

The role of international assignees' social capital in creating inter-unit intellectual capital: a cross-level model

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**THE ROLE OF INTERNATIONAL ASSIGNEES' SOCIAL CAPITAL IN CREATING
INTER-UNIT INTELLECTUAL CAPITAL: A CROSS-LEVEL MODEL**

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Abstract

We conceptualize international assignees as informational boundary spanners between MNC units and develop a cross-level model that explores how assignees' social capital translates into inter-unit intellectual capital. First, as knowledge brokers, assignees create inter-unit intellectual capital by linking their home- and host-unit social capital, thereby enabling cross-unit access to previously unconnected knowledge resources. Second, as knowledge transmitters, assignees' host-unit social capital facilitates their creation of individual intellectual capital which, in turn, translates into inter-unit intellectual capital. We conclude that individual social capital needs to be explicitly transferred to the organizational level to have a sustained effect on inter-unit intellectual capital.

Keywords: international assignments; MNC knowledge flows; social capital; intellectual capital

INTRODUCTION

The role of international staff as agents of knowledge flows in multinational corporations (MNCs) has become a subject of recent academic inquiry (Bonache and Brewster, 2001; Hocking *et al.*, 2004; Riusala and Suutari, 2004). It is widely recognized that the movement of people constitutes a crucial channel for cross-unit knowledge exchange as people can transfer both explicit and tacit knowledge and, importantly, are able to adapt knowledge from one context to another (Argote and Ingram, 2000). In MNCs, it has been suggested that this role is accomplished by international assignees who act as informational boundary spanners since they possess knowledge of the home- and host-unit context (Thomas, 1994; Harvey *et al.*, 1999) and may develop social capital at both organizational units (Kostova and Roth, 2003). Despite the recognition that international assignees diffuse knowledge, there is little theoretical understanding of the processes and determinants of how knowledge is translated between individuals and organizational units on an international scale (Foss and Pedersen, 2004). Initial evidence suggests that important motivational issues arise for those individuals that are able to initiate knowledge flows in MNCs (Gupta and Govindarajan, 2000; Minbaeva *et al.*, 2003). It is thus imperative to consider not only how, but also under which circumstances, international assignees will initiate knowledge transfer across subunit social networks in order for the MNC to create intellectual capital (Nahapiet and Ghoshal, 1998). Intellectual capital can be defined as the knowledge that can be shared through interpersonal exchanges.

To that end, the purpose of this paper is to develop a conceptual framework that examines the role of international assignees in creating intellectual capital from a social capital perspective (Burt, 1992; Adler and Kwon, 2002). Specifically, we examine (1) determinants that influence the transfer of individual into inter-unit social capital, i.e. social capital between the assignee's home and host unit, (2) determinants that influence the transfer of individual into inter-unit intellectual capital, i.e. the sum of knowledge that is collectively held between the home and host unit, and (3) the process of how social capital contributes to intellectual capital creation at the individual and inter-unit level. Our perspective differs from extant research on knowledge diffusion through international assignments by explicitly examining how knowledge flows are initiated by the individual assignee and then translated into organizational knowledge outcomes. In particular, we conceptualize two distinct roles that international assignees possess when engaging in informational boundary spanning. First, assignees serve as *knowledge brokers* by linking their social networks at the home and the host unit, thereby generating access between previously unconnected knowledge resources. Second, assignees also act as *knowledge transmitters*, both by sharing their home-unit knowledge with host-unit staff and by transferring the knowledge they have acquired during the assignment to their home unit. While, at a generic level, our conceptual model could be applied to situations where the assignee transfers knowledge to either the host or home unit, a more detailed and rich discussion of the theoretical propositions is possible by limiting it to a single direction of knowledge flow. Since the majority of existing studies has focused on assignees' knowledge transmission to the host unit (e.g., Bonache and Brewster, 2001; Au and Fukuda, 2002; Riusala and Suutari, 2004), we chose to view assignees as knowledge brokers and transmitters of knowledge back to the *home* unit in developing our conceptual model in order to provide a somewhat new perspective.

In developing our model, we argue that inter-unit intellectual capital is created along the two distinct roles of knowledge broker and knowledge transmitter. First, in their role as knowledge brokers we propose that assignees' host-unit social capital leads to structural inter-unit social capital, moderated by assignees' ability and motivation to build relationships between their own home- and host-unit social capitals. Structural inter-unit social capital will then lead to

relational and cognitive inter-unit social capital, moderated by the turnover rates at the home and host units and by the MNC's top management philosophy towards its MNC units. Relational and cognitive inter-unit social capital, in turn, influence inter-unit intellectual capital, moderated by the home and host units' absorptive capacities. The second path builds on assignees' role as reverse transmitters of knowledge. Here, we propose that assignees' host-unit social capital leads to their creation of new individual intellectual capital which then facilitates the creation of inter-unit intellectual capital as moderated by assignees' ability and motivation to transmit their new knowledge back home.

We first review the relevant literature in the fields of MNC knowledge flows and international assignments and explore the link between social and intellectual capital. Subsequently, we define the main constructs underlying our theoretical arguments and then derive testable propositions that specify the role of international assignees' social capital for the creation of inter-unit intellectual capital. We conclude with directions for future research.

THEORETICAL BACKGROUND

MNC Knowledge Flows and International Assignments

Because a MNC is a differentiated network of globally dispersed units (Bartlett and Ghoshal, 1998), these organizations face challenges of transferring knowledge that is created in different cultural and institutional contexts to other parts of the interrelated network. This reasoning has inspired researchers to investigate MNC knowledge flows between business units (e.g., Zander and Kogut, 1995; Kostova and Roth, 2002). Specifically, scholars have examined the different transmission channels through which these knowledge flows occur, distinguishing between formal and informal mechanisms (Gupta and Govindarajan, 2000) or mechanisms comprising the movement of people, routines and systems (Argote and Ingram, 2000). Whereas these transmission channels vary with regard to the type of knowledge (Winter, 1987), we focus our analysis on the transfer of knowledge that is tacit and complex, rather than explicit and simple, and consider individuals as its main brokers and transmitters. Tacit and complex knowledge cannot be transferred in a codified manner but requires individuals to clarify and reveal its meaning. In the MNC context, this may, for instance, involve experience with operating in a given cultural environment (Riusala and Suutari, 2004).

Building on the current literature that increasingly recognizes the individual locus of knowledge (Felin and Hesterly, 2007) we view international assignees as both indirect and direct boundary spanners of MNC knowledge flows. First, assignees may indirectly contribute to MNC knowledge flows by linking home- and host-unit staff (Kostova and Roth, 2003), thereby initiating cross-unit knowledge sharing. However, research on how this brokerage unfolds in an international cross-unit context is scarce. Second, assignees also contribute to direct knowledge transmission. Recent empirical evidence found that international assignments not only serve as a vital means for transferring tacit knowledge to the *host* unit (e.g., Riusala and Suutari, 2004) but also promote learning for the assignee (e.g., Hocking *et al.*, 2004) that is believed to entail benefits for the assignee's *home* unit (Lazarova and Tarique, 2005). Whereas the knowledge contribution to the host unit has received considerable support in the literature, research on reverse transfer is limited despite its growing importance as MNCs diversify their international staff (Harvey *et al.*, 1999; Reiche, 2006). In this paper, we will examine in greater depth the dynamics of how MNC knowledge flows occur through brokerage and transmission.

These two boundary-spanning roles are filled by an increasingly diverse portfolio of international staff. While MNCs have previously concentrated on sending parent-country nationals to their foreign subsidiaries, they are now complementing this traditional expatriation

with the temporary transfer of subsidiary staff, both vertically in the form of inpatriation from the foreign subsidiary to the corporate headquarters (HQ) and horizontally between peer subsidiaries (Harvey *et al.*, 1999). Rather than focusing on the assignment direction, other scholars distinguish between short-term assignments such as international commuters or frequent flyers, and long-term transfers with a duration of more than one year (Harrison *et al.*, 2004; Collings *et al.*, 2007), between technical, developmental, strategic or functional assignments (Caligiuri, 2006), and the locus of the transfer initiative (Suutari and Brewster, 2000). Implicit to this differentiation is the notion that characteristics of the assignment may influence the degree and type of knowledge transferred. Given our focus on individuals' social capital as the main vehicle for sharing tacit and complex knowledge that entails organizational benefits, we will restrict our analysis to those assignments that require considerable interaction with host-unit staff, have a long-term nature to enable sufficient lead-time for building social capital and are employer-initiated.

Social and Intellectual Capital

Although previous research has addressed the key role of international assignments for knowledge flows in MNCs, little is known on how knowledge transfer essentially occurs at the individual level and then translates into organizational outcomes. In this vein, scholars contend that the success of knowledge transfer through staff movements is not automatic, but rather depends on social interaction (Argote and Ingram, 2000). Building on this notion, recent research has increasingly examined the link between social capital and knowledge flows in the management discipline in general (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002) and in the field of MNC management in particular (Barner-Rasmussen, 2003; Kostova and Roth, 2003). This suggests placing a major focus on individuals' social capital in the examination of the processes and determinants of knowledge diffusion in MNCs.

The structure and content of individuals' networks are captured in the literature by the term 'social capital' (Adler and Kwon, 2002). The notion of social *capital* highlights the fact that social interactions are not only elements of social structures, but can be considered as resources for conducting social affairs and exchange (Coleman, 1990). Along these lines, we use Nahapiet and Ghoshal's (1998: 243) understanding of social capital "as the sum of actual or potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" in developing our definition of social capital.

While social capital can entail negative externalities (Gargiulo and Benassi, 1999), positive outcomes have been well supported in the literature (Borgatti and Foster, 2003). Importantly, researchers highlight social capital as being a crucial resource for accessing, exploiting and leveraging individual and collective knowledge, thereby providing its strategic value for organizations (Burt, 1992; Nahapiet and Ghoshal, 1998). Empirical studies have, for example, shown social capital to positively influence knowledge search (Nebus, 2006), product innovation (Tsai and Ghoshal, 1998) and inter-unit feedback-seeking (Barner-Rasmussen, 2003). From a conceptual perspective, social capital is argued to affect the creation of intellectual capital due to the social resources (e.g., access to information) embedded within social capital (Nahapiet and Ghoshal, 1998). In this regard, the term 'intellectual capital' highlights the resource-based character of knowledge and hence clarifies its conceptual link with social capital. We build on these ideas and define intellectual capital as the entire scope of knowledge that can be shared through social capital transactions. In the international assignment context, this knowledge may include strategic information of the home-unit context or an understanding of how to effectively deal with the respective local stakeholders (Harvey *et al.*, 1999; Berthoin Antal, 2000).

DEFINITION OF MAIN CONSTRUCTS

We develop a cross-level model of the creation of inter-unit intellectual capital through assignees' social capital that is based on two main assumptions. First, we assume that assignees maintain social ties at their home unit which have a certain value for the host organization. Second, we assume that knowledge flows through international transfers can only occur if assignees develop individual social capital with host-unit staff. Although we focus our analysis on a two-business-unit case to reduce the complexity of our model and only differentiate between home and host unit, our arguments can be extended to a multi-unit context. Below, we define the social capital and intellectual capital constructs that constitute the cornerstone of our model.

Assignees' Host-Unit Social Capital

We extend Tsai and Ghoshal's (1998) multidimensional construct of social capital (structural, relational, and cognitive) at the business-unit level to the individual level. In particular, we posit that assignees' host-unit social capital comprises three interrelated but distinct dimensions. Structural social capital concerns the quality and quantity of assignees' network ties at the host unit and includes aspects such as network size and centrality (Nahapiet and Ghoshal, 1998). Relational social capital is defined in terms of the degree of trust between assignees and their host-unit alters. At the individual level, cognitive social capital stems from assignees' identification with the host unit. Current theories conceptualize organizational identification as a cognitive construct that reflects the degree to which individuals share values and goals with and feel psychological attachment to their employer (Dutton *et al.*, 1994). Hence, organizational identification closely parallels cognitive social capital as defined by Tsai and Ghoshal (1998).

We recognize the multitude of antecedents to assignees' host-unit social capital such as personality characteristics (Klein *et al.*, 2004), minority status (Mehra *et al.*, 1998), or cultural differences (Wang and Kanungo, 2004). However, a detailed discussion of the factors that influence the different dimensions of assignees' social capital reaches beyond the scope of this paper. In addition, while we are aware that the three social capital dimensions at the individual level may be related in a sequential, causal manner (see Tsai and Ghoshal, 1998), in this paper we are not interested in how assignees build their host-unit social capital but rather how it influences the creation of inter-unit intellectual capital. Our main focus thus lies on examining the outcomes of assignees' host-unit social capital rather than its antecedents and inherent dynamics.

Inter-Unit Social Capital

Leana and Van Buren (1999) introduce the term organizational social capital as an attribute of a social entity and argue that the translation of individual into organizational social capital is crucial for an organization to reap the benefits that develop through its employees' social exchanges. In this vein, organizational social capital can be understood "as a resource reflecting the character of social relations within the firm" that "is realized through members' levels of collective goal orientation and shared trust" (Leana and Van Buren 1999: 538). This conceptualization parallels Tsai and Ghoshal's (1998) structural, relational and cognitive dimensions of social capital as defined earlier. We adopt these arguments in defining inter-unit social capital. From a structural perspective, inter-unit social capital occurs when organizational members' social ties are linked in organizationally beneficial ways. We acknowledge the fact that individuals' social ties may not necessarily serve organizational purposes, for example in the case of external ties that may result in turnover (McPherson *et al.*, 1992), or that organizations may sustain social ties that reach beyond the capabilities of their members as in the form of inter-

organizational alliances (e.g., Gulati, 1998). However, we are particularly interested in those aspects of an individual's social ties that can be converted into organizationally valuable social ties. In the context of international assignments, structural inter-unit social capital occurs when assignees connect their home-unit ties with their host-unit ties. By brokering between the two social networks, assignees expand inter-unit contacts and opportunities for knowledge sharing (Burt, 1992; Kostova and Roth, 2003). From this perspective, structural inter-unit social capital comprises the number of cross-unit social ties that carry such organizational benefits.

Relational inter-unit social capital is realized through the development of inter-unit trust. This trust evolves as employees at the home and host unit begin to use the social ties brokered by the assignee for cross-unit exchange. While trust may take different forms and thus varies in its intensity, a certain level of trust is imperative for high levels of inter-unit social capital (Leana and Van Buren, 1999). Relational inter-unit social capital thus captures the extent to which home-unit staff trusts host-unit staff and vice versa. Implicit to this understanding is the notion that cross-unit trust may be asymmetrical in nature. For example, there will be a reduced level of relational inter-unit social capital if home-unit employees' trust towards host-unit staff is not reciprocated. Additionally, cognitive elements of inter-unit social capital must be present for a MNC to achieve social capital benefits. Evidence suggests that shared values and common goals help to bind together loosely coupled or spatially dispersed parts of an organization and facilitate cooperation among organizational members (Orton and Weick, 1990; Nohria and Ghoshal, 1994). Once employees at the home and host unit make use of the brokered ties, they are likely to internalize common understandings and develop a shared sense of how to interact with each other which, in turn, will enable them to more freely exchange resources. Therefore, we argue that cognitive inter-unit social capital is realized when employees at the home and host unit embrace a collective goal orientation and share a common level of understanding.

Individual and Inter-Unit Intellectual Capital

While Nahapiet and Ghoshal (1998) adopted an understanding of intellectual capital that is rooted at the level of a collectivity, we differentiate between individual and inter-unit intellectual capital which corresponds to the multi-level nature of social capital (Leana and Van Buren, 1999). Specifically, we define individual intellectual capital as an assignee's overall stock of knowledge and inter-unit intellectual capital as the sum of knowledge that is collectively held across two MNC units. Moreover, we consider intellectual capital to entail different facets, both at the individual and the inter-unit level. We draw upon research by Koka and Prescott (2002) who empirically showed that social capital elements provide three distinct information benefits. While these scholars discuss the differences in information benefits at the firm level, we argue that this logic applies to the creation of both inter-unit and individual intellectual capital.

Following Koka and Prescott's (2002) findings we distinguish between three knowledge benefits: knowledge volume, knowledge diversity and knowledge richness. At the individual level, knowledge volume refers to the quantity of knowledge assignees can access during the assignment to the host unit. Knowledge diversity captures the extent of heterogeneity of the knowledge to which assignees gain access (Rodan and Galunic, 2004), for instance in terms of different types of market-related knowledge. By knowledge richness we refer to knowledge that is tacit, complex and contextually embedded (Winter, 1987). For example, the ability to select appropriate behavioral responses in cross-cultural interactions requires knowledge of culture-specific cues that are imbued with meaning only through the context they are placed in (Bhagat *et al.*, 2002). The knowledge of these cues is thus rich in nature. At the inter-unit level, knowledge volume entails the amount of knowledge that is collectively held across two MNC

units and depends on the frequency of inter-unit knowledge exchange. Knowledge diversity concerns the scope of the collectively held knowledge. For example, knowledge diversity will be high if the cross-unit knowledge stems from staff with different skill sets or, as Koka and Prescott (2002) argue, from the two units operating in different markets or using different technologies. Again, inter-unit knowledge richness reflects the extent to which the joint knowledge is tacit, complex and contextual in nature. Rich knowledge across units contains a low level of codifiability (Zander and Kogut, 1995) and may result from the two units sharing particular experiences with each other (Koka and Prescott, 2002), for example through regular communication patterns.

THEORETICAL MODEL AND PROPOSITIONS

We propose two paths through which assignees' host-unit social capital influences inter-unit intellectual capital (see Figure 1). First, in their role as knowledge brokers assignees' host-unit social capital will influence inter-unit intellectual capital through their development of inter-unit social capital. Second, in their role as reverse transmitters of knowledge, assignees' host-unit social capital will influence inter-unit intellectual capital through their creation of new individual intellectual capital. We begin with the first path: assignees as knowledge brokers.

Insert Figure 1 about here

International Assignees as Knowledge Brokers

In their role as knowledge brokers, assignees' host-unit social capital should lead to structural inter-unit social capital. This effect may be moderated by assignees' ability to link their home- and host-unit social capital, as derived from their home- and host-unit power, and their motivation to do so, which is reflected in the nature of their employment relationship. Structural inter-unit social capital should then lead to relational and cognitive inter-unit social capital, moderated by the turnover rates at the home and host units and by the MNC's top management philosophy towards its MNC units. Both relational and cognitive inter-unit social capital may finally result in the creation of inter-unit intellectual capital, moderated by the home and host units' absorptive capacities.

Development of structural inter-unit social capital

Our conceptualization of inter-unit social capital shifts the focus towards the question of how and when individuals will use their individual social capital to develop it. We begin by exploring the development of structural inter-unit social capital. In general, the quality of an organization's structural social capital is shaped to a large extent by organizational members' individual social capital. For assignees to broker between their home- and host-unit networks, thereby developing structural inter-unit social capital, they need to maintain social capital at both units. In this vein, successful brokerage not only depends on assignees' structural but also their relational and cognitive social capital. Given the geographical distance and the lack of face-to-face contacts between both MNC units, it is difficult for staff at one unit to assess their counterparts at the other unit. Consequently, their decision to interact with these individuals and thus establish cross-unit ties may rely on the cues they receive from their broker. By acting as signaling agents (Higgins and Nohria, 1999), assignees' trust towards host-unit (home-unit) staff

and their identification with the host (home) unit will prompt their home (host) alters to more likely establish ties with host-unit (home-unit) staff. Assuming that assignees have built home-unit social capital prior to their relocation, the development of structural inter-unit social capital largely depends on them establishing host-unit social capital upon arrival. In formal terms:

Proposition 1a: Assignees' structural, relational and cognitive social capital with host-unit staff will positively influence the development of structural inter-unit social capital.

Scholars have also suggested that the development of organizational social capital is influenced by individuals' abilities and motivation to share personal ties with other members (Adler and Kwon, 2002; Kostova and Roth, 2003). We therefore derive two factors that moderate the development of structural inter-unit social capital: Assignees' power at their home and host units that provides them with the ability to broker and the nature of their employment relationship providing assignees with the motivation to broker.

Assignees' power. Although power has been mainly treated as an outcome of social capital (Brass, 1984; Burt 1992), it may also influence social capital building by affecting both opportunity and ease of access to form new and broker between existing social ties (Mehra *et al.*, 1998). In their role as boundary spanners, assignees need to be able to provide host-unit (home-unit) staff with access to their home-unit (host-unit) social ties in order to broker between the networks and build structural inter-unit social capital. Network *access* concerns the structural characteristics of ties and therefore power will mainly concern the structural dimension of assignees' home- and host-unit social capital in building structural inter-unit social capital. In this vein, three different sources of power can be derived that are relevant for our arguments: hierarchical authority, resource control and network centrality (Astley and Sachdeva, 1984).

First, we argue that assignees' power at their home unit will enable them to provide host-unit staff with access to their home-unit social ties, i.e. to their structural home-unit social capital. This power may result from assignees' hierarchical authority in the home organization. Assignees can use this formal authority to command obedience among their home-unit colleagues (Astley and Sachdeva, 1984) and instruct them to develop relationships with individuals at the host unit. Carroll and Teo (1996) also showed that managers have more ties with co-workers, maintain closer network ties and have larger overall networks than non-managers. Accordingly, assignees in hierarchically higher positions will be able to more easily share their home-unit ties with host-unit staff. Assignees' home-unit power also stems from the resources they control through their host-unit social capital. Drawing on social resource theory (Lin *et al.*, 1981), we would assume assignees to have more power if their host-unit alters possess social resources (e.g., access to particular host market information) that are potentially useful to colleagues at home. If employees at home value these resources, they will consider the interaction with host-unit staff worthwhile, thus enabling assignees to provide host-unit staff with access to their structural social capital at home. A final source of home-unit power is assignees' network centrality at home. Network centrality entails the degree to which individuals in a network identify the focal actor as one of their network contacts and has been shown to be associated with power (Brass and Burckhardt, 1993). If assignees have occupied a central network position at their home unit prior to their assignment, they can more easily access and thus broker those ties that are potentially useful to host nationals. In sum, we would assume that assignees with more power at home will be more able to broker between their structural social capital at the home and the host unit. Therefore:

Proposition 1b: Assignees will be more able to develop their structural host-unit social capital into structural inter-unit social capital when they have more home-unit power.

Second, we argue that assignees' power at their host unit will enable them to provide home-unit staff with access to host-unit social ties, i.e. to their structural host-unit social capital. Similar to our earlier arguments, this power may result from assignees' hierarchical authority at the host unit. We would assume that assignees on a strategic or executive transfer (Caligiuri, 2006) have a higher hierarchical authority in the host unit than other assignees and thus have more power. In this vein, expatriates will be able to exert more power than inpatriates since expatriates carry with them the status and influence associated with their role as HQ representatives while inpatriates, coming from the MNC's periphery, are unlikely to encounter the same level of acceptance in the host organization (Harvey *et al.*, 1999). Another source of assignees' host-unit power is a function of the host unit's dependence on the assignee's home unit. Scholars have demonstrated that the extent to which other MNC units depend upon the resources that are controlled by a certain local unit increases this unit's importance to the MNC (Mudambi and Navarra, 2004). When there is a high intensity of resource flows from the local unit to other parts of the MNC, the unit has more power. Thus, assignees coming from a strategically important unit will be perceived by host-unit staff to possess more power and will be able to use this power in providing home-unit staff with access to the host organization. Again, given the generally higher stock of resources at the HQ, expatriates are likely to possess relatively more host-unit power than inpatriates. Finally, assignees' network centrality at the host unit will provide them with the power to share their structural host-unit social capital with home-unit colleagues as they can more easily broker those ties that are potentially useful to home-unit staff. Assignees will more likely occupy a central network position if they are on an executive transfer, are transferred to a smaller unit, which will be the case for expatriates rather than for inpatriates, or are on a repeated assignment to the same unit. Taken together, we propose:

Proposition 1c: Assignees will be more able to develop their structural host-unit social capital into structural inter-unit social capital when they have more host-unit power.

We expect home-unit and host-unit power to have independent, yet additive, effects on assignees' ability to develop inter-unit social capital. Assignees with more home-unit, or host-unit, power will be in a better position to initiate cross-unit interactions than assignees without either source of power. This is because initiation of cross-unit interactions can happen from either the home unit or host unit and does not necessarily require that both units initiate the interactions simultaneously. At the same time, when assignees possess both home- and host-unit power, they will be able to provide cross-unit access to a larger number of staff across both units and thus develop more inter-unit social capital compared to assignees with only one source of power.

Nature of employment relationship. The nature of assignees' employment relationship with the MNC will impact on their motivation to broker between their home- and host-unit social networks. The idea of motivation is central to social capital building since "the mere fact of a tie implies little about the likelihood that social capital effects will materialize" (Adler and Kwon, 2002: 25). Specific motivational problems to develop structural inter-unit social capital arise in the context of international assignments. Building on structural hole theory (Burt, 1992), international assignees can be considered to possess networks rich in structural holes as they are connected to alters at both the home and the host unit that are likely to be unconnected. This brokering role, in turn, generates two main benefits – access to information, and greater control over resources and outcomes (Burt 1992; 1997). These benefits provide assignees with a unique organizational value, which makes their retention a rational choice for the organization even though knowledge could be shared more effectively if the structural holes are filled (Leana and Van Buren, 1999). However, once assignees connect home- and host-unit staff, thereby

developing structural inter-unit social capital and benefiting the organization as a whole, they effectively close their structural holes and their unique value for the organization is reduced. To maintain their employability, assignees may thus feel inclined not to close their structural holes.

This incentive problem on the individual level can be addressed by organization-level inducements. As Leana and Van Buren (1999) argue, the use of long-term oriented employment practices such as training or career development will provide secondary benefits to those employees that build organizational social capital. Indeed, an appropriate design of employment practices can serve as an important means to ensure assignees' employability despite closing their structural holes. Assignees' perceptions of deficient repatriation and career management systems and the resulting high level of repatriate turnover as revealed by several empirical studies (Lazarova and Caligiuri, 2001; Stahl *et al.*, 2002) clearly undermine such a long-term approach. It becomes clear that the type of employment relationship the organization offers is likely to affect whether the assignee will choose to broker relationships between the home and host unit. In this regard, research derives four employee-organization relationships that differ in terms of the time horizon and the degree of balance of the relationship (Tsui *et al.*, 1997). A quasi spot contract is a balanced relationship that focuses on short-term, transactional exchanges between employee and employer whereas a mutual investment relationship balances a reciprocal long-term investment. On the contrary, in an underinvestment (overinvestment) relationship, the employee is expected to meet long-term (short-term) obligations while the employer reciprocates with short-term (long-term) incentives. Yan *et al.* (2002) argue that the unbalanced relationships may also result from opportunism on behalf of the assignee and the organization, respectively.

In the context of international assignments, quasi spot contracts can be viewed as project-based or technical transfers that do not include any career development component (Caligiuri, 2006; Collings *et al.*, 2007). The underinvestment mode characterizes assignments that lack organizational support for repatriation and career planning. This is possible if the knowledge an assignee has acquired during the assignment is location-specific and not applicable elsewhere in the MNC (Bonache and Brewster, 2001). An overinvestment relationship might be one where the company provides numerous extended perks and benefits to assignees, for example in return for accepting a post in an unattractive assignment location or to overcome dual-career issues (Harvey, 1998), but it may also reflect protean career tendencies among assignees (Stahl *et al.*, 2002) which may lead to opportunistic behavior. Companies that invest in and value their international assignees and that have high rates of assignment success indicate a mutual investment approach. For example, research suggests that inpatriate transfers are motivated by developmental purposes to prepare individuals for future management tasks in the foreign subsidiary and that inpatriates believe the HQ assignment to increase their career prospects in the organization (Reiche, 2006). Tsui *et al.* (1997) demonstrated that employees respond more positively in terms of both performance and attitudes when they work in an overinvestment or mutual investment relationship. Along similar lines, we would expect assignees to build more structural inter-unit social capital if the MNC commits to a long-term relationship with them. This long-term commitment is likely to not only motivate assignees to share their respective structural social capital with home- and host-unit staff but also to more openly demonstrate their trust towards and identification with the host (home) unit to home-unit (host-unit) staff which, in turn, will signal to staff at both units that cross-unit interaction is worthwhile. We posit:

Proposition 1d: Assignees working in an overinvestment or mutual investment relationship with the MNC will be more motivated to develop structural inter-unit social capital from their host-unit social capital than those working in a quasi spot contract or underinvestment relationship.

Development of relational and cognitive inter-unit social capital

Two implications can be derived from our definition of inter-unit social capital. First, key to Leana and Van Buren's (1999) conceptualization of organizational social capital is the notion that although social capital is based on a certain structural configuration of actors, its benefits can only be realized through the existence of relational and cognitive social capital. Structural ties are thus a necessary but insufficient condition for social capital effects to occur. Only once the assignee has connected the social networks at the home and host unit, thereby building structural inter-unit social capital, can employees use these cross-unit ties to develop relational and cognitive inter-unit social capital and, in turn, engage in knowledge sharing.

Second, the three social capital dimensions seem to be interrelated in a sequential way. Leana and Van Buren (1999) implicitly assume that structural ties exist before relational and cognitive aspects of social capital can develop. This reasoning is supported by other research. For example, scholars emphasize that trust requires time to develop despite the existence of regular interaction (Lewicki and Bunker, 1996). Also, Tsai and Ghoshal (1998) found that structural and cognitive social capital constitute two different sources of relational social capital which thus mediates their influence on resource exchange. Although their study provides no evidence for structural social capital preceding cognitive social capital, this argument is supported by research on organizational socialization (e.g., Van Maanen and Schein, 1979; Morrison, 2002) that highlights the role of social interactions for the diffusion of organizational values and individuals' social integration with colleagues. Accordingly, we would assume a time sequence between the development of structural social capital on the one hand and relational and cognitive social capital on the other. This idea is especially important for international assignees as they may only be able to directly influence structural inter-unit social capital. The development of relational and cognitive inter-unit social capital, however, evolves separately and depends on employees at the home and host unit deepening the developed cross-unit ties over time. Therefore:

Proposition 2a: Structural inter-unit social capital will lead to the development of relational and cognitive inter-unit social capital.

As international assignees are only able to indirectly influence the relational and cognitive dimensions of inter-unit social capital by providing the necessary structural linkages, other factors will influence their development. We discuss two moderators: turnover rates at the home and host units, and the MNC's top management philosophy.

Turnover rates at home and host units. Researchers emphasize the importance of network stability to ensure continuous social capital benefits (Coleman, 1990). Indeed, as Inkpen and Tsang (2005: 156) state "maintaining a stable pool of personnel within a network can help individuals develop long-lasting interpersonal relationships" while the turnover of central network actors may result in major disruptions to an organization's social system. In this vein, Leana and Van Buren (1999) note the importance of individuals having direct knowledge of one another in order to develop trusting relationships. Because cross-unit exchange is likely to be less frequent and less regular than interactions among individuals within an organizational unit (Kostova and Roth, 2003), network stability over time becomes increasingly important for developing relational social capital. Due to the physical distance between MNC units, the rare opportunities for face-to-face contact between home- and host-unit staff, and existing cultural differences in individuals' trust-building processes (Doney *et al.*, 1998), achieving relational social capital across MNC units may take even more time and effort compared to achieving relational social capital across domestic business units.

A similar logic applies to the development of collective goals across MNC units. Research suggests that stable and cohesive networks facilitate cooperative norms (Coleman, 1990) and solidarity (Adler and Kwon, 2002) which, in turn, will prompt organizational members to subordinate their individual interests to the goals of their collective. These ideas are particularly relevant in the MNC context that is characterized by individuals' dual levels of organizational identification (Reade, 2003). Again, extant cultural differences concerning individuals' frames of reference and attitudes will further slow down the process of building collective goals. Thus, network stability at both the home and host unit is particularly important for the development of cross-unit trust and a common goal orientation within MNCs. Given the considerable time that this process is likely to take, we would assume the effect of network stability to be much more pronounced for the development of relational and cognitive inter-unit social capital than in the case of structural inter-unit social capital. Network stability will be largely a function of turnover rates at the home and host units. When a unit possesses a high rate of turnover, its networks will be more unstable. Consequently:

Proposition 2b: Turnover rates at the home and host units moderate the positive relationships between structural inter-unit social capital and relational and cognitive inter-unit social capital such that the relationships will be stronger when turnover is low.

Top management philosophy. Organizational reciprocity norms facilitate the development of social capital in general and relational and cognitive inter-unit social capital in particular. For example, organizational cultural norms such as inclusiveness and open communication are thought to promote greater interpersonal trust among organizational members (Whitener *et al.*, 1998). Similarly, as Leana and Van Buren (1999) explain, organizations use socialization processes to communicate their philosophy and norms, thereby fostering the development of common values and goals among their organizational members with the aim of initiating collective action. These norms and values not only reflect the character of collective action in employees' most immediate organizational unit, but are also associated with collective exchange and interests between organizational units (e.g., Nohria and Ghoshal, 1994).

In an international context, scholars conceptualize these overarching norms as a MNC's top management philosophy towards its MNC units and distinguish between a polycentric, ethnocentric and geocentric approach (Perlmutter, 1969; Taylor *et al.*, 1996). The polycentric philosophy emphasizes the role of local responsiveness within the MNC network and therefore localizes MNC management. This approach entails a minimal level of cross-unit exchange in terms of staff, management practices and resources. We would thus expect employees to be less likely to establish inter-unit trust and develop collective goals beyond their local unit, resulting in low levels of relational and cognitive inter-unit social capital. An ethnocentric philosophy is based on the belief of HQ dominance in the MNC and primarily encompasses a one-directional exchange from the HQ to the MNC's periphery. This approach allows HQ employees to define and enact collective goals in the MNC and, given their HQ influence, promote trust towards subsidiary staff, although this trust is likely to be more temporal and fragile in nature. However, the lack of reciprocal exchange and the resulting perceived inferiority by subsidiary staff (Banai, 1992) may hinder the development of relational and cognitive inter-unit social capital at the subsidiary level. Finally, the geocentric philosophy adopts a best practices approach to MNC management in which each MNC unit can actively shape overall MNC management. Here, the transfer of staff, practices and resources occurs in a bi-directional way. There is evidence that increased MNC interdependence benefits the individual organizational member, for example in the form of perceived career opportunities beyond the local unit (Newbury, 2001). This facilitates

a culture of reciprocal cross-unit exchange, trust and common understanding and thus results in the highest level of relational and cognitive inter-unit social capital. We posit:

Proposition 2c: A MNC's top management philosophy moderates the positive relationships between structural inter-unit social capital and relational and cognitive inter-unit social capital. Specifically, a geocentric philosophy will result in the strongest relationships and a polycentric philosophy in the weakest relationships.

Creation of inter-unit intellectual capital

When international assignees are able and motivated to broker between their home- and host-unit network ties, thereby developing structural inter-unit social capital, the newly connected network ties can potentially be used by both home- and host-unit staff to access knowledge resources residing at the respective other organizational unit. The acquisition of these resources will ultimately increase the host (home) unit's knowledge towards the home (host) organization and thus enhance inter-unit intellectual capital.

However, due to the geographical dispersion of MNC units, cross-unit ties between individuals are likely to be weaker than intra-unit ties, despite the brokering by assignees. While weak ties may be instrumental in accessing non-redundant information (Granovetter, 1973), the transfer of complex knowledge through weak ties is difficult (Hansen, 1999; Seibert *et al.*, 2001). We would assume that a substantial share of knowledge residing at a specific MNC unit is complex rather than simple as it is embedded in the local organizational and institutional context and needs to be adapted upon transfer (Argote and Ingram, 2000; Kostova and Roth, 2002). We therefore expect that strong ties will be more useful for sharing knowledge across MNC units. To establish strong ties between home- and host-unit staff and allow a MNC to create intellectual capital based on its employees' cross-unit access to knowledge resources, high levels of relational and cognitive social capital across units are needed. For example, Kostova and Roth (2003) argue that the high number of cross-unit interaction points between interdependent MNC units require relational exchanges for social capital effects to materialize. A shared cognitive understanding allows knowledge senders and recipients to communicate with fewer misunderstandings (Tsai and Ghoshal, 1998). Extensive cognitive social capital across units also means that employees may more likely recognize when information is potentially important to another business unit. In this regard, relational and cognitive inter-unit social capital will increase inter-unit intellectual capital not only in terms of knowledge volume but also concerning knowledge diversity and richness. Indeed, high levels of interpersonal trust and shared goals between two MNC units should prompt more staff to engage in cross-unit knowledge sharing, thus increasing the diversity of knowledge resources being connected. Evidence also suggests that individuals who maintain trusting ties with one another are more willing to exchange rich and complex knowledge such as confidential information, strategic resources and potential opportunities (Bouty, 2000; Reagans and McEvily, 2003). Similarly, Kostova and Roth (2002) found shared values to facilitate the exchange of rich and complex knowledge between MNC units, measured as the implementation and internalization of organizational practices. Therefore:

Proposition 3a: Relational and cognitive inter-unit social capital between the home and host units positively influence the creation of inter-unit intellectual capital in terms of knowledge volume, diversity and richness.

Although social capital serves as a crucial pre-requisite for intellectual capital building, knowledge acquisition and exchange at the organizational level also depend on what Cohen and Levinthal (1990: 128) call absorptive capacity, "the ability to recognize the value of new

information, assimilate it, and apply it to commercial ends.” Specifically, they argue that a firm’s capability to identify and make use of new related information derives from the stock of knowledge a social entity has accumulated over the past. In this vein, Szulanski (1996) discovered that the lack of absorptive capacity substantially inhibits the internal transfer of best practices. In another study, Tsai (2001) showed how elements of social capital and absorptive capacity interact to influence intra-organizational knowledge transfer. We would thus expect that relational and cognitive inter-unit social capital only lead to an increase of inter-unit intellectual capital if both the assignee’s home and host units have the capacity to absorb new knowledge in terms of volume, diversity and richness. Once host-unit (home-unit) employees develop cross-unit trust and a common goal orientation based on the network ties brokered by the assignee, they can potentially access and exploit different types of knowledge resources at the home (host) unit and, in doing so, increase inter-unit intellectual capital. This assimilation and exploitation of knowledge resources requires absorptive capacity at the host (home) unit. Prior knowledge, for example rooted in home- and host-unit staff’s experience with cross-cultural interactions (Vance and Ring, 1994), will facilitate the creation of new knowledge. Also, as the stock of prior knowledge may be distributed unevenly across the home and the host unit, internal information provision, for example by the international assignee, or a high degree of inter-unit relatedness may help to synchronize both units’ absorptive capacities (Lenox and King, 2004). We posit:

Proposition 3b: The home and host units’ absorptive capacities moderate the positive relationships between relational and cognitive inter-unit social capital and inter-unit intellectual capital such that the relationships will be stronger at high levels of absorptive capacities.

International Assignees as Knowledge Transmitters

The second path through which assignees’ host-unit social capital will influence inter-unit intellectual capital unfolds via assignees’ role as direct transmitters of their newly acquired intellectual capital back home. Specifically, assignees’ host-unit social capital will influence different dimensions of their individual intellectual capital which, in turn, leads to the creation of inter-unit intellectual capital. The latter relationship is moderated by assignees’ ability to transmit knowledge, which depends on the degree of communication maintained with the home unit, and their motivation to do so, which we propose is contingent upon how successfully assignees are repatriated to their home unit.

Creation of individual intellectual capital

During their stay at the host unit, assignees will develop unique levels of structural, relational and cognitive social capital which, in turn, will impact on the creation of individual intellectual capital. In this vein, we argue that the three social capital dimensions differ in their relative effect on the volume, diversity and richness of the knowledge being acquired. A substantial amount of research discusses the role of structural network characteristics on knowledge transfer. Theoretically, we would expect individuals with many weak ties and individuals who have bridging roles between unconnected networks to gain access to more unique information (Granovetter, 1973; Burt, 1992). Along this line, studies have shown network attributes such as network size, network centrality (Tsai and Ghoshal, 1998; Koka and Prescott, 2002) and network sparseness (Burt, 1992; 1997) to increase the volume of information as well as knowledge accessibility and exchange. Empirical evidence also suggests that structural network characteristics such as network range facilitate individuals’ access to diverse knowledge

(Reagans and McEvily, 2003; Cross and Cummings, 2004). Accordingly, we expect assignees who maintain structural social capital to be able to acquire knowledge from host-unit staff both in terms of volume and diversity and, in doing so, increase their individual intellectual capital. Thus:

Proposition 4a: Assignees' structural social capital with host-unit staff will positively influence their individual intellectual capital by enhancing both the volume and the diversity of knowledge they acquire.

In contrast, relational social capital is mainly instrumental in accessing rich knowledge. For example, Bouty (2000) demonstrates in a study of R&D scientists that strategic resources and semipublic information can only be exchanged under conditions of mutual trust and acquaintance. Along similar lines, there is evidence that strong and trustworthy ties facilitate the transfer of tacit knowledge (Hansen, 1999; Reagans and McEvily, 2003). In order to acquire knowledge that is tacit and thus displays a low level of codifiability, for example in the case of inpatriates' learning of the HQ corporate culture and specific organizational routines, assignees need to sustain relational social capital. In formal terms:

Proposition 4b: Assignees' relational social capital with host-unit staff will positively influence their individual intellectual capital by enhancing the richness of knowledge they acquire.

Tsai and Ghoshal (1998) argue that shared vision and values serve as an important means for knowledge sharing among organizational members as they can prevent misunderstandings in members' communications and enable members to recognize the potential value of their knowledge exchange. Although these scholars only found indirect support for the hypothesized effect, we would expect that cognitive social capital does affect the acquisition of knowledge. Specifically, we suggest that assignees' identification with the host unit helps them to establish similar perceptions about the host unit and share common goals with locals. This will enable assignees to attribute more value to knowledge exchange with locals and will thus increase the amount of knowledge they access from host-unit staff. In a similar vein, we would expect that shared values through identification with the immediate organizational unit will make it easier to exchange tacit, rich knowledge as this type of knowledge is often embedded within individuals' cognitive processes or the routine and non-routine processes of an organization's distinct culture and values (Daft and Lengel, 1986; Bhagat *et al.*, 2002). Thus, we propose:

Proposition 4c: Assignees' cognitive social capital with host-unit staff will positively influence their individual intellectual capital by enhancing both the volume and the richness of knowledge they acquire.

Creation of inter-unit intellectual capital

The intellectual capital assignees gain during their assignment is of potentially high value to their home unit. For example, inpatriates may be able to convey the HQ strategy and culture to home-subsiary staff, thereby establishing more informal control. Likewise, expatriates may diffuse knowledge on the local subsidiary context and local competitors into the HQ and help the MNC to adapt its local business strategies (Harvey *et al.*, 1999; Hocking *et al.*, 2004). It is important to note that this knowledge may not only be transmitted upon assignees' return but also during the assignment. This is particularly relevant for assignees as part of a multinational project that requires constant knowledge exchange. Also, expatriates may continue to coordinate with their HQ management team while abroad. In this vein, the home unit may not only gain from assignees' knowledge in terms of the overall volume but, in particular, also from the degree of knowledge diversity and richness. For example, scholars highlight the access and recombination of assignees' rich expertise for organizational purposes as a key long-term assignment outcome

(Yan *et al.*, 2002; Lazarova and Tarique, 2005). Similarly, Berthoin Antal (2000) showed that the knowledge assignees acquire during their assignment may provide declarative, procedural, conditional, axiomatic and relational resources for the MNC. Therefore:

Proposition 5a: Assignees' newly created intellectual capital in terms of its knowledge volume, diversity and richness increases the volume, diversity and richness of inter-unit intellectual capital.

Again, whether knowledge transfer occurs is also contingent upon assignees' ability and motivation to engage in knowledge sharing (Minbaeva and Michailova, 2004). Accordingly, we derive two factors that moderate the relationship between individual and inter-unit intellectual capital: communication with the home unit that reflects assignees' ability to transmit knowledge, and successful repatriation, reflecting assignees' ongoing motivation to do so.

Communication with home unit. Research suggests that psychic and geographic distance, hierarchical separation and necessary lead-time to initiate communication, for example due to extant time differences, negatively affect the probability that a person is contacted by another organizational member (Nebus, 2006). In the international assignment context, these factors are known to contribute to the 'out of sight, out of mind' phenomenon that is likely to inhibit home-unit communication with the assignee, even though the assignees' home-unit social capital may still be intact. To overcome these communication barriers, the home unit needs to establish formal communication channels. In this vein, there is evidence that technology-supported communication facilitates ongoing information exchange across intra-organizational boundaries (Teigland and Wasko, 2003). We would expect that the use of such communication structures enables assignees to transfer their newly acquired knowledge to the home unit. Thus:

Proposition 5b: Assignees will be more able to build inter-unit intellectual capital from their newly created individual intellectual capital during their assignment when the home unit maintains more communication with the assignees.

Successful repatriation. Although assignees can generally be assumed to be motivated to contribute to the achievement of organizational goals through knowledge provision, especially in the case of long-term transfers that provide high levels of status and autonomy (Minbaeva and Michailova, 2004), difficulties arise upon completing the assignment. Evidence suggests that assignees are largely unsatisfied with MNCs' repatriation systems and perceive their positions upon repatriation to be inadequate, leading to feelings of underemployment and turnover intentions (Stahl *et al.*, 2002). A MNC's failure to provide repatriates with a position that builds on their expertise is thus likely to reduce their motivation to engage in ongoing knowledge sharing. These findings highlight the importance of repatriation as an integral part of the assignment and emphasize that MNCs can only make use of and retain assignees' acquired knowledge in the long run if they are able to successfully repatriate assignees into their home organization. In this regard, repatriation success depends on the provision of organizational support practices (Lazarova and Caligiuri, 2001) and career paths that correspond and foster systematic access to assignees' knowledge resources (Lazarova and Tarique, 2005). We posit:

Proposition 5c: Assignees will be more motivated to build inter-unit intellectual capital from their newly created individual intellectual capital after their assignment when the assignees are more successful in their repatriation to the home unit.

DIRECTIONS FOR FUTURE RESEARCH

Adopting a social capital perspective, our model derives key determinants that influence knowledge flows through international assignments and examines how assignees' social capital

leads to the creation of inter-unit intellectual capital. Through our efforts, we contribute to research on international assignments, social capital and MNC knowledge flows. First, we conceptualize international assignees as conduits of MNC knowledge flows and argue that assignees' roles as knowledge brokers and reverse knowledge transmitters are highly dependent on their social capital at their home and host unit. In doing so, we believe to have advanced academic insight in a field that is in need of further theory development (De Cieri and Dowling, 1999). Second, we contribute to social capital theory by proposing when individuals will be able and motivated to broker between their distinct social networks to benefit the organization. We also conceptualize a time sequence between the development of structural inter-unit social capital on the one hand and relational and cognitive inter-unit social capital on the other, thereby further specifying the link between inter-unit social and intellectual capital. Finally, we address the call for advancing the micro-level foundations of MNC knowledge flows (Foss and Pedersen, 2004) and discuss how individual-level factors contribute to MNC-level knowledge outcomes. At the same time, we take a longer-term perspective on MNC knowledge flows by recognizing that knowledge sharing continues after the assignment has ended (Lazarova and Tarique, 2005).

While we have focused our model on assignees' roles as knowledge brokers and reverse transmitters of knowledge, our arguments can also be applied to assignees' knowledge transfer from their home to the host organization. In this regard, existing research emphasizes the role of diverse social networks for knowledge exchange in the host-unit context (Au and Fukuda, 2002). In line with our conceptualizations, we would expect assignees' host-unit social capital to serve as a main vehicle to share their existing knowledge with host-unit staff, thereby creating inter-unit intellectual capital. Here, mentoring by senior host-unit staff may help to channel assignees' social capital building (Higgins and Nohria, 1999) towards those host employees that are able to make use of assignees' knowledge resources.

Building on our propositions, we hope to encourage future research that tests our model with international assignees. In this regard, the nature of our proposed framework, that entails multiple mediated relationships and crosses different levels of analysis, calls for the use of advanced quantitative approaches to data analysis such as structural equation modeling and hierarchical linear modeling. Given the relatively small overall population size of different groups of international assignees, researchers need to include individuals from multiple divisions, functional areas and organizations in order to satisfy the respective techniques' sample size requirements. At the same time, assignees' dispersion across these distinct organizational units and the resultant need to collect separate corresponding organization-level data and reciprocal social network data for each respondent will render this enterprise very complex and may reach beyond the resources available in a particular research project. To address these challenges, it would be reasonable to test only parts of the model in any given project. For example, Propositions 1a-d would be a feasible single-study project. Complementing large-scale survey results with an in-depth case study in a single organization would also be a sound approach to address these challenges. In a similar vein, the collection of comparable data for two or more distinct assignee groups may provide more far-reaching insights into how types of international assignees will differ in their role as knowledge agents.

In addition, while we have integrated the individual and organizational levels of analysis, there are other individual and organizational determinants worth pursuing. Not only is there a multitude of antecedents to assignees' social capital building but individual-level factors are also likely to influence the creation of individual intellectual capital. For example, it is likely that cross-cultural differences influence various parts of the model. There is evidence that assignees' culture-of-origin may affect different characteristics of their social networks with host-unit staff

(Wang and Kanungo, 2004). Likewise, for knowledge to be created an individual needs to reflect upon, interpret and make sense of new information. This processing is particularly important in a cross-national context, where information may be instilled with culture-specific meanings (e.g., Bhagat *et al.*, 2002). Moreover, the relative home- and host-unit size is likely to influence inter-unit social and intellectual capital building. For example, if both units are small, the cross-unit ties brokered by the focal assignee will be relatively denser and encompass a higher share of staff at each unit, thereby increasing the chance that relational and cognitive inter-unit social capital can develop and lead to the creation of inter-unit intellectual capital. In contrast, when one unit is much larger in size than the other unit, unidirectional knowledge flows are more likely to occur from the larger to the smaller unit. It would also be fruitful to further examine the extent to which cross-unit knowledge exchange occurs once assignees have brokered between home- and host-unit social networks. Research suggests that subsidiaries with strong bargaining power may be tempted to limit their resource distribution with the aim of strengthening their strategic independence (Mudambi and Navarra, 2004).

Although our model essentially constitutes a one-directional path, feedback processes are likely to occur. For example, the developed relational and cognitive inter-unit social capital can be assumed to subsequently strengthen the structural cross-unit linkages over time, thereby pointing towards a situation where the different inter-unit social capital dimensions reinforce each other over time. Our conceptual arguments thus call for longitudinal research that traces individuals' and organizations' social and intellectual capital at different points in time. In doing so, we would expect research on social capital to be able to draw more precise conclusions concerning in which time frame and to what extent social capital benefits will materialize. Our analysis also indicates that individuals can actively control cross-unit knowledge flows by initiating organization-level social ties. It would be important for future research to explore in more detail to what extent these social ties can be sustained when the individual that has established them leaves the organization and how individuals' brokering roles evolve over time. Changes in staff composition at both the home and host organization require inter-unit social capital to be continuously renewed, resulting in the need to make use of repetitive staff transfers. The inability to adapt the inter-unit social capital to changing work environments may lead to negative social capital (Gargiulo and Benassi, 1999).

Finally, our research highlights the need to further integrate theories on social capital and employment relationships. For example, we proposed that assignees will be more motivated to develop organizational social capital when the organization commits to a long-term employment relationship with them. At the same time, it is possible that high levels of assignees' firm-specific social capital also affect their own expectations about the employment relationship with the organization, leading the assignee to engage in "self-escalated commitment" which, however, may not necessarily be reciprocated by the organization in the long run (Yan *et al.*, 2002: 380). In this regard, longitudinal research would be able to examine more closely how the long-term employee-employer relationship develops with changing levels of individual and inter-unit social capital and how this will affect repatriate turnover tendencies.

CONCLUSION

The conceptual framework presented in this paper indicates that the process of knowledge flows across MNC units is complex, ongoing and involves multiple levels of analysis. We argued that individual social capital needs to be explicitly transferred to the organizational level to have a sustained effect on inter-unit intellectual capital. The mere movement of staff across organizational units is thus an insufficient condition for initiating knowledge transfers. Similarly,

the notion that network stability is imperative to the maintenance of social capital and thus continuous knowledge transfer highlights the need for organizations to adopt long-term employment relationships with their employees in order to fully benefit from their members' network ties. Together, these arguments call for more longitudinal research and multi-level theoretical models to better understand how certain assignee and unit-level characteristics impact on MNC knowledge flows and thus better understand how we can conceptualize, measure and facilitate cross-unit knowledge transfer in MNCs.

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FIGURE 1

The Role of International Assignees' Social Capital in Creating Inter-Unit Intellectual Capital

