

THE MANAGERIAL CHALLENGE OF BUSINESS INTERACTION:

BEHIND THE MARKET FACADE¹

David Ford and Håkan Håkansson

ABSTRACT

This paper seeks to address three aspects of the managerial challenge that arises from the process of business interaction: the Diversity of Interaction; the Dynamic Effects of Interaction and the Integration of Interaction into company operations and strategy. The paper develops a typology which characterises different types of interaction in order to identify the managerial issues they represent. The paper seeks to identify the dynamic effects of each type of interaction on the resources and activities involved in it and address the implications that these effects have for management. Finally, the paper discusses how the challenges and opportunities presented by business interaction can be integrated into the general management of a company. The paper is based on the empirical research programme of the IMP Group (impgroup.org) and on a recent large scale research project within that programme.

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1 INTRODUCTION.

The business landscape is characterised by complex inter-company processes through which diverse economic resources are combined, adapted, developed and exploited. These inter-company processes are a driver of economic evolution and provide a critical managerial challenge for the individuals and companies involved in business. This paper is concerned with the development of descriptive and analytical tools to enable us to increase our understanding of the diversity of these processes and the managerial challenge which arises from them.

The paper is based on the empirical research programme of the IMP Group (impgroup.org) and on a recent large scale research project within that programme. The IMP research programme has investigated the patterns of relatedness between business resources and activities and the individual and corporate business actors associated with them. The research has demonstrated how these patterns of relatedness form a network-like *structure* which stretches across the business landscape. IMP research has also examined the *process* through which resources, activities and actors interact within this network structure and has

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demonstrated the role of this interaction in the evolution of the business landscape. Empirical studies across a wide range of industries have shown the centrality of inter-company interaction in many aspects of business such as marketing, purchasing, production, finance and accounting, offering and technical development and logistics, all of which would conventionally be assigned within the purview of an individual company.

1.1 Business Interaction

An interactive process is one in which outcomes emerge from the interaction itself rather than directly from the inputs of any of the participants in the process. In this way, business interaction operates as an intervening variable between the respective intentions, strategies and actions of participant actors and the outcomes of those actions. Business interaction is the process through which combinations of widely distributed elements; activities, resources and actors are accessed, adapted, combined, developed and exploited.

Negotiation is a readily identifiable and often observable aspect of business interaction. But neither negotiation nor any other type of inter-personal contact is a necessary precondition for interaction to take place. Business interaction is both a broader and more complex process than negotiation. Business interaction is founded on the universal relatedness of the activated resources and actors which stretch across the business landscape. Interaction juxtaposes, adapts and transforms activities, resources and corporate actors. Business interaction is a continuing process that takes place between these elements and which forms the basis for the current economy and its evolution. Managerial interventions are superimposed on this continuing interaction and these managerial interventions reflect the interpretations and aspirations of those managers.

Business interaction varies in time, content and style and is by definition at least a bi-lateral and often a multilateral process. Business interaction affects all of the elements involved in it and these effects are always beyond the complete control of any single direct or indirect

participant. Each episode of interaction is influenced by previous and parallel episodes and each will have effects on episodes in the future. Interaction leaves wide tracks within technologies, economic logics and social structures and provides a basis for both immediate advantage and long-term transformation. Business interaction involves all companies in de-facto trade-offs between their own short and long-term costs and benefits and those of their multiple counterparts. Business interaction is an essentially dynamic process but it also leads to the development of multi-faceted interdependencies between combinations of two or more companies in complex business relationships. These interdependencies may increase the predictability of development and provide time and cost advantages. But interdependencies inevitably involve asymmetries in information and control between the counterparts. The shifting pattern of interaction between more or less interdependent resources, activities and actors is a central feature of the business landscape. Interaction provides the basis on which managers are able to operate. But the complexity, diversity and dynamics of interaction is also the source of a major challenge to them. This challenge is the focus of this paper.

1.2 Outline of the Paper

We seek to address three aspects of the managerial challenge that arises from business interaction:

The Diversity of Interaction: The first aspect of the challenge relates to the diversity and complexity of business interaction and a company's requirement to handle the specific set of interaction processes in which it is involved or it wishes to develop. Simply expressed, a company and its managers have to become experts in these highly diverse processes.

The Dynamic Effects of Interaction: The second aspect of the challenge arises from the dynamic nature of the effects of business interaction. Interaction always changes the activities, actors and resources that are involved in it. Managers use interaction as a tool to achieve particular adaptations and developments. But the changes effected by managing interaction will in turn affect other resources and activities. Because of the diversity of interaction processes, these effects will vary widely and often contradict managerial intentions. The challenge for managers is to try to understand, influence and harness these dynamics.

The Integration of Interaction: The final aspect of the challenge for managers is to combine and integrate the evolving effects of interaction within the general management and strategy of a company in order to create a positive development path. This challenge requires management to integrate the totality of multi-element interaction with all internal company activities and especially with all major investments.

We will start our analysis with the challenge posed by the diversity and complexity of interaction processes and we will develop a typology which characterises different types of interaction in order to identify the managerial issues they represent. We will then identify the dynamic effects of each type of interaction on the resources and activities involved in them and address the implications that these effects have for management. Finally, we will discuss how the challenges and opportunities presented by business interaction can be integrated into the general management of a company.

Throughout the paper we will provide empirical illustration for the analysis from a large Norwegian study of management within the business network that encompasses fish and fishing. The study included six Phd-studies and covered the production and distribution of Norwegian fish in relation to Portugal, UK, Japan, Chile and the US. In total more than 150 interviews with companies processing or selling fish were conducted. (Cantillon 2010, Cantillon & Håkansson 2009, Abrahamsen 2009, Abrahamsen & Håkansson 2012, 2014 Haugnes 2010, Prenkert 2013, Huemer, Håkansson & Prenkert 2009, Hoholm 2009, Hoholm & Håkansson 2012).

Fish is a suitable area for study for conceptual, empirical and practical reasons: fish is a vital element in human nutrition and has been a major factor in economic development. Fish and the business which surrounds it have a complex ecology and immense variety. Fish is subject to extensive processing, technological development and is widely traded internationally. Fish is subject to a wide range of disputes about its natural evolution and current status. The importance of fish means that there is considerable interest in the overall development of its exploitation and in the interaction between business and the natural world. Finally, from a theoretical point of view, fish is an area worthy of study as it has commonly been used to illustrate how the concept of the market functions in practice.

2 DIVERSITY IN BUSINESS INTERACTION

2.1 Duel and Duet

The contrasting concepts of duel and duet provide a useful starting point as suggested by Håkansson 2010 for analysis of the diversity of business interaction and the managerial challenge that arises from it:

Duel: A duel is an episode of antagonistic interaction with usually only one winner in which the consequences for the defeated can be extremely severe. The dominance of antagonistic behaviour in a duel means that each actor has a very specific and limited interaction with others within which conflict is dominant. The effects of this interaction are likely to be limited to adaptations to each of the actor's own activities and resources aimed at achieving a positive effect for itself and/or a negative effect on the counterpart, within a broad set of rules of engagement. An actor faced with numerous potential counterparts is likely to seek to interact only with those it believes to be currently or potentially the weaker. In all cases, the aim is to seek advantage at the expense of the counterpart (Polanyi, 1944). For example, a duel between buyer and seller is manifested in the price mechanism. Price in each individual transaction will reflect the relative strengths of supplier and customer or the balance between the seller's wish to supply, the buyer's wish to buy and the availability of alternatives. If there are no restrictions on the transactions then equilibrium will be established across the landscape which results in the efficient use of resources. Duels have a structural role and the result is described in economic theory as a Pareto optimal situation in which all resources are used in the optimal way but with the important basic assumption that all of those resources are independent of each other.

The managerial conclusion from the duel metaphor is both clear and deeply embedded in the culture of business and management: companies should compete with each other and the harder the better, to the extent that competition is often described as analogous to a war in which only the strongest will survive.

Duet: A duet is something quite different and is characterised by cooperation through which two actors together try to find a way to combine and develop their abilities. A duet does not require that the actors be selfless or interested in the well-being of another but the duet may contribute to that well-being. In order to develop the duet, the two actors will often have to

train together and learn about each other's abilities and how they can be combined and adapted. Through the process of combining, they may also find that they have unique combined capabilities that they did not expect. Thus the process of combining is one of search, evaluation, adaptation, trial and error, learning and teaching. But a single actor always has limited resources and has to choose carefully between potential counterparts with which to develop a duet. The productive adaptation, development and combining of an actor's resources require investment and commitment to specific counterparts. In turn, investment and commitment require predictability and reciprocity between counterparts. Each actor has to decide how much of its existing resources and developmental abilities to assign to each current or potential duet. The uncertainties of relationship development mean that actors are likely to attempt a succession of limited approaches, small changes and evaluations in their different relationships. Outcomes are uncertain, but if the costs of cooperation appear greater than its benefits the duet will fail (Ulfstrand 2008, p 123f; Thompson 1994).

The type of behaviour associated with the duet metaphor has been of very limited interest for economists. A possible reason for this is that the metaphor rests on the assumption that actors' resources are not fixed: each duet will develop or create new resources or at least provide a new way to use an existing set of resources. In contrast in economic analysis, resources are generally taken as given and problems are formulated in terms of limitations in the total supply of resources. However, the ideas that lead from the assumption of fixed resources are challenged by empirically-based studies of business in economic history, in the history of technology such as Rosenberg (1994) and Hughes (2004), in studies of technology or business development such as van der Ven et al 1999, von Hippel (1988) and the research of the IMP group (Håkansson, Ford, Gadde, Snehota & Waluszewski 2009). In all these empirically-based studies there are a large number of cases and surveys where different type of business "duets" are described and discussed.

1.2 Combinations of Duel and Duet in different types of Interaction

Some of the interactions between business companies may approximate to a pure duel or a pure duet. But most business interaction will exhibit varying combinations of duel and duet in specific episodes both simultaneously and sequentially. The variations in interaction between pure duel and pure duet is not a new observation and there are different economic models developed that have considered some of the possible combinations (e.g. Williamson 1979, Richardson 1972, Penrose 1959, Rosenberg 1994, & Arthur 1988).

The complexity and diversity of these combinations of duel and duet lead to the first aspect of the managerial challenge of business interaction. We now seek to address this complexity by presenting a typology of different “types” of business interaction based on the metaphors of duel and duet, theoretical models and empirical material from our fish studies. We start our analysis in one of the metaphors, corresponding to a pure duel. We will then examine types of interaction associated with successively stronger elements of duet.

Type 1 Interaction: Pure Duel

The simple exchange of product for price provides perhaps the clearest example of pure duel in business interaction: the product goes in one direction and money goes in the other. Simple exchange involves a fixed offering and consists of a single episode in which the only additional parameter of interest to buyer and seller is the price, in its broadest sense that their counterpart will accept. Seller and buyer will both choose counterparts on the basis of achievable price and their involvement will be limited to achieving the best price for themselves both in a particular transaction with a specific counterpart and between their different counterparts. Pure duel leaves no trace of having happened in the resources of either of the counterparts. But a pure duel still has effects in the memories of participants and in the long-term structure of the business landscape.

Our empirical research highlighted an example of pure duel that was mandated by an external actor; the Norwegian government. The government determined that all wild fish landed in Norway had to be sold through auctions based on the simple exchange model. Similar simple exchange interactions occur in a large number of marginal situations when buyers purchase small amounts of fish directly from wholesalers or retailers. Local fish auctions have commonly been assumed to fall into this category of interaction, although we will see later that this is not always the case.

Type 2 Interaction: Social Duel

A Social Duel represents a departure from a pure duel and towards duet. This type of interaction may take place when the parties involved in a simple exchange begin to get to know each other. Social sentiments and predictability develop through interaction so that some actors may start to prefer to interact with specific counterparts. These developing preferences and the companies' growing experience of each other may make it easier for them to search for counterparts and may provide potentially greater opportunities for interaction that lead to changes in the actors and in their interactions (Granovetter 1985). The Social Duel type of interaction involves some element of duet because there may be direct contact between individuals and these contacts contribute to an elementary structure through which actors know and have opinions about each other and about what they should do together.

Social duels are common within many parts of the fishing industry especially in more marginal business exchange situations where the involved companies know each other but where they have not made any substantial adaptations towards each other. The counterparts may have met a number of times and are part of a well-developed network of personal contacts. There is likely to be a lot of gossip within this network about what particular companies are doing and how they perform. This social structure is likely to involve family

ties and clear ideas of who are “insiders” or who hold “central positions” in each field. It may be difficult for outsiders to become accepted and it usually takes a long time to become “important” in the network. We have examples of this from the Japanese distribution network (Abrahamsen 2009) from selling Norwegian baccalao in Portugal (Haugnes 2010) from selling white fish in the UK (Cantillon 2010) and from the Chilean salmon network (Huemer, Håkansson & Prenkert 2009, Cantillon 2010).

Type 3 Interaction: Offering-Oriented Duet

Type 2 Interaction: Social Duel involves an initial deviation from a pure duel by the introduction of inter-personnel contact and evaluation. But the offerings of the two counterparts for each other remain fixed independently of the counterpart. In contrast, Type 3 Interaction consists of a number of buying and selling activities in which the offerings, or contributions to each other of the two parties form part of the process of interaction and may be adapted through it. Sometimes the adaptation of offerings may be simple such as in the case of a minor product modification by a supplier. But the adaptations in an Offering-Oriented Duet may also be unique for each counterpart and often require direct personal contact. In other cases the adaptation process may be systematized without any specific problem-solving activity or direct contacts. For example, it may be part of a supplier’s normal offering to adapt some aspects of an offering to a customer’s specific requirements or a customer may adapt to the seller’s economic order quantities without interpersonal contact. An important aspect of the interaction in Offering-Oriented Duet is that adaptations become embedded in one or both of the parties and leave a very clear trace in the specific features of their offerings.

An example of the specific adaptations in this type of interaction is provided by white fish in the UK where all the processing companies adapt to the requirements of a small number of

large retailers in the areas of packaging and product design (Cantillon 2010). Similar adaptations occur in interaction between the processors that serve the fish and chip companies. A similar situation occurs with respect to adaptations made by second or third tier wholesalers towards the specific requirements of retailers and restaurants in Japan. (Abrahamsen & Håkansson 2012).

Type 4 Interaction: Long-Term Duet

The first three types of interaction are all characterized by a short-term orientation because any of the adaptations made to meet the requirements of a customer or supplier could be achieved or abandoned quite quickly and easily. In contrast, Type 4 Interaction requires a longer-term orientation in the interactions between the participants. This orientation is necessary because the solutions sought by customer and supplier are likely to require substantial investments or adaptations to the resources of one or both of them. For example, the two actors may have to adapt the physical or organizational facilities through which offerings are produced or used. This type of interaction produces a direct effect on the way that the two parties design and develop their resources. This interaction will leave clear traces in the characteristics of the companies and these form part of a long-term process of specialization and the development of specific interdependencies.

Long-term adaptations have been observed between large retail chains and their suppliers of fish in the white fish network in UK (Cantillon 2010). These interactions involved successive adaptations leading to a unique structure of specialized companies based on the supply of “value-added” prepared fish dishes. In the same way the creation of an alternative distribution channel in the Japanese salmon network was also dependent on long-term adaptations and investments by those involved in the interaction (Abrahamsen 2009). Similarly, the development of the network for the production and distribution of “Atlantic” salmon on the

Pacific coast of Chile was the result of long-term interactions between multinational actors in Europe and the US. (Huemer Håkansson & Prekert 2009)

Type 5 Interaction: Close-Cooperation Duet

Interaction of Type 3, Offering-Oriented Duet and Type 4, Long-Term Duet is limited to changes in a few mainly physical resources. Change may also be restricted to only one side of the dyad. In contrast, a Close Cooperation Duet refers to situations in which a number of resources, activities and specific actors are mobilized and multiple changes may occur on both sides of the dyad. These changes may lead to the development of dedicated offerings and physical and human resources. It is common in this type of interaction for the two parties to have a conscious approach to the ways in which they relate to each other. Commitment, trust and cooperative intent by the counterparts are required for this category of interaction to develop and words such as “partnership” or “alliance” are often used to describe these longer-term agreements between actors in which complex and intense interdependencies are likely to emerge. Importantly, however, the effects of this interaction and the interdependencies which develop from it are still focused on a single dyad in which examples of all Interaction Types 1-4 are also likely to be found. Close Cooperation usually only develops in a subset of each actor’s relationships. But this subset is likely to involve the largest volumes, the most technical development and/or the most adaptations to the physical and social infrastructure of the participants. These relationships are also likely to have a disproportionate effect on the way in which the overall network of related actors evolves.

Our research in the fish network provides examples of this type of interaction in each of the areas we have investigated and these represent a typical situation where large customers meet large suppliers. For example in the white fish network in the UK, four large retail chains have intense interaction with four large processing companies (Cantillon 2010). Another example

of this type of interaction is provided by the supply of salted dried cod or “baccalao” (Haugnes 2010). The interactions between a Norwegian producer and a Portuguese retailer which aimed to achieve a high quality product led both companies to make long term adaptations in their resources and facilities which led to the creation of a joint resource. This is accounting for approx. 10 % of the total volume of the Portuguese market.

Type 6 Interaction: Multiple Duets - Network Interaction

The intentions and effects of business interaction may extend wider than a dyad so that the duet becomes a trio or even a quartet of significant counterparts. Type 6, Network Interaction occurs when the focal actors’ intention is to significantly affect other directly and indirectly related actors. This type of interaction is likely to lead to change in the wider network and many tangible and intangible resources may be adapted in different companies and relationships. Network Interaction is likely to lead to continuing developments that may take place over many years. Critically, in contrast to the previous types of interaction which dealt with direct interaction effects, Network Interaction leads to deliberate *indirect* interaction effects.

Example may again be found in all the investigated fish areas. In the white fish case in UK the domestic processing companies selling to the major retail companies all had developed their international supplier relationships in order to be able to meet the requests from the retail companies. In the same way the Norwegian company selling the high quality baccalao to the Portuguese retail company also had developed its supplier relationships in order to meet the high requirements.

Furthermore, a problem for Norwegian processing companies selling pelagic fish is the auction system on the supplying side. As there is an obligatory auction system there are no possibilities for them to develop supplier relationships in order to meet the successively

higher requirements from advanced customers in the German or Polish market (Abrahamsen & Håkansson 2014).

3 THE MANAGERIAL CHALLENGE OF THE DIVERSITY OF INTERACTION

The typology of business interaction that we have outlined ranges from single issue, single episode, bilateral interaction to multi-issue, multi-episode, multilateral interaction. Each of these types of interaction will affect different combinations of actors, activities and resources. For example, Pure Duel refers to interaction consisting of discrete episodes often with minimal actor involvement, limited or one-off adaptation usually in a single dimension through which actors seek their own short-term gain. In contrast, close cooperation and network interaction demand extensive resource investment and actor involvement, complex evaluation and a long-term orientation. Each type of interaction makes particular demands on the managerial capabilities of those involved in them. But the managerial challenge of business interaction is compounded by a number of factors, as follows:

Mix of different types of interaction: All companies are simultaneously involved in different types of relationships and this means that the same organization has to operate within very different interaction processes. A company may have a few long-term, complex and important relationships and a large number of others which it regards as less critical, but which also have to be managed. Consequently, the organization has to have a structure as well as designed processes for dealing and handling these differences.

Limits to Choice in Interaction: Each of the actors involved in a particular interaction process is likely to have a view of the type of interaction in which it wishes to engage. However the type or types of interaction which develop and subsequently evolve cannot be mandated by a single actor and will themselves, emerge through interaction and the consent of the counterparts. For example, a manager may choose to approach a particular counterpart

within Type 4 Interaction, Close Cooperation, either as part of a general approach or for specific reasons. However, that counterpart may have a more restricted view of the relationship and its investment in it and seek to interact more narrowly within Type 2 Modified Duel. The type of interaction which predominates in a relationship is likely to correspond to the lowest common denominator of the involved counterparts' wishes. A further factor which limits managerial choice in business interaction is that individual managers will have only limited ability to interact effectively in widely divergent processes. Hence managers are likely to seek to replicate the interaction types with which they are familiar and to develop a generalized approach to particular types of interaction processes, such as those which involve major or minor adaptations (Hakansson and Ford, 2002),.

Moving Between Types of Interaction: The initial interactions between business companies will take place in the context of the counterparts' reputations, their experience of similar situations and their other interactions. Early interaction is likely to involve restricted trial, limited commitment and none or few adaptations as in Type 1, Pure Duel. Movement between types of interaction may or may not be linear and will be based on teaching, learning, persuasion and growing commitment and adaptations. Many interaction processes continue to be Type 1 or 2 indefinitely. Managers seeking to develop complex interaction processes of Types 4 – 6, Long Term, or Close Cooperation and Network Interaction are likely to find the development both resource-intensive and slow. These types of interaction require the counterparts to build trust between each other and to establish complex routines and procedures. But, even complex types of interaction are subject to rapid decay if any of the counterparts seek to approach them for short-term advantage as a Pure Duel. However, the propensity to duel will be limited by the complex interdependencies developed between the counterparts.

Simultaneous Types of Interaction within a Single Process: As well as having to cope with a diversity of interaction types in different processes, managers are likely to face different interaction types with respect to particular elements within a single process or even for single episodes within that process. For example, either or both of the counterpart(s) may choose to approach interactions about resource adaptation as a duel. If so, they are likely to seek to reduce their own short-term costs and maximise their short term benefits from any resource adaptations and investments which take place between them. Alternatively, interaction between resource or activity elements may “drift” into a duel through inattention or ignorance. In contrast, the same two counterparts could simultaneously approach the development of their individual actors in a way that is typical of Type 3 Interaction: Offering-Oriented Duet or as part of a wider Type 4 process of Close Cooperation.

The multiple-actors, multiple elements and multiple episodes in many inter-company processes limit the ability of management to determine the evolution of an overall type of interaction with a particular counterpart. Each actor and sub-group involved in the process is likely to have its own agenda and approach. For example, the development engineers in both companies may interact in a way that associated with Close Cooperation whilst the interactions between salespeople and buyers may be closer to Pure Duel. None of these actors can accurately forecast the long or even short-term outcomes of single or multiple interaction episodes. The complex involvement of multiple actors and the limits to overall control lead to interaction of multiple types, both sequentially and simultaneously. These limits also restrict the ability of company to develop or implement an overall “corporate view” of its interactions with a particular counterpart. Indeed, it is often necessary for companies to take a multi-type approach to their interactions with a particular counterpart, for example by alternating duel and duet-oriented managers in negotiation to reduce the ability of a counterpart to interpret its intentions (Ford, Hakansson and Johanson, 1986).

The Evolution of Interaction: Adaptations may be consciously sought by the participants in an interaction process or they may develop unintentionally, unconsciously or unwillingly. Counterpart-specific adaptations tend to fuel interdependencies between participants. The development of these interdependencies provides economies of investment and facilitates and access to the adapted resources of counterparts. The development of interdependencies also increases the intensity of inter-personal interaction by reinforcing the importance of interpreting and evaluating the direct and indirect initiatives of counterparts. Further interaction in and across different aspects of an inter-company process magnifies the effects of independencies on the inter-company process and on the counterparts and simultaneously constrains and empowers the counterparts (Hakansson and Ford 2002). Hence, business interdependencies tend to be self-reinforcing.

The self-reinforcement of interdependencies tends to fuel progression through the Types of Interaction by increasing the preponderance of duet. However, this progression is vulnerable to changes outside the dyad, to continuing re-interpretation by the actors and to the effects of their interactions outside of the dyad. The growth of interdependency reduces the ability of a counterpart to withdraw its consent to this evolution. However in the longer-term, an actor may attempt to change the balance of relative dependence. But all attempts to change the interdependencies in an inter-company process involve costs for those involved.

The evolution of a single interaction process and the types through which it moves are also dependent on management's skills in interaction as well as their intentions. Many inter-company processes, such as those between supermarkets and suppliers of commodity products may not evolve through time away from Type 1 interaction. This is commonly because of the inadequate resources or skills of commodity suppliers and the power of the supermarkets to coerce their counterparts towards a continuing duel. A similar limit to progression has been observed in the processes between major automotive assemblers and some of their components suppliers based on the unwillingness of the assemblers to become dependent on particular suppliers following inter-company product development. In contrast, the inter-company processes between supermarkets and brand suppliers often move between interaction types as interdependencies based on the respective skills and resources of the counterparts develop. However, progression in these cases is often limited or reversed by the initiation of opportunistic interaction based on duel.

The complexities of interaction evolution mean that managing the multiple effects of interaction is central to the management challenge of interaction.

3 THE MANAGERIAL CHALLENGE OF THE EFFECTS OF INTERACTION

The second aspect of the managerial challenge of interaction is in coping with the complex, far-reaching and often unplanned effects of interaction on particular elements of resources and on the activities and actors which are associated with them. Table 1 presents a summary of the more immediate and the potentially wider and sequential effects of different interaction types on different elements of resources; products, services, the facilities used to provide them, the business units that control them and the relationships of those business units. These effects increase for each type of interaction from Type 1, Pure Duel onwards. A Pure Duel may occur without affecting the business actors involved, or their offerings, facilities or their relationships. Managerial concerns are limited to the immediate effects of each discrete episode. Type 2, Social Duel produces changes to the relationship between counterparts that arise from increased familiarity, learning and ease of interaction. Type 2 Interaction may lead to the simplification of some business activities. The managerial challenge is to choose appropriate counterparts for convenient serial episodes and to gathering information on changes in potential counterparts. Type 3 Interaction, Offering-Oriented Duet may lead to changes in the products or services which are transacted in a single relationship. This type of interaction is likely to lead to systemization and attempts to achieve efficiency gains in choosing and limiting adaptations to products and services, often including modularization and changes to service facilities. Management in Type 4, Longer-Term Duet is likely to involve either or both counterparts in developing, investing or adapting physical facilities and associated activities to accommodate the requirements of a specific counterpart. One possible effect of this interaction type is the growth of institutionalization and consequent inefficiencies in each actor's specific relationships and relationship structure. Type 5 Interaction, Close Cooperation is likely to lead to changes to products, services and to the structure of particular business actors at the level of individual, business unit and company and to their associated activities over a long period of time. Close cooperation involves major

and often irreversible investments. Finally, Type 6 Network Interaction is likely to lead to a significant and effectively unknowable sequence of changes to many aspects of the physical resources, associated activities and both direct and indirectly related actors. Type 6 Interaction is likely to be resource intensive and it challenges the ability of managers to assess and exploit their own products, services, facilities and relationships and to “picture” the network and its constituents from the perspectives of significant direct and indirect counterparts (Ford et al, 2003,188).

	EFFECTS ON PRODUCTS AND SERVICES	EFFECTS ON FACILITIES	EFFECTS ON THE INVOLVED BUSINESS UNITS	EFFECTS ON THE RELATIONSHIP BETWEEN COUNTERPARTS
TYPE 1: PURE DUEL	NONE	NONE	NONE	NONE
TYPE 2: SOCIAL DUEL	NONE	NONE	LIMITED CHANGE	LIMITED CHANGE INVOLVING LEARNING AND THE BENEFITS AN

				PROBLEMS OF FAMILIARITY.
TYPE 3: OFFERING- ORIENTED DUET	TENDENCY TOWARDS MODULAR- ISATION OF SERVICE OR PRODUCT ELEMENTS	SYSTEM- ISATION OF SERVICE	LIMITED CHANGE	SIMPLIFICATION OF INTERACTION OFTEN LIMITING INTERPERSONAL INTERACTION.
TYPE 4: LONGER-TERM DUET	SIGNIFICANT CHANGE	SIGNIFICANT CHANGE	LIMITED CHANGE	DEVELOPMENT OF SPECIFIC INTERDEPENDENCIES.
TYPE 5: CLOSE COOPERATION	SIGNIFICANT AND COMPLEX CHANGE	SIGNIFICANT CHANGE	DEVELOP- MENT OF RELATIONSHIP- SPECIFIC BUSINESS UNITS	EXTENSIVE CHANGE TO MULTIPLE ELEMENTS. DEVELOPMENT OF MULTIPLE INTER- DEPENDENCIES.
TYPE 6: NETWORK INTERACTION	COMPLEX CHANGE	COMPLEX CHANGE	COMPLEX AND MAJOR CHANGE	CHANGE TO MULTIPLE RELATIONSHIPS

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TABLE 1: EFFECTS OF DIFFERENT TYPES OF INTERACTION

Table 1 shows that each type of interaction has effects on different aspects of the operations of participating companies, not least in their technical dimensions. Each type of interaction and its effects have to be managed. Even more importantly, all the effects of multiple interactions have to be related to each other in order to create an organized development pattern for the company or its constituent parts. The economic value of the effects of interaction depends on the extent to which each effect is related to others within a more general development pattern. The importance of incorporating interaction effects extends to product design and the management of production facilities. A number of managerial practices have been developed to facilitate the incorporation of interaction such as continuous product development, successive modularization, programmable products and facilities.

5 THE CHALLENGE OF INTEGRATING THE EFFECTS OF BUSINESS INTERACTION INTO THE GENERAL MANAGEMENT OF A COMPANY

The third and final aspect of the managerial challenge of business interaction that we address is perhaps the most demanding of all. This challenge is to develop and implement a strategic approach that integrates the evolving pattern of interactions into the development of the internal and external resources on which a company depends. In other words, the company has to find a way to combine its own long-term evolution with those with which it interacts. Evolution within an interactive world is always relative.

We will start to address this aspect of the challenge of business interaction by developing a view of interaction as a process driven by multiple sequential initiatives and responses. We

will then examine the issues of choice and consent in the different types of interaction and the question of movement between interaction types.

5.1 Initiatives and Responses

The patterns of relatedness that characterise the business landscape mean that all managerial initiatives will affect one or more counterparts. These multiple effects occur even in those initiatives which appear to be addressed to wholly “internal” issues for the initiator. Hence, the effects of all managerial initiatives in an interactive landscape depend on the responses of specific counterparts. In this way, each managerial initiative can be interpreted as *proposal* that particular change should occur both in the initiator and in direct and indirect counterparts.

The responses of counterparts to these proposals and the subsequent re-responses of the initiator determine the actual direction, extent and value of change in these counterparts and also in the initiator itself. At the lowest level, achieving the intended effects of a managerial initiative by one company is likely to depend on the explicit or implicit *consent* of a counterpart. More generally, these intended effects may require that a counterpart initiates change within its own operations or seeks them elsewhere. All types of dyadic interaction are likely to lead to indirect changes both simultaneously and sequentially.

Business managers have to operate on the assumption that the outcomes from business interaction do not result solely, or even mainly from their own managerial initiatives or the unilateral strategies that underlie them, but from a continuing process of initiative and response between counterparts. Managers must be able to identify and interpret the implications of initiatives by others, assess the value and costs of their consent to those initiatives and determine the most appropriate response to them. Managers constantly need to adapt their own initiatives to the willingness and capabilities of others to respond. The more adapted are these initiatives, the more productive the responses will be. Management in

business interaction involves skills in understanding, anticipating and participating in complex combinations of both initiative and response. Let us now have a look at some examples from the fish study.

5.2 Managerial initiatives in activity and resource combination

These initiatives may be directed towards single or combinations of activities. The aim is to either achieve scale through an increased structuring or to achieve a restructuring effect through an innovation initiative. Both of these have to do with how resources are used and developed in activities. We have observed managerial initiatives directed towards more efficient utilization of resources in existing activities throughout the fish network by a systematic increase in the scale of the activities performed. These initiatives have increased the scale and frequency of activities either as a consequence of or as a way of increasing the utilization of existing resources. Examples of scale increases occur in fish catching, farming, processing and especially in the retail area of the network.

In processing, the capacity and speed of equipment has increased. In retailing, the basic resource of raw fish has been refined by secondary processing to produce “value-added” products packaged for ease of display and consumption. These developments mean that the total network is now much more structured than it was even two decades ago. This increased structure is observable in the cooperation between pairs of companies. One such example is the cooperation between the Portuguese retail company Pingo Doce and the Norwegian baccalao processing company Jangaard (Haugnes 2010 p 160 and p 182). Together these two companies have developed a high quality product that accounts for a substantial share of the total baccalao market in Portugal for which the two companies have adapted both their resources and activities. Similarly, initiatives between feed suppliers and fish farmers have led to a reduction in the use of fish feed per kilo of fish produced from 4-6 kilos to 1-2

kilos/kilo of fish. This has clearly affected the cost per kilo produced and has also reduced waste and negative effects on the water. Attempts have also been made to combine activities and resources in completely new ways. For example, the Norwegian dairy company Tine has attempted to combine “blue” and “green” activities to develop a new product, a salami of salmon (Hoholm & Håkansson 2012). In this case the ambition was to use knowledge from the agriculture network to make innovations within the aquaculture network. Managerial initiatives in the fish network have also included other types of new combinations. One of these is the introduction of Atlantic salmon into fish farming on the Pacific coast of Chile. (Huemer Håkansson & Prenekert 2009).

5.3 Managerial Initiatives in actor and activity combinations

There has been a very strong tendency towards specialization in all of the aspects of fish covered by the study; catching, farming, processing and transportation. However, in distribution we observed more of a combination of specialization in one dimension leading to generalization in another. The large, highly-specialized, country-based general distributors have taken over from local distributors that were more specialized on fish products. This has occurred at both the wholesale and retail stages. This process is continuing in all countries including Japan, even though the previous structure is more resistant there. Specialization in farming and processing has also been combined with an increased internationalization. One example of this is the development in Chile where international companies, especially Norwegian – have played a very central role (Huemer, Håkansson & Prenekert 2009).

We have also observed an increase in specialization affecting relationships. For example there has been a combined specialization between processors and retailers in the area of white fish in UK. Highly integrated supply chains have been created combining the retailers Tesco,

Asda, Sainsbury's, Morrisons, Somerfield with the largest processors Young's Bluecrest, Birds Eye, SIF (owns Lyons and Farne) and Coldwater Seafood).

5.4 Managerial Initiatives in the ways in which actors and resources are combined

A systematic increase in the “hierarchization” of the fish network has occurred over the last two decades and fewer companies now account for more of the total volume in all areas of the network. Consequently the most important resources are now controlled by fewer actors. This has occurred for fishing (at least in Norway), for farming, for processing and for retailing. The tendency has been most apparent in retailing and three to five retailers now account for a dominant share of the total sales volume in most countries. One major effect is that there has been an increased interest in creating an efficient flow of products where the classical natural variation and dynamics associated with fish have been reduced as much as possible. Cermaq provides a strong example of this tendency. Cermaq was a small Norwegian state-owned company in the agriculture area. Since then it has become one of the largest multinational fish-companies with important production activities in Norway, Chile, Scotland and Canada. It is also involved in the fish feed industry as well as the farming and the processing parts of the industry. Hierarchisation has also affected the classical fish markets. One example is the Grimsby fish market at which retailers ‘agents account for all of the purchases: it is far from being a “market”.

6. CONCLUSIONS: MANAGING COMPLEX BUSINESS INTERACTION

This paper has described three aspects of the managerial challenge of business interaction: the challenge of operating within the diversity of interaction; the challenge of coping with its particular effects and the challenge of integrating business interaction into the evolving strategy of a company. All managers approach the challenge of business interaction with unique skills and experience, with a set of resources to which they have access, together with

a pre-existing pattern of interdependency and a set of issues and problems that they face. Variations in this “baggage” lead to the distinctive approach and contribution of individuals and companies and the uniqueness of each interaction process. However, the distinctiveness of managers’ approaches in different processes is mediated by considerations of costs and benefits and the limits of the managers’ experience in similar situations. These considerations lead managers to seek at least some commonality in the processes that they seek and the approach they take within different processes.

Managing complex business interaction requires the ability to cope with simultaneous variety in interaction types within and between processes. Managers have to assess the particular and relative importance of different processes and integrate short and long term approaches, both in specific processes and more generally. An important aspect of the managerial challenge is to determine which aspects of a specific process are amenable to beneficial change at any particular time. Business interaction is often resource and investment intensive and commonly involves prioritizing between counterparts and processes. All of this has to occur in a situation where interaction outcomes are beyond the managers complete control and where outcomes are both multiple and effectively unknowable.

Managing a Set of Different Interaction Processes.

Most of a manager’s initiatives that affect the development of his own company will have important connections to the activities and resources of others. All of these initiatives are played out through the interaction process. The connections between particular initiatives and the interaction process require managers to translate their own company’s ambitions into changes in their interactions with others. Managers need to be able to relate their approach to interaction to the problems and opportunities faced by particular counterparts. Initiatives and responses within a single dyadic interaction process may be intended to *confront* specific

issues as they arise or may form part of incremental attempts to move the process through different types of interaction. Especially important is the fact that a development which conforms to current practice in one interaction process will confront what is taking place in another process. Initiatives within a particular interaction process often arise as a response to what has taken place within another relationship. As every company has a set of interaction processes with a substantial variation in their content there is need for extensive coordination in handling them within a single organization. A narrow concentration on the internal workings of particular accounts, no matter how “key” they may be may create more problems than it solves. Developing and exploiting any interaction process requires managers to be able to analyse their interactions not just from the perspective of the specific counterpart but also from the perspective of other contemporary interaction processes.

Managing Multiple Interaction Effects

Operating in the interactive business landscape requires managers to be able to develop and sustain complex interaction across a broad range of processes, involving multiple actors, activities and resources. In particular, these initiatives involve managers in assessing how beneficial change can be achieved by an effort to *consolidate* the use of resources within existing interaction processes or to *create* a change in the utilization by developing new ones. Choices between consolidation and creation will vary within different types of interaction but even more so between interaction processes of the same type. This is especially the case for interactions of Type 3 Offering-Oriented Duet to Type 6 Network Interaction. The difficulty here is that these types of interaction all affect specific resources such as products and facilities where one adaptation or change in one relationship often has effects also in several other relationships. Managers will therefore often face restrictions on their freedom of movement within single relationships because of their previously established interdependencies in other processes, the limits their abilities to operate in radically different

types of interaction processes and the costs and time required to develop them. These restrictions mean that managers tend to seek similar interaction processes or at least specific combinations of interaction types. Furthermore, managers are likely to favour stability in their relationships with existing counterparts. However when they do seek to achieve change, the limits to their freedom to “manage” interaction becomes a major complication in more complex types of interaction. Any attempts to create a new interaction structure will involve extensive negotiation, perhaps a succession of minor changes over time, considerable adaptation to the requirements of multiple counterparts and extensive trade-offs between consolidation and creation in different aspects of particular interaction processes. These challenges are likely to be particularly acute when seeking change outside of a dyadic relationship as in Type 6, Network Interaction. Network interaction, as in attempts to create joint marketing or supply initiatives or to build complex consortia is likely to be resource intensive and long term. This type of interaction is likely to challenge many aspects of the existing processes with which the involved companies operate.

Matching internal and external networks

If we start from the position that interaction is a central economic phenomenon then we are led to a realization of its important consequences both for handling internal resources as well as those resources used by interaction partners. All managers face the challenge of developing and exploiting the physical and human resources over which they have some control. But interaction means that management loses total control of its internal resources as these at least partly “controlled” or influenced by the interaction partners. At the same time the manager gains some control or at least the possibility to influence the resources used by interaction partners.

We have emphasized in this paper the extent to which all managers are dependent on the knowledge, expertise and resources of those in other companies, over which the manager has no direct control. We have also emphasized that the development and exploitation of these resources can only be achieved through interaction with others. Business interaction can take a wide range of forms, each of which may appear to work against the achievement of a manager's immediate goals and none of which are within her sole discretion to choose. Business interaction inevitably restricts a manager's freedom of action and it can limit, delay or even prevent the progress of things she wishes to achieve.

But the obverse of the limitations imposed by business interaction and of a manager's dependence on the resources, intentions and particularly the skills of others is that business interaction provides the means to access, develop and take advantage of the wide panoply of resources across the business landscape. All business interaction develops in a direction which is influenced by a combination of the knowledge and expertise of counterparts. Perhaps the most critical of all of the challenges of business interaction that face managers is to integrate their own knowledge and skills with those of counterparts. In particular, all managers face choices about when and in which aspects of their interactions they should seek to *coerce* a counterpart in a particular direction based on their own expertise and intentions and when they should *concede* to a direction determined by the counterpart. No single corporate or individual business actor has the knowledge to exclusively direct interaction in its own or its counterpart's best interests. All business actors face long and short-term choices about when to seek to direct aspects of their interactions themselves and when to concede the direction to a counterpart. In this world of multiple actors both within and outside the boundaries of a company, managers have to develop networks within the company which match the interactions in which it is involved with external parties.

The internal network of a company is there in order to make the company both an “intelligent and demanding customer” as well as an “intelligent and demanding supplier”. Business management is then the task of developing and utilizing internal resources so that they interact and match the resources developed and utilized by interaction partners.

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