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Researching business interaction: Introducing a conceptual framework
and methodology

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Researching business interaction: Introducing a conceptual framework and methodology

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1. Introduction

The objective of this paper is to propose a conceptual framework and a methodology for researching business interaction. Business interaction is a complex phenomenon, and trying to understand it poses several challenges for researchers. First, there is the issue of understanding *what* is happening between companies when they interact. Every day companies interact with a range of counterparts. Sometimes this interaction represents first-hand experiences subject to trial and error, and in other instances interaction takes place within long-established business relationships. Interaction sometimes represents standard offerings, whereas in other instances interaction means adaptations and mutual commitment if interaction is to have any value to the parties. Additionally, we must understand *where* the interaction occurs: Interaction between two companies never appears in an empty space. This implies that we need to understand how companies are affected by their direct and indirect interaction with connected parties, i.e. their direct and indirect business relationships. As researchers, we must subsequently address three levels of business interaction: What the interaction means for those *who* are involved (the actors), what the interaction means for how relationships between companies are developed and handled (the dyad), and how relationships are connected between multiple actors (the network). In addition, we need to recognize the dynamics of interaction because what happens between two companies is conditioned by their previous experiences and their expectations of the future. Business interaction thereby involves the actions, reactions and re-reactions of connected actors in an ever-changing dynamic process. This means that we also need to look at *when* the interaction occurs, i.e. the temporal dimensions (the past, the present and the future) of interaction. The involved parties will have different goals and expectations regarding how their relationships should be developed as they have differing perceptions and understanding of their surrounding network. Researching business interaction subsequently includes understanding *why* interaction occurs from the perspective of the actors involved, because

actors try to make sense of why things are happening or why other companies act as they do. Finally, we need to understand *how* the actors interact, as different actors try to manage their relationships and position themselves within their network in their specific ways.

The structure of the paper is as follows: First, it briefly presents the way in which business interaction as a phenomenon (*what*) is generally understood within the International Marketing and Purchasing (IMP) research tradition, also known to as the industrial network approach (Håkansson 1982; Håkansson et al. 2009; Håkansson and Snehota 1995). The paper then discusses some epistemological and methodological challenges that this understanding implies, particularly concerning the time- (*when*) and space- (*where*) dimensions of interaction, the unit of analysis (*who*) when researching interaction, how the actors explain or make sense of interaction (*why*), and the particular way (*how*) in which the actors decide to interact. The paper subsequently introduces a novel conceptual framework that enables us to analyse interaction on the principal dimensions of time (past, present and future) and space (actor, dyad and network level), and the ascription or explanation of these dimensions by the actors involved. This framework is then applied in an empirical setting that demonstrates its methodological as well as practical application as a research technique. Finally, the paper ends with a discussion of how this framework can enhance our understanding of business interaction as researchers.

2. Understanding *what* is happening: Business interaction from an IMP perspective

The concept of interaction is at the core of IMP thinking; ‘The idea that business interaction between individually significant companies is a primary characteristic of the business landscape is a basic observation in IMP studies. The implication of this observation is that it is not what happens within companies but what happens between them that constitutes the nature of business’ (Håkansson et al. 2009, p. 27). The Oxford Dictionary defines interaction as follows: ‘If one thing has an interaction with another, or if there is an interaction between two

things, the two things have an effect on each other' (Oxford Advanced Learners Dictionary 2015). The latter part of this definition is central to the IMP perspective on interaction: Two parties should not be studied separately as they are mutually affected by the interaction process: 'In these circumstances business companies don't act against the world around them: They interact with particular customers' (Ford et al. 2011, p. 4). Furthermore, researching business interaction means looking not only at how the actors or the interacting parties are connected, but also on how the relationships themselves affect each other: 'The interaction between a buying and selling firm cannot be analysed in isolation, but must be considered in a wider context' (Håkansson, 1982, p. 29). Interaction does not take place within the boundaries of an external environment but in a web-like structure which 'does not have a centre, nor does it have clear boundaries' (Håkansson and Snehota, 1995, p. 19), where 'what is happening in a relationship between two companies does not depend solely on the two parties involved in the relationship but on what is going on in a number of other relationships' (Håkansson and Snehota, 1995, p. 20).

Researching business interaction (i.e. *what* is happening between companies) is therefore complex and imposes several challenges: It means looking at ongoing processes instead of separate episodes, it means studying actors who aim to affect but are equally affected by the interaction process in ways that are not necessarily apparent to them at first, and it means addressing multiple characteristics that are unique to each specific interaction episode or relationship. The key questions and dimensions, *when* (the interaction happens), *where* (it happens), *who* (is making it happen), *why* (it happens) and *how* (it happens) is one way of addressing these challenges (Table 1):

Table 1: Key questions and interaction dimensions:

Key question	Interaction dimension
'What'	The interaction as such: <i>What is happening?</i>
'When'	The time dimension of the interaction (past, present and future): <i>When is it happening?</i>
'Where'	The space dimension of the interaction (dyad and network level): <i>Where is it happening?</i>
'Who'	The actors involved in the interaction: <i>Who is making it happen?</i>
'Why'	The ascriptions or explanations of the interaction: <i>Why is it happening?</i>
'How'	The actors' ways in which they interact: <i>How does it happen? How do they do it?</i>

We will now discuss these questions in more detail.

3. Understanding *when* it happens (the time dimension)

Interaction has a temporal dimension as each exchange episode is part of a continuing interaction process where the parties have past experiences in addition to perceptions about how the relationship should be managed in the future: ‘...because each episode is part of a continuing interaction process it is affected also by a time-horizon that is much more extended. Both parties involved in an interaction episode link the current issues to their experience of previous interaction and the adaptations that have been made. This history will have an impact on their options, attitudes and behaviour. Both parties will also have expectations about their future interaction which will colour their current episodes’ (Håkansson et al., 2009, p. 35). This process view suggests that relationships are strengthened over time as companies learn, adapt and become committed to each other, and thus time represents an opportunity. On the other hand, time is also problematic as increasing investments and mutual adaptations constrain the parties. In this paper, time is seen as a chronological concept. However, other notions of time exists (see for instance Halinen et al. 2012 for a discussion of different time concepts).

How do we research the time dimension? This challenge has received increasing attention by researchers as there generally has been a lack of methodological tools to study network processes (see Halinen et al. 2012; Halinen and Törnroos 2005; Hassett and Paavilainen-Mäntymäki 2013). Halinen et al. (2012, p. 220) argue that a main challenge regarding time and process research is that researchers need to understand how interaction unfolds across ‘nested structures of individuals, firms, relationships and nets, these being key entities’, and interactions at all these levels need to be attended and connected to each other by the researcher. Another challenge is that processes often evolve parallel to each other, and it is difficult to find defining causes and events that shape the eventual outcome of the interaction. Additionally, the possibility exists that different actors have different interpretations regarding the time and process. This means that researchers must find ways to compare and contrast interpretations across multiple actors at different interaction levels.

One way to approach this challenge is to perform longitudinal research where repeated studies shed light on how interaction is shaped over time (for an discussion of longitudinal reseearch methods, see Flick 2004; Menard 1991). Another approach is to take a snapshot in time and study how the actors look at their past, their current operations, and their future expectations (Halinen and Mainela 2013). Nevertheless, ‘it is difficult to delimit the connection between time and interaction. Thus, it is always difficult to characterise what defines a single episode of interaction or to find a neat way to define its boundaries or when it starts or finishes. No matter when or where we observe interaction, what we see is the continuation of things from the past’ (Håkansson et al., 2009, p. 36). Neither is interaction predetermined. What happens in one relationship is always a combination of experiences and learning from parallel interactions in a number of relationships. It is therefore difficult for respondents and researchers alike to construct causal links between episodes and outcomes. Rather, ‘researchers seeking to explain interaction over time will have to be more interested in the evolving views of the actors,

rather than attempting to model the sequence of cause and effect in a supposedly objective way' (Ford and Håkansson 2006, p. 9).

4. Understanding *where* it happens (the space dimension)

Researching the space dimension implies an understanding of *who* is involved in the interaction (companies or *actors*), how these actors are linked in terms of relationships or *dyads*, and how these dyads are interconnected in a wider *network*. (Note that the *where* dimension in this paper refers to the space dimension – where the interaction happens - and not geographical or physical dimensions). This infers that we cannot study interaction between two companies without understanding the interaction episodes in connected relationships: 'Interaction between two organisations takes place not only a certain point in time, but also in a specific space. The narrow part of this space is represented by the two companies and the relationship between them. But...both actors in a focal interaction are simultaneously involved in interaction with other business partners. The focal interaction affects and is affected by what is taking place in these other interaction episodes elsewhere and all these parallel episodes raise memories of interaction history and expectation of the future' (Håkansson et al. 2009, p. 38). A key IMP concept is the proposition that a dyad or relationship can be analysed in terms of *actor bonds*, *resource ties* and *activity links* (Håkansson and Snehota, 1995). Interactions in space thereby have implications for how resources are utilized, how activities are performed and how actors are mobilized as each interaction episode brings the actors closer together along these three dimensions, but simultaneously more distant from other actors. As such, interaction in space affects the network positions of the connected actors.

How do we research the space dimension? Interaction episodes are mutually connected across networks, and what happens in one relationship must thereby be seen in relation to what happens in other relationships. This makes identifying causes and effects of interaction

difficult: 'Similarly, researchers will find that the multiplicity of simultaneous interactions, both between and outside of any dyad, makes it effectively impossible to construct distinct causal links between particular episodes and outcomes of interaction' (Ford and Håkansson 2006, p. 9).

This further has consequences when attempting to define the unit of analysis (*who* interacts): In order to understand what is happening in relationships between companies, what do we study – the relationship or the actor? An actor may be easily identifiable, but how can we observe or measure how this actor interacts with his/her key partners? For instance, consider a particular resource such as a key account manager who has been appointed to handle a customer relationship by a supplier: A person is easily identifiable as such, but the way in which learning, development and attitude is shaped by the way of conducting business with customers is hard to measure. Another example may be an activity such as transportation. It is easy to identify a lorry or a warehouse, but the way in which these two resources are gradually tailored to the activities of a particular customer is more difficult to observe. Likewise, financial transactions appear in balance sheets and bank accounts, but the actual flow of payments is not easily discernible. Finally, actor bonds such as cooperation, commitment, power and dependence are difficult to observe because they are characteristics of how actors perceive each other, and not bonds to be observed as such. For researchers, this means that the unit of analysis will be different from the unit of observation. Defining the unit of analysis and observation are central elements in research design, but the differentiation is not always clear (Wuehrer and Smejkal 2013). Even though we aim to understand the relationship (the unit of analysis),... 'the unit of observation is an actor, from which whom we elicit information about ties' (Wasserman and Faust 1994, p. 43 cited in Wuehrer and Smejkal 2013). This implies that researchers must try to understand interaction through the eyes of the actor(s), because it is difficult to study interaction in itself.

5. Understanding *why* it happens (actors' ascriptions of interaction)

Studying interaction through the eyes of the actor (the respondent) imposes an epistemological challenge: How can we distinguish reality from perceptions? The positivist approaches to science aim to discover natural laws and causal relationships, whereas relativist and constructivist approaches suggest that social phenomena do not exist 'out there' but in the minds of people and their interpretations of reality. Thereby reality cannot be judged objectively; reality is interpreted social action (Robson 2002). Constructivist approaches consequently 'consider the task of the researcher is to understand the multiple social constructions of meaning and knowledge. Hence, they [the researchers] tend to use research methods such as interviews and observations, which allow them to acquire multiple perspectives. The research participants are viewed as helping construct the reality with the researchers' (Robson, 2002, p. 27). Thus, looking at how interaction is explained or perceived by the actors is be one way to understand interaction (Borders et al. 2001; Mouzas and Henneberg 2015; Mouzas et al. 2008; Osborne et al. 2001). Whether it is 'real' or 'perceived' is of less importance because actors act on the basis of their *subjective interpretation* (Ford et al. 2011; Ford and Håkansson 2006). Subjective interpretation is the single actor's perspective of the world and how he/she interacts with it, and as such resembles the *bounded rationality*-concept (Simon 1991; Simon 1957), meaning individual decision making is limited to the information available at any given point in time. In a network perspective, this means that network actors will base their decisions on their individual interpretation of the action of other actors and the world around them. Subjective interpretations are a consequence of an actor's experience of actions, reactions and re-reactions; it is the interpretation of interactions rather than 'reality' itself that forms the basis for interaction.

Weick (1995) refers to this process as *sensemaking*, meaning that actors need to make sense of what is happening around them from some form of reference. According to Weick (1995), 'the

concept of sensemaking is well named because, literally, it means making sense. Active agents construct sensible, sensible events. They structure the unknown' (p. 4). Sensemaking is not a collective action but is concerned with the individual actor. Ring and Rands (1989) define sensemaking as 'a process in which individuals develop cognitive maps of their environment' (p. 342). This suggests that individual actors will see the world differently depending on where they are. Thus, comparing different actor perceptions across a network is one way to understand interaction, as these perceptions are unique to the individual actor and implies that two actors may have different interpretations of the same event. Weick also talks about interaction as a defining property for identity construction, a key theme within industrial network research. According to Weick, 'to shift among interactions is to shift among definitions of self. Thus the sensemaker is himself or herself an ongoing puzzle undergoing continuing redefinition, coincident with presenting some self to other and trying to decide which self is appropriate' (Weick, 1995, p. 18). Here he touches upon one of the fundamental concepts of the interaction approach; it is the interaction that defines the actor, not the other way round.

Sensemaking also allows studying interaction in time: 'Perhaps the most distinguishing characteristic of the present conceptualization of sensemaking is the focus on retrospect' (Weick, 1995, p. 18). This idea of retrospective sensemaking was first discussed by Schutz (1967). People can only know what they are doing after they have done it. In Weick's view, the past is reconstructed by knowing the outcome of events. In Weick's terms, actors often produce the environment they face. The environment is thus a representation of the actor's perception, and not a defining entity. This means that different actors will have different views of the environment they face and how it influences them. 'Instead, in each case the people are very much part of their own environment. They act, and in doing so create the materials that become the constraints and opportunities they face' (Weick 1995, p. 31). This thinking greatly resembles Håkansson and Ford's (2002) suggestion that the network is both an opportunity and

a constraint. However, Weick goes further when he suggests that it is the *perceived* network or environment which acts as a constraint or opportunity. It is therefore appropriate to analyse interaction at actor, dyad or network level as these three levels constitute the larger 'environment' these respondents face and try to make sense of. As previously argued, one respondent may attribute an interaction episode to someone else's actions (sensemaking at actor level), or to a change in his/her relationships with another actor (sensemaking at dyadic level), or to a change in his wider network (sensemaking at network level). Even though sensemaking is defined at the individual level, it is also a social process. Sensemaking is never solitary because what a person does internally is contingent on others: 'Human thinking and social functioning ... [are] essential aspects of one another' (Resnick et al. 1991, p. 3 cited in Weick, 1995). This means that sensemaking and interaction go hand in hand. Actors are likely to change their actions on the basis of their perceptions, and change their perceptions on the basis of their actions.

6. Understanding *how* it happens (the actors' strategic intent when interacting)

The *how* dimension is concerned with how companies manage their relationships and their strategic intent: The network approach is less concerned with the competitive aspect of companies, and is more concerned with how mutual interdependence affect the actors involved: 'Because management in a single company is intimately related to the interaction between that company and specific others, we cannot make sense of the process of management in a single company by considering what happens in that company alone. Management in a single company can only be understood by looking at what happens in its unique interaction with others' (Håkansson et al, 2009, p. 184). In such a context, strategic action may appear limited because of the interconnectedness that networks represent: 'The sheer unknowability of effects and outcomes in a network means that we may even conclude that the effectiveness of strategic business decisions over time is likely to be largely a matter of luck..' (Ford and Mouzas 2008,

p. 66) Strategy in an IMP perspective (this is also referred to as *strategizing*), is therefore concerned with handling complex combinations of resources, activities and actor bonds in conjunction with other actors, and involves choices about how to interact with, and mobilize as well as influence, other actors through connected business relationships (Gadde et al. 2003). As interaction is a two-sided process, any actor is dependent on and affected by the actions and reactions of other actors. Such actions may be in line with but sometimes against the intentions of others. Håkansson et al (2009) therefore propose three networking aspects concerning strategic choice: The first choice is concerned with choices within existing relationships, and addresses the inherent opportunities and limitations that a business relationship represents. The second choice concerns network position, and reflects that companies are both influencing and are being influenced by their network. The third is concerned with how to network, and implies that a company is simultaneously controlling and being controlled by other actors. These three networking choices are referred to as the *three network paradoxes* (Håkansson and Ford 2002) or the *6 Cs* (Ford et al. 2011) of managerial options about how to network and involves confronting or conforming towards business partners, consolidating existing or creating new relationships, and coercing or conceding to business partners.

The *how* dimension subsequently allows us to understand interaction in terms of how companies seek to manage, organise and influence their business relationships. Researching the *how* dimension therefore means attempting to understand the rationale on which managers base their decision, i.e. what we above have referred to as the *why* dimension. As such, the *how* and *why* dimensions are interlinked as managers base their strategic decisions on their understanding of the surrounding network. Håkansson et al (2009) refer to this as an interplay between network pictures, networking and network outcomes. Network pictures are managers' visual and verbal perceptions or subjective understanding of their network (i.e. their ascription of interaction or why they interact), whereas networking is the managers' conscious attempts to

interact, ‘...through which individual resources, activities and actors confront each other and through which they are modified and take their form’ (Håkansson et al, 2009, p. 197). Network outcomes is the subsequent network structure, which again serves as an input to new network pictures. Recent research supports the proposition that managers strategizing decisions are informed by their perceptions or understanding of their surrounding network (Abrahamsen et al. 2016; Corsaro et al. 2011; Laari-Salmela et al. 2015; Mattsson et al. 2015). The *why* dimension thereby serves as a way to understand the *how* dimension of networking, and subsequently the interplay between cognition and action.

7. A conceptual framework for researching business interaction

The following framework helps to understand business interaction on basis of the key concerns and dimensions discussed above (adapted from Abrahamsen et al. 2012a; Abrahamsen et al. 2012b):

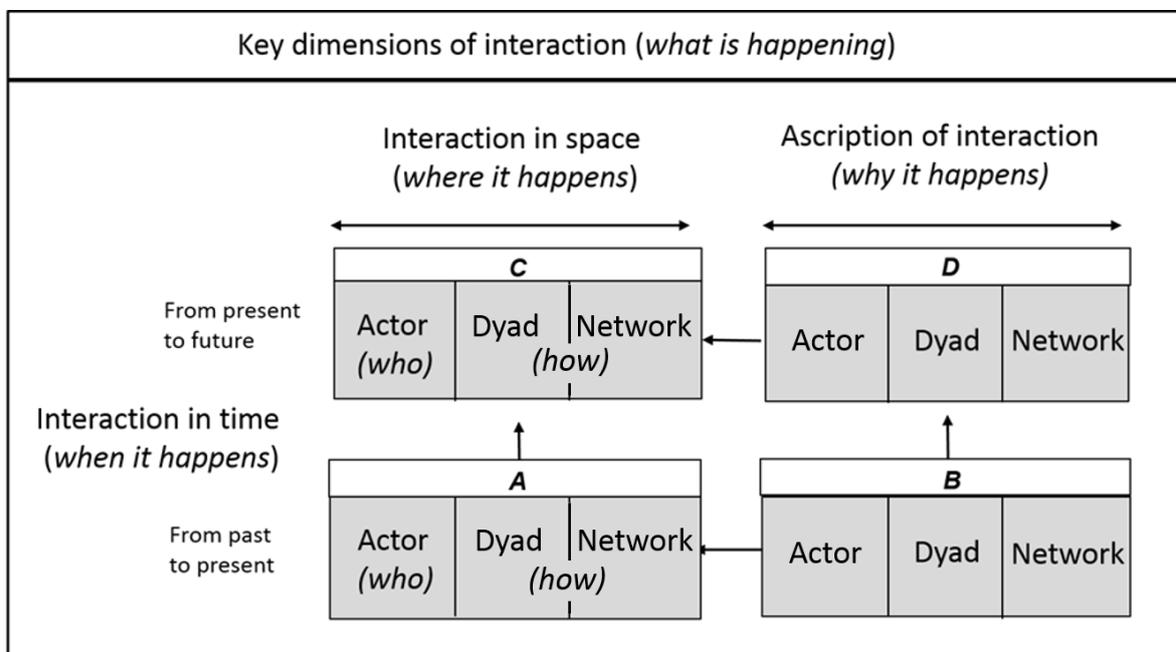


Fig. 1: Conceptual framework to understand business interaction in time and space

The framework presents the key concepts and dimensions introduced in table 1 in a coherent way, and allows for systematic categorization of respondents’ descriptions and ascriptions of

interaction episodes. The overall concept we are studying is interaction as such (*what is happening*). On the horizontal axis is the space dimension of interaction (*where it happens*), and subsequently interaction episodes in boxes A, B, C and D can be studied in terms of *who* is involved (the actors – or the “actor level”), the dyadic level (interaction between organisations) and the network level (interaction between connected relationships), and *how* the actors interact in their dyads and networks. The vertical axis illustrates the time dimension of interaction (*when it happens*) featuring the respondents’ descriptions of past, present and future interaction episodes (boxes A to C, and boxes B to D). The framework also takes into account the ascription or explanation of the interaction episodes, the *why* dimension or the perceived reason for what is happening (boxes B and D). These boxes represent the actors’ *sensemaking* of interaction in time (past present and future) and space (whether interaction is attributed to decisions by the actors involved, by what happens in connected relationships, or by changes in the wider network). In this way, boxes B and D are used to understand what is happening in boxes A and C.

8. Applying the framework in an empirical setting

Let us look at the applicability of this framework by using data from a recent study on network change (Abrahamsen 2011), and more precisely the changes experienced by actors involved in distribution of Norwegian salmon in Japan. Here the main interaction patterns are changing as Norwegian exporters, Japanese importers and large Japanese retailers are increasingly involved in direct distribution at the expense of the traditional Japanese wholesale fish markets. An interview guide for this particular study was developed with the aim of understanding how the different actors interact with their main counterparts, what changes they experience in their relationships and what direction their relationships will take in the future. Table 2 presents the main themes from the interview guide. In addition, follow-up questions were used to probe particularly interesting and noteworthy explanations and descriptions.

Table 2: Interview guide.

Main themes in interview guide with respondents
<ul style="list-style-type: none">• What did your network look like five years ago?• What were the main relationship characteristics in terms of actor bonds, resource ties and activity links?• What does the network look like today?• What are the main changes your company experiences?• Why are these changes happening?• What will the network look like in five years' time?• What does your company do in order to adapt to these changes?

In order to use the framework in Fig. 1 to understand business interactions, the interview responses need to be turned into manageable data suitable for analysis by creating categories (classifying units of data) and codes (labelling, separating, compiling and organising data) (Ghauri and Grønhaug 2010). *Template analysis* (King 2012; 2004) is one way of generating categories and codes that aids this process. It is not a distinct research methodology in itself, but enables studying the text from various angles. It differs from grounded theory (Strauss and Corbin 1998) as it provides a flexible and continuous process of altering categories and finding more suitable positions of analysis as one works through the material, which is a process typically associated with qualitative research (Bryman and Bell 2003). The sources for a template can be the 'interview topic guide..., the academic literature, the researcher's own personal experience, anecdotal and informal evidence and exploratory research' (King, 2004, p. 259). In this case, a template with reference to the interview topic and the academic literature takes the following form:

Passage from text (transcript):	Box A: Description	Box B: Ascription	Box C: Description	Box D: Ascription
'.....'	<p>Where and when is it happening? How is it happening?</p> <p>From past to present at actor (who), dyad or network level</p>	<p>Why is it happening?</p> <p>From past to present at actor, dyad or network level</p>	<p>Where and when will it happen? How will it happen?</p> <p>From present to future at actor, dyad or network level</p>	<p>Why will it happen?</p> <p>From present to future at actor, dyad or network level</p>

Fig. 2: Basic template.

By going through each passage of the interview transcripts, it is possible to broadly categorise the respondents' statements as to whether they are describing *where* the changes are happening (boxes A and C) or *why* the changes are happening (boxes B and D). More precisely, in terms of Fig. 1 above, box A describes changes from the past to the present at the actor, dyad or network level, whereas box C describes changes from the present to the future. Likewise, B represents the respondent's ascriptions of these changes from the past to the present at the actor, dyad and network level, whereas box D presents ascriptions of changes happening from the present into the future. In total, the framework presents twelve categories or boxes that describe a unique characteristic of interaction. Each of these twelve boxes is a given specific annotation (AA means box A, actor level; AD means box A, dyadic level, etc).

When applying this framework to the interview data, how does one decide which data to assign to which categories? As illustrated in Fig. 1, the *where*-column says something about how the actors describe the changes and the *why*-column says something about how these changes are explained. Further, the changes in the *where*- and *why*-columns may appear at the actor, dyad or network level (the space dimension). Defining what we mean by these three levels becomes a vital part in the construction of the framework. Building on the work of Abrahamsen et al. (2012b), the following definitions suggest how data can be coded using this framework:

a) *The actor level*

In the industrial network tradition, all actors act and react to the actions of other actors, and subsequently it is the dyad, not the actor, which is the unit of analysis. Still, relationships would not exist without any actors and we need to have at least some way of classifying who the actors are, and what is happening at the actor level or within the actor's internal organisation.

b) The dyadic level

Interaction at the dyadic level is concerned with what happens *between companies*. In this framework, we look at interaction in terms of actor bonds, resource ties and activity links. These three dyad characteristics are interlinked, and a change in one dimension usually results in changes in the other two.

c) The network level

Networks are connected relationships. Interaction at the network level may therefore be defined as interaction *between multiple actors* or interaction where multiple actors are concerned.

In total, this represents twelve combinations of categories (table 3):

Table 3: Combinations of interaction categories

Box	Category
AA	Actors involved in and affected by interaction from past to present
AD	Interaction at dyadic level from past to present
AN	Interaction at network level from past to present
BA	Sensemaking at actor level from past to present
BD	Sensemaking at dyadic level from past to present
BN	Sensemaking at network level from past to present
CA	Actors involved in and affected by interaction from present to future
CD	Interaction at dyadic level from present to future
CN	Interaction at network level from present to future
DA	Sensemaking at actor level from present to future
DD	Sensemaking at dyadic level from present to future
DN	Sensemaking at network level from present to future

Here are two examples (Tables 4 and 5) of how the interview responses were analysed using the basic template presented in Fig. 2 and the categories above in Table 3. The text quotes are excerpts from an interview with a Japanese salmon importer:

Table 4: Analysing interview responses using template (Example 1: From past to present).

Passage from text (transcript)	Box A: Description	Box B: Description
<p><i>'Traditionally, importers would sell to wholesalers at Tsukiji. Supermarkets and retailers would buy from middle wholesalers or distributors. Sometimes there would be a processor between the distributor and end user, and sometimes between middlemen and distributor. This is a very traditional sales channel, but now this is changing. Now importers and the wholesalers are trying to reduce the sale channels, having more direct contact with the end user. Some importers are actually selling the fish to directly the end user.'</i></p>	<p>Here the respondent describes a general change towards direct distribution in the Japanese seafood market, where traditional seafood distribution (here represented by wholesalers and middlemen at the Tokyo fish market) is being bypassed by importers selling directly to retailers (box AN).</p> <p>The respondent describes how importers and wholesalers are actively changing the network structure (<i>How</i>)</p>	<p>Why is it happening? From past to present at actor, dyad or network level</p>
<p><i>'It used to be importers selling to the wholesaler at the fish market, almost 100%. We could not control the price. But now we are talking with the end user and discussing long-time deals, three months to one year ahead and we are very close, actually.'</i></p>	<p>As a result, importers have established closer connections directly with the retailers, and are able to negotiate long-term contracts (box AD).</p> <p>The importers are trying to exert control of prices and contracts (<i>how</i>)</p>	
<p><i>'As you know, there are so many layers in Japan; there are so many people working and that means lots of costs, and there is competition on a global scale. That's why everybody tries to reduce distribution costs. That's the trend.'</i></p>		<p>To explain these changes the respondent says that traditional distribution and its many layers are very costly. (box BN).</p>
<p><i>'We are now aiming directly at the supermarkets where we can get a higher price.'</i></p>	<p>The respondent here displays a deliberate strategy</p>	<p>The reasons for developing direct distribution is because these customer relationships</p>

<i>'As an importer, if I sell to the wholesalers, I maybe gain one percent. If I sell directly to the end user, I can get ten percent.'</i>	to deal directly with retailers (box AA. (How)	are considered more profitable for his company (box BD).
<i>'We still sell 40% or 50% at the wholesale level and the rest to what we call the downstream customers.'</i>	The fish market is still used despite the trend towards more direct distribution (box AA).	
<i>'At the fish market, the intermediate wholesalers process the fish at low cost. If we have to do the filleting, we have to ask a re-processor, and they have to take their margin.'</i>		The reason for the continued use of the fish market is that it performs vital functions: Someone has to take the cost of filleting. At the fish market, secondary wholesalers perform this function (box BA).

Table 5: Analysing interview responses using template (Example 2: From present to future).

Passage from text (transcript)	Box C: Ascription	Box D: Description
	<p>Where and when will it happen?</p> <p>How will it happen?</p> <p>From present to future at actor, dyad or network level</p>	<p>Why will it happen?</p> <p>From present to future at actor, dyad or network level</p>
<p><i>'Actually, wholesaler sales are down year by year. It is shrinking. Now its 50-50. In the future, it will be 60 or perhaps even 70% direct distribution to retailers.'</i></p> <p><i>'The fish market will not disappear completely, but it will not be as today with its 2,000 middlemen. The number of wholesalers is falling. There will be only two or three large wholesalers left in a couple of years. The number of intermediate wholesalers is currently around 2,000, but this is shrinking.'</i></p>	<p>Here the respondent describes a trend where the fish market will be used considerably less in the future (box CN).</p> <p>This will also have an impact on the number of secondary wholesalers (box CN).</p>	
<i>'In the end, these middlemen cannot survive.'</i>		Explaining this future development, the respondent thinks that the number of wholesalers will be reduced because they cannot make money (DA).
<p><i>'For us this means that direct sales with the end users will increase and sales to wholesalers will be reduced.'</i></p> <p><i>'I think promotion activities together with retailers will increase.'</i></p> <p><i>'I think small supermarkets will go out of the business.'</i></p> <p><i>'Supermarkets like Aeon are getting more power.'</i></p>	<p>This trend will have an impact on customer relationships as cooperation with large retailers will increase. There will also be a shift in the power balance where large retailers will become even more powerful and smaller retailers will struggle (box CD).</p>	

	Power will have an impact (<i>how</i>)	
<p><i>'We still have to sell to the fish market. They are taking care of small customers.'</i></p> <p><i>'The fish market will not disappear because there are many small supermarkets and small sushi restaurants in Japan. These are not members of a chain. The wholesalers are taking care of those businesses'</i></p>	<p>The fish market will have continued importance to him in the future (box CA).</p> <p>He therefore will be dependent on the fishmarket (<i>how</i>)</p>	<p>The fish market remains an important distribution channel because it gives access to smaller retailers (box DA).</p> <p>Several actors are dependent on traditional distribution, and it will therefore persist (box DN).</p>

These examples illustrate the applicability of this template to categorise interview responses along the key interaction dimensions presented in this paper. The data from the template can then be applied to the framework introduced in Fig. 1. In this particular example, the boxes look as follows (Fig. 3):

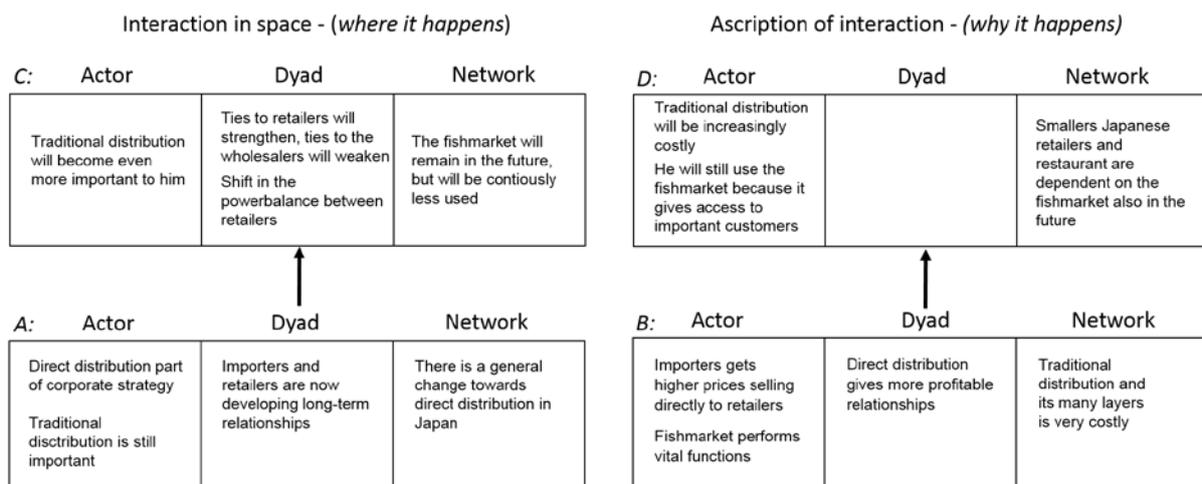


Fig. 3: Analysing interview transcripts using the conceptual framework.

Applying this technique to the full interview undertaken with the respondent cited in Tables 3 and 4 above makes it possible to construct a framework representing the various network changes discussed. The framework used here presents the descriptions of the interaction and the apparent explanations for this as seen by one particular respondent. In Fig. 3 each small box represents a theme, which corresponds to a more detailed description in the transcripts presented in tables 4 and 5. For instance, in box A, the respondent talks about the past and current changes on the actor, dyad and network level, and in box C, he talks about future changes. This is the time dimension, and here he sees how his company, his relationship and his network changes. Likewise, in terms of the space dimension, some of these changes concern him as an actor (actor level), some changes occur in his relationships to other actors (dyadic level) and some changes occur in connected relationships (the network level). Similarly, he makes sense of these changes as he attributes the changes to a number of events in the present (box B) and the future (box D).

9. Analysing interaction from the perspective of a single actor

Using this framework to structure the themes emerging from the transcripts, we are able to describe interaction in time and space in the following way:

Boxes A and B: From past to present

In box B, the respondent describes how direct distribution is slowly changing the Japanese distribution network for fresh salmon: *'Traditionally, importers would sell to wholesalers at Tsukiji [Tokyo's wholesale fish market]. Supermarkets and retailers would buy from middle wholesalers or distributors. Sometimes there would be a processor between the distributor and end user, and sometimes between middlemen and distributors. This is a very traditional sales channel, but now it's changing. Importers and wholesalers are now trying to shorten the sale channels, having more direct contact with the end user. Some importers are actually selling*

the fish to directly the end user' (change at network level). As a result, Japanese importers have established closer ties to the retailers, and have become more powerful (change at dyadic level): *'Previously importers sold the salmon to the wholesalers at the fish market, almost 100%. We could not control the price. But now we are talking to the end user directly and we are discussing long-time deals, three months to one year ahead. We are very close, actually.'*

To explain these changes using box B, the respondent says that traditional distribution and its many layers are very costly (sensemaking related to network level): *'As you know, there are many distribution levels in Japan; there are so many people working and that represents a lot of costs, but there is increasing competition globally. That's why everybody tries to reduce distribution costs. That's the trend.'* Hence, direct distribution is considered more profitable to him (sensemaking at actor level): *'We are now directly targeting the supermarkets where we can get a higher price'* and *'As an importer, if I sell to the wholesalers, I maybe gain one percent. If I sell directly to the end user, I can get ten percent.'*

However, the fish market is still used despite the trend towards more direct distribution: *'We sell 40% or 50% at the wholesaler level and the rest to what we call the downstream customers'*(change at actor level). The reason for this is that the fish market performs vital functions: Someone has to take the cost of filleting. At the fish market, secondary wholesalers perform this function: *'At the fish market, the intermediate wholesalers process the fish at low cost. If we have to do the filleting, we have to ask a re-processor, and they have to take their margin'* (sensemaking at actor level).

Box C and D: From present to future

In box A, the respondent points to a trend where the fish market will lose some of its power, but will not disappear completely (change at network level): *'Actually, wholesaler volumes are down year by year. It is shrinking. Now its 50% fish market and 50% direct distribution. In the*

future, it will be 60% or even 70% direct distribution to retailers' and 'The fish market will never disappear completely, but it will not be as today with its 2,000 intermediaries. The number of wholesalers is falling. There will be only two or three large wholesalers left in a couple of years.' This will also have an impact on the number of secondary wholesalers (change at network level): *'The number of middle sellers is around 2,000, but now it is shrinking.'*

Turning to box D, why this is happening, the number of wholesalers will be reduced because they cannot make money (sensemaking at network level): *'In the end, these intermediaries cannot survive.'* This has an impact on his relationships (change at dyadic level): *'For us this means that direct sales to the end users will increase and sales to wholesalers will be reduced.'*

This trend will also have an impact on customer relationships as cooperation with large retailers will increase: *'I think that promotion activities together with retailers will increase in the future.'* There will also be a shift in the power balance where large retailers will become even more powerful: *'Supermarkets like Aeon are getting more power.'* The emergence of large powerful retailers will have an adverse effect on the number of small retailers: *'I also think small supermarkets will go out of the business.'*

However, smaller actors are necessary for traditional distribution, and therefore they will survive (sensemaking related to the network level): *'We still have to sell to the fish market. They are taking care of the smaller customers' and 'They will not disappear because there are many small supermarkets and small sushi restaurants in Japan. These are not members of a chain. The wholesalers are taking care of those businesses.'*

This detailed description enables a more general analysis of interaction in this particular network from the perspective of one of the involved actors: The network is changing as some actors are confronting its current structure. This has consequences for the relationships of the

actors involved. Some actors, such as the Japanese importers and retailers, are becoming more interconnected in terms of resource ties (salmon filleting and information transfer), activity links (retail and promotion activities, contractual arrangements) and actor bonds (power issues and interdependence). For other actors, such as the traditional Japanese wholesale market, this has the adverse effect. However, traditional fish distribution still performs vital functions to a range of smaller retailers and this actor thereby has a network position of continuing importance. The description also illustrates how actors interact on basis of their understanding of the network. For instance, it is this respondent's perception about the current and future role of traditional distribution that informs his decision to establish closer ties to other actors in the network.

10. Concluding discussion

This paper addresses how we can research business interaction. To understand **what** business interaction is, we have introduced the key questions and dimensions **when, where, who, why** and **how**. Accordingly, the paper's main contribution is a conceptual framework that allows researching the phenomenon business interaction in terms of who interacts (the actors involved), where they interact (the space dimension), when they interact (the time dimension), why they interact (their ascriptions for interaction) and how they interact (their strategic intent), from the perspective of a single actor. This framework contributes to our understanding of interaction in several ways.

First of all, it aids data reduction and data display, two main activities that qualitative researchers need to handle: 'Data reduction refers to the process of selecting, focusing, simplifying, abstracting and transforming the data that appear in written-up field notes of documents...Data display is an organised, compressed assembly of information that permits conclusion drawing and action' (Miles and Huberman 1994, p. 10-11). By enabling analyses

of transcripts in a systematic manner, it opens for categorization of data on a range of dimensions.

Secondly, the framework provides an understanding of the complexity and richness of interaction as it permits comparisons of data across a larger sample of respondents. It enables systematic within-case and cross-case analyses, a vital part of the case study research process (Eisenhardt 1989), and subsequently addresses what Halinen et al (2012) considers one of the main challenges involved in qualitative research: "...networks involve multiple actors' views on time and process. This can be regarded as a challenge, but also as a challenging opportunity. In qualitative business network studies, data is typically collected through personal interviews. This allows the researcher to interpret the respondents' implied application of diverse time concepts and to compare them across and between different actors within interaction processes" (Halinen et al 2012, p. 220). The operationalisation of the framework further opens for a variety of ways to understand interaction across respondents. For instance, using this methodology to compare the perspectives of two actors within a dyad will gain a deeper understanding of how they interact in term of resources, activities and actor bonds (comparing interaction at the dyadic level), and how they are affected by the interaction (comparing description of interaction at the actor level). Extending the analysis to several connected actors will give insight as to how the interaction is described in the wider network (comparing description of interaction at the network level).

Thirdly, comparing the ascriptions of interaction at actor, dyadic and network level gives valuable insights into the reasons for why the actors act in the way that they do. This contributes to our understanding of the respondents' perceived network; their network boundaries or environment (Anderson et al. 1994) or their network horizon (Holmen and Pedersen 2003) as some actors may attribute what happens in their network to their imminent relationships, whereas other actors may attribute the same interaction patterns to changes in their wider

network. The framework is thereby novel as it allows an understanding of how respondents explain or make sense of interaction. This adds an important dimension to interaction research as it allows an understanding of the interplay between cognition and action, a research area that is receiving increasing attention (Abrahamsen et al. 2016; Laari-Salmela et al. 2015; Mattsson et al. 2015).

Finally, the framework represents twelve distinct categories that can be used to study particular facets of interaction from the perspective of a single respondent as done in this empirical example, and numerous combinations of these twelve categories across a network of respondents (for an application of a similar methodology across a network of actors, see Abrahamsen et al. 2012a). In case study research, this opens a variety of interesting combinations and analyses. Observations and analyses can for instance be made in terms of where perceptions are similar or dissimilar between actors with different network positions, as respondents may describe similar changes but the changes may be interpreted differently by them (for an example of how a similar framework is used to analyse network roles and positions, see Abrahamsen et al. 2012b). The framework is additionally well suited for applying computer-assisted software (such as NVivo) to the qualitative data analysis. Coding the different categories on basis of their interaction categories in the template (AA, AD, AN etc.) and using this as a starting point for probing into a well of responses, will undoubtedly enhance the comparison of data within and across respondents both in and between cases. The framework also opens for longitudinal studies. At a future point in time, the actors' descriptions of what has happened in their network can be compared with their initial expectations about the future (i.e. comparing the future boxes A and B with the current boxes C and D and so on). We started this paper stating that researching interaction is a challenging exercise. Nevertheless, the framework proposed in this paper represents a coherent way to collect,

systematize and analyse qualitative data that hopefully will add to our understanding of business interaction.

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