

How should companies interact in business networks?

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Abstract

The terms “relationships” and “networks” are widely used in academic discussion of business practice and have become increasingly common in the conversations between managers themselves. This paper starts with a description of some aspects of business networks and relationships and highlights the questions that they pose for practitioners. The paper suggests that an understanding of these questions require an appreciation of a number of paradoxes that are intrinsic to the nature of business networks. The paper explores each of these paradoxes and draws out their managerial implications. It uses these paradoxes to provide an answer to the question; “How should companies interact in business networks?” © 2001 Elsevier Science Inc. All rights reserved.

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1. Introduction

The words relationships and networks have recently received a great deal of attention from both academics and practitioners. Strategists have been concerned with joint ventures, strategic alliances and strategic networks. The term relationship marketing has become a buzzword for marketers, and purchasers have discussed supply chain models and supplier networks.

These preoccupations seem to point to some basic changes in how companies relate to their environment and in the problems they face. More generally, the words network and relationship indicate that there is some kind of special organisational form at an aggregate level above that of individual companies. This leads to the interesting question, “If such an organisational form exists, then what kind of problems and issues does it pose for companies and how can they respond?” This question forms the focus for this article.

2. What is a network?

In its most abstract form a network is a structure where a number of nodes are related to each other by specific threads.

A complex business market can be seen as a network where the nodes are business units — manufacturing and service companies and the relationships between them are the threads. Both the threads and the nodes in the business context have their own particular content. Both are “heavy” with resources, knowledge and understanding in many different forms (Håkansson, 1997). This heaviness is the result of complex interactions, adaptations and investments within and between the companies over time. It is not a world of individual and isolated transactions between companies. Instead, each node or business unit, with its unique technical and human resources is bound together with many others in a variety of different ways through its relationships.

2.1. The existence of business relationships

The existence of tangible relationships between companies, that are connected together to form a “quasi-organisation” has been observed in a range of studies over the past 25 years (for summaries, see Iacobucci, 1996; Laage-Hellman, 1997; Ford et al., 1998; Naude and Turnbull, 1998; Sheth and Parvatiyar, 2000). The relationships are likely to be complex and long-term and their current form is the outcome of previous interactions between the business units. Relationships enable companies to cope with their increasing technological dependence on others and the need to develop and tailor offerings to more specific requirements. Technologies are both developed and exploited within them

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(Lundgren, 1995; Ford and Saren, 1996). The characteristics of companies' relationships influence what happens inside the companies themselves.

2.2. *The existence of connections between relationships*

Business relationships are connected to each other. This can be illustrated by the simple example of three companies related through two business relationships. The interaction between any two of the companies, whether to buy or sell, or to co-operate in some other aspect, will depend on what happens in relation to the third party. If company A is a supplier and B and C are two customers, then any development between company A and customer B will have a negative or positive effect on its relationship with the other customer C. Similarly, if A is a customer and B and C are both suppliers then what happens between A and one of the suppliers will affect A's relationship with the other. If the three companies are in a chain, so that A supplies B, who supplies C, then interaction in either of the two relationships affects the other. When any resources or activities are shared between relationships there will be either a positive or a negative connection between them. What happens in one relationship will always affect all connected relationships, sometimes marginally, but often substantially.

Thus, the development of any one relationship between two companies will depend on a number of factors: on what has happened in the past in the relationship; on what each of the two parties has previously learned in its other relationships; on what currently happens between the companies in the relationship and in others in which they are involved; on the expectations of both companies of their future interactions; on what happens in the wider network of relationships in which they are not directly involved.

Thus, no one interaction, whether it is a sale, purchase, advice, delivery or payment can be understood without reference to the relationship of which it is a part. Similarly, no one relationship can be understood without reference to the wider network. Each company gains benefits and incurs costs from the network in which it is embedded and from the investments and actions of all of the companies involved.

3. Managerial questions about relationships and networks

This view of companies, relationships and networks leads to a number of important questions for managers, as follows.

3.1. *What kind of special opportunities and restrictions does a network bring to a company?*

How should a company manage and vary its interactions with counterparts and how should each of its relationships be related to others? One concern is how the company and

its counterparts can use their relationships to their advantage and how these relationships restrict the pursuit of their individual aspirations. A company is, in fact, examining opportunities and restrictions when it seeks to bring order into the value and costs involved in the many relationship choices open to it.

3.2. *What is the interplay between influencing others and being influenced by them?*

This question concerns the interface between the node and the threads. In particular, managers must face the issue of what it really means to them to have important business relationships. Relationships provide the opportunity for the company to influence others, but the same relationships are also a force for these others to influence the company. Much managerial analysis and decision-making is concerned with trying to understand a company's interface with both immediate and more distant counterparts, as well as the respective contributions to their operations of different relationships.

3.3. *How can a company control a network and what are the effects on the network and on the company?*

This third question relates to the position that the company holds in the network and to the network structure. It is also concerned with how the characteristics, aims and activities of all of the companies and relationships in the network affect that total structure.

Behind each of these three managerial questions is an important paradox in the nature of business networks or relationships. We will examine these three paradoxes and consider their implications for managers and how they might cope with them.

4. Opportunities and limitations in networks: the first network paradox

This paradox is closely related to the way that a node is built into a network. A node is directly related to the existence of threads. The content of the threads is the result of investments by *both* of the counterparts. The greater the investments the more substantial will be the content. The total network is formed by investments and the life of a node is the result of the interplay between internal investments and those that are made in the threads. The development of the threads is an outcome of investments in both the nodes as well as in the threads themselves. The development of the threads gives opportunities to both nodes, but the existence of the threads also imposes restrictions on them. The stronger that the threads are — the more content there is within them — the more important they will be in giving life to the node, but the more they will also restrict the freedom of the node to change.

4.1. The first network paradox and the business world

The first network paradox means that companies within a network are not free to act according to their own aims, or to circumstances as they arise. They do not operate in isolation from others, or in response to some generalised environment as “one-against-all”. Instead, each companies’ considerations and actions can only be fully understood within a structure of individually significant counterparts and relationships. Both companies and their relationships are “heavy” with the experience and resources that have been built up through previous interactions and investments. The history of a business network is the process through which time and money have been devoted to build, adapt, develop, understand, relate and combine different human and physical resources together. A business network has a specific and intense structure with economic, technical and social dimensions.

Opportunities and limitations for a company are related both to the resources invested in relationships and to the companies’ internal capabilities. Each company’s relationships and resources can be developed and combined with others in a large number of different ways. This creates major opportunities for innovation, to the benefit of both the companies that seize them. However, a change in a network always involves changes in both companies and relationships (Dubois, 1998). This means that a company seeking change is always dependent on the approval and actions of others to achieve the change, when introducing a new service, altering a logistics pattern or developing a new product. But, a company can mobilise part of the network in the direction it wishes, if its action is designed appropriately and seen to be positive by those whose support it needs. On the other hand no company and no relationship in a network has been built or operates independently of others. A business network is seldom the result of one “designer”, although some companies might believe that. Generally, the network is the outcome of the deliberations, aims and actions of a number of the participants. Similarly, no company is the “hub” of the network or is likely to have complete control over it, although some will act as if they were in control. Such a view is likely to be the outcome of a lack of understanding of the nature of networks and the perspectives of others in them. All decisions, all actions and all changes occur within the context of the structure of the network. This structure of existing companies and relationships influences both what can be done and how it can be done (Anderson et al., 1994). Thus, the network of existing relationships is also a severe limitation on a single company. This limitation affects the costs of making a change in a network for both those involved in the change and may have effects elsewhere in the network. These effects are often not readily observable, such as the effects of a change in a company’s inventory policy on the component manufacturers of its suppliers, or the effects of a development agreement between two companies in a different country.

In contrast, sometimes the costs of change are immediately apparent. For example, one Swedish company makes an internal administrative charge of £5000 on any department seeking to establish a relationship with a new supplier. This charge sends a clear message to staff that establishing a new relationship involves both cost and effort, so there must be very good reasons to do so. Whatever form the costs of change take, they contribute to the inertia in a network.

4.2. An illustration of the first network paradox

The network of companies and relationships involved in the Internet provides an illustration. Among these are software and hardware suppliers, fee-based Internet service providers, access suppliers such as fixed-line telecom companies, E-commerce traders, such as Amazon.com etc. and end-users of these services. Each has a network position, consisting of its own resources and those that exist within its relationships. These resources — technical, economic and social — are the source of each company’s strength and the basis for its growth and development in a rapidly evolving market. For example, relationships between hardware and software suppliers and service providers enable them to offer innovative product and service features to end-users. But each of these network positions also represents an investment in the current structure and ways of thinking. Because of this, existing relationships restrict a company’s ability to react to or to emulate new entrants with new ways of operating, based on different resources and without the constraints of already established network positions.

4.3. Managerial implications of the first network paradox

Several important consequences occur from this first paradox for any decision-maker within a company: Firstly, it indicates that the diversity of the network gives every decision-maker myriad opportunities to act and the freedom to do almost whatever it wants. But its ability to act and the effects of its actions is constrained by the existing structure of the network. Change by companies and change within companies occurs through changes to the structure of the network. The existence of the structure and its inertia makes action in the network more difficult, but also more important.

Secondly, the only way that a company can achieve change is through the network. This requires persistence in convincing others of the benefits of that change *and managing their expectations*. A company must give others a picture of the intended direction of a change and find ways to combine changes in internal resources and relationships that relate to their motivations and resources.

Thirdly, because change in a network is initially dependent on the existing structure and resources, it is more difficult for a company to achieve change by seeking new counterparts. The company must first find a suitable counterpart. Even if it can do this, the knowledge and understanding that exists in previous relationships will not

be present. So both must be able to see the potential benefits of the new relationship and be prepared to incur the costs, make the necessary investments and accept its effects on their companies' existing relationships. Managers have to accept that change must often be accomplished within existing relationships, where some investments have already been made and where costs and benefits are more apparent. This is often the case with the development of new products or services. The key questions for both marketing and purchasing in business networks are thus more often about how to interact with *existing* counterparts than about how to choose new ones (Wynstra, 1998). Fourthly, a network of relationships also develops a common knowledge and understanding between the parties about each other and the ways that they can and should interact. This is both a strength and an impediment to change. The costs and time involved in building relationships and in adjusting to a different way of behaving may mean that it makes sense for a company to develop those new relationships where the need for new knowledge is minimised, or where some commonality exists, perhaps because each company has the same related relationships already. It also means that a company can reduce its costs and enhance its benefits by seeking similar relationships and standardising them by content, level of commitment or the requirements of either side. Fifthly, the first paradox should also affect a manager's view of the nature of technological change and its effect on the world around him. Technological knowledge is embedded both within the companies and the relationships of a network. Change in a network is not the result of a single technology, but of the development, synthesis and application of many different technologies, both new and existing across the network. Neither the development nor the application of new technologies occurs in a single company. It is the network that provides the "bundle" of different new and existing technologies, necessary for any innovation (Ford and Saren, 1996). But the existing structure of the network acts as a brake on innovation because of its investment in existing ways of working and because of the requirement to enlist the co-operation of those with which the innovator does not have relationship (Håkansson, 1994).

5. Influencing and being influenced in a network: the second network paradox

A company's relationships are the outcomes of its strategy and its actions. But the paradox is that the company is itself the outcome of those relationships and of what has happened in them. Thus a network is both a way to influence and to be influenced. Both situations exist simultaneously and both premises are equally valid.

The interconnection between the threads and the node is a critical one and they each determine the other. The interconnection can be examined by the more obvious

view that the node is something that was created first and then developed its own threads. Alternatively, we can see the node as a crossroads between threads that has its existence defined by those threads. But, without nodes there are no threads and without threads the nodes have no value or function for each other. A thread that provides a link to a node is without value if that node has no special capability. Developing a node always involves developing its threads and a thread cannot be developed without affecting the nodes to which it is linked. It is meaningless to try to determine which of them comes first. In this way, nodes and threads are completely interdependent. There is an obvious direction from the node to the thread but there is at the same time an obvious direction from the thread to the node.

5.1. The second network paradox and the business world

If we translate this paradox to a business context then the interesting question is posed, "What is a business relationship and how is it related to a company?" If we claim that a company develops its own relationships then we see those relationships as tools used by the company. This way of examining the interface between the company and the relationships is a typical managerial approach and it points to the importance of a company's development of its relationships. But such a view can over-emphasise a company's ability to act in a network and can easily become egocentric. If, on the other hand, we suggest that a company is developed by or through its relationships then we emphasise the importance of having the right counterparts. Consequently, listening, reflecting and reacting to others become central activities. These are not typical managerial actions, but companies in a network have to live with both ways of behaving.

5.2. An illustration of the second network paradox

The Swedish telecom company, Ericsson, and the largest Swedish telephone operator, Telia, provide an example of the second paradox. The two companies have had a close relationship for 100 years and this has had profound effects on both of them. They developed their first automatic exchanges together in the 1920s. The later AXE exchange, developed by Ericsson in co-operation with Telia had a major effect on its international success. Later, mobile phones were developed within this relationship. From this perspective, the relationship has *formed* both Ericsson and Telia. However, the relationship has to operate in a way that suits each of the companies and their overall strategies. For example when launching a new release of the GSM system for mobile phones, Ericsson has to take into account a number of major users, of which Telia is only one. For Telia, the release has to be compatible with the new releases they are getting from other suppliers, such as Nokia.

5.3. Managerial implications of the second network paradox

A common view of business strategy is of a self-generated pattern or plan. Through this a company marshals its *own* goals, actions and resources into a cohesive whole in the light of its interpretation of the current and potential environment. But the second network paradox highlights that a company's characteristics are also the outcome of its interactions and relationships and that its future is dependent on what happens in those relationships (Håkansson and Lundgren, 1997). No company has sufficient resources itself to satisfy the requirements of any customer. It is dependent on the skills, resources, actions and intentions of suppliers, distributors, other customers and sometimes competitors, to satisfy those requirements. Similarly, no company can develop or exploit its own resources except in conjunction with those of others. Interdependence between companies means that the strategy process is interactive, evolutionary and responsive, rather than independently developed and implemented. The "strategizing" task is about identifying the scope for action, within existing and potential relationships and about operating effectively with others within the internal and external constraints that limit that scope.

A second implication of this paradox concerns which of the parties in a relationship will most affect its development. The party that is *least* committed to a relationship is likely to control it negatively by restricting its development. Conversely, the *positive* development of a relationship is likely to be driven by the party that is most committed to it. The development of a relationship is never determined unilaterally, even in those situations where one party appears overwhelmingly powerful or committed. A relationship does not develop without effort and it is certainly important that someone believes in it and is prepared to work for it (Huemer, 1998).

The third implication of this paradox concerns the extent of effects in a network. The close connection between a company and a relationship means that all actions in the two are interdependent. The second network paradox emphasises that a manager has to look at a network both as a set of companies and as a set of relationships in order to get a full picture.

Finally, the second network paradox has implications for individual managers. The co-determination of companies and relationships in a network means that the more important are a company's relationships then the more important will be the individuals who interact in them. This emphasises the importance for each company to manage all of its interactions carefully and for each individual person to interact self-consciously.

6. Controlling and being out of control in networks the third network paradox

Companies try to control the network that surrounds them and to manage their relationships to achieve their

own aims. This ambition is one of the key forces in developing networks. But, the paradox is that the more that a company achieves this ambition of control, the less effective and innovative will be the network.

Each thread of a node is important to that node, not so much on its own, but as part of a larger structure. Each thread connects two nodes. It provides contact for both of them, but may well have a different role for each. One reason for this is that each node has other threads and has to relate each of them to the others. The total network structure is dependent on how all of the threads are related to each other. The effect of any one thread on the nodes is affected by these interdependencies with other threads. But it is the nodes that connect the threads and handle these interdependencies.

The connecting of threads by the nodes is a key ingredient in network development. This development includes connecting the development of "stronger ties" (well-established relationships) with development of "weak ties" (undeveloped relationships) (Granovetter, 1973; Uzzi, 1997; Wilkinson and Young 1999). For the network to develop it is important that a number of nodes are active in this way.

6.1. The third network paradox and the business world

Each company will try to develop its position in the network relative to other companies, by influencing the knowledge and understanding within other companies and the direction in which each relationship develops. These ambitions are an important development force within the network. However, the more successful a single company is in forcing its thinking onto the network, the more it and those around it are likely to encounter long-term problems. If the development process becomes directed from one centre it will become more integrated and may have fewer overt conflicts, but the network may cease to exist and become more of a hierarchy. A uni-directed network will have less ability to embrace relationships that are not compatible with each other or which are developing in different directions. These may subsequently be important in ways that were impossible to forecast beforehand (Wilkinson and Young, 1999).

6.2. An illustration of the third network paradox

For a long time IBM tried to control its network, especially on the customer side. The company set strict roles for the software companies who had the rights to sell IBM computers and IBM was able to develop a very efficient geographically based organisation for production and sales. IBM had no plans to change this organisation, until it became apparent that it had become static and that the networks of other companies had been developing much faster. IBM lost-out because a controlled network cannot develop faster than the company that controls it. Such a company has little incentive to change as long as

it has control. The developments between advanced customers and other producers of hardware and software forced IBM to change its own internal organisation to become much flatter and much more diversified. In order to cope with the variety in the surrounding network, the organisation has had to become much messier, with fewer strict rules and more freedom for individuals to take initiative (Tunisini, 1997).

6.3. Managerial implications of the third network paradox

Firstly, this paradox reinforces the need for a manager to analyse his company's position in terms of its specific relationships and its own and others' resources, rather than in terms of a set of products, markets and competitors. Secondly, it highlights the problems for managers if they take a self-centred view of the network. A network will look very different from the perspective of different companies, each with their own motivations, resources and understandings. A company that only sees the network from its own perspective will fail to understand its dynamics and the interface between the well-being of others and itself. The third network paradox also has strong implications for the conventional view of business strategy. All companies seek to manage their relationships to their own ends. But it is dangerous for a company to seek to manage its relationships so as to achieve overall control of a network. If this were ever to be achieved then the only source of wisdom and innovation in the network would be the company itself. Instead, each company must seek to manage *in* that network. In doing so the company is accepting that conflict is both inevitable in a network and is a source of change. Strategy in complex networks consists of attempting to influence others where possible and to benefit from their resources and, more importantly from their initiatives and their creativity. This is done within a complex pattern of action and reaction to events and to actions and reactions of others. Strategic management is about the development of orientation and approach in each episode, relationship and network situation.

7. How should companies interact in business networks?

We began with the clear question: How should companies interact in complex networks? A clear answer to this must be based on an awareness of the limitations both of business researchers and of businesses themselves. Business researchers can aim to construct tools to help managers to understand their world, not tell them what decisions to take or what to do. Business researchers cannot predict the direction of development of a network, nor forecast the final effects of any network action. This is because of the large number of ways each participant can act and react. Developing relationships is similar to the testing process in a laboratory and is something that can be done more or less

thoughtfully and efficiently. Managers also have to accept that their current network position may not be optimal from the perspective of each single issue that they face. But changing a network position is a major strategic activity that can only be achieved in the long run. Networks are built on variety, but despite this they do have systemic properties. This means that the answers to managers' questions about their interactions will always depend on the specific situation and context. There are no nice neat solutions or standardised approaches to strategic network success. The paper has shown the value of thinking through what lies behind the actions of themselves and others and the dynamics of the network itself. Thus, the basis for interaction should be the formulation of new questions rather than looking for optimal solutions, as follows.

7.1. Opportunities and threats

Managerial questions about the opportunities and threats facing a company relate to the "heaviness" and the "variety" of the network and to the first network paradox of the simultaneous liberating and restricting characteristics of networks. Variety means that a company should interact to continuously learn and develop the way it is embedded in its relationships and the network. Variety requires ever-new *conceptualisations* of situations, relationships and business units. Heaviness emphasises the costs of changes and the importance of using the resources that are already available to the company in its existing relationships. The network as a resource constellation creates inertia that limits innovation, but it also creates a firm basis from which developments can take place.

7.2. Influencing and being influenced

Questions about influence relate to the second network paradox of the simultaneous influence of a company on its relationships and of those relationships on itself. A company should use its interactions as a way to learn about the link between its own resources and those activated in its relationships. This is not simply saying that a company should try to understand its dependence on others in a network. And understanding cannot be achieved by viewing the world as a set of competitors, customers and suppliers. Instead a company should interact to try to understand how the network functions *from the perspective of these specific others* and how they see their own position and its own.

7.3. Control in the network

Questions about how to manage a company's interactions relate to the third network paradox, that control is important but also dangerous. This means that companies should aim for control but as soon as they acquire some "final" control over the surrounding network (or their supply chain or value

chain!) they should be worried! Of course, a company's task is to try to modify its own network position and to influence what happens in their own and others' relationships. But the management task is also to encourage and help others to continuously clarify *their* understanding of the network. It is their actions, based on *their* perspectives that provide the dynamics of a network. These dynamics and the company's participation in them lead to change in the company's position and bring advantage to it. Interaction in business networks leads to a process of learning and systematising action. This takes advantage of the variety in the network and also capitalises on the economy of network stability.

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