows", or the collective understanding of the network participants.

Outcomes and Activities: Network outcomes can also affect how different activities are related to each other. They can re-structure a company's relationships, by changing the activities that each of the companies performs and the links between them. Network outcomes can also re-structure the network, with new companies and relationships emerging and existing ones disappearing. We can summarise the structure of network outcomes as follows:

- **Aggregation:** This refers to the network outcome by which a company undertakes some activities internally that were previously undertaken by relationship counterparts. Aggregation either restructures an existing relationship or causes it to end. It may also lead to the establishment of new relationships. An example of this is provided by the Danish shoe company ECCO. It previously bought leather, already prepared for making shoes and sold the finished shoes to independent retailers. It now buys un-processed cow-hides, makes its own leather and shoes and sells them through its own outlets. This restructured Ecco's relationships, ending those with the suppliers of hides and with retailers, but establishing or developing those with leather chemical suppliers.

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[3] For a discussion of technological scanning see, Ford and Saren, 2001, op cit, 146-150.

- **Dis-aggregation:** This refers to the network outcome by which a company ceases to carry out some activities internally and relies for them on a relationship counterpart. Dis-aggregation either involves establishing new relationships or extending an existing one. Dis-aggregation commonly occurs as companies' contract-out activities to others with which they establish relationships. A well known example of this outcome is Nike, who now buy in all of the products that they sell from their suppliers.

- **Dis-intermediation:** This refers to the network outcome through which two companies establish a direct relationship, where none had existed before, or where the companies had previously dealt with each other via an intermediary. *In the case of IKEA, they established relationships with producers of pulp and even with producers of paper-making equipment, rather than simply dealing with paper suppliers.*

- **Intermediation:** This refers to the outcome by which a new company is established as an intermediary between companies that had previously dealt with each other directly, or when an existing company changes its portfolio of relationships to include intermediaries.

Outcomes and Resources

Networking can have outcomes that affect the development and utilization of resources between companies.

•**Utilization of Resources:** Networking has important outcomes that affect access to and utilization of resources for companies. These resources include both those in the company itself and in its counterparts. The resources may include existing technology or know-how, offerings, facilities or an organisational unit. Resource effects are especially critical for all capital and knowledge-intensive companies. The access to and efficient utilization of resources dominated the networking in the IKEA case.

•**Development of Resources:** Another type of outcome affects the development of the resources of the companies involved, whether technical, physical or operational. A major type of outcome of networking in the IKEA case was the development and introduction of a new technology of Totally Chlorine-Free paper.

Outcomes affecting both access to and development of resources have important financial implications for the companies involved. In the IKEA case, the financial outcomes were highly positive for the two Swedish pulp-producers that were the first to produce Chlorine-Free paper, whilst the financial outcomes were negative for those that were left behind.

INTER-CONNECTIONS

Networking, Network Pictures and Network Outcomes are all inter-connected. None of them automatically precedes the others and each affects and is affected by those others. We can identify some of the main connections as follows:

Between networking and network outcomes

All of the dimensions of network outcomes are clearly affected by networking and the aims of networking can often be expressed in terms of various outcomes. However, the connections between the two are not simple or straightforward. Networking is part of the complex and continuous interaction that takes place that the outcomes will often be so blurred so that it is meaningless to attribute causality. But companies certainly learn from networking and their subsequent choices in networking are affected by how their network outcomes develop. In this way, outcomes trigger actions and companies "learn by doing", so that much of networking is in practice a process of controlled experimentation.

Between network pictures and networking

A company's networking is affected by its network picture and their view of their position in the network. Sometimes this picture can restrict networking. A company may see its position in the network as "just a wholesaler". This company will be unlikely to innovate by, for example establishing relationships directly with consumers. In contrast, another company may have a broad picture of network dynamics and use this as the basis for innovative networking.

Conversely, a company's network picture is affected by the networking that is happening within the network. For example, experience with different aspects of networking may convince a company of the respective role and influence of important counterparts. Much activity within companies and relationships consists of discussion

and bargaining about network pictures – What does the network really look like and what does it mean?

Between network pictures and network outcomes

There is a clear connection between network pictures and network outcomes. If outcomes are in line with a company's existing network picture then that picture will be re-enforced. If the outcome is not in line with the company's expectations then it is likely that its network picture will change. Network outcomes are also affected by the company's network picture, as what is seen as the relevant outcome dimensions and indeed, what is seen to have happened, are determined by the network picture.

> *For example, IKEA's picture of environmental concerns in the network established the criteria by which it networked with its suppliers, whilst their picture saw relationships as devices to ensure capacity utilization, with consequently different criteria.*

Network pictures provide the frame within which performance is assessed. One of the consequences of unfortunate outcomes is to change the dimensions by which outcome are assessed as these are affected by the development of a new network picture.

CONCLUSIONS

This paper has presented a model of managing in networks. The model has a number of features that are important both for the researcher trying to understand what happens in networks and the manager trying to operate in them. It is based on two basic ideas about networks:

Networks are Broad: Our view of the network is broad. The network is not defined by a single company or restricted to the companies with which that company deals. Nor is it something that it established, owns or manages. However the term is commonly used in each of these senses. We would simply emphasise that any view that is restricted in this way will inevitably lead to difficulties in understanding how the network looks from the perspective of other companies. These companies will act from their own perspective, which will almost certainly include other companies and other types of relationships, rather than that of the "focal" company. Without a broader view, a company will be unable to anticipate the actions and reactions of those around it.

Also, a failure to take a broad view of the network will make the company vulnerable to dynamics that have their origin "over-the-horizon" from its normal operations.

Networks are Complex: Managing in networks is complex. Each of the companies in a network attempts to manage their individual relationships and to affect others elsewhere in the network, with which they do not deal directly. Each company has limited knowledge and operates on the basis of an evolving, but subjective "network picture". Each has limited discretion and is subject to the simultaneous networking of many other companies, each operating on the basis of their own different network pictures. Each company has to cope with the peculiarities or paradoxes of the network and networking in each is a combination of three aspects; within and between relationships and involving both encouragement and coercion.

STRATEGY AND MANAGING IN NETWORKS

The three elements of the model of managing in networks each provide a perspective on strategy:

Strategy and Network Pictures: A company's network picture is an important component in strategy development. Strategic analysis involves assessing the company's own picture as well as those held by others. It also involves reassessing and developing the company's own picture in the light of experience of networking by the company and others. Different pictures are likely to be held by individuals in different functional areas within the company and strategy involves building these pictures and seeking consensus based on the collective wisdom of those individuals. A company has an element of choice in its network picture and it can choose to enhance particular aspects as a basis for its networking.

Strategy and Networking: Networking involves choices: When and where to conform with current relationship norms and when and where to confront them; when to consolidate on a current network position and when to rearrange existing and new relationships to change that position; when to attempt to coerce counterparts and when to accede to their wishes. Strategy involves reassessing current networking and considering the options for change in individual relationships, between relationships and in the methods employed.

Strategy and Network Outcomes: Network outcomes also include an element of choice. Each network outcome is multi-faceted and many occur simultaneously. A company has to choose which to focus on. It is easy for a company to either fail to record or examine outcomes or to accept those that occur. Strategy and network outcomes involve a conscious attempt to ascertain "real" and accurate network outcomes and to assess the value of these.

Strategy and the Model of Management in Networks: Finally, strategy involves examining the interconnections between the elements of the model:

- To make explicit the two-way connections between networking and network outcomes.
- To examine the connections between networking and current network pictures.
- To examine how the company's network picture affects its view of network outcomes and what should be the effects on those pictures of experience with both outcomes and networking.

Strategy in business networks is not a linear process of analysis, development and implementation. The complexity and interactivity of a network means that a company's strategy is more clearly seen as the "pattern in stream of decisions". These decisions are not just its own, but those of its counterparts. Strategy involves action, reaction and re-reaction, based on a company's network pictures, its own and others' networking and the outcomes from this.

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