UNDERSTANDING THE CROSS-LEVEL EMBEDDEDNESS OF INTERFIRM PARTNERSHIP FORMATION

JOHN HAGEDOORN
University of Maastricht

This paper suggests a cross-level understanding of the embeddedness of interfirm partnering in the context of the formation of new partnerships. It makes a critical distinction among environmental embeddedness, interorganizational embeddedness, and dyadic embeddedness, stressing the importance of understanding the interaction of these different levels of embeddedness. This focus on the complex interaction effects of different levels of embeddedness of interfirm partnering sets this contribution apart from previous work in the field.

The emergence of new forms of economic organization and their social embeddedness—that is, the socioeconomic context of these economic activities—are important topics in the management and organization literature (Baum & Oliver, 1991; Dacin, Ventresca, & Beal, 1999; DiMaggio & Powell, 1983; Granovetter, 1985; Holm, 1995; Oliver, 1992). Interfirm partnering—the sharing of assets and resources by separate companies—is an example of such a relatively new form of economic organization that appears to have become well embedded in the advanced economies of the world. It is no surprise, therefore, that the formation process of these partnerships has received quite a bit of attention in the literature (e.g., Dyer & Singh, 1998; Gulati, 1995a, 1999; Hagedoorn, 1996; Mowery, 1988; Osborn & Baughn, 1990).

My objective in this paper is to propose an interacting cross-level understanding of the social embeddedness of interfirm partnerships and the formation of subsequent partnerships. In that context, I conceptualize embeddedness at several levels that correspond to different social contexts that surround interfirm partnerships and their sponsors. Some classical contributions from sociology have already discussed different levels of social embeddedness and their impact on social behavior. I take the differentiation into various levels of social embeddedness further by distinguishing among environmental embeddedness, interorganizational embeddedness, and dyadic embeddedness of interfim partnerships. These separate levels of embeddedness can be understood as the environment in terms of the specific country and industrial background, the historical setting of interorganizational networks in which companies find themselves, and the concrete one-on-one linkages between companies.

In its specific attention to the embeddedness of interfim partnerships, this paper adds to previous conceptual and theoretical work on the role of embeddedness of organizations from a more general perspective related to a broad series of organizational changes (Baum & Dutton, 1996; Dacin et al., 1999; Granovetter, 1992b). As explained in Dacin et al.’s (1999) systematic and critical review of the relevant literature, previous contributions have mainly considered the additive effects of multiple levels of embeddedness. For instance, Dansereau, Yammarino, and Kohles (1999) stress the relevance of a multiple-level understanding of change in various organizational entities, such as dyads, small groups, partnerships, and industries, but they do not consider the possible interaction of these different levels. This paper attempts to go beyond such an analysis of added multilevel embeddedness and longitudinal changes. In the remainder of the paper, I emphasize the importance of a theoretical analysis of the role of embeddedness that focuses on the complex interaction effects of different levels of embeddedness, leading to a cross-level understanding of interfim partnering.
EMBEDDEDNESS AND INTERFIRM PARTNERING

A number of contributions suggest that the embeddedness of interfirm partnering is affected by a process of learning through informed imitation of companies sponsoring these partnerships (Baum & Oliver, 1991; Di Maggio & Powell, 1983; Osborn & Hagedoorn, 1997). Through this learning mechanism, companies follow the example of others as they experiment with such new organizational forms as interfirm partnerships. This process guiding the diffusion of new forms of organization is influenced both by the broader environment of companies and by their more direct environment (Osborn, Hagedoorn, Denekamp, Duysters, & Baughn, 1998).

Such a differentiation of embeddedness into an environment at large and a direct environment echoes a “classic” sociological interpretation of social interaction, such as that found in Simmel (1950). Simmel (1950) separated stable forms of social interaction into dyadic (one-on-one) environments and large group environments. A somewhat similar distinction is found in Granovetter (1985, 1992a,b), who analyzed embeddedness in modern economic systems, where (economic) actions and outcomes of the behavior of “actors” are affected by both their dyadic relationships and the broad structure of their overall network of relationships. In other words, the embeddedness of organizations has already been characterized by both its structural and its relational aspects in some of the seminal contributions from sociology.

Structural embeddedness affects companies when they mimic the behavior of others—for instance, as they introduce new organizational forms based on the information they receive from external sources, such as early adopters of new organizational forms with which they are not in direct contact. Obviously, companies can also learn through direct interaction with companies operating in the same market, where they interact with each other through various transactions, partnerships, trade organizations, and so forth. In that case, learning about new forms of organization is largely influenced by relational embeddedness.

Empirical research on the adoption of new forms of organization, such as partnerships, does indeed suggest that the process of organizational diffusion is heavily affected by learning through various forms of informed imitation. For instance, research by Venkatraman, Loh, and Koh (1994) reveals that this process of organizational diffusion follows a twofold pattern in terms of diffusion through learning from direct “channels of communication” within a specific nearby environment and diffusion by means of distance learning through remote, external influences without any direct interaction with a group of early adopters.

As far as the viability of new forms of organization is concerned, learning through informed imitation helps companies structure their interfirm relationships to fit their environmental conditions. In addition, the combination of a broader environmental fit and the specific interorganizational fit is important for the continuing viability of organizations and their different interrelationships (Osborn et al., 1998; Saxton, 1997). This implies that the embeddedness of partnerships can be understood at different levels—that is, the nearby environment in which a partnership operates and the more general socioeconomic setting of its environment at large. As already mentioned above, one can also follow Granovetter (1992a,b), where relational, dyadic embeddedness is placed in the broader context of structural embeddedness.

I suggest that it is useful to combine these different works when one aggregates different dichotomies of embeddedness into three separate levels that will allow a more complex, cross-level understanding of the embeddedness of partnerships. This embeddedness at different levels is not only relevant for the comprehension of the emergence of new forms of economic organization, such as interfirm partnerships. It is also important for understanding the likelihood that such new forms of economic organization will be continued by companies that are already actively involved in interfirm partnership formation (Dyer & Singh, 1998; Gulati, 1995a; Heide & Miner, 1992; Uzzi, 1997).

In the following, I propose an understanding of the likelihood of interfirm partnership formation at different levels of embeddedness—that is, environmental embeddedness, interorganizational embeddedness, and dyadic embeddedness. As explained in further detail in the following sections, one should not only understand this process of the formation of partnerships at each of the different levels of embeddedness. For the current contribution, the discrete levels
of embeddedness that I discuss first are primarily building blocks. The interaction of these different levels, representing the complexity that affects the likelihood of the formation of partnerships, is of greater concern than the analysis from a single-level perspective.

Environmental Embeddedness

When one considers the environmental embeddedness affecting the likelihood of new partnership formation, one has to think of specific effects at the macro and meso level. The macro level of embeddedness relates to specific country differences that influence the likelihood of partnership formation in an international context. The meso level refers to the industry level or the sectoral propensity to build interfirm partnerships.

The distinction between a macro level and a meso level of environmental embeddedness has the advantage of avoiding the danger of applying environmental embeddedness as a broad, indiscriminate conceptualization of “context” or “constraint” for the behavior of companies. For instance, I understand the macro level of embeddedness in terms of country differences to be relevant for understanding the behavior of companies, even though many believe that the context in which most companies operate is becoming increasingly global or homogeneous (Dunning, 1993; Hu, 1992; Parkhe, 1991). However, as explained below, it turns out that many companies are still, to a large extent, characterized by specific features that can be traced back to their country of origin. In reference to the meso level of embeddedness, the behavior of companies varies largely across a range of industries. For instance, companies in high-tech industries appear to behave quite differently from companies in low-tech industries (Organisation for Economic Co-operation and Development, 1992; Oster, 1999). In other words, environmental embeddedness, in terms of both country- and industry-specific contexts, can create a first understanding of differences with regard to the conduct of companies engaged in partnerships.

At the macro level of embeddedness, I expect international differences regarding the propensity to engage in partnerships to affect the future partnering activities of companies. Freeman and Hagedoorn (1994) have already established that interfirm partnerships are concentrated in highly developed economies, whereas developing countries play only a very limited role. Also, differences in organizational features of companies are influenced by the history of the socioeconomic preferences in their home country (Kogut & Singh, 1988; Lam, 1997; Sorge, 1991; Whitley, 1994).

Park and Ungson (1997) show that differences in national cultures—the attitude regarding cooperation and willingness to trust “outsiders”—do affect the continuation or dissolution of partnerships. In some economies—for instance, Japan and South Korea—complex networks of intrafirm and interfirm partnerships are deeply embedded in the specific socioeconomic structure, and, as such, these networks have become an integral element in the overall structure of the economy (Gerlach, 1992; Whitley, 1990). Khanna (2000) stresses the importance of understanding the country-specific role of a variety of business groups in emerging economies. Hamilton and Biggart (1988) and Sakakibara and Dodgson (2003) demonstrate that the complex interaction of country-specific legal regulation, economic policies, and existing intercompany networks has different effects on the formation of interfirm partnerships and business groups in a number of Asian countries (Japan, Korea, and Taiwan). Similar aspects are important for understanding partnerships with companies from Russia and other former communist countries (Hagedoorn & Sedaitis, 1998). Therefore, one can expect country specificity in the embeddedness of partnerships to affect the propensity to form future partnerships.

There are also differences regarding the sectoral propensity to engage in partnerships, as many scholars have shown (Hagedoorn, 1996; Link & Bauer, 1989; Mowery, 1988; Mytelka, 1991; Organisation for Economic Co-operation and Development, 1992; Osborn & Baughn, 1990; Osborn et al., 1998; Oster, 1999; Park & Ungson, 1997; Yu & Tang, 1992). Their contributions have established that particularly advanced sectors, such as high-tech industries and sectors with substantial international competition with major multinational players, account for a large share of interfirm partnerships. It is also in these sectors that many companies seem both well equipped and willing to experiment with new forms of organization. This particular feature of some sectors, leading to a lopsided industrial distribution of partnerships, implies that the op-
portunity to engage in partnerships differs for a range of industries. It is important to stress that the understanding of industry effects should not necessarily be restricted to traditional standard industry classifications for reasons of statistical convenience. Where appropriate, alternative industrial groupings, clusters of product-market combinations, new sectors, or strategic groups of companies can also delineate new “industry” boundaries (Duysters & Hagedoorn, 1995; Organisation for Economic Co-operation and Development, 1992; Powell, Koput, & Smith-Doerr, 1996).

I do not expect the given categorical differences between countries or sectors to be the only ingredients of an explanation of the likelihood that new partnerships will occur. It is just as important to pay attention to changes in these patterns of partnership formation over time (Dansereau et al., 1999). When companies find themselves embedded in an environment where the general propensity to engage in partnerships alters, this likely will also affect their propensity to form partnerships. In other words, if companies operate in an environment where partnerships are becoming increasingly accepted, the effect of informed imitation will generate a higher propensity for them to enter into new partnerships. It is obvious that this effect refers not only to increasing levels of embeddedness but also to decreasing levels or lack of embeddedness.

Interorganizational Embeddedness

The next level of embeddedness refers to the networks created by interfirm partnerships of groups of companies. Through these networks, this level of embeddedness reflects the general experience of companies in establishing partnerships with other companies. This interorganizational embeddedness also indicates the history of multiparty networks in which companies have been engaged. Given the direct nature of these contacts, interorganizational embeddedness refers to what Venkatraman et al. (1994) label the channels of communication within the environment of companies.

Park and Ungson (1997) analyzed joint ventures in electronics and found that the experience of companies with partnering increases the survival of existing partnerships. Their research also suggests that, through this experience, companies develop capabilities that enable them to successfully enter into new partnerships. Ring and Van de Ven (1992), Dyer and Singh (1998), Gulati (1999), Kale and Singh (1999), and Anand and Khanna (2000) indicate that the experience with partnering transforms into specific managerial skills that can assist companies in establishing new partnerships.

I also expect that the central role of companies in a network of interfirm partnerships will affect the probability those companies will engage in future partnerships; this nodal role enables them to develop certain capabilities through a multitude of diverse contacts, thus increasing the probability the companies will enter into future partnerships (Dyer & Singh, 1998). Firms in central network positions will have informational advantages that increase their propensity to engage in new partnerships (Burt, 1992; Freeman, 1979). Information advantages associated with central network positions also diminish the information asymmetry problems associated with selecting partners (Knoke & Kuklinski, 1982; Wasserman & Faust, 1994). In addition to this, a central network position can shape the reputation of companies as accomplished partners that give access to new information and a variety of other contacts (Brass, Butterfield, & Skaggs, 1998; Powell et al., 1996). Therefore, central positioning in interfirm networks and related status (Podolny, 1993) will positively influence future partnership formation.

Dyadic Embeddedness

Dyadic embeddedness has to be understood in the context of repeated ties within pairs of companies. This topic has received considerable attention in the literature, probably because it relates to a variety of phenomena, such as information asymmetry, familiarity, and trust. As explained by Chung, Singh, and Lee (2000), under conditions of information asymmetry in potential partnerships, companies are likely to enter into partnerships with companies with which they have already collaborated in the past. The main reason for this preference is that the search process for reliable and valuable partners and the final selection process are costly and time consuming. Previous experience with a particular partner based on one or more earlier partnerships generates helpful informa-
tion. This implies that if a company intends to enter into a new partnership, one can expect this company to first consider companies with which it has shared a common partnership experience (Gulati, 1995a).

A somewhat similar line of reasoning applies to the effects of familiarity and trust on partnership formation. When familiarity and repeated ties are related to trust between companies, this trust is understood as "relational trust" (Ring & Van de Ven, 1992). As relational trust becomes embedded in repeated ties between companies, it is expected to positively affect the stability of their relationship. Also, the familiarity of companies with each other is important for the stability and duration of existing relationships (Chung et al., 2000; Gulati, 1995b; Heide & Miner, 1992; Khanna, 1998; Kogut, 1989; Levinthal & Fichman, 1988; Nooteboom, Berger, & Noorderhaven, 1997; Zaheer, McEvily, & Perrone, 1998).

The Interaction of Different Levels of Embeddedness

The individual effects of environmental, interorganizational, and dyadic embeddedness on new partnership formation already merit substantial attention. However, as mentioned above, the current contribution focuses on understanding the interaction effects of these different levels. This more complex analysis of interaction effects suggests a nested view of embeddedness that studies the interplay of multiple mechanisms of embeddedness, taking the analysis beyond a straightforward summation of individual effects. According to Dacin et al. (1999), there is relatively little theory that provides a theoretical underpinning of the linkages and the direction of effects, while the actual implications of the nested view are still underdeveloped. There are also few examples of empirical research papers studying the interaction of different levels of embeddedness. Nevertheless, Dacin et al. (1999) describe the interacting cross-level analysis of embeddedness as one of the more interesting directions for further research. This case for an intricate, cross-level analysis of embeddedness revisits classical sociology (Simmel, 1950) that specifies that social relations should be analyzed in cross-level settings in order to get a better understanding of their complexity. I suggest the basic argument that the environmental, interorganizational, and dyadic embeddedness of partnering companies exercise a multiplicative, interacting effect on future joint partnering. This implies that country characteristics and patterns of industrial interfirm partnership formation, as well as the specifics of the partnering history of companies, jointly affect their future partnership formation.¹

The proposed understanding of the multiplicative, interacting effects of joint partnering underscores that, as mentioned by Uzzi (1997), it is crucial to bring history and complex social structures back into the analysis of socioeconomic phenomena, such as interfirm partnerships. An important argument for the relevance of a cross-level understanding of embeddedness, in the context of interfirm partnering, is that many companies are occupied with partnerships through a variety of partners from different (sub) sectors, possibly from different countries, that each have different partnering histories. Instead of focusing on simple one-on-one relations, this perspective gives greater consideration to the multidimensional nature of interfirm relationships. For instance, the formation of a new partnership by a company could be reduced to a straightforward economic transaction, merely recognizing that some aspects of its international background, sectoral setting, and experience might play some role. However, the experience that a company has with setting up partnerships is not only an individual feature of this company, although it certainly reflects a basic attitude of the company and its management. This experience of a company and its specific partnering history are also affected by the broader network of its partners and their experiences.

Similarly, one cannot isolate the experience of companies from their sectoral background or their domestic environment, since the accumulated experience within an industry and/or country will impact the propensity of companies to enter into interfirm partnerships (see also Gimeno & Woo, 1996, and Osborn et al., 1998). The literature on interfirm partnership formation, although fragmented, demonstrates many connections between separate levels of embeddedness.

¹ As suggested by one of the reviewers, understanding the interaction of environmental embeddedness in a cross-country setting with the specific partnering histories of companies in an industry can be helpful in isolating the effects of country embeddedness.
that reinforce each other (see Chung et al., 2000; Gargiulo & Benassi, 2000; Gulati, 1995a; Khanna, 1998; Lam, 1997; Osborn et al., 1998; Park & Ungson, 1997; Rowley, Behrens, & Krackhardt, 2000; Saxton, 1997; Uzzi, 1997). This paper combines these different bilevel interactions in an encompassing, cross-level understanding of the embeddedness of interfirm partnerships.

A small number of empirical analyses of various other research topics do demonstrate such strong interacting linkages between multiple levels of embeddedness (Amburgey, Kelly, & Barnett, 1993; Carroll & Wade, 1991; Scott & Meyer, 1994). Following this line of previous research, I expect interfirm partnership formation to be embedded in the dyadic embeddedness between partnering firms, which itself is affected by interorganizational embeddedness in terms of the broader experience of companies with partnering and their surrounding networks. This combination of different levels of embeddedness is overarched and reinforced by an environmental embeddedness that is characterized by a set of country- and industry-based forces that also shape the nature of partnering activities of companies.

An example of such complex interaction effects is found in the U.S. pharma-biotechnology sector (e.g., see Powell & Brantley, 1992, and Powell et al., 1996; Rothaermel, 2001). Here, the propensity of an individual company to form partnerships is influenced by the high level of interfirm interaction across the U.S. industry, affecting a large group of companies and their networks. These general patterns impact the dominance of certain companies in these networks, and they also affect the partnering history of nodal players and their role in particular dyadic relationships.

The propensity of an individual company in this industry is not just influenced by its own experience in setting up these partnerships. This experience itself is reinforced by both the larger networks in which this company finds itself and by the need of many other companies in the pharma-biotechnology industry to find companies that are willing to form such partnerships. The network in which an individual pharma-biotechnology company finds itself is also affected by the actual configuration of competing neighboring networks in that industry that turn partnering activities into a strategic activity for most companies (Gomes-Casseres, 1996). For an adequate understanding of the partnership formation of a company in this industry, one has to consider the choices made by the individual company based on its experience. Yet these choices are affected by the changes in the constellation of its network, the transformations in surrounding pharma-biotechnology networks, and the overall partnering propensity in this industry that influences the number of potential partners.

As noted above, this line of theory development and empirical research is still preliminary and, consequently, has a strong exploratory status. However, as discussed above, the literature on interfirm partnerships has already established a basic understanding of the effects of some individual levels of embeddedness, combined with a somewhat ad hoc comprehension of combinations of different levels of embeddedness. The next step would be to continue with a more systematic study of the complex interaction effects. These interactions of the different levels of embeddedness lead to two-way and three-way interactive effects that indicate the different degrees of nested embeddedness of partnerships that are expected to affect the propensity to enter into future partnerships (see Figure 1).

The anticipated interaction effects suggest that the more pairs of companies operate in an environment (country and industry) where partnering has become a generally accepted activity, and the more previous partnerships between two companies have already been established, the higher the likelihood will be that a future partnership between these companies will also be established. Also, the more two companies have become organizational innovators with a large number of partnerships, and the more these two companies have already shared previous partnerships, the higher the likelihood will be of a future partnership between these companies. Finally, one can expect a triple-order interaction effect, where the combination of environmental embeddedness, interorganizational embeddedness, and dyadic embeddedness affects the likelihood of partnership forma-

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2 In order to avoid an unnecessarily complicated Figure 1, the actual interactions between different levels of embeddedness, representing the two-way and three-way interactive effects, are subsumed as part of the continuous lines that represent these interactive effects.
Proposition 1: Apart from single-level embeddedness effects, the likelihood of repeated partnership formation of (pairs of) companies is positively affected by the various interaction effects of combinations of dyadic, interorganizational, and environmental embeddedness of their prior partnerships.

This proposition can be translated into a range of subpropositions that correspond to different degrees of interaction for these levels of embeddedness. These more detailed propositions can also be effective in teasing out the effects of the interaction of different levels of embeddedness in future empirical research. Following the two-way and three-way effects indicated in Figure 1, this leads to the following set of more detailed propositions.
Proposition 1a: The likelihood of repeated partnership formation of (pairs of) companies is positively affected by the two-way interacting effect of their environmental embeddedness and their interorganizational embeddedness.

Proposition 1b: The likelihood of partnership formation of (pairs of) companies is positively affected by the two-way interacting effect of their environmental embeddedness and their dyadic embeddedness.

Proposition 1c: The likelihood of partnership formation of (pairs of) companies is positively affected by the two-way interacting effect of their dyadic embeddedness and their interorganizational embeddedness.

Proposition 1d: The likelihood of partnership formation of (pairs of) companies is positively affected by the three-way interacting effect of their dyadic embeddedness, their interorganizational embeddedness, and their environmental embeddedness.

CONCLUSIONS

The distinction among environmental, interorganizational, and dyadic embeddedness indicates different levels of social embeddedness that affect the behavior of companies. This framework suggests that the embeddedness of interfirm partnerships implies both historical patterns and different environmental conditions. These different levels of embeddedness play a role in explaining the behavior of companies in terms of their propensity to enter into future partnerships. Interaction effects for combinations of specific historical patterns with environmental embeddedness and the multiplicative effect of experience, common history of partners, network properties, and sectoral and country-based propensity to form partnerships stress the complexity that surrounds the embeddedness of interfirm partnerships. The role that experience plays, in combination with the interorganizational embeddedness of partnerships, stresses the importance of learning in both a specific and a broader social context. Furthermore, for individual companies participating in interfirm partnerships, the understanding of these interaction effects can also clarify why extensive experience of companies in multiple contexts enables them to accumulate and enrich alliance capabilities (see Anand & Khanna, 2000; Dyer & Singh, 1998; Kale & Singh, 1999). Considering all these elements, this interactive approach to understanding interfirm partnership formation, with its different analytical levels, enables researchers to further disentangle the complexity of this phenomenon.

This paper stresses the positive effects of cross-level embeddedness on partnership formation. However, at some point, the growing propensity to form partnerships could lead to overembeddedness (Uzzi, 1997), where companies face decreasing opportunities from forming interfirm partnerships. This overembeddedness can take place at all levels, indicating a possible decreasing propensity to form partnerships. Overdependence on particular partners and diminishing information gains through additional partnerships are known to play a role in this overembeddedness effect (Chung et al., 2000; Gulati, 1995a,b; Saxton, 1997). This effect is most apparent at the level of pairs of companies—that is, dyadic embeddedness—but, depending on the number of (potential) partners in networks, industries, and countries, the effect of overembeddedness can take place at each level of embeddedness. Consequently, through their interaction, these different levels of embeddedness can also jointly affect the negative impact of overembeddedness even further.

Although this point certainly adds to the complexity of both theoretical understanding and empirical research, such further theory development on the possible effect of overembeddedness can link to recent contributions in network analysis. In a growing number of such contributions, scholars have considered the concrete effects of overembeddedness on the declining propensity of companies to enter into new partnerships (Burt, 1992; Gargiulo & Benassi, 2000; Uzzi, 1997). In addition to this line of research, the analysis of possible overembeddedness effects in dense networks can also reflect on the movement of well-embedded and path-dependent networks to new, less embedded, sparse networks (Hite & Hesterly, 2001). In that context, sudden, important changes in, for instance, technology, in combination with being well em-
bedded in the “wrong” country or in “obsolete” local networks and with being closely linked to partners that are not the major carriers of new innovations, can create a “liability of embeddedness” that can easily frustrate the search for new partners.

Clearly, this line of investigation, based on a nested view of embeddedness, is not only in need of such further theoretical refinement (see also Baum & Dutton, 1996, and Dacin et al., 1999) but also requires a sophisticated empirical research strategy that may further unravel the nature of the embeddedness of interfirm relationships. There are some important methodological issues, since those following this line of research have to consider the statistical properties of interaction effects and single effects simultaneously. Other potential problems in that specific context are related to serial correlation and spurious state dependence. In a longitudinal approach, there is the risk that the dependent variable becomes endogenous, since, for instance, the probability of new partnership formation is not independent of previous partnerships. Advanced statistical methods such as panel data analysis can provide a number of technical solutions to these methodological issues, not least because these methods provide a larger number of data points within basically a similar data set as used for more conventional methods. However, these methods are sensitive to the quality of the data set. The analysis of interacting, cross-level effects can also benefit from new approaches found in later versions of structural equation models, extended logit models, and technical network analysis, such as, for instance, Wasserman’s *p* models (Anderson, Wasserman, & Crouch, 1999).

Obviously, the research agenda suggested above still has certain other limitations, since it can be extended with a number of cognitive, social-psychological, interpersonal, and process-oriented mechanisms that can play a role in understanding embeddedness (Baum & Dutton, 1996; Dacin et al., 1999; Lam, 1997; Reger & Huff, 1993; Zukin & DiMaggio, 1990). However, the current outline of understanding cross-level embeddedness of interfirm partnerships does already strongly suggest the complex nature of the social embeddedness of interfirm partnerships in an international, multi-industry, and longitudinal setting. Therefore, this paper stresses that the analysis of interfirm partner-

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John Hagedoorn (j.hagedoorn@os.unimaas.nl) is professor of strategy in the Department of Organization and Strategy at the University of Maastricht and a professorial fellow with the Maastricht Economic Research Institute on Innovation and Technology. He received his Ph.D. from the University of Maastricht. His research focuses on alliances, interfirm networks, innovation, M&As, and high-tech industries.