ORGANISATIONAL MANIFESTATIONS OF NETWORK PICTURES

Concept and Case Evidence

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Abstract

This study is concerned with how views and perceptions of individual managers manifest themselves in organisational artefacts, such as information systems, processes, operating and strategic plans, or organisational structures. Specifically, we are interested in the inscriptions of the embedding relationships within an inter-organisational network. The concept of 'organisational network pictures' is derived from the network marketing literature. Furthermore, a two-dimensional operationalisation is proposed and applied to an in-depth longitudinal case study. Implications and further research are discussed.

Keywords

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Introduction

This study is concerned with how the views and perceptions of individual managers manifest themselves in organisational artefacts. In other words, we try to understand how subjective sense-making and the inscribed organisational artefacts which are directing the managerial activities of a company are linked (Smircich and Stubbart, 1985). Our focus is on investigating the way managers get to grips with the complexity of being embedded in a network of interacting organisations, resulting in strategic decisions about complex strategic marketing activities. This represents an area of research which has recently attracted considerable interest within marketing theory and beyond (Achrol, 1997; Achrol and Kotler, 1999; Parolini, 1999; Castells, 2000) Based on the research tradition of the IMP (International Marketing & Purchasing) Group, we use the construct of *network pictures* to conceptualise the process of individual sense-making for the understanding of management practices in terms of how organisations manage in networks, i.e. we focus on sense-making phenomena specific to inter-organisational exchanges (Holmen and Pedersen, 2003). Network pictures are defined as the mental representations of the network characteristics which individual managers perceive as important for their own sense- and subsequently decision-making (Ford et al., 2003; Henneberg et al., 2006). *Qua definitione*, this means that there exists a significant chasm between subjectively-held network pictures, e.g. those of top managers, and organisational activities ('networking'), i.e. the implementation of managerial decisions to interact with customers, suppliers, and

other relevant actors (Meindl et al., 1994). *Networking* can be understood as an 'aggregated' enactment of individual expressions of will and as such can be 'attributed' to an organisation. This is also how it is perceived by other network actors: 'Company X has increased the price for product A'. Most management activities affecting organisational interactions are not (and mainly cannot) be attributed to individual persons (and their underlying subjective way of sense-making), they are enmeshed with the structures and processes of an organisational entity within which it is enacted (Weick, 1995).

While networking as a theoretical construct does not imply a reification of whole organisations as 'actors' (Meindl et al., 1994), it nevertheless implies that an 'objectification' (in the sense of an inter-subjective alignment or organisational manifestation) of mental models or network pictures happens (Mouzas et al., 2007). This results in certain activities to be enacted, i.e. realised. As such, we posit that certain network pictures can be associated with 'organisations', i.e. they are structures or imprints within the organisational make-up, processes, or culture of a company that embed a specific view of how a company relates to other actors in the network (Porac et al., 1989). In the following, we will call these organisational imprints *organisational network pictures.* The resulting organisational structures are called *artefacts* or *inscriptions*, indicating that they are the tangible organisational manifestations of the manifold subjective network pictures within a company.

Several questions follow from the assumption that organisational network pictures exist, i.e. questions on the level of process, outcome, and manifestation. These are:

Process: How are (subjective) network pictures 'amalgamated' to an objectified and potentially organisational network picture, i.e. how does the process work? (Mouzas et

al., 2007). Is a single organisational network picture the results, or a multitude of kaleidoscopic and contradictory ones?

Outcome: What do these objectified and organisational network pictures look like, e.g. in relationship to their subjective antecedents?

Manifestation: How are network pictures of individual managers inscribed as artefacts in an organisation, i.e. embedded in the fabric of a company?

This study will deal with the third aspect, namely how network pictures manifest themselves in an organisation. As such, we are specifically concerned with the ways strategic marketing options in terms of networking are inscribed in the fabric of a company. Initially, we will synthesise the existing literature on sense-making in the context of complex networks by introducing the concept of network pictures. Secondly, a discussion of the organisational manifestations of network pictures as artefacts will provide the foundation for the derivation of a theoretical framework of these manifestations. Furthermore, the case example of BT Industries, a worldwide leader in the warehouse truck market, is analysed with regard to this framework. Lastly, theoretical implications will be discussed.

Network Pictures: Oscillating Concept between Manager and Organisation

Within the IMP group, the dictum holds that actors such as companies cannot 'manage *a* network' but can only 'manage *in* networks' (Ford et al., 2003). However, any construct that characterises such managerial networking activity (which includes decision-making and realisation of decisions as well as cognitive aspects such as gaining an understanding of the network, its actors and interactions; Halinen et al., 1999) is based on subjective cognitive structures, so-called schemata which enable 'sense-making'. Thus, it is

assumed that reality is, in a certain way, fundamentally mind-dependent. This view, based on Kant's idealism, serves as a starting point of our theoretical discussion (Kant, 1781/1998).

The beliefs and attitudes which actors hold about the complex inter-organisational exchanges and interactions within which their management actions are embedded (and which provides opportunities but also restrictions for their marketing options) have been conceptualised as cognitive maps or 'network pictures' (Ford et al., 2003; Hodgkinson, 1997; Huff, 1990). These are subjective and dynamic cognitive representations of the network environment and what it 'means' for the individual managers. What is included in such a network picture and what is not, how aspects of it are linked, where 'boundaries' are drawn, all these questions are specific to the subjective judgement of a manager about what is important (Ford and Ramos, 2006). Such individual importance can be judged to be general or specific, e.g. with regard to context, task, or time. Henneberg et al. (2006) have shown that different structures of network pictures exist, depending on the individual's overall goal orientation. Furthermore, network pictures are more than just pictorial representations of inter-organisational relationships but are cognitive maps in the sense of multi-layered schemata which are based on spacial relations as well as textual connections (Henneberg and Rohrmus, 2006).

Each manager will have an idiosyncratic understanding of what a specific business network environment means and how it affects certain managerial activities like strategic marketing decision-making and decision implementation (Holmen and Pedersen, 2003). This idea is not specific to the IMP group but can be found also in the strategy literature on 'cognitive strategic groups' (Bougon, 1992; Lyles and Schwenk, 1992; Reger and Huff, 1993; Hodgkinson and Johnson, 1994)) as well as in organisational behaviour

research (Weick, 1979; Daft and Weick, 1984). In combining these different research traditions, certain characteristic of network pictures can be posited (Henneberg and Rohrmus, 2006). Subjective representations will change over time, e.g. every time the individual 'learns' something about the network this will have repercussions on her view of the network (Ford et al., 2003). However, learning itself (i.e. interpreting network stimuli and linking them to existing knowledge regarding the network) depends on the held network picture which is the foundation of sense-making. Thus, there exists an epistemological 'chasm' within the cognitive cycle of belief, action, and reaction (learning) (Neisser, 1967; 1976). In the complex world of business networks, individual managers do not 'act' in the sense of strategic networking activities as an 'expression of their enacted will'. Firstly, decision-making is often *social*, i.e. group-based, as well as *formalised*, e.g. channelled through due diligence regulations, or rigid decision processes or systems. Secondly, the enactment of managerial decisions is frequently *delegated*. Thirdly, marketing actions in networks depend to some degree on other business actors, e.g. are part of an inter-organisational *relationship* such as collaborative NPD projects, joint ventures and strategic alliances, and therefore are often not single-entity specific. This leaves the conundrum that seemingly whole organisational entities such as companies act (they 'network'). However, their networking activities are based on the subjective network pictures of the relevant decision-makers (e.g. top-management-teams) (Hambrick and Mason, 1984). Thus, organisational networking is not based solely on the network pictures of *individual actors* but on their *social amalgamation* into what we posit to be 'organisational network pictures' (Mouzas et al., 2007). At this point it is of no importance whether such organisational network pictures are dominated by the view of one or several persons, whether they are kaleidoscopic, or whether they represent the

common denominators between all relevant subjective network pictures (Ford et al., 2003). For the purposes of our argument, it is only important to state that an 'objectification' is happening in the sense that through social interactions between managers, an inter-subjective and somewhat shared social view is formed (Weick, 1979; 1995).

It can be expected that these organisational network pictures are not explicit but they have formed, often unconsciously, as part of manifold social exchanges. However, they leave organisational traces, i.e. inscriptions. Again, these inscriptions which are the manifestations of the shared beliefs about the business network do not need to be explicit but they are, in line with our characterisation of them as artefacts, impressed on many different aspects of an organisation, especially on those areas that are related to interactions with the 'outside' (this can include classical marketing interactions with customers but also those with suppliers, strategic partners, knowledge providers, or competitors). Inscriptions can both be part of an explicit decision (e.g. the strategic statement of 'we see ourselves in strategic competition with companies A and B'), or they can be embedded implicitly within managerial decisions that are not primarily linked to 'networking' activities but have an impact on them (e.g. the decision to cut sales force budgets by 50%, resulting in the pruning of sales visits to some customer segments). These organisational network pictures represent an *objectification* that can start in turn an *ossification* process, based on the reinforcing relationship between these manifestations and further decisions that impact on the organisational perspective regarding its surrounding environment (Porac et al., 1989; 1995; Daft and Weick, 1984). Consequently, different perceived network elements (manifestations and inscriptions) within an overall and mostly complementary organisational network picture interlock

with each other and eventually influence most managerial actions by providing a subtle but stable frame that guides and limits strategic decision-making. As such, organisational frameworks are also functioning as 'sense-giving' devices which encourage certain subjective ways of interpreting network phenomena.

Organisational Network Pictures: Inscriptions and Manifestations

In the following, a descriptive research concept of organisational network pictures will be developed. We provide a model of elements of network picture inscriptions and manifestations. Such inscriptions can potentially be embedded in manifold aspects of the company, e.g. the way the budget is allocated, organisational structures, 'hard-wired' interaction systems with network actors (e.g. EDI or JIT), sales force incentivisations.

Our model is an initial attempt to systematise these manifestations by analysing traces they leave according to several criteria. The model is based on two dimensions which are not fully independent of each other. Firstly, we define the morphology of the inscriptions and manifestations by 'locating' them within the organisation. This dimension must not be understood as referring to a 'physical' location but is concerned with the aspect of the organisational entity in which the manifestation resides (e.g. this can also be a process, a textual description, a norm). Secondly, the consequences of organisational manifestations are delineated, i.e. what kind of priming or framing impact they have on networking activities. We use an adaptation of the actor-activity-resource model to incorporate the way inscriptions and manifestations impact on organisational networking (Håkansson and Snehota, 1995).

Morphology of Manifestations

We posit that inscriptions and manifestations of organisational network pictures are possible in the following areas:

Systems: Hard systems (such as ICT) or soft systems (such as incentivisation systems) often implicitly set limits regarding the interaction partners. For example, the system configuration of a CATI system used by a call-centre may only provide certain variables to the agent. An agent with knowledge regarding the 'value of a customer' may vary interactions accordingly, while one without this knowledge will not be able to personalise the interaction.

Processes: Systems may imply certain processes. Within the process, certain interaction parameter, or decision-rules are embedded. These may only make sense for certain marketing interaction partners or certain strategic interactions and therefore delineate certain acceptable managerial responses.

Budgets: Networking focus or emphasis can be guided through budgets. While budget allocation is one of the main managerial decisions which follows strategic intent, it also contains some unexpected restrictions (e.g. with regard to the crowding out of options which were not visible at the time of the budget decision-making).

Strategy: Issues around how to segment supplier or customer markets, and subsequently where to target company resources immediately and directly impact on the networking activities and interactions which are prioritised (and those which are consequently de-prioritised). However, other strategic decision can also 'contain' network manifestations, e.g. decisions regarding joint ventures (Öberg et al., 2006).

Organisational structure: How a company organises itself is an expression not only of how it wants to internally transform resources but also of how it wants to interact with the outside world (the 'sorting' decision within exchange patterns; Alderson and Martin,

1965; Hambrick and Mason, 1984). Clear organisational indicators of organisational network pictures can for example be found in Key Account Management structures.

Influences and Consequences of Manifestations

Along the second dimension of the research model of organisational network pictures, three distinct aspects can be identified, based on an adaptation of the actor-activity-resource model used to describe and analyse dyadic and network interactions.

Inclusion/exclusion of interactions partner: this refers to whether or not certain interaction links with partners are embedded in the organisation (or more precisely, its morphology) to the exclusion of other potential interaction partners. This can be inscribed in preferred interaction partner lists/preferred supplier lists; sales people route planning; contractual agreements (e.g. exclusivity rights); market and customer segmentation/targeting models.

Impact on interaction mode: certain manifestations are prescribing an interaction mode with exchange partners, i.e. an underlying 'rationale' for this interaction is stipulated. This may include certain relational norms but also recommendations regarding non-interactions. Examples of organisational manifestations which are impacting on interaction modes are Key Account Management/Key Supply Centre structures; treatment strategies as part of relational interaction systems like CRM; preferred channel interaction strategies; KPI-based incentivisation of certain behaviour routines for touchpoint agents and sales personnel; or marketing strategies regarding differentiation from competition.

Allocation of resources: commitment of financial resources directly prescribes certain interactions with external exchange partners (see *budget* above). As such, budget distributions are showing commitment (or the lack of it) as well as a certain implied network structure regarding important exchange partners. However, other resource

streams such as prioritised information gathering, external knowledge exchanges via joint innovation management, or employee recruitment or 'outplacement' (e.g. in professional services firms to generate new potential clients) give an indication of the organisational network picture.

Using these two dimensions of morphology and consequences, an organisational network picture can be characterised as consisting of certain company-specific elements which can hold inscriptions of the implied network environment in which the focal business is operating and which impacts on its strategic options and its networking capability. The morphology and the consequences of manifestations therefore provide a descriptive five by three grid that can be used as the basis for a content analysis of organisations. It forms the basis of a 'coding tree' which provides access to a structured understanding of the organisational manifestations of network imprints and also their managerial consequences. Using previous studies on subjective network pictures (e.g. Ford and Ramos, 2006; Henneberg et al., 2006; Ford and Redwood, 2005), sub-dimensions in terms of content themes were developed as auxiliary tools for the data analysis. However, the main construct dimensions for organisational network pictures were used to structure the findings.

Empirical Case Study Analysis Design

Before the concept of organisational network pictures is exemplified by applying the two-dimensional grid to the longitudinal case study of a leading material-handling equipment manufacturer, the empirical research design is described.

Research Design

The case study company, BT Industries (*AB Bygg- och Transportekonomi*), was analysed with special reference to the time period 1996 to 2004. This time period was chosen as it represents several crucial merger and acquisition activities (operationalised as four different phases) in which this company was involved which dramatically shifted its understanding of the network in which it was doing business (Öberg et al., 2006).

Our main empirical sources consist of multiple interviews with twenty-one BT managers which were done in 2003 and 2004, ranging from CEO and President, Vice Presidents, CFOs, division and country managers, but also district sellers, purchasing or business planning managers.[1] These interviews were conducted in the mother-tongue of the managers, using semi-open question frames which allowed for clarification, follow-up and additional questions to be employed. Furthermore, primary material was used, including BT press releases and internal documents.

Based on the two-dimensional construct of organisational manifestations of network pictures and the content variables derived from it, different textual sources were analysed, using content analysis which was employed by overlaying our construct components and variables over the analysed texts (Hodder, 1994; Huberman and Miles, 1994; Krippendorff, 2004; Manning and Cullum-Swan, 1994). Abductive inferences were used to link our research question and the construct operationalisation with the different empirical sources (Dubois and Gadde, 2002). Using reflexive contrast and comparison techniques as well as multi-rater assessments (Altheide and Johnson, 1994; Hodder, 1994; Huberman and Miles, 1994) allows us to reduce the data and present our findings as synthesis and juxtaposition tables (Krippendorff, 2004).

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[1] A complete list of interviewees can be found in Öberg (2007).

The qualitative assessment of the content analysis was done independently by the main researchers. Afterwards, themes, ideas, and specific findings were compared by analysing the overlaps as well as discussing the discrepant findings. Specifically, we tested whether our findings:

1. were directly or otherwise clearly linked to the cognitive belief systems of top-managers (Thomas and McDaniel, 1990; Lyles and Schwenk, 1992)

2. were presenting an expression of one of our manifestation categories (items which span several categories were analysed and discussed further to decompose them into their specific components)

3. were mentioned by more than one researcher as being present in the case study material

Additionally, an independent judge was provided with the basic description of the network pictures concept, and the different aspects of their manifestations to verify the accuracy of the findings and guard against bias by the researchers. The judge was then asked to analyse the textual data for one randomly selected time period and compare these findings with the researchers' results. Proportional reduction in loss (PRL) was used to assess inter-judge reliability which was above 0.7, i.e. satisfactory for exploratory research (Rust and Cooil, 1994).

Focal Case Study Company

The focal company, BT Industries, is now the worldwide leader in the warehouse truck market. During the period 1996 to 2004, BT developed from a European truck specialist with a limited product line to a leading world-wide full range material-handling equipment manufacturer by ways of several mergers and acquisition which saw BT eventually become a subsidiary of Toyota Industry Corporation. For the purpose of this

study, we will provide only a succinct overview of the actual case study. Further details regarding the historical developments of BT can be found in Öberg (2007), while an analysis of the changing network pictures associated with the different M&A activities is provided in Öberg et al. (2006).

The acquisition history of BT Industries involved geographical as well as product expansions, and was aimed at addressing strategic developments among customers and competitors. In 1997, BT acquired the US warehouse truck manufacturer Raymond to meet perceived globalisation trends among customers. In 1999 and 2000, BT Industries acquired its previous Italian co-operation partner Cesab, in reaction to competitors offering both warehouse and counterbalanced trucks. This acquisition was followed by Toyota's take-over of BT Industries, constructing a conglomerate with several overlapping product lines. The acquisitions raised questions especially regarding how to (re)organise marketing and sales, as the several brands which were provided via various sales channels also meant internal competition within the group. At large, sales channels, brands and manufacturing sites have been kept as before the acquisitions. Various actors within the company group saw risks associated with merging units, sales channels, and brands. They consequently advocated continuous independence while synergies of the acquisition activities were isolated in the area of purchasing and logistics.

Findings

In the following, the different manifestations of how BT perceives to be embedded within a network of inter-organisational relationships are discussed. It needs to be mentioned that such a discussion does not relate organisational network pictures to individual cognition. Although the level of the company is the main descriptive perspective, this

represents a simplification of the complex interactions between managers which lead to these manifestations (Mouzas et al., 2007). Individual network pictures may actually contradict organisational ones. Thus, the presentations of our findings on company level must not be misunderstood as a reification of the organisation (Meindl et al., 1994). We will use four phases of the development of BT to illustrate our findings.

We present our case in four distinct phases, each representing a shift in organisational network pictures associated with a major M&A activity. Thus, phase 0 is used as a 'baseline'. Following on from this, differences in the aspects of organisational manifestations of network pictures are discussed in phases 1 to 3.

Phase 0: BT prior to 1997

Prior to the hectic M&A activities beginning in 1997, BT's organisational network pictures were characterised by an understanding of itself as a rather peripheral player in the network. BT saw the competitive landscape 'shrinking' (less numbers of competitors but with better capabilities; integrated brands). This picture was inscribed in a (marketing) strategy which 'explained' the value-creating system according to demand differences of key downstream players: BT aligned itself with specific customers and their preferences (in the consumer goods industry) and in specific areas (particularly Europe) with a focus on warehouse trucks. The organisational structure of BT, as well as its distribution systems, were clear manifestations of this position within the network. This can be juxtaposed with BT's understanding of the network competences and demands of its customers: these were perceived to want integrated solutions across sub-networks. BT understood this to mean cross-relational interactions and processes which BT at this point did not match. In this phase, BT focused with its strategy and underlying organisational network picture on 'aspirational' competitors, such as Linde and

Jungheinrich, which had in BT's opinion already achieved more integrated systems and processes compared to BT.

Based on a strategic network picture that saw BT as a services provider within the value-creating system, the importance of service interactions plus rental interactions is expressed by their contributing 70% of BT turnover. This also became inscribed in the distribution system with many fully-owned or semi-dependent distribution and after-sales service channels (contrary to some other market players).

Aspects of BTs ownership structure also impacted on some elements of its organisational network pictures. The fact that BT had no debts and that liquid resources existed, together with strategic profitability aims which were not achievable via organic growth, caused BT to perceive the network strategically in line with more ambitious aims. A 'wider' network picture is evident: new players became interesting (competitors or co-operation partners in counterbalanced trucks) as well as new interactions (worldwide-offering provision in an integrated, global system). Strategic M&A activities became the only option for BT to enact its 'wider' network picture, also encouraged by the organisational development of BT becoming more of a peripheral business in the portfolio of KF, the investment vehicle owning BT in this phase (see table 1).

Phase 1: BT after Raymond acquisition (1997-1999)

BT in phase 2 shows very different manifestations of its network pictures after the acquisition of the US warehouse truck manufacturer Raymond. This take-over allowed BT to enact at least partially its network ambition: it now became a global and integrated player in the warehouse truck industry. BT now saw itself as the worldwide 'Number 1' in one sector of the truck market, i.e. it had become a 'core actor' in the value-creating

system. Changes linked to these new network pictures manifested themselves quickly in different aspects of BT's network pictures.

In terms of systems the more central and global position of BT meant that they now had an expectation of being used as 'preferred suppliers' with the associated key account and key supply management processes associated. Thus, a manifestation of all things 'global' (e.g. International KAM) became visible in the systems architecture of BT as well as in the process chains of suppliers (BT and Raymond integrated their purchasing strategy and processes with special emphasis on driving costs down). However, while this network picture of integration became manifested on BT's upstream-side of the network, the same did not happen for the downstream-side, i.e. regarding customer interactions. 'Old' network picture structures (i.e. pre-Raymond acquisition) are visible: Raymond and BT divided customers by 'continental responsibilities', based on a network logic which explained customer differences (need for ergonomics and quality versus need for price) by juxtaposing Europe and the US. This meant that SBU-organisation based on on regions followed, with BT 'leading' the European effort, and Raymond being responsible for the US. Furthermore, combined NPD development between Raymond and BT did not succeed, ossifying an intra-organisational network picture of 'two cultures'. This intra-organisational perception was consequently mirrored in BT's interactions with customers which meant that often buying companies were not made aware of the fact that BT and Raymond were now an integrated company.

Thus, while BT tried to achieve a 'preferred supplier status' as a global player in the market following from its acquisition of Raymond, the manifestations of organisational network pictures show clearly that this 'vision' did not become inscribed in BT's processes, systems, nor in its strategy or organisation. However, BT still had the 'wider'

strategic network pictures as guidance for further activities which was based on seeing the relevant network as the overall global truck market and not merely the warehouse truck segment of it (see table 2).

Phase 2: BT after Cesab acquisition (1999-2000)

The acquisition of Cesab has to be seen as another step done by BT to enact its 'wider' organisational network picture. However, the specific targeting of Cesab was a kind of afterthought after negotiations with Toyota (and other actors in the market) had failed. Toyota was meant to provide BT with the worldwide counterbalanced truck capabilities in terms of customer base, offering spread, and global reach it needed to become a core player in the market. However, Toyota declined cooperation. Furthermore, BT was under threat itself as it perceived that its position in the network could change dramatically as KF, its owner, was actually thinking about disinvesting non-core activities such as BT.

Nevertheless, BT's wider network pictures and its manifestation in its strategy focused still on global customers demanding a full complement of trucks from one supplier, i.e. warehouse and counterbalanced trucks together. Thus, the Cesab acquisition closed a gap in BTs network picture manifestations by providing the capabilities to fulfil these demands. This was also driven by BT's perception, as inscribed in its strategy, that they were (again) lacking behind Linde and Jungheinrich (which had become full-offering suppliers through the respective acquisitions of STILL and Steinbock).

The Cesab acquisition changed the network picture manifestations in many different ways: Firstly, it reduced the relevant direct cooperation partners for BT (Clark and Hyster as previous operational partners in the area of counterbalanced trucks had the respective relationships ended). Cesab trucks were produced under BT's brand. However, the organisational structure of diverse but dependent sales and services organisations was

perpetuated by adding the Cesab sales organisation as a further channel. This meant additional customer interaction systems as Cesab also relied on independent dealers. Secondly, customers were still able to buy Cesab and BT trucks in a competitive sales environment as the two brands (with their respective channels and interaction systems) were run independently, i.e. providing customers with perceived alternatives. This meant for BT that the company needed to manage network picture manifestations of intra-company competition. Thirdly, BT 'exported' its supply-chain management best practice to Cesab, i.e. it used its proven processes and systems of buying in the warehouse truck market also for its counterbalanced trucks (see table 3).

Phase 3: BT after take-over by Toyota (2000-2004)

With phase 2, BT had to some extent been able to fulfil its ambition to become of full-complement global truck company, operating at the core of its value-creating system, as the different aspects of the manifestation of the organisational network picture have shown. However, another actor which was previously more peripheral to BT's network picture became central in phase 3: Toyota, with its take-over of BT. This was done with the integration of the customer networks of BT (Europe and US) and Toyota (Asia) in mind. Thus, BT now had a totally new dimension (Asia, especially Japan) added to its network picture. Furthermore, BT/Toyota had a clear top positioning in the global truck market, as well as in most niche areas, through a wide product and channel portfolio.

However, the network picture manifestations show that a wide-ranging independence of BT remained with regard to its place within the network logic of the value-creating system. Toyota continuously refused counterbalance truck deliveries to, or product system integration with, BT. This meant that BT continued and in fact increased its use of the Cesab brand (e.g. by introducing it to the US). Again, upstream interactions were of

importance, especially in terms of changes in the systems and processes: because of the dominant position of BT/Toyota, efforts were made to develop more efficient interaction modes with suppliers (e.g. lead buyer systems; large volume supply structures by continent). This also spilled over into an integration of production systems between Toyota and BT. However, the organisational network picture shows that downstream customer interactions were not following this integration. A 'two brands/two channels' strategy was evident, resulting from the organisational divide which existed between Toyota's middle management and BT. This was apparent, for example, with regard to the BT sales channels (made up mostly of dependent organisations) which Toyota believed would threaten its preferred sales network structure (i.e. independent dealers). While some internal system integration happened (such as cross-supplying and re-branding of offerings), this was not communicated to customers which still 'faced' two seemingly independent companies, exemplified in their different interaction channels and interaction modes (see table 4).

Conclusion and Implications

The concept of organisational network pictures was used in the case analysis by analysing different facets of their manifestations by phases. Some conclusions regarding the merger and acquisition activities of BT in the period 1997-2004 can be drawn from this analysis, as well as some comments on the concept itself and its operationalisation can be made.

Starting with the analysis of the hectic M&A activities at BT, it can be shown that from an early point onwards, the strategic orientation of BT as exemplified in the strategic manifestations was already fixated with a 'wider' network picture, while processes, systems, budgets, or organisational issues remained bound to 'narrower' network picture

logic. BT saw itself on the periphery of a global market of trucks, based on full-offering customer demands, channel and supply-chain integration, and a shrinking competitive landscape. Its specific starting point in terms of deep after-sales interactions based on dependent sales and service channels, with a focus on Europe and a niche positioning in warehouse trucks comprised of a much smaller number of actors, more limited interaction modes and resource ties than its 'wider' organisational network picture as envisaged in its strategic manifestations. Over the course of the different acquisitions, new players, interactions, systems, processes, and organisational aspects were one-by-one added and aligned with this wider network picture, in order to achieve finally a core positioning in the global truck network where the strategic network picture overlapped with the other aspects of network picture manifestations. This was achieved by including more customers (in the US via Raymond), more offering variety and supply-chain system efficiency (via Cesab), and finally a truly global reach (multiple brands, channels, and the inclusion of Asia via Toyota).

However, the different facets of network picture manifestations also clearly show that there are still frictions in existence, as well as contradictions within BT. The hope to become a 'preferred supplier' is an example of this: while on strategic level a consistent and integrated full-offering interaction with global key customers across continents is envisaged, this is contradicted by organisational manifestations (e.g. SBU organisation by continent; different channel systems for BT and Toyota), by process manifestations (e.g. international KAM but brand-based interaction processes), and by system manifestations (e.g. no brand-crossing NPD). While these alignments along all dimensions of network picture manifestations exist to a somewhat larger degree in the area of supply-chain-management (e.g. by global purchasing integration; best-practice roll-out across different

SBUs; supplier consolidation and bundling efforts), they have not been achieved in downstream interactions.

Analysing the usefulness of the concept of organisational network pictures, the M&A activities of BT show that certain aspects of the strategic intent inscribe themselves before the action itself has been enacted. This is especially true in terms of the strategic aspects of network picture manifestation: the 'network definition', the actor focus (e.g. in terms of important competitors), the availability of options (e.g. the pressure to use funds). Thus, one can trace the success of the intended strategy in terms of its enactment by juxtaposing the different aspects of the organisational network picture construct. Internal contradictions and a lag of manifestations, e.g. in terms of processes or organisational structure, are indicators of potential shortfalls.

Applying the construct of organisational network pictures to our case study shows that while the concept and its facets can be clearly overlaid over the data, this works best for 'strategic' manifestations and to some extent also for process and systems issues, as well as for the inclusion/exclusion of actors, and the interaction mode. Aspect of organisation and budget, as well as resource tie-related issues were more difficult to extract. This hints at the fact that these need more specific data sources, i.e. beyond a general case study description and analysis of M&A processes. Thus, case study information which covers these aspects may need to be collected specifically to ensure a rich data source, covering all aspect of network picture manifestations.

References

Achrol, R. S. (1997). "Changes in the Theory of Interorganizational Relations in Marketing: Toward a Network Paradigm", *Journal of the Academy of Marketing Science*, 25 (1), 56-71.

Achrol, R. S. and Kotler, P. (1999). "Marketing in the Network Economy", *Journal of Marketing*, 63 (Special Issue), 146-163.

Alderson, W. and Martin, M. W. (1965) "Toward a Formal Theory of Transactions and Transvections", *Journal of Marketing Research*, 2(May), 117-127.

Altheide, D. L. and Johnson, J. M. (1994), "Criteria for Assessing Interpretive Validity in Qualitative Research", in N. K. Denzin and Y S. Lincoln (eds.), *Handbook of Qualitative Research*, Thousand Oaks, Sage, pp. 485-499.

Bougon, M.G. (1992) "Congregate Cognitive Maps: A Unified Dynamic Theory of Organization and Strategy", *Journal of Management Studies*, 29 (3), 369 – 389.

Castells, M. (2000) *The Rise of the Network Society*, Malden: Blackwell, 2nd ed.

Daft, R.L. and Weick, K. E. (1984) "Toward a Model of Organisations as Interpretation Systems", *Academy of Management Review*, 9 (2), 284-295.

Dubois, A. and Gadde, L.-E. (2002) "Systematic Combining: An Abductive Approach to Case Research", Journal of Business Research, 55 (7), 553-560.

Ford, D. and Håkansson, H. (2006) "The Idea of Interaction", *The IMP Journal,* 1 (1), 4-27.

Ford, D. and Ramos, C. (2006) "Network Pictures: Conceptual Development and Preliminary Findings", Paper presented at the 22nd International IMP Conference, Milan, Sept. 2006

Ford, D. and Redwood, M. (2005) "Making Sense of Network Dynamics Through Network Pictures: A Longitudinal Case Study", *Industrial Marketing Management*, 34 (7), 648-657.

Ford, D., Gadde, L.-E., Håkansson, H. and Snehota, I. (2003) *Managing Business Relationships*, Chichester: John Wiley & Sons.

Håkansson, H. and Snehota, I. (1995) "Analysing Business Relationships", in H. Hakansson and I. Snehota (eds.) *Developing Relationships in Business Networks*, London: Routledge, pp. 24-49.

Halinen, A., Salmi, A., Havila, V. (1999) "From Dyadic Change to Changing Business Networks: An Analytical Framework", *Journal of Management Studies*, 36 (6), 779-794.

Hambrick, D.C. and Mason, P.A. (1984) "Upper Echelons: The Organisation as a Reflection of Its Top Managers", *Academy of Management Review*, 9 (2), 193-206.

Henneberg, S. C. and Rohrmus, D. (2006) "Sense-making and Cognition in Business Networks: Conceptualisation and Proposition Development", Paper presented at the 2nd IMP Journal Seminar, Gothenburg, May 2006.

Henneberg, S.C., Mouzas, S. and Naudé, P. (2006) "Network Pictures – Concepts and Representations", *European Journal of Marketing*, 40(3/4), 408-429.

Hodder, I. (1994), "The Interpretation of Documents and Material Culture", in N. K. Denzin and Y S. Lincoln (eds.), *Handbook of Qualitative Research*, Thousand Oaks, CA: Sage, pp. 393-402.

Hodgkinson, G.P. (1997) "The Cognitive Analysis of Competitive Structures: A Review and Critique", *Human Relations*, 50 (6), 625-654.

Hodgkinson, G.P. & Johnson, G. (1994) "Exploring the Mental Models of Competitive Strategists: The Case for a Processual Approach", *Journal of Management Studies*, 31 (4), 525-551.

Holmen, E. and Pedersen, A.-C. (2003) "Strategizing Through Analyzing and Influencing the Network Horizon", *Industrial Marketing Management*, 32, 409-418.

Huberman, A. M. and Miles, M. B. (1994), "Data Management and Analysis Method", in N. K. Denzin and Y S. Lincoln (eds.), *Handbook of Qualitative Research*, Thousand Oaks, CA: Sage, pp. 428-444.

Huff, A. S. (1990) "Mapping Strategic Thought", in A. S. Huff (ed.) *Mapping Strategic Thought*, Chichester: Wiley, 11-49.

Kant, I. (1781/1998) *Critique of Pure Reason*, Cambridge: Cambridge University Press.

Krippendorff, K. (2004), *Content Analysis*, Thousand Oaks, CA: Sage.

Lyles, M. A. and Schwenk, C. R. (1992) "Top Management, Strategy and Organizational Knowledge Structures", *Journal of Management Studies,* 29 (2), 155-174.

Manning, P. K. and Cullum-Swan, B. (1994), "Narrative, Content, and Semiotic Analysis", in N. K. Denzin and Y S. Lincoln (eds.), *Handbook of Qualitative Research*, Thousand   Oaks, CA: Sage, pp. 463-477.

Meindl, J. R., Stubbart, C. and Porac, J. F. (1994) "Cognition Within and Between Organizations: Five Key Questions", Organization Science, 5 (3), 289-293.

Mouzas, S., Henneberg, S. C. and Naudé, P. (2007), "Developing Network Insight", Industrial Marketing Management, forthcoming

Neisser, U. (1967) *Cognitive Psychology*, New York: Appleton-Century-Crafts.

Neisser, U. (1976) *Cognition and Reality: Principles and Implication of Cognitive psychology*, San Francisco: W.H. Freeman and Company.

Öberg, C. (2007) *CASE STUDY BT Industries*, Times 2007; based on "On Customer in Mergers and Acquisitions, Linköping Studies in Science and Technology, Thesis No. 1145; LIU-Tek-Lic 2004:74

Öberg, C., Henneberg, S. C. and Mouzas, S. (2006) "Changing Network Pictures: The Evidence from Mergers & Acquisitions", Paper presented at the 2nd IMP Journal Seminar, Gothenburg, May 2006. {change to IMM when accepted}

Parolini, C. (1999) *The Value Net*, Chichester: Wiley.

Porac, J.F., Thomas, H., Baden-Fuller, C. (1989) "Competitive Groups as Cognitive Communities: The Case of Scottish Knitwear Manufacturers", *Journal of Management Studies*, 26 (4), 397-416.

Porac, J.F., Thomas, H., Wilson, F., Paton, D., Kanfer, A. (1995) "Rivalry and the Industry Model of Scottish Knitwear Producers", *Administrative Science Quarterly*, 40, 203-227.

Reger, R.K. and Huff, A.S. (1993) "Strategic Groups: A Cognitive Perspective", *Strategic Management Journal*, 14 (2), 103-123.

Rust, R. and Cooil, B. (1994) "Reliability Measures for Qualitative Data: Theory and Implications", *Journal of Marketing Research*, 31 (Feb), 1-14.

Smircich, L. and Stubbart, C. (1985) "Strategic Management in an Enacted World", *Academy of Management Review*, 10 (4), 724-736.

Thomas, J. and McDaniel, R. J. (1990) "Interpreting Strategic Issues: Effects of Strategy and the Information-Processing Structure of Top Management Teams", *Academy of Management Journal*, 33(2), 286-306.

Weick (1979) *The Social Psychology of Organizing*, Second Edition, New York: Random House.

Weick, K.E. (1995) *Sensemaking in Organisations*, Thousand Oaks: Sage.

Phase 0 (BT prior to 1997)

	System	Process	Budget	Strategy	Organisation
Inclusion/ exclusion	Limited presence on the US market and difficulty grow there via present representation (subsidiary Prime Mover)	Perception of customers having global purchasing processes which are not matched by BT		Targeting strategy focused on consumer goods customers (in comparison to some main competitors such as Kalmar which target process industry customers)	Minor player in the US via Prime Mover
	Distribution systems to provide counter-balanced trucks only available to BT in a small number of countries (Sweden and UK via Clark cooperation)			BT views itself as a 'service company' with attached production division in the network	Organisational cooperation with other KF-owned customers; exclusion of interactions with KF competitors
	Industry logic of systems as based on warehouse trucks for consumer goods companies; and counterbalanced trucks for process industry			Strategic focus on two main competitors in Europe: Jungheinrich and Linde (both seen by BT as full-range suppliers of counterbalance and warehouse truck, thus targeting process and consumer goods industry)	Emphasis on after-sales service organisation
				Competitor landscape is shrinking due to acquisitions by main players; brand landscape also shrinking due to brand culls	
				Strategic intent: either becoming a European full-range supplier, or a global warehouse truck nicher	
Interaction mode	Closer interactions with US customers via proprietary system perceived to be necessary	Aggressive market behaviour ('corporate raids') towards Raymond places it in the perception of the network as a 'M&A target'	After sales interactions contribute 50% of turnover; rental interactions contribute another 20%	Operations in the US would mean for BT that they are now perceived as a 'national' interaction partner	Large number of wholly or partly owned service and sales organisations as semi-independent service organisations
			Cash reserves at BT made aggressive acquisition search possible	Tackling Raymond and Crown as the main US competitors head-on as a means of expanding business	Co-operation with counterbalanced truck providers on certain markets (Clark)
				Competition and cooperation as two-pronged interaction approach, e.g. combi-truck collaboration with Raymond	
				Long-term sales interaction with customers via after-sales as favourite strategic interaction model	
Allocation of resource			BT had no debts since end of 1997. Therefore, investment was 'needed' and resources were earmarked for this purpose	Strategic profitability aim was not achievable via organic growth and therefore focused on M&A resource availability	Physical production investment focus in Sweden, US, and Canada
					BT becoming a peripheral business within the ownership organisation of KF

Table 1: Organisational Manifestations of Network Pictures, BT Phase 0

Phase 1 (BT after acquisition of Raymond: 1997-1999)

	System	Process	Budget	Strategy	Organisation
Inclusion/ exclusion	New increased size and position of BT leads to expection of becoming 'preferred supplier' to key customers PrimeMover systems (proprietary to BT) sidelined by Raymond	Inclusion of Raymond suppliers into supply chain	Inclusion of Raymond supplier with renegotiations to obtain better prices	Geographical expansion into dominant niche through warehouse trucks via Raymond acquisition BT's self-perspective as No. 1 in world market of warehouse trucks (previously saw itself as No. 3 in Europe) Strategic decision not to make Raymond customers aware of the new link with BT; the same happened in some European countries where BT customers were not informed about Raymond's integration Strategic focus after acquisition on expanding BT customer base (and not creating globally integrated customer base) Perceived next challenge in network was linked to becoming a truly global player by satisfying all customer demands, i.e. by having counterbalance and warehouse trucks all over the world. First priority: to become full range supplier in Europe	
Interaction mode	Expectation that 'global interaction systems' are now necessary for BT Otherwise, interaction systems did not dramatically change	Initial attempt (later abandoned) to provide product and component coordination with Raymond (later, BT and Raymond became again independent offerings) No 'cross-marketing' of SBU offerings allowed (especially not between US and Europe) Expectation that new 'key supplier' relationships will develop Emphasis on ergonomics and quality issues in Europe, and on price in the US Integration attempts seen to have failed due to Raymond's resistance to process alignment	Price renegotiations with Raymond suppliers; general supply-chain renegotiations of framework agreements General purchasing interactions with supply-chain became more price focused Raymond as a new part of BT was the more profitable and faster growing company	Strategic aim to become a 'preferred supplier' with key customers Perceived interaction demand of customers as 'global' Initial attempt to provide integrated interaction by product/component coordination (later abondoned and BT and Raymond SBU strategy became reinstated) Customer interactions did not change due to the fact that no customer handling integration between Raymond and BT was envisaged Customer interactions were expected to change due to size/position of BT, providing them with 'preferred supplier' status Purchasing interactions and relationships were redefined as part of strategic focus of BT after acquisition Main logic of network associated with ergonomics and quality of offering considerations in Europe, and with price in the US Based on continent-based understanding of network logic, marketing and R&D networking activities different	Organisational material flow not the main consideration for Raymond acquisition, but customer locations with the necessary global organisational reach for suppliers No organisational integration of Raymond due to its 'independent' success BT was meant to be the integrating link between organisational regions International KAMs introduced as new layer in BTs organisation Generally perceived different 'cultures' between Raymond and BT organisations
Allocation of resource	Marketing/product systems for BT and Raymond had separate resource funds	Raymond becomes dominant brand and sales channel for US SBU (Prime Mover was integrated into Raymond)	Raymond provide very positive resource flow but is seen by BT more as a strategic investment	Resource allocation based on quality considerations in Europe, and on price in the US Separate strategic NPD budgets	Resource re-allocation in the US from old BT business to Raymond SBU in the US

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Phase 2 (BT after acquisition of Cesab: 1999-2000)

	System	Process	Budget	Strategy	Organisation
Inclusion/ exclusion	System development to deal with counterbalanced and warehouse trucks	Toyota refused to provide counterbalanced trucks to BT; BT decided to provide Toyota with warehouse trucks anyway	KF was not profitable and therefore wanted to exclude non-core activities from its portfolio, including BT	Perception by BT that the customer network of the material-handling industry demand a full complement of trucks from one supplier	Decision to acquire organisational supplement in the form of Cesab to become a full offering provider was preferred to other organisational networking alternative (e.g. cooperation approaches by Toyota and by Clark had been made)
		Fear by BT that Cesab could cease its previous cooperation and process integration with BT via being acquired by competitor	KF divested BT shares, thus BT was seen to be for sale	Previously, BT SBU Europe worked in this area via own production capabilities and as distributor of counterbalanced trucks for other companies (Hyster, Clark, Dockstocker)	
		Via acquistion of Cesab cooperation with Clark and Hyster is ended		Strategic intent of Cesab acquisition based on complementing offering portfolio by bringing counterbalanced truck production in house (and therefore open the BT network to new customers and segments)	
				Perception by BT that Linde and Jungheinrich have already made that step to a full-offering provider (through Steinbock and STILL acquisitions)	
Interaction mode		BT tried to 'educate' Cesab about purchasing process to align efforts		Integration of branding, e.g. BT brand/logo was used on Cesab counterbalanced truck (except for Italy and other countries where Cesab survived as a brand)	Cooperation main option but failed to find cooperation partner for counterbalanced trucks. Organisational acquisition became preferred to other organisational interaction modes/networking solutions
				Further brand reduction by BT trucks partially replacing Clark and Hyster trucks which were previously distributed via BT	Independent sales organisation of Cesab (dealers) are kept
				Some countries experience customers having to choose between BT and Cesab trucks competitively as both are available through different selling channels	
				Purchasing relationships with Cesab suppliers were redefined through dissemination of 'best-practice' BT approach to supplier interactions	
Allocation of resource	Cesab with own budgets for sales systems and sales management through independent dealers	Two-step process of acquiring Cesab			Board of Cesab replaced with primarily BT people

Table 3: Organisational Manifestations of Network Pictures, BT Phase 2

Phase 3 (BT after take-over by Toyota: 2000-2004)

	System	Process	Budget	Strategy	Organisation
Inclusion/ exclusion	Due to Toyota continuously refusing to provide BT with counterbalanced trucks, BT continues with Cesab in Europe on systems level; Cesab trucks are also introduced in the US			Toyota acquisition of BT focused on incorporating existing BT customer networks in warehouse trucks, especially those in the US and Europe Toyota focused on strategic market share target in a global market for trucks BT clearly preferred Toyota as a buyer due to market synergies and perceived continuous independence, compared to alternative take-over attempts/bidders which were in the market	Toyota middle management opposed integration of BT by, for example, shared product sales channels, due to a perceived negative impact on the existing Toyota distribution network. Therefore, no organsiational integration happened
Interaction mode	Lead buyer' system to disseminate best-practice purchasing between SBUs and sub-brands Integration of systems between BT and Toyota only by continents Toyota production system used at BT's production plants	Introduction of best-practice processes for purchasing Two indepdendent customer interaction processes and channels by brand		Purchasing modes are redefined by SBU (i.e. continents) by identifying mutual suppliers of BT and Toyota and consolidation into large volume supply interactions Introduction of a 'lead buyer' concept, based on the combined experiences of BT, Toyota, and Cesab Customer interactions based on a two brand strategy: Toyota and BT (internal slogan: Two brands, two channels), implying a desired intra-group competition Toyota aims at implementing (learning) BTs after-sales	BT and Toyota sales channels remained organisationally separate, especially in Europe BT continues with owned sales organisations, while Toyota uses independent dealerships However, cross-supplying was made without allowing the customers to realise this Second integration wave meant centralised management for Europe in Brussels
Allocation of resource	BT and Toyota brands and channels with quasi-independent systems and system budgets			BT delivering trucks to Toyota but not the other way around with budget imbalance and transfer costing implications	

Table 4: Organisational Manifestations of Network Pictures, BT Phase 3