ORGANIZATIONAL NETWORKS AND THE ROLES OF MNCS SUBSIDIARIES: WHEN BARTLETT AND GHOSHAL MEET GRANOVETTER, COLEMAN AND BURT

Abstract

This theoretical paper connects the literature on roles of MNCs' subsidiaries with that on organizational networks. The development of such a link between these two bodies of knowledge is necessary for at least two reasons: First, different kinds of subsidiary roles imply different types and degrees of MNC-internal interdependencies which should be prompted by different MNC network configurations. Second, the sociological literature on the structure of networks and the quality of its relationships offers many insightful elements which are not yet fully captured by the literature on the organization of MNCs.

In order to develop such a conceptual bridge between these two literatures, we first briefly summarize the key findings of the research on organizational networks. During this process, we will focus on the two key dimensions of networks: The relational and the structural dimension. Then, different typologies of MNCs subsidiaries are presented and it will be discussed, which type of network configuration fits best to the respective subsidiary role. With respect to one of the role typologies, that of Bartlett and Ghoshal, the link between subsidiary roles and network configurations is specified in more detail. Here, some broader propositions will be defined which – at a later stage – could be transferred into testable hypotheses. We think that this will give MNCs some guidance to build situation-specific types of social capital within the firm.

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Introduction

A key task of the top management of multinational corporations (MNCs) is to integrate the firm's business activities across countries. In the literature, the establishment of a network of the firm`s subsidiaries is frequently seen as a means to fulfil this task (Hedlund 1986, Bartlett/Ghoshal 1988). In such an MNC network the subsidiaries can be used to develop specific products, to manufacture parts of a production line, or even to offer the entire production line at the host country market (Doz/Prahalad 1984). Furthermore, a network can help to source and to transfer knowledge crucial for the respective subsidiary itself and for the MNC in general. Following this line of reasoning, a network-type organization helps the subsidiaries to fulfill their core activities, which – according to Bartlett and Ghoshal (1988) – are the "creation" of innovations through new products or processes, the "adoption" of innovations that may be received from the parent or other subsidiaries, and the "diffusion" of local innovations in the MNC network (Bartlett/Ghoshal 1988).

Consequently, Ghoshal and Bartlett (1990) describe the modern MNC as an interorganizational network of subsidiaries. In such a network[1], the subsidiaries exchange resources with other parts of the MNC and with external stakeholders. This leads to a complex web of interactions among the subsidiaries and their environments. In order to analyze the relationships and structure of such a network, Bartlett and Ghoshal suggest the sociological network approach as an appropriate instrument to study MNC networks (Ghoshal/Bartlett 1990, Furu 2000).

The general network literature argues that, within a network, the actors maintain relationships which each other to transfer resources of many kinds. These relationships can be differentiated according to their content or by structural elements (Bonacich 1987, Ibarra 1993, Brass/Butterfield/Skaggs 1998). The interactions include exchange processes like economic transactions, but also non-economic resource sharing. Content elements of these

[1] Formally, a network can be defined as a set of nodes (actors, e.g. persons, organizations) that are connected by a set of social relationships of any type to be specified (e.g. friendship, transfer of assets, joint membership) (Laumann/Galaskiewicz/Marsden 1978, Gulati 1998).

relationships can be goods or services, information and knowledge, developing trust and friendship, or the striving for legitimacy. On the one hand, however, the content of a relationship describes not so much the network itself. On the other hand, the structure of a network doesn't say anything about its content. Thus, if the characteristics of a network shall be specified to a sufficient degree, both the relational and the structural dimension of the network have to be studied (Granovetter 1992, Moran 2005).

With respect to MNCs it is still an unanswered question of what the optimal network of the firm shall look like. Does a network with the focus on strong ties or does a network with many rather weak ties deliver the desired advantages to the regarded MNC subunit and the MNC in total? Shall the MNC network be rich of structural holes to permit advantages of information and control to the focused subsidiary? Or is it a superior solution to have a dense network of MNC subsidiaries? The current paper wants to make a contribution to answer such questions. In following this goal, the paper's general view is that these questions cannot be answered in a universalistic way. Instead, we argue that the role of the respective subsidiary is a main contingency factor according to which the density and structure of an MNC network should be configured. Thus, the main task of the current paper is to develop a subsidiary-role-specific model of MNC network configurations. By connecting the literatures on organizational networks and on MNC subsidiary roles we will show that there might be an optimal network configuration for each MNC subsidiary role. By developing specific interrelations between subsidiary roles on the one hand and the specific configurations of an MNC network on the other hand, our paper wants to help integrating the literature on the organization of MNCs into the general literature on organizational networks. A connection of the literatures on subsidiary roles and on organizational network is necessary, since subsidiaries with different roles face different needs to relate themselves with other subunits of the MNC. Although this view is widely accepted, existing typologies of subsidiary roles do not sufficiently specify how these "external" linkages should look like.

Our argumentation starts with a brief summary of the research on organizational networks. Therein, we will focus on the two main dimensions that determine the characteristics of an MNC network: The relational and the structural dimension. Subsequently, we will dwell on the roles of MNCs subsidiaries. In this section, we will mainly refer to a prominent typology of subsidiary roles and we will show that it is possible indeed to develop a nexus between a subsidiary's role and the shape of its network. At the end of this section some broader

propositions will be defined which – at a later stage – could be transferred into testable hypotheses. Finally, the paper ends by outlining some implications for future research.

Dimensions of Organizational Networks

In the network literature, a large number of attributes have been introduced to characterize the specific features and differences of networks. Referring to these attributes, empirical studies have found heterogeneous evidence for effective and efficient network shapes. Some studies mention the advantage of dense networks (Coleman 1990), whilst other outline the benefits of structural holes existing within a network (Burt 1992). Furthermore, scholars focus on the quality of the relationships within networks measuring trust, trustworthiness, intensity, satisfaction, and commitment, or on the individual characteristics of the network actors as their values or shared visions. Unlike Moran (1995), Tsai and Ghoshal (1998), or Nahapiet and Ghoshal (1998) who followed the idea to distinguish between structural, relational, and cognitive network embeddedness, it is argued here that there is no precise selective way to separate between the relational and the cognitive dimension and therefore it is reduced to the differentiation between the structural and the relational dimension (Granovetter 1992). Summing up, all of these networks characteristics will be categorized within this into two dimensions: The relational and the structural dimension.

These two dimensions are discussed in the following paragraphs, since they constitute the frame of reference which will be developed later in order to relate the subsidiaries' roles to the network literature.

The Relational Dimension of Organizational Networks

The relational dimension of a network describes qualitative characteristics of its ties (Granovetter 1985, Coleman 1990, Moran 2005). In general this is called the strength of a relationship or of a tie. The relational dimension of networks will be discussed, since research has shown that tie strength is an important predictor of a network's effectiveness and that it even can be more crucial than the number of relationships existing in a network (McFadyen/Cannella 2004).

The strength of a relationship can be operationalized with respect to the intensity of a contact (for instance the frequency of using a contact), the nature of contact use (commercially or for business and private), and the level of trust in a relationship, which regularly is higher within relationships of a longer duration.

Since the development and maintenance of exquisite social relationships require significant amounts of resources (e.g., time and financial resources) and since actors' resources are always limited, there is a trade-off between the number and the quality of social relationships existing in a network (Granovetter 1973, Giroud/Scott-Kennel 2009). This means that actors will not be able to serve all potential relationships with a maximum degree of attention. This problem is an important because of the well-known paradox of overembeddedness existing in many social networks (Uzzi 1997): Keeping up too many ties with different network partners will be inefficient due to the costs that these relationships induce. Therefore, there exists an optimal maximum of network ties to each central actor and the maintaining of more relationships will decrease the value of the network.

Actors who evaluate strong ties as specifically important tend to have less direct contacts than actors who benefit from a contact, regardless of the strength of a relationship. This assumption also effects the resulting number of indirect contacts. An actor who does not need high quality relationships will in many cases be satisfied with a large number of weak ties and indirect contacts in her/his network as soon as these indirect contacts deliver the desired use to her/him. This trade-off exists in the area of MNCs, too: Take for instance an MNC subunit responsible for handling the logistics process for a standard component which goes into the value processes of a larger number of subsidiaries. Since the component is standardized and not subsidiary-specific, the logistics subunit will not have to develop extraordinary strong relationships to the recipient subsidiaries. Instead, the subunit's relationships to the recipient subsidiaries will be more superficial. Unlike this, a subunit providing a more specific know-how for a small number of subsidiaries will foster much more intensive relationships to the subsidiaries and thus, for the subunit, it will not be able to interact with such a large number of subsidiaries.

Thus, with respect to the relational dimension of networks, two different poles have to be distinguished which both are relevant for MNCs: On the one hand *strong ties* existing

between the actors. Typically, actors have only few relationships of such a strong type and such strong relationships only occur if there is a direct tie between the actors. On the other hand there are *weak ties*, which occur more frequently in social interactions. Such weak relationship exist both among direct, but mainly among indirect ties. Or expressed in other words: If actors do not have direct contacts with each other, it is impossible that they will develop strong relationships. Each of the two poles for themselves can be of advantage regarding a subsidiary's network dependent on the situation of the subsidiary.

The general (sociological) network literature found empirical evidence for the advantages of both poles of the relational dimension, for networks with strong relationships and a focus on direct ties as well as for networks with many weaker links associated with a higher number of contacts (McFadyen/Cannella 2004). For example, Levin, Cross, and Abrams (2002) have shown that the effectiveness of a firm's knowledge transfer is higher if there are strong relationships between the actors involved, since these relationships lead to a higher degree of confidence among the knowledge transfer partners. On the other hand, they recognized that weak relationships also support the knowledge-processing since they provide a large variety of indirect contacts leading to more heterogeneous, less-redundant information (Levin/Cross/Abrams 2002). In addition to such clear-cut recommendations for or against strong or weak relationships within a network there are also proposals for hybrid solutions. Capaldo (2007), for instance, found that the optimal relational shape of a network would consist of a mix of many weak contacts and a core of strong contacts. Li (2005) shows that the effects of different levels of relational embeddedness vary subject to intra- or inter-organizational relationships.

The Structural Dimension of Organizational Networks

An MNC pursuing the goal of an optimal network structure can vary along a second dimension also consisting of two approaches: First, the establishment and maintenance of a cohesive network, characterized by a high density and, in relative terms, many connections among the network members (Coleman 1990). Second, unlike a cohesive network, a structure that is composed by actors who are to a large extent not connected to each other in which the central actor is able to exploit unconnected network alteri for his own benefits (Burt 1992).

The *first approach* specifies the advantages of cohesive (closed) networks (Coleman 1990). Cohesive networks can be beneficial, since they support the development of generally accepted standards and routines. Because of the closure of the network, negative external effects can be minimized and positive effects might be promoted (Coleman 1988). Indeed, several empirical studies found evidence that closed networks lead to positive effects in specific situations (Walker/Kogut/Shan 1997, Cummings/Cross 2003, Bae/Gargiulo 2004, Mehra et al. 2006, Zaheer/Soda 2009).

The *second approach* results in a(n active) separation of non-redundant contacts (Hite/Hesterly 2001) and follows Burts (1992) theoretical concept of structural holes. Structural holes exist in places of a network, where two actors are neither directly connected, nor do they show redundant network contacts (Burt 1992, Susskind/Miller/Johnson 1998).

The existence of structural holes yields some advantages to the central actor, who serves as a broker and is called the Tertius Gaudens. The Tertius Gaudens mediates between the two alteri, one of which might offer for instance a resource which is required by the other (Burt 1992, Hargadon/Sutton 1997). The Tertius Gaudens is in an advantageous position compared to the other actors since they only are connected through him, and thus are dependent on him. Because of his central positioning within the network, the Tertius Gaudens enjoys better access to other actors, to information, and to resources compared to other actors, and this will lead to control and information benefits (Burt 1992). Evidence for these advantages and for the value of such a network position to an actor has already been found for certain samples (McEvily/Zaheer 1999, Burt/Hogharth/Michaud 2000, Gargiulo/Benassi 2000, Reagens/Zuckerman/McEvily 2004). These advantages are particular interesting when regarding certain industries (Rowley/Baum 2004, Zaheer/Bell 2005) or specific functional areas (Reagens/Zuckerman/McEvily 2004).

If, in an MNC, a specific subsidiary has such a central position between otherwise unconnected subsidiaries, it can also benefit from such a positioning. Consider for instance the Ford Motor Company's technical centre in Dunton, Essex, United Kingdom, which over decades was not only responsible for developing engines and transmissions for Ford vehicles sold in the European market, but also served as an important broker coordinating Ford's technological innovations made in North America and in other regions of the world. The important role of this subsidiary within Ford's network does not only stem from its big

number and specific characteristics of relationships within the Ford's group, but also from its structural position within the network (Geletkanycz/Boyd/Finkelstein 2001). Because of its central position within Ford's subsidiary network, the Dunton plant was and still is able to enjoy control and information benefits as they were outlined by theory.

However, benefits as described to structural holes can not be realized in any situation. Podolny and Baron (1997) see the advantages or disadvantages of structural holes depending on the content of the networks relationships. Ahuja argues that the optimal network structure is contingent upon the actors within a network (2000). Ibarra and Smith-Lovin (1997) show that although structural holes are prosperous for additional social capital in "resource networks" they do not help in "network identity", the "pipes" through which attitudinal standards and role expectations are running (Xiao/Tsui 2007). Further, according to a study by Xiao and Tsui (2007), the cultural characteristics of the area in which the network is located play an essential role in terms of how beneficial structural holes for the broker can be. It was found that in collectivistic countries like China, the corporate culture gives less room for a systematic exploitation of the benefits inherent to the Tertius Gaudens. In such cultures, an exploitation of own contacts might be seen more critical than in Western cultures (Xiao/Tsui 2007).

Furthermore, the ways to gain the largest value for a broker out of this central position are discussed controversially. In this respect, the views of the "Tertius Gaudens" and the "Tertius Iungens" are competing. The latter was conceptualized by Obstfeld (2005), who shows that the way of introducing non-affiliated third parties to another and connecting them can be advantageous especially for innovation-intensive units as they are typical of MNC. As a result, according to Obstfeld (2005), new coordination possibilities and a more intimate and thus more substantial relationship between the actors involved arise.

Like in the area of the relational dimension of networks, in addition to clear-cut recommendations for or against dense or unconnected networks there are also proposals for hybrid solutions (e.g., Burt 2001, Soda/Usai/Zaheer 2004, Gargiulo/Ertug/Galunic 2009). Burt (2001) and Soda, Usai and Zaheer (2004) found evidence for both, the value of structural holes within a network as well as for a dense network. According to these research results, these different structural network shapes are beneficial at different points in time.

Independency of the Relational and the Structural Dimension of Networks

There are convincing arguments to assume that the relational dimension and the structural dimension of an actor's network tend to be independent from each other. First, it has to be mentioned that the structure of a network only describes its quantitative characteristics and not the quality of the relationships within the network. Furthermore, networks consisting of many strong ties can structurally differ enormously. Some of these networks might be rich of structural holes whilst others have high levels of density and therefore contain only few or even no structural holes. On the other hand, the example of university faculties shows that usually nearly all faculty members have interactions among each other (e.g., they meet in faculty meetings on a regularly basis) although most of these relationships within this network tend to be weak. Thus, the university example shows that in dense networks the ties not necessarily have to be strong.

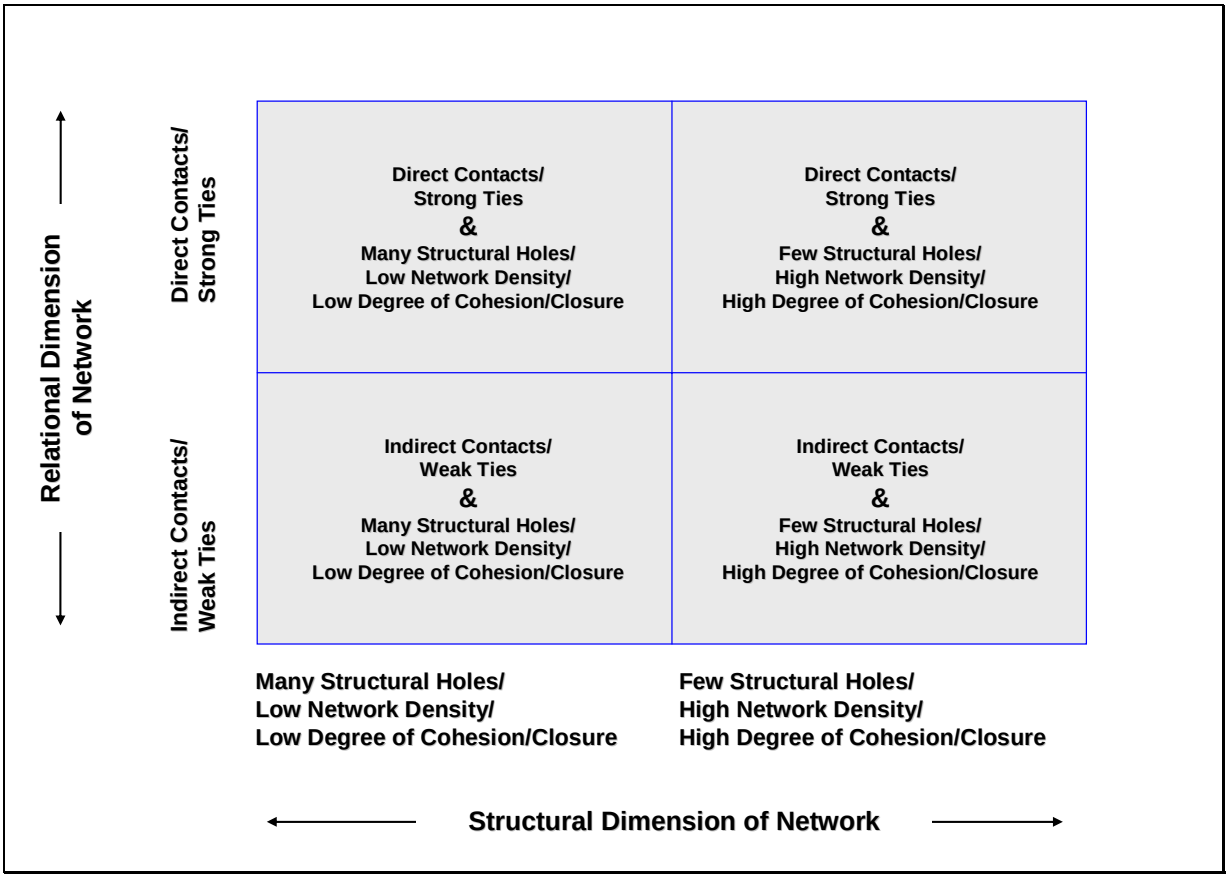
This independency of the relational and the structural dimensions of networks allows us to develop a 2*2 matrix describing alternative types of networks. Whilst the strength of ties is taken as the first, *the relational dimension*, the dichotomy between cohesive networks on the one hand and non-redundant networks on the other is taken as the second, the *structural dimension.* A combination of high or low degrees of the two dimensions leads to four different types of networks. The *first* possible type is a network with many structural holes, and a large amount of high quality relationships (strong ties). The *second* possible type is a network with many structural holes and a large number of low quality connections (weak ties). Both types represent networks, characterized by openness, low density, and a low level of cohesion. Nevertheless, these two types differ significantly in their qualitative nature. In the first type, each relationship is being of high value to an actor and it is the result of considerable investments she/he put into this relationship. Because of these specific investments, in such networks high levels of trust between the involved actors exist. In the second type, the relationships are less intensive and of a more formal nature, and therefore the network members have a stronger tendency to exploit the network relationship. Here, the network members tend to show a calculative behavior: The caring of social ties in such a network is operated only to a sufficient extent, and the effort that would have to be applied for an intensive relationship management is considered to be inefficient. Because of this calculative world-view and behavior low quality relationships dominate the configuration of the network and therefore in such a network it is more likely that the regarded actor benefits

more from the quantitative utilization of network resources, namely the simple realization of other contacts, including many indirect contacts.

Among networks with few structural holes two sub-types are possible (third and fourth type). The *third* network type has few structural holes within the network on the one hand and a high level of strong relationships on the other part hand. One might think here on the classical family clan as it exists(ed) in China or in Arabian countries. Such networks cultivate strong relationships within a largely homogeneous group. A *fourth* type finally results in a network prevalent in only a few structural holes on the one hand and mainly weak ties on the other hand. Such a network is thus characterized by homogeneous and more formal relations. British gentlemen clubs as well as local Rotary or Lions clubs can be taken as examples of this kind of networks.

Figure 1 illustrates the relational and the structural dimensions of networks and the four possible network configurations resulting from alternative combinations of these dimensions.

Figure 1: Relational and Structural Network Dimensions



Before it will be possible to relate the four types of networks to different subsidiary roles, we will briefly have to introduce alternative typologies of subsidiary roles.

Typologies of Subsidiary Roles

It is widely accepted that the assignment of specific tasks to domestic and foreign subsidiaries helps MNCs a lot to gain competitive advantages. Thus, during the last decades, in the IB/IM literature several typologies of subsidiary roles have been specified and contrasted with each other (a useful synopsis over existing prominent typologies is given by Enright and Subramanian (2007)). Indeed, these role concepts assign different tasks to subsidiaries.

Almost every of these role typologies uses two dimensions, so that each creates a matrix with four possible fields in which three (Jarillo/Martinez 1990, Birkinshaw/Morrison 1995) or four roles (White/Poynter 1984, Bartlett/Ghoshal 1986, Gupta/Govindarajan 1991, Taggart 1997, Taggart 1998, Randøy/Li 1998) are distinguished. The ultimate sense of such role typologies is to outline distinct implications for the management of subsidiaries. Because subsidiary roles are specifications of the general tasks of subsidiaries, these managerial implications tend to be far more precise than those referring to subsidiaries in general.

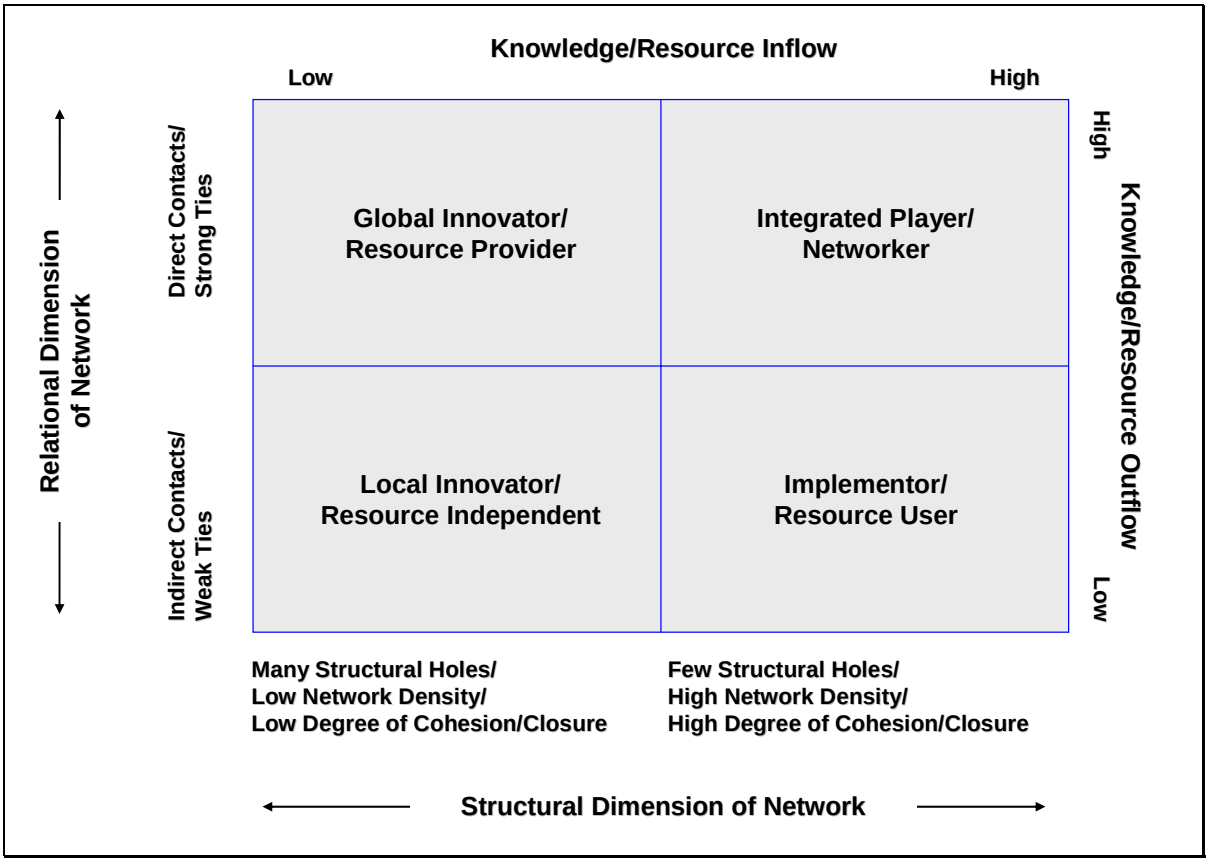
In the following sections the role typologies of Bartlett and Ghoshal (1986), Gupta and Govindarajan (1991), and Randøy and Li (1998) will be discussed, since these typologies are conceptually close enough to the theory of multinational networks so that – in a later section of the paper – it will be possible to relate them in a useful manner to the network types presented above. Since Bartlett and Ghoshal derive roles of subsidiaries in transnational corporations as differentiated networks, their typology will be strongly focused on later. Gupta and Govindarajan's analysis is relevant here, since it considers the subsidiaries' embeddeness in the company's knowledge network. Randøy and Li in turn present an extension of Gupta and Govindarajan's concept. In addition to the transfer of knowledge they look at the transfer of resources in general and develop for these cases a similar role typology. Again, the links of subsidiaries to other MNC subunits are focused. The latter two typologies of subsidiary roles are interesting here since their basic dimensions focus on the exchange aspects among MNCs' subsidiaries (know-how in the case of Gupta/Govindarajan; resources

in the case of Randøy /Li).

Gupta and Govindarajan's and Randøy and Li's Typology of Subsidiary Roles

Gupta and Govindarajan argue that the emerging knowledge flows and the internalization of knowledge within the entire company are the main drivers of the MNC's foreign direct investment and foreign vertical integration. Knowledge is described as technologies or skills that are transferred between the MNC's subsidiaries. The role typology is based on knowledge inflow on the one hand and knowledge outflow on the other hand. Thus, four different roles of subsidiaries emerge (see Figure 2).

Figure 2: Relational and Structural Network Dimensions and the Role Typologies by Gupta/Govindarajan and Randøy/Li



Subsidiaries, which have both extensive knowledge inflows as well as a high level of knowledge outflows hold the role of the *Integrated Player*. For these subsidiaries, it is not sufficient to absorb *or* to disperse knowledge (Gupta/Govindarajan 1991); they have to do

both. A subsidiary that called a *Global Innovator* is characterized by extensive knowledge outflows to other units, but only by a low level of knowledge inflow. Gupta and Govindarajan suggest that subsidiaries occupying such a role serve as knowledge creators for the entire MNC (Gupta/Govindarajan 1991). The difference between the first two roles is that the Integrated Player is not independent from other units in terms of satisfying its own knowledge needs. A subsidiary characterized neither by significant inflows nor outflows of knowledge acts as a *Local Innovator*. Instead of relying on knowledge from other units of the MNC or generating and providing knowledge for other subsidiaries, the Local Innovator generates the requirements necessary for the local market knowledge itself (Gupta/Govindarajan 1991). Finally the role of a subsidiary that is heavily dependent on knowledge inflow from other units of the MNC, but hardly is self-generating crucial knowledge and therefore is not providing knowledge to other units is called an *Implementor* (Gupta/Govindarajan 1991).

As indicated above, we think that each of Gupta and Govindarajan's subsidiary role requires a specific type of a network configuration. For the *Integrated Player* a dense network with many strong direct contacts is appropriate, since subsidiaries of this type usually play an important role as a transmission unit within the MNC's complex web ob knowledge. Furthermore, since the Integrated Player enjoys a high centrality and importance among the MNC's subsidiaries, for him there is no need to strive for an ego-centric exploitation of information or control advantages (as it is typical of the broker in Burt's sense). Instead, he is strong enough to serve as a Tertius Iungens who helps to reduce the remaining smaller number of structural holes existing in the MNC's network. And finally, since the Integrated Player needs a significant inflow of knowledge, it helps him a lot if there is a dense, cohesive network among the alteri subsidiaries. If such a dense, cohesive network exists, the Integrated Player is able to gather the knowledge needed from less partner units. Since the *Global Innovator*'s main task is to feed other subsidiaries with knowledge, for this type of subsidiaries it is less problematic if among the alteri subsidiaries a larger number of structural holes exist. For Global Innovators it is more important to have a valid picture of the specific knowledge demand existing in the respective subsidiary which has to be supplied with knowledge. For analyzing and covering the knowledge demand of the respective alteri subsidiary it is less important for the Global Innovator that among the partner subsidiaries a dense, cohesive network exists. For the *Local Innovator* an unconnected network with many structural holes and with weak ties among the network members is favorable. Or, expressed in other words: The Local Innovator will not suffer if a network is dominated by weak ties and

by contacts that might not be connected with each other. This is because the Local Innovator's knowledge processes will be mainly within his own borders or between him and the respective local (host country) environment. Finally, the main arguments why the *Implementor* needs a dense, cohesive network had been presented above: Since he is highly dependent on a permanent inflow of knowledge, it is comfortable if he acts vis-à-vis a partner network where a lot of cross-subsidiary knowledge-processing takes place. Then each of the interwoven alteri-subsidiaries will be able to deliver the knowledge needed by the Implementor.

Randøy and Li typology extends Gupta and Govindarajan's work. This typology covers three main kinds of resource flows, which include capital, product, and knowledge flows. Comparable to Gupta and Govindarajan, the volume of inflows and outflows of resources are studied. Thus, the first dimension is the amount of resource outflow from the to other units of the company network. The second dimension is the amount of the inflow of resources from other units of the company network. The resulting 2*2 matrix with four international subsidiary roles is shown above in Figure 2. If the four roles are characterized in the following, it has to be considered that they are presented here only for the general case of resource flows, while Randøy and Li individually distinguish between roles in product, knowledge and capital flows. They define Networker, Resource Provider, Resource Independent, and Resource User.

A subsidiary that holds the role of a *Networker* is marked by high resource inflows as well as a high levels of resources outflows. Subsidiaries that absorb and offer resources within the network are acting local and global, similar like the headquarters of an MNC (Randøy/Li 1998). *Resources Providers* are subsidiaries characterized by large outflows of resources but only a small amount of resource inflows from other units of the company. These subsidiaries are used to generate advantages through collecting locally available resources and dispersing them globally (Randøy/Li 1998). Foreign subsidiaries, which have neither any significant inflow or outflow of resources, are referred to as *Resource Independent*. They operate almost autonomously and use locally available resources, rather than obtaining them from other units (Randøy/Li 1998). The role of the *Resource User* is characterized by extensive resource inflows associated with low resource outflows. The subsidiary, thus, acts as a resource recipient of other units of the entire MNC and utilizes the resources for local tasks (Randøy/Li

1998).

It is obvious that Randøy and Li's conceptualization has borrowed a lot from Gupta and Govindarajan's work. Both the dimensions used and the subsidiary types offered look very much like those developed by Gupta and Govindarajan. In detail, the role of the Networker corresponds to the role of the Integrated Player, the Resource Provider follows the Global Innovator, the Resource Independet resembles the Local Innovator, and the Resource User is an equivalent to Gupta and Govindarajan's role of the Implementor (Gupta/Govindarajan 1991, Randøy/Li 1998). Thus, it does not make sense to invest energy here to conceptualize the relationship between Randøy and Li's subsidiary roles and alternative network configurations. Instead, we conclude that the assignments in the paragraph on Gupta and Govindarajan's work also hold for this typology. Therefore, it is possible to integrate the assignments developed above into Figure 2.

Bartlett and Ghoshal's Typology of Subsidiary Roles

Bartlett and Ghoshal argue that MNCs' managers responsible for defining a subsidiary's role have to consider (1) the strategic relevance of the specific foreign market the subsidiary is located in and (2) the level of competence of this subsidiary. For this decision, these are the most important contingency factors. Again, four different roles are distinguished.

Subsidiaries with a *Strategic Leader* role act in strategically important markets and they are highly competent so that they can generate strategic approaches for certain business sectors. Such subsidiaries are involved not only in the strategy development and implementation, they are also responsible for the success of specific business fields. Thus, such subsidiaries are important players in their specific fields of competence. Sometimes, in their domain they are more important than the parent. Moreover, these subsidiaries have the responsibility not only to identify threats and opportunities in the environment, but are also responsible for developing and implementing appropriate solutions for the entire company (Bartlett/Ghoshal 1986). The role of the *Contributor* is appropriate for subsidiaries located in strategically unimportant markets but endowed with special skills and competences. To avoid an overestimation of the local market by an excessive local use of these skills, these skills should

be capitalized not only locally but also for global challenges, so that there is a need for integration (Bartlett/Ghoshal 1986).

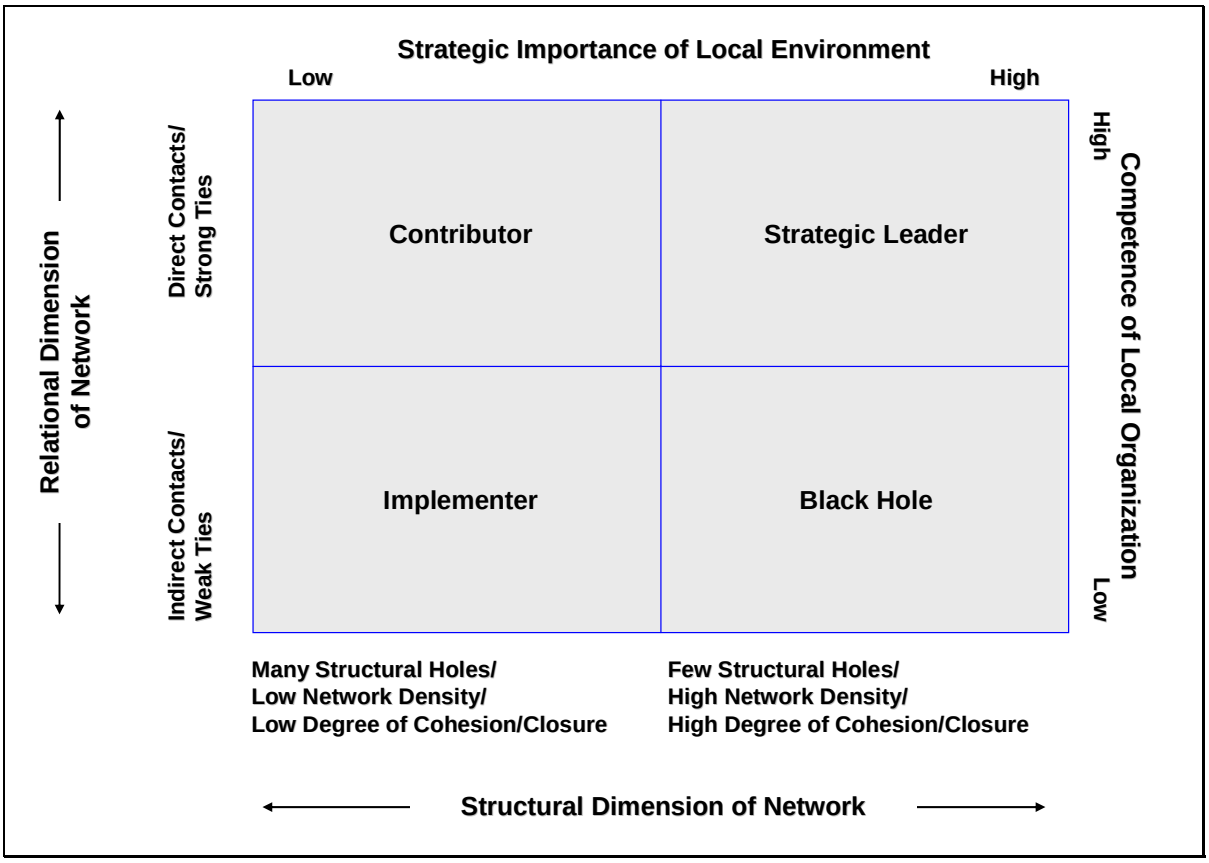
The *Implementer's* role holds for subsidiaries operating in strategically less important markets and having a low level of competence, just enough to respond to local needs. Such a subsidiary does not make a significant contribution to the MNC's strategy development and implementation. Instead, it works only to run the local market and realizes policies of the parent or other subsidiaries (Bartlett/Ghoshal 1986).

A *Black Hole* is referred to subsidiaries located in strategically important markets, but endowed with only a very low level of capabilities and competence. The role of the Black Hole is unsustainable for an MNC in the long run, for the short term, however, in part, it may be necessary to build up a foreign representation in strategically important, but difficult markets, even if necessary skills and competences can not be implemented directly (Bartlett/Ghoshal 1986).

It is plausible to assume that these four types of subsidiary roles imply different needs to relate the respective subsidiary with other subunits of the MNC. Thus, Figure 3 does not only assign the four roles to the contingency factors mentioned by Bartlett and Ghoshal themselves. It does also relate the four subsidiary roles to the relational and structural dimensions of subsidiary networks.

In the subsequent chapter we will specify this link between Bartlett and Ghoshal's subsidiary roles and network characteristics. We will focus this discussion of the "subsidiary role-network-link" mainly on Bartlett and Ghoshal's typology of subsidiary roles, since in this typology the relationships of the subsidiaries to other MNC subunits is not conceptualized in much detail.

Figure 3: Relational and Structural Network Dimensions and the Role Typology by Bartlett/Ghoshal



Propositions: Relating Bartlett and Ghoshal's Subsidiary Roles to Network Configurations

Network Characteristics of the Strategic Leader

The Strategic Leader, because of its high level of competence and its positioning in a strategically important market, is not only passively involved in the MNC's strategy development and implementation processes, but also takes leadership in such endeavors. Frequently, in these efforts, the Strategic Leader is on a par with the parent company (Bartlett/Beamish 2010). It does not only have the aim to identify opportunities and threats in the environment, but is also responsible for developing and implementing appropriate solutions for wider arrays of the MNC (Bartlett/Ghoshal 1986, Bartlett/Beamish 2010). In order to specify the network needs of a Strategic Leader, it is important to know that it often

represents the full spectrum of business activities of the parent company. This may be, for example, an entity which holds sovereignty over several functional areas such as R&D, production, and marketing, as it was in the example of Philips in the UK in the development of teletext (Bartlett/Beamish 2010). Thus, the Strategic Leader is not only strong in specific fields; rather it is knowing in a wider spectrum of functional areas.

Because of this availability of a broad field of expertise it seems reasonable that such a kind of a subsidiary holds and needs an immense variety of strong, direct contacts within the corporate network. Because of its high level of competence, the Strategic Leader has to cope with complex, frequently tacit knowledge and the exchange of such knowledge works best if the relationships with other MNC subunits are characterized by high levels of trust typically growing if the ties between the network nodes are strong (Hansen 1999, Suarez 2005). Since the expertise of the Strategic Leader refers to several functional areas, its strong contacts should reach into almost all of the functional areas of the MNC network and into all relevant business units within these. Thus, regarding the closure of the network, an interconnectedness of many network nodes is desired, what allows to obtain the combined knowledge elements from one source as well as to reduce the resources required for knowledge gathering and other communicational efforts in an efficient framework. In the Strategic Leader's case, a high number of structural holes appears not to be an advantage, especially since the specific benefits of structural holes, as heterogeneous information or control benefits may not be necessary to the degree as they are in other types of subsidiaries. Control benefits as a result of exploiting unconnected third parties are therefore for this type of subsidiary not as important as to other role types. This is because a Strategic Leader is able to act with a dominant attitude within its corporate network due to its extraordinary expertise. Furthermore, the Strategic Leader's high level of resource endowment and the valuable competence-stock resulting of it can be best capitalized within a dense network (Baraldi 2008). And finally, since the Strategic Leader can consolidate its position through strong relationships, it should serve as a "bridge-builder" introducing and connecting network nodes which previously were not in direct contact with each other. This will help to improve the efficiency of the internal work flows of the network partners as well as those of transnational work flows in general. Of course, such a behavior corresponds to the Tertius Iungens orientation, as requested for instance by Obstfeld and Singh (Obstfeld 2005, Singh 2008). Since such a network architecture supports the Strategic Leader in aiming its goals, we formulate:

Proposition 1: Successful MNC subsidiaries meeting the role of a Strategic Leader tend to have direct and strong contacts and are part of a more cohesive network with only few structural holes.

Network Characteristics of the Contributor

The role of the Contributor typically holds for subsidiaries possessing special skills and competences, but who are located in strategically rather unimportant markets. Since the Contributor's skills and competences are significantly higher than needed for the subsidiary's host-country-specific tasks, they are not only used to reach local aims, but also to accept global responsibilities, so that there is a need for a companywide integration of the subsidiary (Bartlett/Ghoshal 1986). Contributors are often specifically designed to endow comparative competitive advantage for the entire company by developing novel knowledge and providing valuable resources to the whole company network.

To run the local market is not or at least only to a limited extent scheduled for that category of subsidiaries. Of course, the external environment may have some significance to the Contributor. For example, in the case that co-located innovative companies put a (positive) pressure on the subsidiaries' performance or that the closeness to the existing knowledge factories increases the innovation rates by allowing a more easy knowledge transfer. Similarly, the proximity to highly qualified employees, for instance, the proximity to elite universities, will help the Contributor a lot to feed the MNC network with knowledge and resources (Ferdows 1997). However, not the importance of the local customer market for the overall strategy will be the key factor determining the Contributor's location. Such subsidiaries can be, for example, R&D entities or Centers of Excellence. Advantages for such research and knowledge intensive subsidiaries arise from particularly creative and innovative network partners, to which the subsidiary is connected.

For the Contributor it is advantageous if its network contains many structural holes. If the Contributor's network would be dense and cohesive, then this subsidiary would not be able to fulfil its goal to create new ideas and to provide them for the entire MNC. This is because in such a type of a network, because of the manifold relationships among the alteri subsidiaries, the Contributor would mainly collect redundant type of knowledge (Burt 1992). Unlike this,

in a less cohesive network, among the unconnected network partners or sub-networks there are fragments of knowledge which can be combined by the Contributor in a meaningful way. Potentially, each knowledge fragment of each individual unconnected network partner can contain some creative and innovative elements which within the MNC have not yeen been detected or appreciated. The more heterogeneous the knowledge collected by the Contributor is, the more its own knowledge base will grow and the more it will be able to fulfil its generic task to develop and to provide new ideas for the MNC (Walker/Kogut/Shan 1997, Zaheer/Bell 2005, McFadyen/Semadeni/Cannella 2009). Of course, to master this expert role of a knowledge generator within the MNC network, the Contributor will also have to develop a high level of absorptive capacity (Cohen/Levinthal 1990).

Furthermore – within a different line of reasoning – one might argue that for the Contributor's task to disseminate knowledge within the MNC it is unimportant if the recipient subsidiaries are connected or not. Instead, to guarantee a reliable transfer of knowledge to a recipient partner subsidiary, it is more crucial that strong ties between the Contributor and the recipient subsidiary exist. This means that an intense and intimate knowledge and resource exchange is only able to work on the basis of a network strategy which is relationally characterized by reliability, durability, commitment, and trust.

Tiwana (2008) confirms this assumption for innovation intensive projects and recommands structural holes for the seeking of new perspectives and strong ties for the implementation of these new ideas.

Proposition 2: Successful MNC subsidiaries meeting the role of a Contributor tend to have direct and strong contacts and are part of a less cohesive network with many structural holes.

Network Characteristics of the Implementer

The role type of the Implementer is characterized by a relatively little importance of the local market in the strategic dimension as well as by a low level of subsidiary competence. Most MNC subsidiaries are Implementers; their primary goal is to keep the business on the respective market running and to represent the company. Typically, such subsidiary's abilities

are just sufficient to meet the limited local demand needs. Bartlett and Beamish (2010) mention subsidiaries located in markets whose relevance might increase in future generations, such as the smaller Eastern European countries, in order to install an early presence there. Yet, since the Implementer does not make a substantial contribution to strategy development and implementation for the entire MNC and since its market is strategically not very important on the short run (Bartlett/Ghoshal 1986), it does not need outstanding amounts of resources and attention from the headquarters.

In respect to its organizational network, the majority of the business activities of such subsidiaries can be realized with rather weak ties to other subunits of the MNC. To fulfil their tasks properly, for Implementers a network with relatively weak connections is sufficient. It is sufficient if an Implementer's relationships to other MNC subunits are persisting in more formal ways. Furthermore, there is no need to establish to many direct, intensive, and trust-based relationship to other subunits. Thus, not too many resources have to be invested in the building of social relationships. Since the Implementer's activities mainly focus on the host-country context, it is sufficient when its firm-internal social connections refer to selected partner units. These partner units do not need to be connected among themselves since they are pursuing heterogeneous goals (e.g., suppliers and customers). Furthermore, a relatively high level of structural holes within the network helps the Implementer to gain bargaining power through benefits out of information and control advantages (Shipilov 2009). Thus, a less cohesive network is appropriate, with a relatively high level of structural holes.

Proposition 3: Successful MNC subsidiaries meeting the role of an Implementer tend to have rather weak contacts and are part of a less cohesive network with many structural holes.

Network Characteristics of the Black Hole

Subsidiaries endowed with very limited skills and competences, but acting in strategically important markets are called Black Holes. Bartlett and Ghoshal mention that Philips in Japan, Ericsson in the U.S., or Matsushita in Germany for many years were in such a position. Although this role type is unsustainable in the long run, in the short term it is sometimes necessary to break into a strategically important but difficult new market and to establish

stepwise necessary skills and competences (Bartlett/Ghoshal 1986). This is the only role type within Bartlett and Ghoshal's typology that is not suitable to the strategic visions of an MNC and therefore in their work no management implications are identified, but it is the initial position to overcome these unfavourable condition of the subsidiary.

At this point it should be made clear that in this paper, too, the relationship between few direct, predominantly weak ties, and the high level of cohesion of the network should not be understood normatively but descriptively only.

It sounds plausible to assume that the Black Hole will have problems in developing strong ties within the MNC network. MNCs, like other firms, are economic institutions where co-operation occurs if a partner sniffs a chance to benefit from an interaction. Yet, the Black Hole is not it a position to provide such a benefit for other subsidiaries. Thus, the Black Hole will have only few, typically weak relationships to other subsidiaries. Because the Black Hole is an "uncertain prospect", other subsidiaries will strive for direct contacts among each other in order to by-pass this weak point within the organizational network. Since the Black Holes' limited competences are typically well-known among the MNC's subsidiaries, this will enhance the efforts of the other subsidiaries to establish many direct contacts among each other. Therefore, the MNC's overall network seems to be relatively closed and for the Black Hole there is no need and no chance to act as a Tertius Gaudens bridging sub-networks existing within the firm. Furthermore, of course, the low competence level does not allow the Black Hole to slip into such a broker role. As a consequence, only poorly differentiated information can reach the Black Hole. Therefore, hardly any information or control benefit will be generated and, as a consequence, the Black Hole will have diffuculties on overcoming its problematic status quo.

Since the Black Hole acts in a strategically important local environment which can and shall not be changed in the short run, it is clear that the only way of the Black Hole out of its problematic position is to develop itself to a Strategic Leader. Yet, for the Black Hole, this way is very difficult to go: This is because *both* his competence level *and* the strength of its ties are low. This means that a leveraging of the Black Hole's competence level is extremely complicated, because the causality between an improved embeddedness within the internal and external corporate network on the one hand and a high degree of competence on the other hand is reciprocal. An increase in competences, skills, or other resources lifts a subsidiary to a

more attractive contact partner itself from the perspective of other network partners and thus may cause more intense, stronger relationships. On the other hand it can be assumed that an intensification of relationship management and a consequent high level of trust to certain network partners for example also boosts expertise and other resources. This fact seems to be the dilemma of subsidiaries occupying Black Holes. They are neither characterized by a high level of competence nor by a strong network. To break this vicious circle, therefore, two implications appear equally appropriate: First, the parent company has to ensure that the subsidiary has the option to acquire the missing skills. Regarding this claim resources have to be provided, which may vary depending on the situation. For example, training of staff or staff exchanges or even an improved communications system shall be mentioned, or financial resources that may be used autonomously by the subsidiary specifically to address these issues. Obviously the functional areas have to be clarified, which shall be targeted to expand these special skills. Secondly, a larger social network may be made available to the subsidiary, especially characterized by strong relationships. The mediation of contacts can be provided to a certain extent by the parent company, as far as it has access to contacts which are of help for the subsidiary to obtain its necessary skills. In this case the parent would occur as the Tertius Iungens, even if that means losing parts of its control and information advantages. To gain a particularly high level of competence, it is necessary – as described for the Strategic Leader and the Contributor – to transfer or exchange very complex information or technologies. This in turn requires relationships that are based on reliability and trust and can only evolve over time. The development of internal and external relationships from the moment of the first contact to an intensive strong tie as just described requires a lot of commitment and can not happen at short notice (Ahuja/Polidoro/Mitchell 2009).

Proposition 4: MNC subsidiaries in a Black Hole position tend to have rather weak contacts and are part of a more cohesive network with only few structural holes.

Implications, Limitations, and Avenues for Future Research

The connection of the theory on organizational networks with that on roles of MNCs' subsidiaries has implications both for the work of business practitioners as well as for the members of the scientific community.

Our research has shown that the managers of MNCs' subsidiaries not in any case have do develop strong relationships with a maximum number of partner units. Instead, they should be aware that any kind of network building requires a lot of financial, personal, and material resources and that therefore the development of many strong ties only makes sense if the strategic role requires this. Given the tremendous costs necessary for the development and maintenance of a larger number of strong ties, subsidiary managers should first carefully analyze their subsidiary's role within the MNC network and then build up a level of subsidiary embeddedness which is appropriate to this role. For subsidiaries holding the strategic roles of the Contributor or the Strategic Leader, it is necessary to develop high quality relationships or explicitly strong ties within the MNC. Unlike this, the managers of Implementer subsidiaries should not waste to much energy in building and maintaining a high amount of strong ties, since this could lead to the problem over overembeddeness. The amount of structural holes within the subsidiary network should also be defined according the respective subsidiary role. Our research showed that only the Strategic Leader role calls for a dense network containing few structural holes.

For international management theory the current research also has significant implications. Existing literature on MNC networks frequently leave the reader with the impression that a high level of network-building within the MNC is mainly dependent on the general strategic orientation of the firm. Further, not only the early work of Hedlund (1986) and Bartlett and Ghoshal (1986), but also many subsequent publications have suggested that the transnational solution will be the strategic orientation clearly dominating in the future and that this orientation generally calls for dense networks consisting of many strong ties among the subunits involved. Yet, our conceptualization has shown that a more fine-grained way of theorizing is necessary which takes subsidiary-specific variables as contingency factors for the explanation of the strength and structure of a subsidiary's network. Of course, the respective MNC's strategic orientation will remain an important predictor of network configurations, but it has to be accompanied by subsidiary-specific peculiarities.

Since, in the current paper, the link between the roles of subsidiaries and the configuration of its network has been developed on a theoretical basis and since the formulated propositions have not been tested yet, further research first will have to find appropriate ways to operationalize the variables under study. Given the abstract level of the variables considered

here, this will not be an easy task. But both in the area of subsidiary roles (e.g., Benito/Narula/Grøgaard 2003) and with respect to network configurations (e.g., Tiwana 2008) there are already first fruitful attempts for making these complex concepts measurable. Furthermore, the collection of data on the conceptualized variables will also be a considerable challenge, since MNCs typically do not report on such data. The collection of data will be difficult, because ideally from each MNC information relating to several subsidiaries is needed.

In the conceptual dimension, future research will not only have to focus on how a subsidiary is embedded in its network, but also to whom. Therefore more investigations are needed that analyze the way of the characteristics of optimal network partners in an MNCs network (Al-Laham/Amburgey 2010). And finally, since the current paper yielded on MNC-internal networks, future research should also develop insights to what extent different subsidiary roles call for diverse degrees of external embeddedness of the respective subsidiary (Doz/Santos/Williamson 2001, Andersson/Forsgren/Holm 2002, 2007). Of course, subsidiaries are not cut off from the world outside the MNC. But this is a further complex field of research which has to be conceptualized in a separate paper.

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