ABSTRACT

Yang, Zheng. An Investigation into Collaborative Partnerships Through the Perspective of Embedded Networks. (Under the direction of Dr. Branda Nowell).

This dissertation presents three independent papers, each of which investigates one dimension of the phenomenon of partnership embeddedness in terms of shared-membership: (1) Paper One investigates whether partnership design is under isomorphic pressure or strategic pressure from the community environment through the mechanisms of shared-membership between partnerships. Results indicate that partnership strategy and funding portfolio are under strategic pressures to be different from the modal design of a partnership’s ego network. (2) Paper Two examines whether being isomorphic with institutional norms through the whole network and partnerships’ respected networks is associated with higher level of partnerships’ symbolic performance as institutional theory has argued. Results show stronger evidence for strategic effects than institutional effects and reveal that partnership embeddedness plays an important role in a social comparison process between partnerships. (3) Paper Three examines to what extent resource dependency theory (exogenous factors) and network perspectives (endogenous factors) help to explain the strength of dyadic partnership ties in terms of shared-membership. It is found that Simmelian ties that two partnerships share are positively related to the level of strength of dyadic partnership ties. Overall, this dissertation makes contribution to the public and nonprofit literature by studying partnership embeddedness within broader context of collaborative activities and applying network perspectives to the partnership level of analysis to understand how external relations and environmental pressures from partnerships’ community contexts relate to partnership design, behavior, and success.
An Investigation into Collaborative Partnerships Through the Perspective of Embedded Networks

by
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BIOGRAPHY

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Chapter 1: Introduction

Inter-organizational collaborative arrangements such as partnership, alliance, and coalition are increasingly relied upon as a way to improve the delivery of goods and services in public management, public health, innovation, research and development, and other social areas (Brinkerhoff, 2002; Raab et al., 2013). Through sharing resources and joint decision making, inter-organizational groups seek to address common interests, achieve shared goals or benefit mutual stakeholders (Stuart et al., 2011). In the past decades, collaborative partnerships have become an increasingly popular format of collaboration for bringing local government officials, nonprofit agencies, business leaders, and interested citizens together to address issues of shared concern over time (Zakocs & Edwards, 2006). For the purpose of this dissertation, partnerships are defined as the community-based groups comprised of leaders and staff representing three or more organizations/agencies who share a common issue domain (e.g., mental health, domestic violence, HIV/ AIDS; Nowell, 2009). In the field of community health, the number of partnerships has increased significantly in response both to the need for achieving complex health goals through community collaboration and due to millions of dollars invested in alliances, coalition, consortia, and other collaborative groups in the United States (Lasker et al., 2001). The 2013 report of National Association of County and City Health Officials revealed that more than three-quarters of local health departments over United States have used some form of partnership in each of their surveyed health sub-areas, such as emergency preparedness, community health assessment and planning, drugs, and infectious disease (Wilhoit, 2014).
The growth of partnerships has drawn dramatic research interests in the study of community collaboration and partnerships. Research from the past decades have investigated a series of fundamental questions about partnership activities and outcomes, such as partnership formation and evolution, effects of collaborative partnerships, characteristics and capacity of successful partnerships, partnership leadership, partnership synergy, and the assessment of partnership effectiveness, etc. (Brinkerhoff, 2002; Feinberg et al, 2004; Foster-Fishman et al., 2001; Gottlieb, 1993; Granner & Sharpe, 2004; Hays et al, 2000; Roussos & Fawcett, 2000; Weiss et al., 2002). Scholars note that compared to the hierarchical organizational authority paradigm of bureaucratic management, much less knowledge has been built with explaining the design of collaboration that can guide collaborative management (Agranoff & McGuire, 2001; Lowndes et al., 1998; McGuire, 2006). As Agranoff and McGuire (2001) pointed out, although collaborative management (interchangeably often referred to as inter-organizational management, multi-organizational management, network management) is overlapped with organizational management, it could not be appropriately explained by classical intraorganizational-inspired management perspective (Agranoff & McGuire, 2001).

In spite of the growing interests in partnership studies, recent studies notice that most prior partnership literature almost overlooked the influence that external environment could have on partnership designs, studying community partnerships as if they are in isolation (Nowell, Yang, & Hano, 2013). For example, empirical studies examining factors that lead to partnership effectiveness have mainly focused on factors that are within the partnership other than external to the partnership. In their review of 26 empirical studies on explaining
health coalition effectiveness, Zakocs and Edwards (2006) found six factors that were consistently significant indicators of partnership effectiveness including formalization of rules, leadership style, member participation, membership diversity, agency collaboration, and group cohesion, which are exclusively related with the dynamics and features inside the partnership, or between its members. This example shows how empirical studies on partnership effectiveness have paid more attention to partnerships’ internal capacity over external capacity.

In fact, multiple organizational theories such as resource dependence theory, institutional theory, and network theory have long emphasized the impact that environment could have on the design and behaviors of organizations. For example, resource dependence theory proposed that no organization is completely self-contained or in complete control of the conditions of its own existence; rather, in order to survive, organizations need to adjust to and cope with its external environment (Pfeffer & Salancik, 2003). Resource dependence theorists view organizations as open systems that depend on external organizations and environmental contingencies. Also emphasizing dynamics in environmental context, institutional theory stresses that organizations are all under isomorphic pressures from their institutional environment, including coercive, normative, and mimetic isomorphism (DiMaggio & Powell, 1983). Organizations do not always make decisions and take actions from a rational and efficiency point of view. Rather, in order to gain legitimacy and survive, they tend to be increasingly isomorphic overtime with institutionalized environment (Meyer & Rowan, 1977). Finally, network theory also emphasizes the importance of external linkages for organizations and the effect of network ties on organizational performance and
behaviors. How organizations are positioned in a boarder network with other entities has been linked with their absorptive capacity, efficiency, access to resources, and performance (Barley, 1990; Burt, 2004; Powell et al., 1996; Tsai, 2001; Westphal et al., 1997; Zaheer & Bell, 2005).

In addition to being informed by organizational theories, the importance of external relations of partnerships was also emphasized by theoretical frameworks such as in the work of Foster-Fishman et al. (2001). Partnership success is believed to be not only related with internal capacity of partnership (e.g., member capacity, organizational capacity, programmatic capacity), but also depends on “external relationship capacity”, which focuses on partnerships’ relations with other organizational sectors, community residents, key community leaders and policy makers, and other communities and coalitions. Indeed, a number of existing theoretical frameworks on partnership success and partnership effectiveness frequently point to the importance of contextual factors or external linkages. In the previous literature, external factors that were identified as critical for collaboration success include the level of resource munificence of the external community (Provan & Milward, 1995; Raab & Cambre, 2013; Stuart et al., 2011; Turrini et al., 2010), the external control over partnership such as fiscal or community control (Provan & Milwared, 1995; Roussos & Fawcett, 2000; Turrini, et al., 2010), the level of contextual stability of the system that partnerships are under in terms of number of changes in munificence and complexity (Andrews & Entwistle, 2010; Provan & Milward, 1995; Raab & Cambre, 2013; Turrini et al., 2010), and the level of social capital such as the degree of citizens’ engagement with and trust for each other and in community institutions (Haines et al., 2012; Mueller & Jungwirth,
These studies and frameworks all point to the importance of studying partnership behavior and success by examining the influence from their external environment.

With the recognition that partnerships’ external relations and community context are important for understanding their behavior and success, this dissertation aims to examine the role of partnership embeddedness within broader network of collaborative activity in their community. Studies on board interlocks and network perspectives suggest that embeddedness through shared board members between firms can have significant influence on firms’ design and performance (Mizruchi, 1996; Shropshire, 2010); yet to date there is a scant of knowledge on how partnership embeddedness within broader community network of collaboration is related to partnership behavior and success. The following sections of this introduction chapter discusses the significance of shared-membership among partnerships, the value of a perspective of embedded networks in studying collaborative partnerships, and finally introduces the focus of each of the three papers included in this dissertation.

**Shared-membership among Collaborative Partnerships**

Shared-membership among partnerships in this dissertation refers to the phenomenon that an organizational member that sits on one partnership is also a member of another partnership in the community. Although few previous studies gave attention to shared-membership between partnerships, a recent empirical study confirmed that there usually could be more than one partnership existing that focus on the same area of issues in a community; furthermore, these partnerships could be highly connected with each other
through shared organizational members between them (Nowell, Yang, & Hano, 2013). In reality, one organization can choose to join multiple collaborative partnerships in its community that they are interested in joining, with leaders or staff from the organization attending multiple partnerships’ meetings, and working with different partners for multiple collaboration projects. Such existence of shared-membership forms ties among partnerships, with one or more shared members connecting multiple partnerships through their attendance on multiple partnership projects. Figure 1.1 below presents the community network map (the whole network) that was created by Nowell, Yang and Hano (2013)’s study. This network map demonstrates a community where 34 partnerships that focus on community health are highly connected to each other through sharing organizational members. In the map, blue squares represent the health partnerships that were identified in the county, red dots represent organizational members, and lines between them represent that an organization is a member of the partnership. This network map reveals that collaborative partnerships in this community are associated with different levels of embeddedness in terms of the shared organizational members with other partnerships in the community. As such a phenomenon of shared membership is rarely noted or discussed by previous partnership literature, it becomes highly important to increase our understanding about the role of shared-membership and how it may relate to partnership behavior, design, and performance as indicated by the network literature.
Figure 1.1: Illustration of Embedded Partnerships through Shared Organizational Members (Nowell, Yang, & Hano, 2013).

*Note.* Blue squares in this map represent health partnerships identified in the community, red dots represent organizational members, lines represent an organization is a member of the partnership.

Although less studied in public and nonprofit literature, the role of shared-membership between different organizations has in fact been richly studied in the business field by board interlocks literature. Board interlocks are ties among organizations through a member of one organization sitting on the board of another (Borgatti & Foster, 2003). Past studies suggest that board interlocks serve as mechanisms for dissemination of practices between interlocked firms in a number of organization attributes, such as structures, strategies, systems, and processes (Shropshire, 2010). Through serving as a mechanism for information transfer between firms (Davis, 1991; Haunschild, 1993; Useem, 1984), board interlocks are able to impact firms’ adoption of a certain practice or structure, such as
multidivisional form (Palmer, Jennings & Zhou, 1993), acquisition (Haunschild, 1993), diversification (Chen, Dyball, & Wright, 2009), and business strategy and compensation (Westphal, Seidel, & Stewart, 2001). Furthermore, a body of literature also suggests that board interlocks can facilitate imitation of practices between firms, such as in innovation adoption (Davis, 1991), joint venture formation (Gulati & Westphal, 1999), adopting strategies of CEO’s pay premiums (Geletkanycz et al., 2001), and inter-firm collusion and cooperation (Koenig et al., 1979). Haunschild (1993) found evidence that firm managers are imitating acquisition activities of other firms to which they are tied through directorships because they are exposed to the acquisition activities when they sit on those firms’ boards. As Mizruchi (1996) points out, interlocks could be considered as indicators of network embeddedness, suggesting “a range of firm behaviors—strategies, structures, and performance—could be affected by the firm’s relations with other firms.” (Mizruchi, 1996, P283)

This perspective that views interlocking boards as network embeddedness suggests that shared-membership between collaborative partnerships within their broader community network may also be associated with partnership structure, strategies, activities, and performance, depending on the embeddedness level of a partnership through sharing organizational members with other partnerships within a community.

Embeddedness refers to the extent that economic actions are informed, influenced, and enabled by the network of accumulated stable and preferential social relations (Granovetter, 1985; Lynall et al., 2003). Studies from network perspectives (which will be reviewed in more detail later in this chapter) suggest that the embeddedness of an
organization within a broader network can influence the level of information and other key resources that it can access (Burt, 2004; Zaheer & Bell, 2005), which may be related to organizations’ adoption of strategies, innovative capabilities, and performance (Barley, 1990; Tsai, 2001; Powell et al, 1999; Westphal et al., 1997). A higher embeddedness within their community network may bring a partnership a higher level of reputation in their community (Huang & Provan, 2007), which can facilitate obtaining of resources and help with organizational survival (Zaheer & Harris, 2005). Higher embeddedness through shared organizational members may also be associated with higher level of institutional constraints (Villadsen, 2011), which drives a partnership to be isomorphic with community norms in its strategy and structure design.

Despite the many influences that shared-membership may have for partnership behaviors and outcomes, to date there is a scant of knowledge on shared-membership among collaborative partnerships. Understanding how shared-membership is related to partnership behavior as well as factors that are associated with different levels of shared-membership between partnerships is critical for obtaining a complete appreciation of partnership behavior and outcomes.

**The Network Perspectives and Its Value to Inform Theories in Partnership Studies**

This dissertation aims to contribute to the partnership literature by studying collaborative partnerships through the perspective of embedded networks, examining the role of partnership embeddedness within broader network of collaborative activity in their community. Network analysis has been widely used to study individuals and organizations,
yet it has been much less applied to studying how partnership embeddedness within a local community could be associated with partnership design and performance. Compared with resource dependency theory and institutional theory, social network perspectives emphasize the importance of network formation on reputation, trust, reciprocity, and mutual interdependence (Larson, 1992; Lynall et al., 2003) and can add significant value towards understanding the role of shared-membership and its relationship with partnership behavior and success.

Prior network studies suggest that embeddedness of actors have significant relevance with actors’ behavior, performance, and reputation. At the individual level, network ties were found to relate to administrative innovation roles in the organization (Ibarra, 1993), shape individual perceptions of jobs and influence in the organization (Ibarra & Andrews, 1993; Brass, 1984; Sparrowe & Liden, 2005), and serve as an important predictor of individual performance in organizations (Ahuja et al., 2003). At the organizational and intra-organizational level, network positions have been linked to entities’ innovation capability and performance (Barley, 1990; Powell et al., 1999; Tsai, 2007; Westphal et al., 1997). Although empirical studies have shown mixed results, organizations occupying central network positions are commonly believed to possess a series of competitive advantages including better access to resources, knowledge, and information (Burt, 2004; Zaheer & Bell, 2005). On the other hand, network context was also found to influence the ways that organizations perceive their environment and potentially the actions that organizations may take in light of such perceptions (Moore et al., 2006). This indicates that the degree of linkages that an
organization has built with its external environment may affect the organization’s behaviors and strategies.

Network perspectives can play an important role in informing other organizational theories and advancing our understanding of partnership design and performance. By adopting a network perspective, the questions about how partnership behavior and performance is related to external relations and their community context can be richly explored. For example, social network theories have provided evidence that an actor is highly influenced by its environment, its connections with other actors, and its position within the network. Network ties are considered to enable diffusion of knowledge and information between organizations, which influences the way organizations evolve (Provan et al., 2007) and facilitates homogeneity in clusters through which organizations model themselves after organizations (Tan, 2006). This group of literature from network perspectives provides a rich foundation for us to study the role of partnership embedded within their broader community network, and how it may serve as mechanisms of external pressures that is associated with partnership design and behavior.

In a word, network perspectives have been richly applied to individual and organizational level of studies to understand actors’ behavior, perceptions, and success; yet it has rarely been applied to the partnership level, which prevents a complete understanding of partnership behaviors. In adopting a network approach to study partnerships embeddedness in terms of shared-membership in the broader community network, this dissertation seeks to bridge the gap of understanding on how partnership embeddedness relates to partnership design, behavior, and success.
Research Questions of This Dissertation and Their Relevance

This dissertation contains three independent papers (Chapter 2, 3 and 4), and a final chapter for synthesizing (Chapter 5). Each of the papers in this dissertation asks one independent research question about partnership embeddedness and examines its relationship with partnership design, behavior or success:

- **Paper One:** Is partnership design under mimetic pressure to be isomorphic with modal designs of their embedded networks, or under strategic pressures to be different from its connected peers?

- **Paper Two:** Under the context of embedded networks, is being isomorphic or being distinct with institutional norms in a community associated with higher symbolic performance?

- **Paper Three:** To what extent resource dependency theory (exogenous factors) and network perspectives (endogenous factors) help to explain the strength of dyadic partnership ties in terms of shared-membership?

To summarize the introductory chapter, this dissertation aims to make two main contributions to the public management literature: first, prior literature on collaborative partnerships has paid inadequate attention to the shared-membership between partnerships as well as the influence of partnerships’ external environment. Drawing on board interlocks literature, network perspectives, institutional theory and resource dependency theory, this dissertation aims to advance the understanding on the role of partnership embeddedness through shared-organizational members within a community, investigating what factors are
associated with dyadic relationship of shared-membership, and how the level of a partnership’s embeddedness may relate to its design and performance. To the knowledge of the author, this dissertation is among the first studies to investigate how embeddedness within broader community network of collaboration may influence partnership design and performance.

Second, network perspectives have great value in informing other organizational theories through studying the social ties between organizations and the roles that networks play. By studying shared-membership among collaborative partnerships through network perspectives and drawing on other organizational theories, this dissertation also seeks to contribute to the organizational literature by advancing our knowledge about how to apply and combine different organizational theories, such as institutional theory, strategic alliance literature, and resource dependency theory, to best explain collaboration activities in public and nonprofit sectors.

It is the hope of this author that this dissertation will start the investigation into partnership embeddedness in the public and nonprofit sectors, enhancing our understanding about partnership behavior and outcomes through adopting the perspective of embedded networks.
References


Chapter 2: Explaining Partnership Design under the Context of Embedded Network

Introduction

Health-related partnerships, as defined in this paper, are community-based groups comprised of leaders and staff representing three or more organizations/agencies who share a common issue domain (e.g., mental health, domestic violence, HIV/AIDS; Nowell, 2009). In the collaboration literature, how to explain varied partnership designs such as partnership structure, strategies, and funding portfolio is a critical question for both community practitioners and organizational researchers. Even focusing on similar missions, collaborative partnerships usually display varied designs across numerous characteristics including whether having sub-committees and paid staff, having a certain working strategy among partners, and how frequently partnership meetings are held. Compared with the hierarchical organizational authority paradigm of bureaucratic management, collaborative management is often found to be guided by an inadequate knowledge on how to explain the design of collaboration (Agranoff & McGuire, 2001; Lowndes et al., 1998; McGuire, 2006). Scholars of collaboration have noted that collaborative management (inter-organizational management, multi-organizational management, network management), although overlapped with organizational management, could not be appropriately explained by classical intraorganizational-inspired management perspectives, and is thus in need of a knowledge base equivalent to the hierarchical organizational authority paradigm of bureaucratic management (Agranoff & McGuire, 2001).
Although collaborative partnerships have been found to be embedded within a broader community of network and could be highly connected through sharing organizational members with each other (Nowell, Yang, & Hano, 2013), how pressures and influences from partnerships’ local community can be related to partnership design has been rarely explored. Similar with firm board interlocks in the business field, shared organizational members between different collaborative partnerships in a community can serve as mechanisms of knowledge sharing and organizational learning. As empirical studies have confirmed that board interlocks between firms are associated with firm behavior, strategies, innovation, and structure design (Davis, 1991; Geletkanycz et al., 2001; Haunschild, 1993; Shropshire, 2010; Useem, 1984), it is equally important to ask whether ties between partnerships in terms of shared organizational members serve as similar roles for partnership design and strategies.

In spite of the frequent use of institutional theory in studying public and nonprofit management, prior collaboration literature rarely asked how the designs of collaborative partnerships is associated with institutional norms in their community. Most existing partnership studies almost overlooked the influence that external environments exert on partnership design, and asked little about how partnership behaviors are related to the connections between partnerships and their peers in the same community. Such a way of studying partnerships as if they are isolated from their environment and their peers (Nowell, Yang, & Hano, 2013) weakens opportunities to understand how external environment and relationships constrain or facilitate partnership activities. As many partnership frameworks have frequently emphasized the important role that the external system and community environment plays for collaborative groups to achieve success (Andrews & Entwistle, 2010;
Feinberg et al., 2004; Foster-Fishman et al., 2001; Haines et al., 2012; Provan & Milward, 1995; Raab & Cambre, 2013; Roussos & Fawcett, 2000; Turrini et al., 2010), understanding the relevance of partnership design with environmental and institutional influences is critical for understanding how to achieve desirable partnership outcomes.

This study aims to bridge the gap by examining two competing perspectives for explaining organizational design: institutional theory and strategic alliance literature. Both groups of literature highlight the importance of community environment in influencing organizational behaviors and designs; however, institutional literature reasons that organizations are pressured by their local peers to mimic similar organizational designs and behaviors, while strategic management literature argues that organizations tend to build distinctive designs from their peers so that they can contribute uniquely to their alliance and make the best use of diversified resources that are available. Through using a network analysis approach, this study empirically examines a case containing 34 health partnerships within one community where a high level of connectivity exists between partnerships through shared organizational members. It seeks to find whether collaborative partnerships are under mimetic pressure to be isomorphic with modal designs of its networks, or under the strategic pressure to be different from or complementary to its connected peers.

As embeddedness of organizations has been found by board interlocks literature (which will be discussed in more detail later) to be associated with numerous aspects of firm characteristics and firm behaviors, this paper aims to enhance our understanding on how partnership embeddedness within the broader community network could play the role as
mechanisms connecting embedded partnerships and organizational members and how it relates to partnership design.

Theoretical Background: Institutional and Strategic Explanation for Organizational Design

Institutional theory is among the most popular organizational theories to explain organizational design and behavior. Studies from institutional perspectives have pointed out that all organizations are under the influence from their institutional environments; in order to gain legitimacy among peers, organizational designs are driven to be isomorphic with their environment. Defined by institutional literature, isomorphism is “a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions.” (Hawley, 1968). Compared with theories that are based on rationality assumptions, institutional theorists claimed that the process of isomorphism is less driven by competition, but by the “processes that make organizations more similar without necessarily making them more efficient.” (DiMaggio & Powell, 1983). Coercive, mimetic, and normative pressure are theorized to drive organizations to be isomorphic with their peers in their designs and behaviors, because being isomorphic with their environment helps organizations to look appropriate, rational, and modern in its appearance (Meyer & Rowan, 1977). Thus, based on argument of institutional theory, a partnership would be expected to have the similar organizational design with its community norms when experiencing isomorphic pressure; in other words, organizations are more likely to have a similar design
with the modal design that is most widely adopted in its community when the strength of modality of that design is high.

In contrast, studies on strategic alliances have brought attention to the tendency and advantages for organizations to stand out from their peers by being distinctive in organizational designs, such as in their mission focus, skillsets, organizational strategies, and resources. For example, Luo and Deng (2009) found that similar partners in a focal firm’s alliance portfolio contribute to the firm’s innovation only up to a threshold, beyond which additional similar partners can lead to a decrease in innovation because of the trade-offs embedded in collaboration between similar partners. In other words, instead of the tendency of building connections with similar peers in a community, a focal organization may tend to make connections with partners that have a range of different resources, strategies, information sources, or perspective that can gain itself the most diverse resources that are needed. Meanwhile, within a strategic alliance, organizations may also try to build a different profile of their own proactively so that they could provide complementary resources and contribution to its alliance. This view that organizations are motivated to be different from local community is also supported by network composition studies, which suggest that a network composed of similar partners is restricted in information diversity (Burt, 1992). Overly close relationships with business partners are also believed to outweigh the benefit of broad market information from diverse partners (Uzzi, 1996).

This paper chooses to build hypotheses based on the logic of institutional argument, testing whether collaborative partnerships would be more likely to have similar organizational design with its ego network and respected network of partnerships.
Accordingly, while this study presents hypotheses that are consistent with the predictions of institutional theory, it does so with the recognition that there is ample theory to propose a competing perspective.

**Mimetic Isomorphism and Its Mechanisms**

In institutional theory, mimetic isomorphism is defined as the achievement of conformity through imitation when organizations are faced with uncertainty in their course of action (DiMaggio & Powell, 1983; Haveman, 1993; Mizruchi & Fein, 1999; Oliver, 1997). Mimetic isomorphism has been given attention in the literature of inter-organizational imitation, where scholars notice that when one or more organizations use a certain practice, it may increase the likelihood of that practice being used by other organizations (Haunschild & Miner, 1997). During the past decades, a series of studies have investigated consequences and antecedents of such imitation and discussed the implication for organizational behavior and management (Barreto & Baden-Fuller, 2006; Haunschild, 1993; Haunschild & Miner, 1997; Haveman, 1993; Kraatz, 1998; Ordanini et al., 2008; Westphal, Gulati, & Shortell, 1997).

According to institutional theory, mimetic isomorphism happens particularly when organizations are faced with uncertainty (DiMaggio & Powell, 1983; Haveman, 1993). When a clear course of action is unavailable, organization leaders may decide to mimic a peer that they perceive to be successful as the best response (Mizruchi & Fein, 1999). Mimetic pressure can influence organizations’ adoptions of certain strategies; prior empirical studies have examined mimetic isomorphism in organizations’ adoption of hospital structure, civic-
service reform, multidivisional corporate form, and matrix management programs (Haveman, 1993).

Although most organizational scholars agree that organizations are under mimetic pressure to be isomorphic with their institutional norms, there is limited agreement to date on the mechanisms that mimetic isomorphism takes place and with whom organizations are isomorphic (Suddaby, 2010). For example, DiMaggio and Powell (1983) suggested that an organization will model itself after organizations that it perceives to be successful (DiMaggio & Powell, 1983); yet studies on attitude similarity claim that similarity would be formed through direct interaction within the network or through structural equivalence (Brass et al., 2004). Another perspective on imitation suggested that culture, selection, and socialization processes and reward systems might cause an organization to exhibit “a modal similarity pattern” (Brass et al., 2004, P706), which may determine the extent to which he or she is central or integrated in the interpersonal network.

In order to examine the different modes of inter-organizational imitation, Haunschild and Miner (1997) distinguished three types of imitation targets that organizations usually choose: 1) frequency-based imitation, where the common behavior is copied; 2) trait-based imitation, where the behavior of organizations with certain features are copied (larger organizations, or organizations in the same strategic group); and 3) outcome-based imitation, where a behavior believed to be related to good performance in another organization is copied (Haunschild & Miner, 1997; Ordanini et al., 2008). These studies on imitation suggest that when organizations are under mimetic pressure, it is likely for mimetic isomorphism to occur through multiple mechanisms. Though institutional theory argues that mimetic
isomorphism can shape organizational designs and behaviors, few studies have empirically tested how different mechanisms of mimetic pressure are associated with organizational designs, and even fewer have investigated the question for collaborative partnerships.

Based on the inter-organizational imitation literature, this study proposes that collaborative partnerships are likely to experience mimetic pressures through multiple mechanisms in their community, including at least: 1) the mimetic pressure to be isomorphic with the modal design in their ego networks (the network of peer partnerships that a focal partnership is directly connected with through sharing at least one organizational member); and 2) the mimetic pressure to be isomorphic with the modal design used by partnerships that are perceived as the most effective peers by the focal partnership in the community (the respected network). The following sections will first discuss shared-membership between partnerships and then explain why a partnership can be under mimetic pressure from its ego network as well as respected network comprised of effective peers.

**Shared-membership between Partnerships and Mimetic Isomorphism**

Although the role of shared membership and its effects have not been adequately explored among the partnership literature, the board and interlocks literature in business management has well established how embeddedness and cross-members between firms can facilitate knowledge flow and imitation of practices (Borgatti & Foster, 2003; Mizruchi, 1996; Shropshire, 2010). Studies on shared-membership across firm boards (board interlock, or interlocking boards) suggest that shared members between organizations can facilitate inter-organizational isomorphism by serving as conduits in which information as well as
expectations and pressures flow (Davis, 1991; Haunschild, 1993; Useem, 1984; Villadsen, 2011). For example, Davis (1991) found central firms have more abundant access to the information that flows through the network and therefore are able to notice and respond to environmental changes more rapidly. Existing studies also suggest that network embeddedness is associated with the level of constraints that an organization is under from its external environment and consequently the level of isomorphism it has with community norms (Tan et al., 2013). Study of Villadsen (2011) on policy isomorphism of Danish municipalities indicated that interlocked mayors are constrained by mutual expectations about what the appropriate way to solve a task is, which influences the municipality’s policy isomorphism.

Based on the board interlocks literature and Haunschild and Miner (1997)’s framework of inter-organizational imitation, this study first proposes that when a partnership has shared organizational members with other partnerships within one community, the organizational design of the focal partnership will be isomorphic with the modal design (most frequently used design) in its ego network. Prior studies indicate that organizations are more likely to imitate their peers that they have more interaction with (Brass et al., 2004; Haunschild, 1993). For example, Huanschild (1993) found evidence that firm managers are imitating the acquisition activities of other firms to which they are tied through directorships because they are exposed to the acquisition activities when they sit on those firms’ boards. In the same vein, partnerships are more likely to be isomorphic with the norms that they are most frequently exposed. An ego network is composed by partnerships that share at least one organizational member with the focal partnership; compared with other partnerships in the
community that do not share organizational members with the focal partnership, information about partnership strategy, structure or funding portfolio within the ego network is easier to access through from the existing shared members. Thus this study first hypothesizes that the stronger modality that an organizational design has within a partnership’s ego network, the more likely that a focal partnership will have the similar design with this modal design.

**H1**: Within a focal partnership’s ego network, the stronger the strength of modality is for a certain organizational design, the more likely that the focal partnership’s design of this aspect will resemble the modal design of its ego network.

**H1-a**: Within a focal partnership’s ego network, the stronger the strength of modality is in partnership strategy, the more likely that the focal partnership’s strategy will resemble the modal strategy design used by its ego network.

**H1-b**: Within a focal partnership’s ego network, the stronger the strength of modality is in partnership structure, the more likely that the focal partnership’s structure will resemble the modal structure design used by its ego network.

**H1-c**: Within a focal partnership’s ego network, the stronger the strength of modality is in partnership funding portfolio, the more likely that the focal partnership’s design in funding portfolio will resemble the modal design used by its ego network.

In addition to the mimetic pressure to be isomorphic with the norms in their ego network, Haunschild and Miner (1997) and other scholars also suggests that organizations may experience mimetic pressure to be isomorphic with the successful peer organizations in the community (DiMaggio & Powell, 1983; Haunschild & Miner, 1997; Mizruchi & Fein,
This study uses “respected network” to represent the successful peer partnerships that a focal partnership perceives to be the most effective partnerships in the community in terms of being a positive force for change in promoting health and preventing relevant health problems in the community. Here the ties in the respected network do not represent the traditional meanings that are often indicated by connections between organizations such as collaboration and contacts between firms, instead ties in the respected network represent a nomination from one partnership to another for perceiving the latter to be one of the three most effective partnerships in the community with a health focus. As organizations may experience pressure to model themselves after successful peers (DiMaggio & Powell, 1983), the following hypotheses are made:

**H2**: Among a focal partnership’s respected network of partnerships, the stronger the strength of modality is for a certain organizational design, the more likely that the focal partnership’s design of this aspect will resemble the modal design used by its respected network.

**H2-a**: Among a focal partnership’s respected network of partnerships, the stronger the strength of modality is for partnership strategy, the more likely that the focal partnership’s design in strategy will resemble the modal design used by its respected network.

**H2-b**: Among a focal partnership’s respected network of partnerships, the stronger the strength of modality is for partnership structure, the more likely that the focal partnership design in structure will resemble the modal design used by its respected network.
**H2-c**: Among a focal partnership’s respected network of partnerships, the stronger the strength of modality is for **partnership funding portfolio**, the more likely that the focal partnership design in funding portfolio will resemble the modal design used by its respected network.

In understanding partnership isomorphism, past studies suggest that certain organizational characteristics are more susceptible to isomorphic pressures than others (Ashworth et al., 2009; Villadsen, 2013), thus it is critical to distinguish isomorphism in different aspects of partnership design. In his study applying institutional theory to investigate which organizational attributes are amenable to external reform, Andrews et al. (2011) used public financial management reform data in Africa and empirically supported his argument that reforms are harder where they influence organizational characteristics that (i) are difficult to observe externally, (ii) are core to the organization, and (iii) involve actors with whom the externally defined change agenda is unlikely to resonate normatively. Compared with partnership structure and partnership strategies, partnership funding portfolio is more visible to the community and less core to the partnership values. Accordingly, the following proposition is made:

**H3**: The effect of partnership isomorphism in partnership design is not equal in level across different partnership characteristics; isomorphism effects are stronger in the design of partnership **funding portfolio** than in partnership **strategy** or partnership **structure**.
Methodology and Data

This case study uses secondary data collected from thirty-four health collaborative partnerships in one county of North Carolina in Spring 2012. Health partnerships are defined in this study as community collaborative groups that are composed of three or more organizations, meeting on a regular basis, and focusing on improving community health and wellness. This study uses two datasets that were collected from this study, the interview data and the network data. The interview data contains population level data for this county in that all health partnerships that are identified in the county through a process of snowball sampling approach were included in the dataset; the data is tested in this study as a sample of a broader population data to reveal patterns of dyadic partnership relationships. This dataset contains data of numerous dimensions of partnership functions, ranging from basic characteristics such as partnerships’ age, partnership missions and targets, to their organizational structure, staffing information, meeting frequency, and funding sources. All these 34 partnerships identified themselves to have their major mission to be improving community health and wellness. Among the 34 partnerships, 71% of them administer and manage their own programs or services, while 44% of them reported to focus significant time and energy on policy change initiatives. Partnership age ranged from less than one year to over 26 years, with an average partnership age of 9.33 years. On average, one partnership in the sample has 24 organizational members. The size of these partnerships ranged from the lowest of 6 members to the largest of 103 members. A partnership in the sample is connected to an average of 64% of other partnerships in the community through sharing organizational
members. A pair of any two partnerships in the sample shares an average of 2.139 organizational members with each other.

The network data used for this study records the number of shared organizational members that any two health partnerships have (presented by a matrix table). The network data is used along with interview data to prepare for calculating modality strength in each attribute for ego networks. This study used the network data analytic software UCINET and its network composition analysis function to calculate Blau index and its normalized version index IQV (Index of Qualitative Variation), which were then transformed to serve as modality strength measure (see more explanation in the operationalization section below).

All data were prepared and imported into SPSS for analysis.

Key Variables and Measures

Hypothesis 1 (H1-a, H1-b, and H1-c). The following paragraphs describe the key variables in the three sub-hypotheses under Hypothesis 1.

Dependent Variables (H1). The dependent variable in Hypothesis 1 is the match of partnership design (in strategy/structure/funding portfolio) with an ego network, which represents to what extent a focal partnership’s design of a certain aspect resembles the modal design used in its ego network. Here a modal design is the organizational design that appears

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1 This one-mode dataset is prepared from two-mode network data collected from the community, which records ties between two sets of entities: health partnerships and the organizations that are members of these partnerships. This network data were collected by asking all partnership coordinators to provide a list of names of all individual members that are part of the partnership along with the organizations that they are affiliated with, these lists were then cleaned and aggregated into an edgelist and finally prepared into one-mode partnership level network data.
most often, or used by most partnerships in an ego network. Using the way of matching between a focal organization’s design with a conventional design in testing institutional effects is not new in organizational studies; for example, Finkelstein and Hambrick (1990) used “the degree to which a firm’s strategy matches the average strategic profile of its competitors in the same industry” to measure strategic conformity of firms; Deephouse (1996) and Deephouse and Carter (2005) both followed this approach and used the “extent to which an organization’s strategies resemble the conventional, normal strategies in an industry” to measure strategic conformity. Based on previous literature, the dependent variables in each sub-hypothesis under Hypothesis 1 is operationalized as following:

- **Match of Strategy design with the ego network (H1-a):** operationalized by measuring how many of a focal partnership’s strategy attributes (Strategy1, Strategy 2, and Strategy 3) match the modal design of strategy in the ego network. (See Table 2.1 for partnership strategy measures).

- **Match of Structure design with the ego network (H1-b):** operationalized by measuring how many of a focal partnership’s structure attributes (Structure1, Structure 2, and Structure 3) match the modal design of structure in the ego network. (See Table 2.1 for partnership structure measures).

- **Match of Funding portfolio design with the ego network (H2-c):** operationalized by measuring how many of a focal partnership’s funding source attributes (Funding 1 to Funding 9) match the modal design of funding portfolio in the ego network. (See Table 2.1 for partnership funding portfolio measures).
Table 2.1: Measures for Partnership Design Attributes

<table>
<thead>
<tr>
<th>Type of Attributes</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partnership strategy</td>
<td>1. Does your partnership administer and manage its own programs or services? (Y/N)</td>
</tr>
<tr>
<td></td>
<td>2. Does your partnership focus significant time and energy on policy change initiatives? (Y/N)</td>
</tr>
<tr>
<td></td>
<td>3. Does your partnership focus a significant amount of time and energy on developing protocols for improving coordination among member</td>
</tr>
<tr>
<td></td>
<td>organizations and agencies? (Y/N)</td>
</tr>
<tr>
<td>Partnership structure</td>
<td>1. How often does the entire partnership meet? (bi-monthly, monthly, quarterly, other)</td>
</tr>
<tr>
<td></td>
<td>2. Does your partnership have sub-committees or task forces? (Y/N)</td>
</tr>
<tr>
<td></td>
<td>3. Does your partnership have paid staff? (Y/N)</td>
</tr>
<tr>
<td>Partnership funding</td>
<td>What types of financial support does the partnership have? Choose yes or no for each of the following (all Y/N):</td>
</tr>
<tr>
<td>sources</td>
<td>1. Federal grant;</td>
</tr>
<tr>
<td></td>
<td>2. State Grant;</td>
</tr>
<tr>
<td></td>
<td>3. County Grant;</td>
</tr>
<tr>
<td></td>
<td>4. City Grant;</td>
</tr>
<tr>
<td></td>
<td>5. Public Donation;</td>
</tr>
<tr>
<td></td>
<td>6. Fundraisers;</td>
</tr>
<tr>
<td></td>
<td>7. National foundations;</td>
</tr>
<tr>
<td></td>
<td>8. Local or state foundations</td>
</tr>
<tr>
<td></td>
<td>9. Other sources</td>
</tr>
</tbody>
</table>

**Independent Variables (H1).** The key independent variable in Hypothesis 1 is modality strength of a certain partnership design (in strategy/structure/funding portfolio) in an ego network, which represents how strong the modality of a certain design in a focal partnership’s ego network is. The independent variable in each sub-hypothesis is listed below:

- **Modality strength of partnership strategy in ego network:** represents how strong the strategy modality in a focal partnership’s ego networks is. The strength of modality is calculated by using network analysis software UCINET and then was recoded to
represent the average level of strength of modality that a focal partnership experiences in strategy from its ego network. For each of the three strategy characteristics (See Strategy 1, 2 and 3 in Table 2.1), a normalized version of heterogeneity measure, IQV (Index of Qualitative Variation), was calculated through the Composition command under Ego Network calculation in UCINET. IQV is equal to Blau measure divided by 1-1/n (Blau measure is the measure of heterogeneity also calculated by UCINET, which is 1 minus the sum of the squares of the proportions of each value of the categorical variable in ego’s network). Then in order to represent strength of modality, I used 1 minus IQV so that higher values represent higher levels of modality strength. Lastly, the average of three IQV measures for partnership strategies was calculated to represent this independent variable.

- **Modality strength of partnership structure in ego network:** operationalized in the same approach discussed for “Modality strength of partnership strategy in ego network” above, this variable represents how strong the structure modality is in a focal partnership’s ego networks (See measure for Structure 1, 2 and 3 in Table 2.1)

- **Modality strength of partnership funding portfolio in ego network:** operationalized in the same approach discussed for “Modality strength of partnership strategy in ego network” above, this variable represents how strong the modality is for the design of partnership funding portfolio in a focal partnership’s ego networks (See measures for Funding 1 to 9 in Table 2.1)

*Control Variables (H1).*
• **Size of a focal partnership’s ego network:** The size of an ego network has been identified to be a relevant factor with network density (Krätke, 2002), information transmission within a network (Lu et al., 2009) and the ego organizations’ performance (Uzzi, 1996) by the past literature. Here the size of ego networks is controlled for partnerships; it equals the number of partnerships that is in a focal partnership’s ego network, i.e., the number of partnerships that a focal partnership is directly connected through sharing at least one organizational member with.

• **Interaction term between size of ego network and the strength of modality in the ego network:** an interaction term is suspected between a focal partnership’s size of its ego network and the strength of modality in the ego network. Depending on the size of its ego network, strength of modality in the ego network may have different types of relationships with partnership design match with the ego network.

**Hypothesis 2 (H2-a, H2-b, and H2-c)**

**Dependent Variables (H2).** The dependent variable in Hypothesis 2 is match of partnership design (strategy/structure/funding) with respected network, representing to what extent a focal partnership’s design of a certain aspect resembles the modal design used by its nominated peer partnerships who were perceived to be most effective by the focal partnership:

• **Match of strategy design with the respected network:** operationalized by measuring how many of a focal partnership’s strategies (Strategy1, Strategy 2, and Strategy 3) match the modal design of strategy used among its respected network. (See Table 2.1 for strategy measure)
• **Match of structure design with the respected network:** operationalized by measuring how many of a focal partnership’s structure designs (Structure1, Structure 2, and Structure 3) match the modal design of structure of its respected network. (See Table 2.1 for structure measure)

• **Match of funding portfolio design with the ego network:** operationalized by measuring how many of a focal partnership’s funding sources (Funding 1 to Funding 9) match the modal design of funding portfolio of its respected network. (See Table 2.1 for funding source measure)

**Independent Variables (H2)**

• **Modality strength of partnership strategy in respected network:** represents how strong the strategy modality is in a focal partnership’s respected networks. The strength of modality is calculated by using network analysis software UCINET and then was recoded to represent the average level of strength of modality that a focal partnership experiences in strategy from its respected network. For each of the three strategy characteristics (See Strategy 1, 2 and 3 in Table 2.1), a normalized version of heterogeneity measure, IQV (Index of Qualitative Variation), was calculated through using the Composition command under Ego Network calculation in UCINET. IQV is equal to Blau measure divided by 1-1/n (Blau measure is the measure of heterogeneity also calculated by UCINET, which is 1 minus the sum of the squares of the proportions of each value of the categorical variable in ego’s network). Then I used 1 minus IQV to represent the strength of modality, so that higher value means
strong modality of strategy design. Lastly, the average of three IQV measures for partnership strategies was calculated to represent this independent variable.

- **Modality strength of partnership structure in respected network**: operationalized in the same approach discussed for “Modality strength of partnership strategy in respected network” above, this variable represents how strong the structure modality is in a focal partnership’s respected network (See measure for Structure 1, 2 and 3 in Table 2.1)

- **Modality strength of partnership funding portfolio in respected network**: operationalized in the same approach discussed for “Modality strength of partnership strategy in respected network” above, this variable represents how strong the modality is for the design of partnership funding portfolio in a focal partnership’s respected network (See measure for Funding 1 to 9 in Table 2.1)

**Control Variables (H2)**. Same as Hypothesis 1, control variables included are size of a focal partnership’s respected network and the interaction term between size of respected network and the strength of modality in the respected network.

- **Size of a focal partnership’s respected network**: this variable represents the number of partnerships that is in a focal partnership’s respected network, i.e., the number of partnerships that a focal partnership nominated to be the most effective partnerships in the community to promote community health.

- **Interaction term between size of respected network and the strength of modality in the respected network**: an interaction term is suspected between a focal partnership’s size of its respected network and the strength of modality in the respected network.
Depending on the size of respected network, strength of modality in the respected network may have different types of relationships with match of partnership design with the respected network.

Analysis

This study uses SPSS for testing hypotheses. First, descriptive analysis was conducted for all variables. Second, for each category of partnership attributes (strategy, structure, funding), two correlation analyses were conducted between strength of modality, size, and match of partnership design with their networks. Third, linear regressions were conducted for all partnership attributes hypothesized for. For regressions that showed a significant effect (or trend of significance) for interaction terms, a further regression was conducted with independent variables mean centered to better interpret the analysis results. The following section shows all results from these analyses.

Results

First, descriptive analysis was conducted for all the variables. Table 2.2-2.4 below show the valid cases, missing, mean, mode, minimum and maximum for dependent variables, independent variables, and control variables respectively.
Table 2.2: Descriptive Statistics on Dependent Variables

<table>
<thead>
<tr>
<th>Category</th>
<th>Dependent Variables</th>
<th>Valid cases</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>Match of partnership strategy with ego network</td>
<td>32</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1.6563</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Match of partnership strategy with respected network</td>
<td>22</td>
<td>12</td>
<td>0</td>
<td>3</td>
<td>1.7273</td>
<td>2</td>
</tr>
<tr>
<td>Structure</td>
<td>Match of partnership structure with ego network</td>
<td>33</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1.8485</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Match of partnership structure with respected network</td>
<td>27</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>1.7778</td>
<td>2</td>
</tr>
<tr>
<td>Funding</td>
<td>Match of partnership funding portfolio with ego network</td>
<td>33</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>6.1818</td>
<td>5</td>
</tr>
<tr>
<td>portfolio</td>
<td>Match of partnership funding portfolio with respected network</td>
<td>27</td>
<td>7</td>
<td>1</td>
<td>9</td>
<td>5.5556</td>
<td>7</td>
</tr>
</tbody>
</table>

2 Missing data: among the 34 partnerships in the dataset, one partnership is an isolate (not sharing any organizational members with the rest partnerships in the community), thus does not have any data on design match with ego networks or strength of modality measures; 7 partnerships did not provide nominations for their respected networks or provided invalid data, thus are missing on data for design match with respected networks; one partnership is missing on strategy design, thus any other partnerships that nominated this partnership as the only respected peer are missing on match of partnership strategy with respected partnerships and modality strength of strategy design among respected networks.
Table 2.3: Descriptive Statistics on Independent Variables

<table>
<thead>
<tr>
<th>Category</th>
<th>Independent Variables</th>
<th>Valid cases</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>Modality strength of strategy design in ego network</td>
<td>33</td>
<td>1</td>
<td>.02</td>
<td>.27</td>
<td>.0886</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Modality strength of strategy design in respected network</td>
<td>23</td>
<td>11</td>
<td>.00</td>
<td>1.00</td>
<td>.7488</td>
<td>1.00</td>
</tr>
<tr>
<td>Structure</td>
<td>Modality strength of structure design in ego network</td>
<td>33</td>
<td>1</td>
<td>.07</td>
<td>.43</td>
<td>.1595</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>Modality strength of structure design in respected network</td>
<td>27</td>
<td>7</td>
<td>.00</td>
<td>.59</td>
<td>.2730</td>
<td>.00</td>
</tr>
<tr>
<td>Funding portfolio</td>
<td>Modality strength of funding portfolio in ego network</td>
<td>33</td>
<td>1</td>
<td>.12</td>
<td>.47</td>
<td>.2369</td>
<td>.12</td>
</tr>
<tr>
<td></td>
<td>Modality strength of funding portfolio in respected network</td>
<td>27</td>
<td>7</td>
<td>.10</td>
<td>1.00</td>
<td>.6786</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Table 2.4: Descriptive Statistics on Control Variables

<table>
<thead>
<tr>
<th>Control Variables</th>
<th>Valid cases</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of the ego network</td>
<td>34</td>
<td>0</td>
<td>0</td>
<td>32</td>
<td>20.882</td>
<td>26</td>
</tr>
<tr>
<td>Size of the respected network</td>
<td>34</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1.618</td>
<td>3</td>
</tr>
</tbody>
</table>

Hypotheses Testing

**Partnership Strategy (H1-a and H2-a)**

Hypothesis 1-a states that the stronger that a strategy design is in a partnership’s ego network, the more likely that the partnership’s strategy will resemble the modal design of its ego network. Correlation analysis below (Table 2.5) shows a significant relationship between
strength of modality in ego network and the match of strategy design with the modal design of its ego network; however, contradictory to the hypothesized direction, the correlation analysis shows a significant negative relationship between the two variables ($r= -.427$, $p= .015$), indicating that the more strongly that a strategy design is used in a partnership’s ego network, the more likely that this focal partnership will use a different strategy design from its ego network.

Correlation analysis also reveals a significant negative relationship between network size and strength of modality, indicating that the larger size that a focal partnership’s ego network is, the lower level the modality strength will be for strategy design a focal partnership’s ego network—this is consistent with the common sense reasoning that the larger size a network has, the less likely that all organizations within the network will be using the same kind of design (or in another word, has a full modality). This negative relationship between size of network (either ego or respected network) is also expected to be observed for all following analysis regardless of whether the examination is on the characteristics of strategy, structure, or funding portfolio.

Correlation analysis also reveals that there is a trend of significance between the interaction term (size of ego network and strength of modality) and the dependent variable, indicating there might be a significant interaction term in the regression, which is further tested by the regression listed below with interpretation followed.
Table 2.5: Match of Partnership Strategy with Ego Network (H1-a)

<table>
<thead>
<tr>
<th></th>
<th>Match of partnership strategy with ego network</th>
<th>Strength of modality of partnership strategy in Ego network</th>
<th>Size of ego network</th>
<th>Interaction between network size and modality strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Match of partnership strategy with ego network</td>
<td>1</td>
<td>-.427*</td>
<td>.267</td>
<td>-.346</td>
</tr>
<tr>
<td>Strength of modality of partnership strategy in Ego network</td>
<td>-.427*</td>
<td>1</td>
<td>-.473**</td>
<td>.416*</td>
</tr>
<tr>
<td>Size of ego network</td>
<td>.267</td>
<td>-.473**</td>
<td>1</td>
<td>.626**</td>
</tr>
<tr>
<td>Interaction between network size and modality strength</td>
<td>-.346^</td>
<td>.416*</td>
<td>.626*</td>
<td>1</td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10

Regression analysis tested two models, with the independent variables being mean centered in Model 2. As Table 2.6 shows, goodness of fit for regression model improves after the interaction term is added in (F =3.358 for Model 1, p= .049; F = 11.429 for Model 2, p=.000), showing both the main effects and the interaction term to be significant predictor (Model 2). It can be interpreted from results of Model 2 (centered) that, for a partnership that has the average size of ego networks (mean= 22), the higher the modality strength is in its ego network, the less likely that the partnership will have the same strategy with the modal design in its ego network (Beta=-1.384, p=.000). The model also shows that for a partnership that has both the average size of ego network (mean=22) and the average modality strength (mean=.0886), the level of matches that its strategy has with the modal
design of its ego network is 1.357 (range = 0 to 3). In order to demonstrate the interaction effect, a graph for the interaction term is plotted by using the software *Interaction!* (See Figure 2.1 below). As the Figure 2.1 reveals, the effect size of modality strength on partnership strategy will depend on how large the ego network is; the larger a partnership’s ego network is, the more likely that modality strength of strategy in a partnership’s ego network will be strongly related to its strategy design match with the ego network in a negative direction.

**Table 2.6: Regression on Match of Strategy Design with Ego Network (H1-a)**

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2 (Centered)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>Constant</td>
<td>2.069**</td>
<td>.679</td>
</tr>
<tr>
<td>Strength of modality of partnership strategy with ego network</td>
<td>-6.966</td>
<td>3.414</td>
</tr>
<tr>
<td>Size of ego network</td>
<td>.010</td>
<td>.022</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td>-2.079</td>
<td>.438</td>
</tr>
<tr>
<td>R square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F value</td>
<td>3.358*</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10**
Different from the results for H1-a, the correlation analysis with respected partnerships (H2-a) didn’t reveal a significant relationship between strength of modality and the match of strategy design, although as expected, the size of respected network still shows a negative relationship with the match of partnership strategy design with modal design (see Table 2.7 below). Regression with and without the interaction term further confirmed that there is no relationship found between the modality strength or network size with the dependent variable (see Table 2.8). Since neither of the two models for respected network was found to be significant, this rejects H2-a which states a significant positive relationship between strength of modality in respected network and the match of strategy design with the respected network.
Table 2.7: Design in Partnership Strategy Similarity with Respected Peers (H2-a)

<table>
<thead>
<tr>
<th></th>
<th>Match of partnership strategy with respected network</th>
<th>Strength of modality of partnership strategy in respected network</th>
<th>Size of respected network</th>
<th>Interaction between size and modality strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Match of partnership strategy with respected network</td>
<td>1</td>
<td>-.176</td>
<td>.097</td>
<td>-.020</td>
</tr>
<tr>
<td>Strength of modality of partnership strategy among respected network</td>
<td>-.176</td>
<td>1</td>
<td>-.511*</td>
<td>.564**</td>
</tr>
<tr>
<td>Size of respected network</td>
<td>.097</td>
<td>-.511*</td>
<td>1</td>
<td>.715**</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td>-.020</td>
<td>.564**</td>
<td>.715**</td>
<td>1</td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10**
Table 2.8: Regression on Match of Strategy Design with Respected Network (H2-a)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.00*</td>
<td>.858</td>
</tr>
<tr>
<td>Strength of modality in partnership strategy with respected network</td>
<td>-.386</td>
<td>.594</td>
</tr>
<tr>
<td>Size of respected network</td>
<td>.008</td>
<td>.233</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td>1.654</td>
<td>.983</td>
</tr>
<tr>
<td>R square</td>
<td>.031</td>
<td></td>
</tr>
<tr>
<td>F value</td>
<td>.304</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10

**Partnership Structure (H1-b and H2-b)**

For the design of partnership structure, analysis results did not show a significant relationship between modal strength and the match of design in ego network as what is shown for partnership strategy (see results in Table 2.9 and Table 2.10). Correlation analysis for respected networks (Table 2.11) revealed a trend of negative correlation between strength of modality and the level of structure match with the modal design used by a focal partnership’s respected partnerships ($r = -.379, p = .051$). In addition, Table 2.11 shows a significant and negative correlation between size and strength of modality ($r = -.857, p = .000$); since the maximum size of respected network is only three (partnerships were asked to nominate up to three partnerships they perceive to be most effective during interview), this strong relationship between network size and modality strength merely means that
nominating more number of partnerships increases the likelihood for diversified designs to exist within a respected network.

When network size is controlled in the regression (Model 1 in Table 2.12), the strength of modality in the respected network did *not* show to be a significant predictor for match of structure design with modal design in respected network. When the interaction term between network size and strength of modality was added (Model 2 in Table 2.12), the model’s goodness of fit dropped (F=2.545 for Model 1 and 1.665 for Model 2, see Table 2.11), with none of the predictors shown to be significant in the model. Since there showed to be strong correlations between network size, strength of modality, and the interaction term (correlation between network size and the interaction=.874**, p=.000, see Table 2.11), regression Model 1 and Model 2 both are under a high risk of multicollinearity. Accordingly, the regression results did not support the hypothesis that strength of modality in the respected network is positively related with match of structure design in the respected network when network size is controlled.
Table 2.9: Partnership Structure Similarity with Ego Network (H1-b)

<table>
<thead>
<tr>
<th></th>
<th>Match of partnership structure with ego network</th>
<th>Strength of modality of partnership structure in Ego network</th>
<th>Size of ego network</th>
<th>Interaction between size and modality strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Match of partnership structure with ego network</td>
<td>1</td>
<td>-.223</td>
<td>.180</td>
<td>.130</td>
</tr>
<tr>
<td>Strength of modality of partnership Structure in Ego network</td>
<td>-.223</td>
<td>1</td>
<td>-.536**</td>
<td>.071</td>
</tr>
<tr>
<td>Size of ego network</td>
<td>.180</td>
<td>-.536**</td>
<td>1</td>
<td>.776**</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td>.130</td>
<td>.071</td>
<td>.776**</td>
<td>1</td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10

Table 2.10: Regressions on Match of Structure Design with Ego Network (H1-b)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(constant)</td>
<td>1.992*</td>
<td>.866</td>
</tr>
<tr>
<td>Strength of modality of partnership structure with ego network</td>
<td>-2.272</td>
<td>2.699</td>
</tr>
<tr>
<td>Size of ego network</td>
<td>.010</td>
<td>.025</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td></td>
<td>.337</td>
</tr>
<tr>
<td>R square</td>
<td>.055</td>
<td></td>
</tr>
<tr>
<td>F value</td>
<td>F=.870</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10
Table 2.11: Correlation Analysis: Match of Structure Design with Respected Network (H2-b)

<table>
<thead>
<tr>
<th></th>
<th>Match of partnership structure with respected network</th>
<th>Strength of modality of partnership structure in respected network</th>
<th>Size of respected network</th>
<th>Interaction between size and modality strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Match of partnership structure with respected network</td>
<td>1</td>
<td>-.379^</td>
<td>.416*</td>
<td>.287</td>
</tr>
<tr>
<td>Strength of modality of partnership structure in respected network</td>
<td>-.379^</td>
<td>1</td>
<td>-.857**</td>
<td>-.285</td>
</tr>
<tr>
<td>Size of respected network</td>
<td>.416*</td>
<td>-.857**</td>
<td>1</td>
<td>.874**</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td>.287</td>
<td>-.285</td>
<td>.874**</td>
<td>1</td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10

Table 2.12: Regressions on Match of Structure Design with Respected Network (H2-b)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(constant)</td>
<td>1.440</td>
<td>1.187</td>
</tr>
<tr>
<td>Strength of modality of partnership structure with respected network</td>
<td>-.224</td>
<td>.966</td>
</tr>
<tr>
<td>Size of respected network</td>
<td>.246</td>
<td>.256</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R square</td>
<td>.175</td>
<td></td>
</tr>
<tr>
<td>F value</td>
<td>2.545^</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10
**Funding Portfolio (H1-c and H2-c)**

Correlation analysis on funding portfolio showed a negative relationship between modality strength in ego network and the ego network size ($r = -.539$, $p = .000$; See Table 2.13), but no significant relationship for respected networks (Table 2.15 and Table 2.16).

Regression for the ego network (Table 2.14) showed that Model 2, which included both the size of ego network and the interaction term between them, is significant at .10 level ($F=2.592$, $p = .072$). Compared to Model 1 which only included the main effects, the $F$ value for Model 2 increased from .060 to 2.592 ($p$ value decreased from .942 to .072), while $R$ square increased from .004 to .211. Model 2 (centered) showed that for a partnership whose ego network whose network size equals mean value (mean=21), the modality strength in funding portfolio will have a negative effect on how similar the partnership’s funding portfolio is from the modal design in ego network ($\beta = -.981$, $p = .016$). The regression for Modal 2 also shows that the interaction between modality strength and size of ego network is significant ($\beta =-.980$, $p = .01$). Figure 2.2 presents the interaction effect identified. This result again showed an opposite direction of the modality strength and match of structure design as argued by institutional logic, indicating that strategic considerations might have stronger association than isomorphic pressures with partnerships funding design.
Table 2.13: Correlation Analysis: Match of Funding Portfolio Design with Ego Network (H1-c)

<table>
<thead>
<tr>
<th></th>
<th>Match of partnership funding portfolio with ego network</th>
<th>Strength of modality of partnership funding portfolio in Ego network</th>
<th>Size of ego network</th>
<th>Interaction between size and modality strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Match of partnership funding portfolio with ego network</td>
<td>1</td>
<td>-.048</td>
<td>-.009</td>
<td>-.148</td>
</tr>
<tr>
<td>Strength of modality of partnership Funding Portfolio in Ego network</td>
<td>-.048</td>
<td>1</td>
<td>-.539**</td>
<td>-.178</td>
</tr>
<tr>
<td>Size of ego network</td>
<td>-.009</td>
<td>-.539**</td>
<td>1</td>
<td>.919**</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td>-.148</td>
<td>-.178</td>
<td>.919**</td>
<td>1</td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10

Table 2.14: Regression on Match of Funding Portfolio with Ego Network (H1-c)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2 (Centered)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>B</td>
</tr>
<tr>
<td>Constant</td>
<td>6.997**</td>
<td>2.490</td>
<td></td>
<td>5.598**</td>
</tr>
<tr>
<td>Strength of modality of with ego network (funding portfolio)</td>
<td>-2.229</td>
<td>6.478</td>
<td>-.074</td>
<td>-29.368</td>
</tr>
<tr>
<td>Size of ego</td>
<td>-.013</td>
<td>.059</td>
<td>-.049</td>
<td>-.034</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td>-2.390</td>
<td>.865</td>
<td>-.980*</td>
<td></td>
</tr>
<tr>
<td>R square</td>
<td>.004</td>
<td></td>
<td></td>
<td>.211</td>
</tr>
<tr>
<td>F value</td>
<td>.060</td>
<td></td>
<td></td>
<td>2.592^</td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10
Figure 2.2: Interaction Effect: Modality Strength in Ego network and the Size of ego network (Funding Portfolio)
Table 2.15: Correlation Analysis: Match of Funding Portfolio Design with Respected Networks (H2-c)

<table>
<thead>
<tr>
<th></th>
<th>Match of partnership funding portfolio with respected network</th>
<th>Strength of modality of partnership funding in respected network</th>
<th>Size of respected network</th>
<th>Interaction between size and modality strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Match of partnership funding portfolio with respected network</td>
<td>1</td>
<td>.058</td>
<td>-.175</td>
<td>-.097</td>
</tr>
<tr>
<td>Strength of modality of partnership funding among respected network</td>
<td>.058</td>
<td>1</td>
<td>-.828*</td>
<td>.273</td>
</tr>
<tr>
<td>Size of respected network</td>
<td>-.175</td>
<td>-.828**</td>
<td>1</td>
<td>.665**</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td>-.097</td>
<td>.273</td>
<td>.665**</td>
<td>1</td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10

Table 2.16: Regression on Match of Funding Portfolio with Respected Networks (H2-c)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(constant)</td>
<td>8.759</td>
<td>3.220</td>
</tr>
<tr>
<td>Strength of modality of partnership funding portfolio with respected network</td>
<td>-1.893</td>
<td>2.434</td>
</tr>
<tr>
<td>Size of respected network</td>
<td>-.942</td>
<td>.829</td>
</tr>
<tr>
<td>Interaction between size and modality strength</td>
<td>3.277</td>
<td>2.452</td>
</tr>
</tbody>
</table>

R square | .054 | .122 |
F value  | .689 | 1.070 |

**P<.01, *P<.05, ^P<.10
Hypothesis 3

Through examining analysis results for Hypothesis 1 and 2, this study did not find adequate evidence supporting Hypothesis 3 which states that isomorphism effects are stronger in the design of partnership funding portfolio than in partnership strategy and partnership structure. Previous literature suggested that isomorphic effects might be unequal across organizational attributes (Ashworth et al., 2009; Villadsen, 2013), yet the current data did find support for this argument. First, isomorphic effects were not observed to be relevant with strength of modality in this data; second, all three types of organizational attributes tested were found with some level of negative association between strength of modality and the match of partnership design with modal design in their networks (indicating an effect of strategic considerations), although the effects were observed in the ego networks for strategy and funding design, and in the respected networks for the design of partnership structure.

Discussion

This study is built on the recognition that there usually are more than just one collaborative partnership in a community focusing on the same field area and that the understanding on the embeddedness of partnerships within their broader community network can help us better understand partnership design. While institutional literature and studies on strategic alliance literature both provide insights into how organizations’ design and behavior can be associated with their local networks and communities, different streams of literature have provided competing arguments. Through examining 34 health partnerships within one embedded community network, this study did not find evidence that a focal partnership’s
design is more likely to resemble the modal design of its ego or respected network when modality strength increases; rather, the results from correlation and regression analyses revealed a pattern of effects that have been argued by the strategic alliance literature: the likelihood for partnerships to show different organizational designs increases as the modality strength becomes higher in a network. Such a tendency for partnerships to be “different” might be driven by strategic choice of organizational members.

Previous literature of strategic alliance highlights the advantages for network composition to be diversified, this study confirmed this effect in the context of embedded partnerships. For their ego networks, partnerships are showed to be connected through shared membership with other partnerships in the community that have different strategies and funding portfolio. The more widely that a certain strategy or funding design is used by peers in a focal partnership’s ego network, the more likely that the focal partnership has a different strategy design or funding portfolio design than the ego network’s modal design. This indicates that organizational members of the partnerships may be less interested in getting involved with a large number of similar collaborative partnerships; instead, engaging in a diverse group of partnerships may be seen as being associated with higher advantages for organizations, such as in increasing the types of resources, skillsets, information, knowledge, and perspectives (Luo & Deng, 2009).

Analysis results from this study also finds an interacted relationship between modality strength and network size: for partnerships that are connected with a large number of other partnerships in the community in their ego network, strength of modality in both strategy design and funding portfolio design shows a bigger effect size for the match of
partnership design with networks than partnerships that have smaller ego networks. This means that for partnerships who are not highly connected with their community, the strategic effect of being different is weaker, or at least is not the most influential. This may indicate that stronger modalities have a bigger impact on the partnerships who are more embedded within the community network.

Institutional literature has argued that organizations tend to mimic the community norms to increase legitimacy and their chance of survival, yet the current study shows at least for the current case analyzed, organizational members from collaborative partnerships seem to be more concerned with whether the partnerships they joined are showing different profiles and making special contributions that are distinct from the rest of partnerships that they are also members of in the community. Such a motivation to join a groups of different partnerships rather than similar partnerships might be driven by the community’s desire to effectively use the diversified resources and networks, to avoid duplicated projects and work, and to complement to each others’ work as a whole community. For this purpose, shared membership between partnerships is found to play the important role as a mechanism for information to flow between partnerships, for organizations to learn knowledge and practices from the broader community, and for making sure different partnerships are working on diversified projects and making unique contributions. Dependent on how a partnership is embedded and to what extent it is embedded within the community network, partnership design in strategies and funding portfolios show different levels of conformity to local norms in their ego networks. This suggests that partnership embeddedness is an important factor for understanding partnership design, which needs further investigation in future studies.
Limitation and Future Direction

This study has several limitations. First, based on the research design as a case study, findings from this study has limited generalizability and should only be applied to communities that are similar to the current case in their profile. Second, using a cross-sectional dataset, findings from this study do not reveal direction of causality between match of partnership design with modal designs and strength modality.

In addition, as this study used a secondary dataset, there may be missing variables that were not able to be included for the models tested. Data analyzed are based on three measures for partnership structure and three measures for partnership strategies, thus findings on how different attributes are under different levels of isomorphic pressures might be different when other aspects of partnership characteristics are added or tested, such as the absolute amount of financial support, partnerships’ specific strategies to create and build effective programs, strategies to build new relationships and enroll partners, level of formality in working procedures, and approaches to making goals and evaluate outcomes, etc.

Future studies should consider testing the current findings in broader contexts; for example, for communities of a different size, with larger or smaller numbers of partnerships, and with a different level of network density in the community. Longitudinal studies that are more rigorous in research design are encouraged to clarify the direction of causality between partnership design and strength of modality. As the current study suggests that partnership embeddedness is a relevant factor for partnership design, future studies should examine in broader contexts to what extent and in what ways partnership embeddedness in terms of shared-membership influences partnerships to make decisions, design structures, and take
actions. With the current knowledge gap on how external pressures and community contexts can shape and influence partnership design in different attribute aspects, studies on such topics will be valuable for us to obtain a more complete appreciation of partnership design, and how to better explain different dimensions of inter-organizational collaboration.
References


Chapter 3: Mimetic Isomorphism and Its Relationship to Collaborative Partnership’s Symbolic Performance: To be Different, or to be the Same?

Introduction

Inter-organizational collaboration efforts such as partnerships, alliances, or coalitions have been increasingly identified as a way to improve the design and delivery of goods and services in public management, public health, innovation, research and development, and other social areas. (Brinkerhoff, 2002; Raab et al., 2013). Through sharing resources and joint decision making, inter-organizational groups seek to address common interests, achieve shared goals, or benefit mutual stakeholders (Stuart et al., 2011). Such collaborative groups are defined in this study as partnerships, which refer to community-based groups composed of leaders and staff representing three or more organizations/agencies who share a common issue domain (e.g., mental health, domestic violence, HIV/AIDS; Nowell, 2009).

Over the past several decades, researchers have investigated fundamental questions about partnership design and performance, such as partnership formation and evolution, partnership attributes, characteristics of successful partnerships, partnership synergy, assessment of partnership effectiveness, etc. (Brinkerhoff, 2002; Feinberg et al, 2004; Foster-Fishman et al., 2001; Gottlieb et al., 1993; Granner & Sharpe, 2004; Hays et al., 2000; Weiss et al., 2002). This existing literature on partnership performance has heavily focused on the internal functioning of partnerships, paying much less attention to the influences and pressures that a partnership can experience from its local community and external environment (Haines et al., 2012; Nies et al., 2003). The predominant emphasis on internal
partnership functioning attracts scholars’ attention to the processes and strategies of staffing, strategic planning, leadership, organizing, or coordination among groups that make up a partnership, potentially obscuring the role of the broader institutional environment. In their review of 26 empirical studies on explaining health coalition effectiveness, Zakocs and Edwards (2006) found six factors that were consistently significant indicators of partnership effectiveness including formalization of rules, leadership style, member participation, membership diversity, agency collaboration, and group cohesion, which are exclusively related to the dynamics and features within the partnership, between its members. This example shows that empirical studies on partnership performance have paid inadequate attention to external characteristics that may influence partnership performance (Haines et al., 2012; Nies et al., 2003).

On the other hand, organizational theories such as institutional theory, resource dependency theory, and network theory have frequently pointed out that an organization’s external environment has a significant influence on its behaviors, designs, and success. Understanding how environmental and contextual factors influence partnership performance is critical for advancing our understanding on how to achieve partnership success. Seeking to lessen this gap, this paper draws on institutional theory and strategic alliance literature, investigating how partnership isomorphism within its local context relates to partnership symbolic performance. This study asks: 1) Does being isomorphic with local institutional norms in a community indeed help a collaborative partnership to gain higher reputation and self-perceived effectiveness as institutional theorists have argued? 2) Do different
mechanisms of partnership isomorphism have different relationships with partnership symbolic performance?

**Community Systems of Collaborative Partnerships**

Although few previous studies have given attention to the interaction between different partnerships through shared organizational members, recent empirical research has confirmed that there are usually more than one partnership existing that focus on the same area of issues in a community; plus these partnerships can be highly connected with each other through shared organizational members (Nowell, Yang & Hano, 2013; see Figure 1.1 on Page 6, which demonstrates the community network map created by this study). Shared-membership among partnerships refers to the phenomenon that an organizational member that sits on one partnership is also a member of another partnership in the community. In reality, one organization can choose to join multiple collaborative partnerships that share related missions, with their organizational members attending multiple partnerships’ meetings, and working with multiple partners on different collaboration projects. This shared membership represents a link or tie among partnerships. In other words, when two partnerships have one or more members in common, these partnerships are connected to one another through their overlapping members who attend both partnerships’ meetings and participate in both partnerships’ projects. Figure 1.1 (Page 7) demonstrates this when one organization (represented as red circle) has connections or links to two partnerships (represented by blue squares).
Although less studied in public and nonprofit literature, the role of shared-membership between different organizations has been richly studied in the business sector as seen in board interlocks literature. Board interlocks are ties among organizations through a member of one organization sitting on the board of another (Borgatti & Foster, 2003). Past studies suggest that board interlocks serve as mechanisms for the dissemination of practices between interlocked firms in a number of organization attributes, including structures, strategies, systems, and processes (Shropshire, 2010). Through serving as a mechanism for information transfer between firms (Davis, 1991; Haunschild, 1993; Useem, 1984), board interlocks are able to impact a firm’s adoption of a certain practice or structure, including multidivisional form (Palmer, Jennings & Zhou, 1993), acquisition (Haunschild, 1993), diversification (Chen, Dyball, & Wright, 2009), and business strategy and compensation (Westphal, Seidel, & Stewart, 2001). Furthermore, a body of literature also suggests that board interlocks can facilitate imitation of practices between firms, such as in innovation adoption (Davis, 1991), joint venture formation (Gulati & Westphal, 1999), strategies of CEO’s pay premiums (Geletkanycz et al., 2001), and inter-firm collusion and cooperation (Koenig, 1979). Haunschild (1993) found evidence that firm managers are imitating the acquisition activities of other firms to which they are tied through directorships because they are exposed to the acquisition activities when they sit on those firms’ boards. As Mizruchi (1996) pointed out, interlocks could be considered as indicators of network embeddedness, suggesting “a range of firm behaviors---strategies, structures, and performance----could be affected by the firm’s relations with other firms.” (Mizruchi, 1996, P283)
The present study aims to examine partnership symbolic performance in the context of highly embedded networks, such that many partnerships have a high degree of overlapping members with other partnerships in the network. Based on a case study in one community, this study seeks to explain partnership symbolic performance by including the examination on a whole community system. Focusing on the debate between institutional theory and strategic literature on organizational performance, this paper examines whether embedded partnerships can increase their symbolic performance by having isomorphic organizational designs with their community norms.

**Symbolic Performance: What It is and Why It is Important**

Realizing that there may not be one best way to implement a partnership or to evaluate success (Roussos & Fawcett, 2000), previous collaboration literature has used a series of different approaches and terms to evaluate partnerships. For example, studies have explored partnership capacity (Foster-Fishman et al., 2001; Nowell, 2009), partnership success (Haines et al., 2012; Foster-Fishman et al., 2001), partnership impact (Wells et al., 2009; Hays et al., 2000), community or system change (Roussos & Fawcett, 2000), partnership effectiveness (Feinberg et al., 2004; Provan & Kenis, 2008; Provan & Milward, 1995; Turrini et al., 2010; Willem & Lucidarme, 2014; Zakocs & Edwards, 2006), and partnership performance (Cristofoli et al., 2014; Herranz, 2010; Keast, Mandell & Agranoff, 2014; Mueller & Jungwirth, 2011). It is noted that when studying networks, more attention has been given to issues of network formation, network governance, power and influence in
networks, yet relatively few empirical studies on the effectiveness of networks exist to date (Provan, Fish, & Sydown, 2007; Raab & Cambre, 2013; Turrini et al., 2010).

This study focuses on symbolic performance of partnerships, defined here as “the extent to which organizations command legitimacy, status, and reputation” (Heugens & Lander, 2009, P64). Symbolic performance is often discussed in comparison to substantive performance, a measure defined as the extent to which organizations are able to generate accounting-based profits or increase their overall market value (Heugens & Lander, 2009). According to Heugens and Landers (2009), performance measures that assess level of regulatory endorsement, media endorsement, and agency ratings belong to symbolic performance measures; in comparison, impact on costs, return on revenue and return on equity are representative measures for substantive performance.

According to institutional theory, organizations do not always seek only financial objectives, but often have other social objectives, such as the search for legitimacy (Fernandez-Alles et al., 2006). An organization’s survival depends on its attaining the support of relevant entities in its environment (Human & Provan, 2000). Studies from symbolic management perspective have claimed that actions that symbolize organizational concern or special treatment, regardless of their actual content, can provide intangible benefits to organizations (Perry-Smith & Blum, 2000; Pfeffer, 1981). For example, a two-year inductive field study of British ventures found that entrepreneurs are more likely to acquire resources for new ventures if they perform symbolic actions (Zott & Huy, 2007). In the same vein, symbolic performance can play an important role for organizations to gain resources and social support.
In public and nonprofit management, symbolic performance is frequently used to measure the success of collaborative partnerships (e.g., Feinberg et al., 2004; Gottlieb et al., 1993; Torrence, 2005), which usually is developed based on the perceptions of partnership members, or any person, group or organization who can affect or be affected by the partnership’s goals, activities, or outcomes (Feinberg et al., 2004; Stuart et al., 2011). The common use of symbolic performance measures is not just derived from the recognition that using performance indicators beyond the perceptions of coalition members or local informants is difficult for measuring the outcomes of partnerships (Feinberg et al., 2004), but is more due to many advantages that symbolic measures bring. For example, symbolic performance is believed to be able to serve as a compound construct encompassing the extent to which organizations command legitimacy, status, and reputation (Deephouse & Suchman, 2008; Huegens & Lander, 2009).

This study focuses on two dimensions of partnership symbolic performance: partnerships’ self-perceived effectiveness and peer-perceived effectiveness. As suggested in names, self-perceived effectiveness is measured by how effective an organization perceives itself to be, while peer-perceived effectiveness is measured by how effective others perceive the partnership to be. Both are frequently used to measure organizational performance, self-perceived and peer-perceived effectiveness measures are important indicators of partnerships’ outcomes and behaviors. Self-perceived effectiveness, for example, is believed to have effects on partnership sustainability and the stability of membership; peer-perceived effectiveness, on the other hand, can influence the level of resources and social support that a partnership can gain from its community (Perry-Smith & Blum, 2000).
Compared to organizations’ substantial performance, symbolic performance is more likely to be directly affected by community embeddedness (Granovetter, 1985; Guo & Acar, 2005; Larson, 1992). According to Granovetter (1985), organizations are embedded in a wide variety of networks that create opportunities for cooperation by deepening awareness, trust, and commitment among parties within the relationship (Granovetter, 1985; Guo and Acar, 2005). Previous studies found that the level that an organization is embedded with interorganizational networks could be related to its performance, rapid dissemination of information regarding opportunities and threats, interfirm resource pooling, cooperation, and coordinated adaptation (Zaheer & Bell, 2005). Symbolic performance such as reputation, which is the common opinion that people have about someone or something (Webster’s, 2014), is a particularly critical outcome of embeddedness because it represents a form of social capital that can be transformed into other types of capital (Nowell, Izod, Hano, & Yang, 2014).

In examining symbolic performance, institutional theory provides a rich literature that links organizations’ isomorphism with institutional norms to performance. In the institutional literature, scholars are increasingly interested in organizations' symbolic performance, such as the relative standing in an intersubjectively agreed-upon esteem-based ranking and their reputation (Heugens & Lander, 2009). High performance in gaining community reputation and self-perceived effectiveness can potentially help collaborative partnerships gain credibility and legitimacy in organizing and coordinating diverse partnership members, managing internal conflicts, and gaining support from local and state stakeholders. This study tests an institutional argument under the context of embedded community systems: does
being isomorphic in partnerships’ organizational design with community norms increase
organizations’ symbolic performance? This study examines isomorphic effects in three
aspects of partnerships’ organizational design: whether partnership isomorphism in strategy,
structure, and funding portfolios is related to partnership symbolic performance.

**Institutional Explanations of Mimetic Isomorphism**

Institutional theory has been used as an important perspective in organizational
studies to explain organizational behaviors and outcomes under environmental influences.
Institutional theorists stress that organizations do not always make decisions or take action
from a rational or efficiency point of view. Rather, because organizations are under coercive,
mimetic, and normative pressures, they tend to be increasingly isomorphic over time with
their institutionalized environment. This is because isomorphism can help organizations to
gain legitimacy, which is critical for organizations’ success and survival (DiMaggio &
Powell, 1983; Meyer & Rowan, 1976). Isomorphism with norms in the field can make it
easier for organizations to conduct themselves in transacting with peer organizations,
appealing for more resources, and being subjected to lower regulatory and behavioral
scrutiny by internal and external constituents (DiMaggio & Powell, 1983; Greenwood et al.,
2008; Heugens & Lander, 2009; Krishnan & Yetman, 2011). Due to these benefits, one
central argument of institutional theory is that institutional isomorphism promotes the

In contrast, the conventional wisdom from strategic management literature indicates
that organizations create competitive advantages by ‘being different’ rather than being the
same. Organizational differentiation is believed to reduce the intensity of competition between organizations and increase organizational performance (Deephouse, 1999; Tan et al., 2013). Recent empirical studies on whether isomorphism with community norms increase or diminish organizational performance have shown mixed results (Barreto & Baden-Fuller, 2006; Deephouse, 1999; Greenwood et al., 2008; Heugens & Lander, 2009; Tan et al., 2013), suggesting that the relationship between organizational isomorphism and organizational performance might be more complicated than expected by institutional theory.

**Mimetic Isomorphism of Collaborative Partnerships**

This paper focuses on investigating one type of institutional isomorphism: mimetic isomorphism. Mimetic isomorphism refers to the behavior of organizations to model themselves after other organizations in their field when faced with uncertainty over goals, technologies, means-ends relationships, etc. (DiMaggio & Powell, 1983; Yang & Hyland, 2012; Heugens & Lander, 2009). Imitation can take place when organizations model after successful organizations in the face of uncertainty, or when learning about proper behavior through industry associations, consulting firms, director linkages, and other networks (Deephouse, 1996); it can also take place indirectly through employee transfer or turnover (DiMaggio & Powell, 1983). Mimetic isomorphism is more likely to happen when managers face ambiguous situations with unclear solutions and when legitimacy becomes crucial for organizational survival (Barreto & Baden-Fuller, 2006; DiMaggio & Powell, 1983).

Compared to normative isomorphism, mimetic isomorphism requires direct knowledge and connection. For organizations which are strongly embedded in their institutional contexts,
which are made up of peer organizations, customers, suppliers, public bodies, etc., such contexts exert certain pressures on organizations, which lead to mimetic isomorphism (Ordanini et al., 2008)

According to institutional theory, collaborative partnerships would be able to gain legitimacy and decrease uncertainties when imitating other effective partnerships, which would ultimately increase chances for partnerships to succeed and survive (DiMaggio & Powell, 1983). Establishing legitimacy has been identified as a critical concern for collaborative partnerships, although limited studies have explored this topic (Human & Provan, 2000; Provan & Kenis, 2008). Human and Provan’s study (2000) found that the ultimate partnership sustainment could only be accomplished through a broader legitimacy-building strategy that addressed both internal and external stakeholders. Partnerships’ strategies are shaped by institutional context (Human & Provan, 2000). In order to gain a legitimate identity both internally and externally, partnerships have to make themselves an acceptable form of organizing, a legitimate entity that is recognizable to members and outsiders, and an interaction process so that members would be willing to work together to build and maintain the levels of involvement and norms of cooperation to sustain the network (Human & Provan, 2000; Provan & Kenis, 2008). Mimicry on other partnerships’ practices is recognized as an important means for partnerships to gain legitimacy. For example, Provan and Kenis (2008) noted that mimicry could help partnerships to gain legitimacy when the participants of one partnership adopt the interactive practices of another.

Heugens and Lander (2009) conducted a meta-analysis on whether conformity to institutional norms enhances or diminishes organizational performance. By analyzing a
database comprising the of 136 published and eight unpublished studies in the area of organizational institutionalism, the authors found that conformity to institutional ordinances improves both the symbolic and substantive performance of organizations. This meta-analysis included institutional studies that focus on a number of different organizational attributes, indicating that isomorphic effects of different organizational characteristics (strategies, structure, funding, etc.) are comparable. Nevertheless, no evidence proves so far that isomorphism effects across different attributes are in the positive or negative direction with organizational performance, or at the same level of strength.

**Being Isomorphic with Whom?**

While the institutional literature agrees that organizations are under mimetic pressures from their context to be isomorphic with the community norms, scholars do not agree on who are the peer organizations that a focal organization imitates under the mimetic pressure (Suddaby, 2010). Haunschild and Miner (1997) identified three types of imitation: frequency-based imitation, where the most widespread behavior is copied; trait-based imitation, where the behavior of some groups of firms (larger firms, or firms in the same strategic group) are copied; and outcome-based imitation, where a behavior believed to be related to good performance in another firm is copied (Haunschild & Miner, 1997; Ordanini et al., 2008). Characteristics that have been used in past studies as organizations’ references for choosing imitating targets are such as network peers, organization size, and most successful organizations. (Barreto & Baden-Fuller, 2006). In addition, Barreto and Baden-
Fuller (2006) suggested that firms follow the actions of those signaled as legitimate by outside legitimacy providers when mimetic behavioral pressures are strong.

This study explores two types of isomorphic targets that collaborative partnerships may imitate when they are experiencing mimetic pressure: the dominant design in the whole network (see Figure 1.1 as an example) and the dominant design of respected network (see Figure 3.1 as an example).

First, a partnership can imitate the organizational design that is most frequently used (the modal design) in the whole network (see Figure 1.1 for the example of a whole network, Page 7). A whole network comprises all nodes and ties in the network. In the case of this study, the whole network is composed by all health partnerships and their ties of shared members in the community. Organizations are strongly embedded in their institutional contexts, made up of peer organizations, customers, suppliers, public bodies, etc., and such contexts exert certain pressures on organizations, which can lead to alignment and adaptation (Ordanini et al., 2008). In a community where collaborative partnerships are fairly well connected through each other by sharing organizational members, information about peer partnerships’ design and strategies can easily flow from one partnership to another. Therefore, a partnership might be exposed to the organizational design used by other partnerships in the community and could be under mimetic pressure to be isomorphic with the design that is mostly used by peers in the community.

Second, a partnership can imitate the organizational design of the partnerships that it perceives to be the most effective in the community (referred to as respected network, see Figure 3.1 below as an example of a focal partnership’s respected network). This notion
aligns with the “outcome-based imitation” proposed by Haunschild and Miner (1997). Mimetic isomorphism is more likely to happen when managers face ambiguous situations with unclear solutions and when legitimacy becomes crucial for organizational survival (Barreto & Baden-Fuller, 2006; DiMaggio & Powell, 1983). In such cases organizations may imitate successful organizations, or learn about proper behavior through industry associations, consulting firms, director linkages, and other networks (Deephouse, 1996).

Based on the two mechanisms discussed, this dissertation tests whether being isomorphic with the whole network and being isomorphic with the respected network is related to partnerships’ symbolic performance. While the hypotheses tested in this study are based on the logic of institutional argument, it does so with the recognition that there is ample theory to propose a competing perspective.

Figure 3.1: An Example of a Respected Network
Partnership Isomorphism and Peer-Perceived Effectiveness

The first hypothesis of this study investigates whether partnerships who present isomorphic designs with their respected networks are more likely to perceive themselves as more effective. The mimetic isomorphism literature frequently suggests that organizations tend to model the successful peers’ strategies and decisions when they are under uncertainties (Barreto & Baden-Fuller, 2006; DiMaggio & Powell, 1983; Haunschild & Miner, 1997; Wholey & Burns, 1993). Being isomorphic with reputational partnerships can help partnerships to gain confidence for acting with legitimacy in the community, which can lead to higher rating of partnership effectiveness by itself. As establishing legitimacy is critical for collaborative partnership success (Human & Provan, 2000; Provan & Kenis, 2008), being isomorphic in strategies, structure and funding portfolio with the effective partnerships will help a collaborative to gain confidence and higher level of perception towards itself.

H1: Higher isomorphism displayed in a focal partnership’s structure, strategies and funding portfolio with its respected network (which is composed by partnerships that are perceived as high effective by the focal partnership), will be positively related to the self-perceived effectiveness of the focal partnership.

H1-a: Higher isomorphism displayed in a focal partnership’s strategy with its respected network, will be positively related to self-perceived effectiveness of the focal partnership.
**H1-b**: Higher isomorphism displayed in a focal partnership’s *structure* with its respected network, will be positively related to self-perceived effectiveness of the focal partnership.

**H1-c**: Higher isomorphism displayed in a focal partnership’s *funding* portfolio with its respected network, will be positively related with self-perceived effectiveness of the focal partnership.

**Partnership Isomorphism and Self-Perceived Effectiveness**

The second and third hypothesis focus on how a focal partnership’s isomorphism with the dominant norms of whole community network relates to its symbolic performance. Past studies point out that culture, selection, and socialization processes and reward systems might cause an organization to exhibit a modal similarity pattern, rather than be isomorphic with any other single organization (Brass et al., 2004). Adopting the types of partnership design that is most commonly used in the community can help partnerships to decrease uncertainties in face of ambiguous situations by looking “appropriate, rational, and modern” in its appearance (Meyer & Rowan, 1976, P344; also see Barreto & Baden-Fuller, 2006; DiMaggio & Powell, 1983). As establishing legitimacy is critical for collaborative partnership success (Human & Milward, 2000; Provan & Kenis, 2008), being isomorphic with the dominate norms of the community will help a collaborative partnership to look legitimate to the rest of the community and therefore be perceived with high reputation. In comparison, a focal partnership’s self-rated effectiveness may not be so strongly associated with its isomorphism.
from the whole network norms, since partnership leaders may not be accurately aware of the dominate type of organizational designs that the whole community are using.

**H2:** Higher isomorphism displayed in a focal partnership’s structure, strategies and funding portfolio with the modal archetype of the whole network will be positively related to the peer-perceived effectiveness of the focal partnership.

**H2-a:** Higher isomorphism displayed in a focal partnership’s *strategies* with the modal archetype of the whole network will be positively related to the peer-perceived effectiveness of the focal partnership.

**H2-b:** Higher isomorphism displayed in a focal partnership’s *structure* with the modal archetype of the whole network will be positively related to the peer-perceived effectiveness of the focal partnership.

**H2-c:** Higher isomorphism displayed in a focal partnership’s *funding* portfolio with the modal archetype of the whole network will be positively related to the peer-perceived effectiveness of the focal partnership.

**H3:** Isomorphism displayed in a focal partnership’s design with the modal archetype of the whole network is a stronger predictor for partnership peer-perceived effectiveness, but weaker predictor for self-perceived effectiveness.

**H3-a:** Isomorphism displayed in a focal partnership’s design of *strategy* with the modal archetype of the whole network is a stronger predictor for partnership peer-perceived effectiveness, but weaker predictor for self-perceived effectiveness.
**H3-b:** Isomorphism displayed in a focal partnership’s design of *structure* with the modal archetype of the whole network is a stronger predictor for partnership peer-perceived effectiveness, but weaker predictor for self-perceived effectiveness.

**H3-c:** Isomorphism displayed in a focal partnership’s design of *funding* portfolio with the modal archetype of the whole network is a stronger predictor for partnership peer-perceived effectiveness, but weaker predictor for self-perceived effectiveness.

Figure 3.2 below presents the relationships that are hypothesized by this study.

![Diagram of Hypothesized Relationships](image)

**Figure 3.2: Diagram of Hypothesized Relationships**

**Methodology and Data**

**Data**

This case study uses secondary interview data collected from 34 health collaborative partnerships in one county of North Carolina in Spring 2012. Data collection was conducted
through snowball sampling, and started from asking members from the largest health partnership in the county to nominate other health partnerships in the county. At the second stage the team contacted the coordinators of these nominated partnerships to verify they met the definition of health partnership used for the purpose of this study and also invite them to nominate other health partnerships in the county that were not on the list. Through this process the team finally identified 34 health partnerships in the county who met the study definition of “health partnership” as being composed of three or more organizations, meeting on a regular basis, and focusing on improving community health and wellness.

The coordinators of each of these 34 partnerships invited to participate in a telephone interview with the research team. All of the 34 coordinators completed an interview, representing a one hundred percent response rate. The size of these partnerships ranged from the lowest of 6 members to the largest of 103 members. On average, one partnership in the sample has 24 organizational members. Partnership age ranged from less than one year to over 26 years, with an average partnership age of 9.33 years. Among the 34 partnerships, 71% of them administer and manage their own programs or services, while 44% of them reported to focus significant time and energy on policy change initiatives.

The dataset analyzed for this study contains population level data for this county in that all health partnerships that are identified in the county through a process of snowball sampling approach were included in the dataset; yet the data is tested in this study as a sample of a broader population data to reveal patterns of relationships between partnership isomorphism and partnership performance. Partnerships in the sample are highly connected with each other through sharing their organizational members. During the interview, each of
the partnership coordinator was asked to provide a list of names of all individual members that are part of the partnership along with the organizations that they are affiliated with. On average, a partnership in the sample is connected to 64% of other partnerships in the community through sharing organizational members. This high level of connectivity through shared organizational members makes it a good fit for the purpose for examining partnership designs in embedded community system.

The interview also covered a series of dimensions of partnership functions ranging from basic characteristics such as founding date and initiator, partnership missions and targets, to their organizational structure, staffing information, meeting frequency, funding sources, and external relationships. In addition, the interview protocol included a measure that asked coordinators’ to rate their own partnership’s effectiveness in a number of functioning aspects, as well as to nominate up to three health partnerships in their county (not including themselves) that they perceived as having the strongest reputation in the community for being a positive force for change in promoting health and preventing relevant health problems in the community. The responses were entered and recorded into online survey software Qualtrics during the telephone interview, and then transformed to SPSS data for analysis.

Through the interview and preliminary analysis, the profile of one partnership stood out from the rest of the sample, this partnership was the seed partnership where the first round of partnership nomination was chosen to be started because it was known to be the largest and best known health partnership in the community. This partnership reported a total 103 organizational members on board while the average number of organizational members
that the rest health partnerships in the sample had was 22. The partnership also received 16 times of nominations for being effective partnership in the community while the second highest nomination in the community is 5 times, with an average of 1.15 times for the rest partnerships. Due to these incomparable profiles of this partnership, the response of the largest partnership is omitted from the sample to avoid model misspecification. The following analysis therefore reports 33 partnerships at most for different hypotheses tests.

**Operationalization of Variables**

**Dependent Variable.** This paper tests the relationship between isomorphism and two sets of dependent variables: partnership self-perceived effectiveness and partnership peer-perceived effectiveness:

- **Partnership self-perceived effectiveness:** measured by asking coordinators to rate how effective they believe their partnerships are on a scale from 1 to 5 in each of the following aspects: 1) gaining support of key local stakeholders, 2) organizing interest groups, 3) setting clear goals, and 4) Obtaining the resources it needs to accomplish its goals; 5) accomplishing its goals. This is a scale adapted from Mitchell et al., 2004. A final combined effectiveness scale is calculated by adding up the values of all the five indicators (Alpha = .78).

- **Partnership Peer-perceived effectiveness:** measured by the number of times that a partnership in the sample was nominated by its peers for having the strongest reputation in the community for being a positive force for change in promoting health and preventing relevant health problems in their community (Nowell, Yang, & Hano, 2013).
**Independent Variables.** There are two groups of independent variables in this study, partnership isomorphism with the respected network, and partnership isomorphism with the whole network. Previous literature measures isomorphism by the degree to which an organization’s certain design characteristic resembles conventional designs in an industry (Deephouse, 1996; Deephouse & Carter, 2005; Finkelstein & Hambrick, 1990). This paper follows this approach and measures partnership isomorphism (in strategy/structure/funding portfolio) by the degree to which a focal partnership resembles a modal design in a certain network (respected network or the whole network):

**Partnership Isomorphism (in strategy/structure/funding) with respected network.** Three variables measure respectively to what extent a focal partnership’s design resembles the modal design of its respected network (partnerships nominated as effective): strategy isomorphism with respected network, structure isomorphism with respected network, and funding portfolio isomorphism with respected network. In order to accurately reflect the institutional effect, three procedures were conducted to operationalize this group of variables. First, a binary variable was created to indicate whether a certain partnership attribute matches the modal design of its respected network (Yes/No). Second, for each partnership attribute, a normalized Blau measure was calculated for that attribute using UCINET. Blau's measure of heterogeneity is 1 minus the sum of the squares of the proportions of each value of the categorical variable in ego's network. A normalized version of this index is equal to the previous column divided by 1-1/n (n=number of categories of the variable). Then Blau measures were recoded by being taken from 1 to indicate the strength of modality (i.e., the closer the recoded Blau is to 1, the higher the strength of modality of the modal design is in
its respected network). Finally, using the measures prepared, isomorphism with respected network is calculated with the consideration of both whether a design matches with the modal design and the strength of modality of the modal design.

*Partnership Isomorphism (in strategy/structure/funding) with the whole network.*

Three variables respectively measure to what extent a focal partnership’s design resembles the modal design of the whole network: strategy isomorphism with the whole network, structure isomorphism with the whole network, and funding portfolio isomorphism with the whole network. Since the strength of modality is constant for the whole network, isomorphism with the whole network does not consider the strength of modality and is operationalized by measuring how many of a focal partnership’s attributes of a certain design (strategy/structure/funding portfolio) match the modal design of the whole network. (See Table 3.1 below for detailed operationalization for each variable).
Table 3.1: Operationalization for Independent Variables

<table>
<thead>
<tr>
<th>Type of networks</th>
<th>Independent Variables</th>
<th>Operationalization</th>
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<tbody>
<tr>
<td></td>
<td>Structure isomorphism with respected network</td>
<td>MEAN [Match Respected for Structure 1<em>Recoded Blau for Structure 1+ Match Respected Structure 2</em>Recoded Blau for Structure 2+ Match Respected for Structure 3*Recoded Blau for Structure 3] (see Table 3.2 for the measure of Structure 1, 2 and 3)</td>
</tr>
<tr>
<td></td>
<td>Funding isomorphism with respected network</td>
<td>MEAN [Match Respected for Funding 1<em>Recoded Blau for Funding 1+ Match Respected Funding 2</em>Recoded Blau for Funding 2+ Match Respected for Funding 3 *Recoded Blau for Funding 3+…+ Match Respected for Funding 9 *Recoded Blau for Funding 9.] (see Table 3.2 for the measure of Funding 1-9)</td>
</tr>
<tr>
<td>Whole network</td>
<td>Strategy isomorphism with the whole network</td>
<td>Operationalized by measuring how many of a focal partnership’s strategy attributes (Strategy1, Strategy 2, and Strategy 3, see Table 3.2) match the modal strategy design of the whole network.</td>
</tr>
<tr>
<td></td>
<td>Structure isomorphism with the whole network</td>
<td>Operationalized by measuring how many of a focal partnership’s structure attributes (Structure1, Structure 2, and Structure 3, see Table 3.2) match the modal structure design of the whole network.</td>
</tr>
<tr>
<td></td>
<td>Funding portfolio isomorphism with the whole network</td>
<td>Operationalized by measuring how many of a focal partnership’s funding sources (Funding portfolio measure 1-9, see Table 3.2) match the modal funding portfolio design of the whole network.</td>
</tr>
</tbody>
</table>
**Control Variables.** This study follows previous literature (Deephouse, 1996; Deephouse & Carter, 2005) to control for the size and age of partnerships. In addition, a measure of partnership funding diversity is controlled for hypotheses testing funding isomorphism (H1-c, H2-c, H3-c) in order to isolate the effect of funding portfolio isomorphism.

*Partnership size:* measured by the total number of active organizations represented in a partnership.

*Partnership age:* measured by the years of the partnership since started.

*Funding diversity:* measured by the number of different funding sources that a partnership reported to have (see Table 3.2 for the nine categories of funding sources). Funding diversity is controlled in all hypotheses testing partnerships’ funding portfolio isomorphism.
Table 3.2: Measures for Partnership Design Attributes

<table>
<thead>
<tr>
<th>Type of Attributes</th>
<th>Measures</th>
</tr>
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<tbody>
<tr>
<td>Partnership strategy</td>
<td>1. Does your partnership administer and manage its own programs or services? (Y/N)</td>
</tr>
<tr>
<td></td>
<td>2. Does your partnership focus significant time and energy on policy change initiatives? (Y/N)</td>
</tr>
<tr>
<td></td>
<td>3. Does your partnership focus a significant amount of time and energy on developing protocols for improving coordination among member organizations and agencies? (Y/N)</td>
</tr>
<tr>
<td>Partnership structure</td>
<td>4. How often does the entire partnership meet? (bi-monthly, monthly, quarterly, other)</td>
</tr>
<tr>
<td></td>
<td>5. Does your partnership have sub-committees or task forces? (Y/N)</td>
</tr>
<tr>
<td></td>
<td>6. Does your partnership have paid staff? (Y/N)</td>
</tr>
<tr>
<td>Partnership funding sources</td>
<td>What types of financial support does the partnership have? Choose yes or no for each of the following (all Y/N):</td>
</tr>
<tr>
<td></td>
<td>10. Federal grant;</td>
</tr>
<tr>
<td></td>
<td>11. State Grant;</td>
</tr>
<tr>
<td></td>
<td>12. County Grant;</td>
</tr>
<tr>
<td></td>
<td>13. City Grant;</td>
</tr>
<tr>
<td></td>
<td>14. Public Donation;</td>
</tr>
<tr>
<td></td>
<td>15. Fundraisers;</td>
</tr>
<tr>
<td></td>
<td>16. National foundations;</td>
</tr>
<tr>
<td></td>
<td>17. Local or state foundations</td>
</tr>
<tr>
<td></td>
<td>18. Other sources</td>
</tr>
</tbody>
</table>

Results

Descriptive statistics were first computed for all major variables. Results revealed that on a scale of 1 to 5, the self-perceived effectiveness of interviewed partnerships ranged from 2.2 to 5, with a mean of 3.82. The number of times that a partnership is nominated by peers

---

3 This table presents the same contents of Table 2.1 in Chapter 2, it is shown here again for the purpose of this particular independent paper.
for being effective (peer-perceived effectiveness) ranged from a minimum of 0 times to a maximum of 5 times. On average, one partnership in the sample receives 1.15 times of nomination by peer partnerships in the community to be an effective partnership (See Table 3.3).

Table 3.3: Descriptive Analysis on Symbolic Performance (Dependent Variables)

<table>
<thead>
<tr>
<th></th>
<th>Valid cases</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partnership self-perceived effectiveness</td>
<td>33</td>
<td>0</td>
<td>2.20</td>
<td>5</td>
<td>3.82</td>
<td>4.40</td>
</tr>
<tr>
<td>Partnership peer-perceived effectiveness</td>
<td>33</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>1.15</td>
<td>0</td>
</tr>
</tbody>
</table>

**Strategy Isomorphism and Symbolic Performance**

Descriptive statistics revealed that among the 33 health partnerships, 72.7 percent of them reported to administer their own program, 45.5 percent focused significant time on policy change initiatives, and 54.5 percent of them focused a significant amount of time and energy on developing protocols for improving coordination among member organizations (see Table 3.4 for frequency analyses on partnership strategies used, and Table 3.5 for descriptive statistics for the two strategy isomorphism measures).
Table 3.4: County Profile on Partnership Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Percentage of partnerships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your partnership administer and manage its own programs or services?</td>
<td>72.7% =Yes</td>
</tr>
<tr>
<td>Does your partnership focus significant time and energy on policy change initiatives?</td>
<td>45.5% =Yes</td>
</tr>
<tr>
<td>Does your partnership focus a significant amount of time and energy on developing protocols for improving coordination among member organizations and agencies?</td>
<td>54.5% =Yes</td>
</tr>
</tbody>
</table>

Table 3.5: Descriptive Analysis on Strategy Isomorphism

<table>
<thead>
<tr>
<th>Strategy Isomorphism with whole network</th>
<th>Valid cases</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>2.12</td>
<td>2</td>
</tr>
<tr>
<td>Strategy Isomorphism with respected network</td>
<td>23</td>
<td>10</td>
<td>.00</td>
<td>1</td>
<td>.36</td>
<td>.00</td>
</tr>
</tbody>
</table>

Next, correlation analysis was conducted between strategy isomorphism (independent variables), symbolic performance (dependent variables), partnership size and partnership age (control variables). Results show that self-perceived effectiveness and peer-perceived effectiveness are moderately correlated with each other ($r = .442$, $p = .01$), indicating that the more effective partnerships perceive themselves are, the more likely other partnerships in the community perceive them to be more effective. Correlation analysis and multiple regression show that neither strategy isomorphism with the whole network nor strategy isomorphism with respected network is significantly related with any of the two symbolic performance measures. Therefore, analysis results did not support the hypotheses that strategy
isomorphism is positively related with self and peer perceived effectiveness (see Table 3.6-Table 3.8).

**Table 3.6: Correlation Analysis: Strategy Isomorphism**

<table>
<thead>
<tr>
<th></th>
<th>Self-perceived effectiveness</th>
<th>Peer-perceived effectiveness</th>
<th>Strategy Isomorphism (whole)</th>
<th>Strategy Isomorphism (Respected)</th>
<th>Partnership size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-perceived</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>effectiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer-perceived</td>
<td>.442*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>effectiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategy Isomorphism</td>
<td>.028</td>
<td>.024</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(whole)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategy Isomorphism</td>
<td>-.049</td>
<td>.218</td>
<td>.086</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>(Respected)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnership size</td>
<td>.118</td>
<td>.035</td>
<td>.067</td>
<td>-.079</td>
<td>1</td>
</tr>
<tr>
<td>Partnership age</td>
<td>-.052</td>
<td>.335^</td>
<td>-.031</td>
<td>.213</td>
<td>.087</td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10**
Table 3.7: Regression on Self-Perceived Effectiveness (Strategy)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>Strategy isomorphism with the whole network</td>
<td>-.074</td>
<td>.249</td>
</tr>
<tr>
<td>Strategy isomorphism with respected network</td>
<td>-.103</td>
<td>.531</td>
</tr>
<tr>
<td>Partnership size</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Partnership age</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>R square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F value</td>
<td>.068</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10

Table 3.8: Regression on Peer-Perceived Effectiveness (Strategy)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>Strategy isomorphism with the whole network</td>
<td>-.453</td>
<td>.510</td>
</tr>
<tr>
<td>Strategy isomorphism with respected network</td>
<td>1.190</td>
<td>1.089</td>
</tr>
<tr>
<td>Partnership size</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Partnership age</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>R square</td>
<td></td>
<td>.084</td>
</tr>
<tr>
<td>F value</td>
<td>.915</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10
Structure Isomorphism and Symbolic Performance

Table 3.9 shows the frequency statistics on partnership structure attributes. The majority of partnerships in the county hold entire meetings every month (48.5%), 54.5% of the partnerships reported to have subcommittees, and 72.7% reported to have paid staff.

Table 3.10 shows the descriptive statistics for the two measures of structure isomorphism (structure isomorphism with the whole network and structure isomorphism with respected network).

Table 3.9: County Profile on Partnership Structure

<table>
<thead>
<tr>
<th>Structure</th>
<th>County Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often does the entire partnership meet?</td>
<td>12.1%=Bi-monthly</td>
</tr>
<tr>
<td></td>
<td>48.5%=Monthly</td>
</tr>
<tr>
<td></td>
<td>24.2%=Quarterly</td>
</tr>
<tr>
<td></td>
<td>15.2%=other</td>
</tr>
<tr>
<td>Does your partnership have subcommittees or task forces?</td>
<td>54.5%=Yes</td>
</tr>
<tr>
<td>Does your partnership have paid staff?</td>
<td>72.7%=Yes</td>
</tr>
</tbody>
</table>

Table 3.10: Descriptive Analysis on Structure Isomorphism

<table>
<thead>
<tr>
<th></th>
<th>Valid cases</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure Isomorphism with whole network</td>
<td>33</td>
<td>0</td>
<td>.00</td>
<td>3.00</td>
<td>1.76</td>
<td>2</td>
</tr>
<tr>
<td>Structure Isomorphism with respected network</td>
<td>29</td>
<td>4</td>
<td>.00</td>
<td>0.70</td>
<td>0.37</td>
<td>0.33</td>
</tr>
</tbody>
</table>

Correlation analysis (Table 3.11) reveals that structure isomorphism with the whole network shows a trend in positively correlating with partnerships’ self-perceived
effectiveness \( (r = .319, p = .70) \), indicating that the more similar a partnerships’ structure is with the modal structure design in the whole network, the more likely that the partnership perceives itself to be effective (at 0.10 significance level). However, being isomorphic with the whole network is not shown to be significantly related to how effective the partnership is perceived by the community. Thus Hypothesis 2-b which states that “structure isomorphism with the whole network is positively related with peer-perceived effectiveness” is not supported by the data. Hypothesis 3-b stating that structure isomorphism with the whole network positively correlates with self-perceived effectiveness is thus partially supported; the positive direction of relationship is supported at the .10 significance level; yet this relationship is found to be stronger than that between structure isomorphism with the whole network and peer-perceived effectiveness, which is in contradiction to H3-b (See Table 3.11). Multiple regression on self-perceived effectiveness and peer-perceived effectiveness did not find structure isomorphism with the whole network to be a significant predictor for symbolic performance when other variables are controlled (see Table 3.12 and Table 3.13).
### Table 3.11: Correlation Analysis: Structure Isomorphism

<table>
<thead>
<tr>
<th></th>
<th>Self-perceived effectiveness</th>
<th>Peer-perceived effectiveness</th>
<th>Structure Isomorphism (whole)</th>
<th>Structure Isomorphism (Respected)</th>
<th>Partnership size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-perceived</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>effectiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer-perceived</td>
<td>.442*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>effectiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structure</td>
<td>.319^</td>
<td>-.018</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isomorphism (whole)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structure</td>
<td>.064</td>
<td>.301</td>
<td>.184</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Isomorphism (Respected)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnership size</td>
<td>.118</td>
<td>.035</td>
<td>.035</td>
<td>.020</td>
<td>1</td>
</tr>
<tr>
<td>Partnership age</td>
<td>-.052</td>
<td>.335^</td>
<td>.027</td>
<td>.097</td>
<td>.087</td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10

### Table 3.12: Regression on Self-Perceived Effectiveness (Structure)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>B</td>
</tr>
<tr>
<td>Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>isomorphism with</td>
<td>.262</td>
<td>.170</td>
<td>.294</td>
<td>.262</td>
</tr>
<tr>
<td>the whole network</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structure</td>
<td>.041</td>
<td>.756</td>
<td>.010</td>
<td>.057</td>
</tr>
<tr>
<td>isomorphism with</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>respected network</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnership size</td>
<td>.003</td>
<td>.011</td>
<td>.052</td>
<td></td>
</tr>
<tr>
<td>Partnership age</td>
<td>-.005</td>
<td>.020</td>
<td>-.053</td>
<td></td>
</tr>
<tr>
<td>R square</td>
<td>.088</td>
<td></td>
<td>.093</td>
<td></td>
</tr>
<tr>
<td>F value</td>
<td>1.252</td>
<td>(p=.303)</td>
<td>.614</td>
<td>(p=.657)</td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10
Table 3.13: Regression on Peer-Perceived Effectiveness (Structure)

<table>
<thead>
<tr>
<th>Model 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>Structure</td>
<td>-.188</td>
<td>.344</td>
<td>-.103</td>
<td>-.207</td>
<td>.331</td>
<td>-.114</td>
</tr>
<tr>
<td>isomorphism with</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the whole network</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.591</td>
<td>1.533</td>
<td>.320</td>
<td>2.319</td>
<td>1.480</td>
<td>.286</td>
</tr>
<tr>
<td>Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>isomorphism with</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>respected network</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnership size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.003</td>
<td>.020</td>
<td>.023</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnership age</td>
<td></td>
<td></td>
<td></td>
<td>.076</td>
<td>.038</td>
<td>.362^</td>
</tr>
<tr>
<td>R square</td>
<td></td>
<td></td>
<td></td>
<td>.101</td>
<td></td>
<td>.233</td>
</tr>
<tr>
<td>F value</td>
<td>1.457</td>
<td></td>
<td></td>
<td></td>
<td>1.823</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10

**Funding Isomorphism and Symbolic Performance**

Descriptive statistics on partnerships’ funding portfolio showed that 79% of the interviewed partnerships have at least one source of funding support. Among the different types of financial support, federal grant is the most commonly acquired financial support with 42% of interviewed partnerships reported they have federal funding, followed by 36% reported having state funding (see Table 3.14 for frequency analysis). Partnerships’ funding diversity ranged between 0 source of funding support and 7 sources of funding support, with a mean of 2.5 sources. Table 3.15 shows the frequency analysis on partnership funding diversity. Table 3.16 shows descriptive statistics of the two funding isomorphism variables:
funding isomorphism with the whole network and funding isomorphism with the respected network.

Table 3.14: County Profile for Partnership Funding

<table>
<thead>
<tr>
<th>Funding</th>
<th>County Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the partnership have funding?</td>
<td>79% =Yes</td>
</tr>
<tr>
<td>-Federal grant</td>
<td>42% =Yes</td>
</tr>
<tr>
<td>-State grant</td>
<td>36% =Yes</td>
</tr>
<tr>
<td>-County grant</td>
<td>24% =Yes</td>
</tr>
<tr>
<td>-City grant</td>
<td>15% =Yes</td>
</tr>
<tr>
<td>-Public donations</td>
<td>30% =Yes</td>
</tr>
<tr>
<td>-Fundraisers</td>
<td>24% =Yes</td>
</tr>
<tr>
<td>-National foundations</td>
<td>21% =Yes</td>
</tr>
<tr>
<td>-Local or state foundations</td>
<td>21% =Yes</td>
</tr>
<tr>
<td>-Other financial support</td>
<td>30% =Yes</td>
</tr>
</tbody>
</table>

Table 3.15: Frequency Analysis on Funding Diversity (n=33)

<table>
<thead>
<tr>
<th>Number of Funding Sources of a partnership</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>7</td>
<td>21.2</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>12.1</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>21.2</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>15.2</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>15.2</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>9.1</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>3.0</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 3.16: Descriptive Analysis on Funding Isomorphism

<table>
<thead>
<tr>
<th></th>
<th>Valid cases</th>
<th>Missing</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Isomorphism with the whole network</td>
<td>33</td>
<td>0</td>
<td>2</td>
<td>9</td>
<td>6.12</td>
<td>8</td>
</tr>
<tr>
<td>Funding Isomorphism with respected network</td>
<td>26</td>
<td>7</td>
<td>.05</td>
<td>1</td>
<td>.42</td>
<td>1</td>
</tr>
</tbody>
</table>

To test relations between funding isomorphism and partnerships’ symbolic performance, first a correlation analysis was run between isomorphism funding measures, the two types of symbolic performance measures of partnerships, and control variables. Correlation analysis reveals funding isomorphism with the respected network (the peers that it nominated as effective partnerships) is significantly correlated with its self-perceived effectiveness in a negative direction ($r = -.497, p = .01$). Interestingly, this confirms the hypothesized significant relationship between funding isomorphism with respected network and self-perceived effectiveness, but demonstrates an opposite direction from what is hypothesized (H1-c). The negative relationship indicates that the less isomorphic a partnership’s funding portfolio is with its respected networks’ profile, the more likely it perceives itself to be an effective partnership. Funding isomorphism with the whole network has a negative but weaker correlation with partnerships’ self-perceived effectiveness ($r = -.336, p = .056$). The substantial number of funding sources measured by funding diversity shows a trend in being positively correlated with self-perceived effectiveness ($r = .342, p = .051$), indicating that the more number of funding sources that a partnership has, the more effective it tends to consider itself to be.
Correlation analysis (Table 3.17) also shows that partnerships’ funding diversity is positively correlated with partnership peer-perceived effectiveness \( (r= .507, p= .001) \), see Table 3.17). In comparison to funding diversity, funding isomorphism with respected network shows a much weaker relationship with peer-perceived effectiveness \( (r= -.360, p= .071) \).

As funding isomorphism with the whole network is shown to be highly correlated with the funding diversity of partnerships \( (r= -.827, p=0.00) \), funding isomorphism with the whole network is dropped for the following regression analysis to avoid multicollinearity. The correlation analysis also showed limited evidence that partnership size and partnership age are correlated with symbolic performance based on the current data, thus these two control variables are not included in the following regression analysis either.
In order to further examine the hypotheses, linear regressions were conducted for both self and peer perceived effectiveness. Regression on peer-perceived effectiveness reveals that when controlling for funding diversity, funding isomorphism with respected network is not significant in the model (see Table 3.18). Being isomorphic in funding portfolio with the community norm did not show to be significantly correlated with how effective a partnership is perceived by the whole community; rather, the more diversified the substantial funding supports that a partnership has, the more likely the partnership is nominated by other partnerships as highly effective (Beta=.466, p=.032). Conflicting with
what is argued by institutional theorists, having the similar funding portfolio with the local community norm did not show to be related to a high level of peer-perceived effectiveness.

Table 3.18: Regression on Peer-Perceived Effectiveness (Funding Portfolio)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
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<tbody>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Funding Isomorphism with respected network</td>
<td>-.696</td>
</tr>
<tr>
<td>Funding diversity</td>
<td>.378</td>
</tr>
<tr>
<td>R square</td>
<td></td>
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<tr>
<td>F value</td>
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**P<.01, *P<.05, ^P<.10

Interestingly, regression on self-perceived effectiveness (Table 3.19) shows that when partnerships’ substantial level for funding diversity is controlled, funding isomorphism with respected peers is the stronger predictor of the two for partnership self-perceived effectiveness (Beta= -.393, p= .10); funding diversity did not show to be a significant predictor for self-perceived effectiveness as for peer-perceived effectiveness.
Table 3.19: Regression on Self-perceived Effectiveness (Funding Portfolio)

<table>
<thead>
<tr>
<th>Model 1</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding isomorphism with respected network</td>
<td>-1.062</td>
<td>.549</td>
<td>-.401^</td>
</tr>
<tr>
<td>Funding diversity</td>
<td>.07</td>
<td>.077</td>
<td>.187</td>
</tr>
<tr>
<td>R square</td>
<td></td>
<td>.273</td>
<td></td>
</tr>
<tr>
<td>F value</td>
<td></td>
<td>4.308*</td>
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**P<.01,  *P<.05,  ^P<.10

Discussion

This study combines institutional and network perspectives to test whether partnership isomorphism is related to partnership symbolic performance. Institutional literature has made the central argument that organizations can increase their legitimacy and performance by having isomorphic designs with community norms, while strategic literature has proposed a negative relationship between organizational isomorphism and performance. Based on a case study of 33 health partnerships embedded within the same community context, this study examines whether partnership isomorphism in the organizational design of strategy, structure and funding portfolio is positively related to partnerships’ self-perceived effectiveness and peer-perceived effectiveness as institutional theory has argued.

This study makes several contributions to public management and organizational literature. Through testing the relationship between isomorphism in three different categories of organizational attributes (strategy/structure/funding) with two types of symbolic performance (self-perceived effectiveness and peer-perceived effectiveness), results from this
study showed that the question of “to be different or to be the same” depends on which type of organizational attribute is being investigated. Although the institutional theory does not normally elaborate on the particular categories of organizational attributes when examining isomorphic effects of organizations, results from this study demonstrate that this is a key question that needs to be further clarified for future institutional studies.

In this study, analyses based on health partnerships’ design of strategy, structure, and funding revealed different relationships with partnership symbolic performance: strategy isomorphism did not show a significant relationship with partnership symbolic performance; structure isomorphism with the whole network shows a trend in positively correlating with self-perceived effectiveness, but not with peer-perceived effectiveness; funding isomorphism with respected network is negatively related to self-perceived effectiveness while funding diversity shows a positive relationship with community perception of effectiveness. By examining three different categories of organizational attributes, this study finds that neither institutional theory nor strategic literature is completely supported by the results, instead it showed that in order to gain high symbolic performance (both self-perceived and peer-perceived), partnerships might consider to be the “same” in structure designs (staff, subcommittee, meeting), but consider to be “different” in funding portfolio.

The results also show that partnership’s self-perceived and peer-perceived effectiveness are correlated with each other at a moderate level, yet the two measures for symbolic performance are predicted by different constructs. Particular from analysis on funding isomorphism, results reveal that a partnership’s peer-perceived effectiveness is not associated with how similar the partnerships’ funding portfolio is with the community norm;
rather, it is more strongly related to the substantial number of funding sources that the partnership has. In other words, in a community where most partnerships do not have funding from a diverse range of sources, a partnership may gain higher community reputation for being effective when it attracts more sources of funding. When considering who are the most effective peers in the community, partnership coordinators seem to be using funding diversity as important criteria.

Interestingly, analyses in funding isomorphism show that partnerships follow a different rationale in considering how effective their own performance is: a “social comparison” effect is shown to be relevant for self-perceived effectiveness. Regression on self-perceived effectiveness shows that there is no evidence that partnerships use the level of funding to rate how effective themselves are; instead, a partnership’s self-perceived effectiveness is associated with both who it perceives to be the most effective peers in the community, and whether the partnership itself has relatively more advantageous design than its respected peers. In this current case, partnership coordinators compare their own funding portfolio with those of the partnerships that they respect as the most effective in the community; the more different a partnership’s funding portfolio is from what is used by its own respected peers, the more likely it perceives itself to be an effective partnership. This means that in a community where most partnerships do not have significant sources of funding, the more types of funding that a partnership sees itself to have in comparison with those it views as effective partnerships, the more effective it perceives itself to be. To say it in another way, it is the comparative advantages, rather than the substantial advantages that is associated with higher level of self-perceived effectiveness.
This finding also suggests that a partnership’s embeddedness within a community is a relevant factor for how a partnership perceives itself. Particularly, this study finds that partnership embeddedness is playing an important role when social comparison happens among partnerships. Initially proposed by Festinger (1954), social comparison theory has made the argument that individuals evaluate their own opinions and abilities by comparing themselves to others in order to learn how to define themselves. The concept of downward comparison was differentiated from upward comparison based on whether the individual looks to another individual or group that is considered to be worse off or better off than themselves (Wills, 1981). The phenomenon that partnerships compare themselves to the peers that they respect as most effective partnerships in the community falls under the upward social comparison, which is believed to be made to self evaluate and self improve in the hopes that self-enhancement will also occur. According to Collins (1996), people who make an upward social comparison want to believe themselves to be part of the elite or superior, and make comparisons highlighting the similarities between themselves and the comparison group.

Results from analyzing funding isomorphism and symbolic performance confirmed a social comparison effect between partnerships that focus on the similar missions within an embedded community. Through consciously or subconsciously comparing the profile of their own partnerships to the ones that they perceive as the most effective in the community, partnership coordinators are conducting an upward social comparison, which then builds into part of their standards for defining an effective partnership. This study shows that when a partnership has more diversified funding sources than its highly respected peers, the
partnership is more likely to perceive itself to be effective. Whereas, the rest of the community would look to the substantial diversity of funding that the partnership has to decide on effectiveness level of the partnership. This finding has significant implications for practitioners managing and working for collaborative partnerships. It suggests that it might be beneficial for coordinators and partnership leaders to keep in mind that their own standards for being an effective partnership could be significantly biased by how their partnership is embedded in the community, which partnerships they perceive to be most successful peers in the community, and what these partnerships’ profiles are like; meanwhile the rest of community might have very different standards and views.

Another practical implication is that a partnership who wants to enhance its community reputation for being an effective partnership may consider enhancing the types of financial supports it has. Since peer-perceived performance can influence the reputational capital and resources that an organization has, this study makes an important contribution by showing that a partnership’s community reputation is more heavily decided by its substantial organizational design (funding diversity) than displaying isomorphic designs with community norms.

The findings from this study also highlight the importance for us to further understand community systems that partnerships are embedded in. Since partnerships are looking at their peers in their community in evaluating their own performance, how strongly they are embedded within the community network, as well as where their network positions are located may both influence the partnerships’ social comparison process, and ultimately affect partnership behavior and outcomes. Therefore it confirms the importance of examining
partnerships from a perspective of community systems, to include environmental and local community as important factors when studying partnership behaviors and outcomes.

**Limitation and Future Direction**

Due to the limitation of a case study as well as the current sample size, findings from this study should only be understood within its context. This study represents population level data for the sampled community, however it needs further investigation to identify the extent to which these dynamics found by this study would be reflected similarly in other communities. Future research should also consider testing the findings in a wider range of community contexts. For example, funding isomorphism with both whole network and respected network might have different formats of effects on partnership performance in a community where partnerships on average have higher levels of funding; the mechanisms of respected network and the whole network might also display different relationships with partnership performance in communities where partnerships are more closely or more weakly connected with each other.

In addition, as this study used a secondary dataset, there may be missing variables that were not able to be included for the models tested. Data analyzed are based on three measures for partnership structure and three measures for partnership strategies, thus findings on how different attributes are under different levels of isomorphic pressures might be different when other aspects of partnership characteristics are added or tested, such as the absolute amount of financial support, partnerships’ specific strategies to create and build effective programs, strategies to build new relationships and enroll partners, level of
formality in working procedures, and approaches to making goals and evaluate outcomes, etc.

As this study is using a cross-sectional dataset, another limitation is that findings from this study can not reveal direction of causality between partnership isomorphism and partnership symbolic performance. Therefore future research should consider testing the hypothesized relationships with a longitudinal research design, further clarifying the relationship between partnership isomorphism with different mechanisms of networks and partnership performance.

In addition to partnership symbolic performance, it would also be valuable for future research to extend to partnership substantive performance (Heugens & Lander, 2009), community level of outcomes (Provan & Milward, 2001; Roussos & Fawcett, 2000), and organizational level of outcomes (Nowell & Foster-Fishman, 2011; Provan & Milward, 2001). It is the hope of the author to start the conversation about how partnership embeddedness and shared-membership could help to explain collaborative outcomes at different levels within an embedded community network.
References


Chapter 4: A Dyadic Investigation of the Relative Contributions of Resource Dependency and Network Perspectives for Explaining Strength of Ties between Partnerships

Shared-membership among partnerships refers to the phenomenon that an organizational member that sits on one partnership is also a member of another partnership in the community. Shared-membership is observed between collaborative partnerships that work on similar missions in one community (Nowell, Yang, & Hano, 2013), yet to date few existing studies have examined how partnerships come to share different levels of members with their peers. As a rich body of literature, such as board interlocks studies, suggests that shared-members between organizations can influence organizations’ decisions on structure, strategies, systems, and processes (Chen, Dyball, & Wright, 2009; Davis, 1991; Haunschild, 1993; Shropshire, 2010; Wijk et al., 2008), there is a scant of research that examines shared membership between partnerships and the formation of shared-membership ties.

The formation of social network ties and strengths of ties have been identified as key questions in social network studies (Ahuja et al., 2012; Guo & Acar, 2005). Network scholars noted that compared to the extensive body of knowledge existing on network outcomes, less attention has been paid to understanding how and why organizational networks emerge (Ahuja et al., 2012). Ahuja et al. (2012) pointed out that it is important to understand genesis of network structures for at least two reasons: first, without an appreciation of the genesis of network structures, it is hardly possible to have a complete understanding of network outcomes because the benefits provided by networks are dependent on the network
architecture and its evolution over time; second, the functional roles that networks perform are contingent on the existence of specific network structures or architectures.

In the context of collaborative partnerships, a recent study found that among 34 health collaborative partnerships in one community, a partnership was connected to an average of 64% other health related partnerships in the county via shared membership, with the lowest connection of zero tie with other partnerships to the highest connection of 94% (Nowell, Yang, & Hano, 2013). This finding empirically confirmed the high connectivity between partnerships through shared membership in a community, pointing to the importance of increasing our understanding of connection through shared membership across collaboratives. In addition, the confirmation of high level of shared-membership between partnerships also poses questions concerning how to explain different levels of strengths of dyadic ties between partnerships, which was rarely examined by the existing network and partnership literature. As Gulati (1995) pointed out, past attention was primarily given to understanding when and why organizations enter alliances or partnerships, yet the question of with whom organizations are likely to ally has been left relatively unexplored. As studies on board interlocks and structural embeddedness keep drawing attention to the relationship between shared membership between organizations and organizational behavior, to date we know little about how to explain dyadic partnership tie strength in terms of shared organizational members.

This study follows Gulati and Gargiulo’s call (1999) to understand tie formation through investigating two categories of factors: endogenous and exogenous. Gulati and Gargiulo argued that the formation of networks is “driven by exogenous interdependencies
that prompt organizations to seek cooperation, and by endogenous network embeddedness mechanisms that help them determine with whom to build partnerships.” (Gulati & Gargiulo, 1999, P1441). As endogenous and exogenous factors are both observed and tested for firm alliance networks (Gulati, 1995; Gulati & Gargiulo, 1999), they are rarely tested for public and nonprofit collaborative groups. This study examines whether the formation of dyadic partnership ties through shared organizational members is driven by both exogenous (resource dependency) and endogenous (Simmelian ties) factors. By drawing on literature of network tie formation as well as organizational theories such as resource dependence theory and network perspectives, this paper is among the first to study the formation of ties between collaborative partnerships within an embedded community network. The study investigates the factors that help to explain the strength of dyadic ties between two partnerships that work on the same field within a community. More specifically, the research question that guides this study is: To what extent resource dependency theory (exogenous factors) and network perspectives (endogenous factors) help to explain the strength of dyadic partnership ties in terms of shared-membership?

**Shared Membership between Collaborative Partnerships and Their Consequences**

Collaborative partnerships (or “partnerships”), as defined in this paper, are community-based groups comprised of leaders and staff representing three or more organizations or agencies who share a common issue domain (e.g., mental health, domestic violence, HIV/ AIDS; Nowell, 2009). Partnerships are formed by organizational members who can choose to be part of more than one partnership in their community. For example, a
recent empirical study on partnership membership confirmed that organizational members could not only join multiple partnerships in a community; furthermore, such connections between partnerships through shared organizational members form a broader community network (Nowell, Yang, & Hano, 2013). From social network perspectives, the shared membership between partnerships serve as network ties between partnerships, which can have significant influence on partnership behavior, design, and success.

Less studied in public and nonprofit literature, such phenomenon of shared membership between organizations has been richly discussed in the business management such as in board interlocks literature. Board interlocks (or interlocking directorates, interlocking boards) are ties among organizations through a member of one organization sitting on the board of another (Borgatti & Foster, 2003). Studies on board interlocks suggest that interlocking boards serve as conduits for the dissemination of information and practices between firms (Borgatti & Foster, 2003; Mizruchi, 1996; Shropshire, 2010). Through the shared board members, information can be taken from one firm to another, which facilitates the process of knowledge sharing, organizational learning, and practice imitation (Borgatti and Foster, 2003; Davis, 1991; Haunschild, 1993; Shropshire, 2010; Useem, 1984). For example, Board interlocks between firms are found to predict firm behavior on innovation adoption (Davis, 1991), inter-firm collusion and cooperation (Koenig et al., 1979), the imitation of acquisition activities (Haunschild, 1993), firm compensation strategies (Westphal, Gulati, & Shortell, 2001), and the diffusion of governance practices (Shipilov et al., 2010). Board interlocks are believed to serve as a means for organizations to reduce uncertainties and to share information about acceptable and effective corporate practices.
(Borgatti & Foster, 2003). Scholars believe that central organizations who are tied to a greater number of other organizations are associated with higher social capital, such as in the form of more abundant information access through the network, and a higher likelihood of practice diffusion (Davis, 1991; Shipilov et al., 2010). As Mizruchi (1996) pointed out, interlocks could be considered as indicators of network embeddedness, suggesting “a range of firm behaviors---strategies, structures, and performance----could be affected by the firm’s relations with other firms.” (P283)

Similar with the concept of board interlocks from the business literature, shared organizational members between different collaborative partnerships can also serve as mechanisms of knowledge sharing, organizational learning, and practice imitation. Under the network perspective, higher level of shared membership with other partnerships is associated with higher level of social capital, information access, and potentially a higher rate of practice diffusion for partnerships. In addition, higher network embeddedness is also associated with greater level of constraints and expectations from external environment (Tan et al., 2013; Villadsen, 2011)

With numerous consequences that shared-membership between partnerships might have on partnership behavior and success, it is important to ask how shared-membership come into formation between partnerships and to examine the factors that predict tie formation. Study on formation of ties is not only relevant for understanding network outcomes and consequences (Ahuja et al., 2012), it contributes to the current network literature. This study particularly focuses on dyadic tie formation as the unit of analysis as a response to Gulati’s (1995) call that with the majority of previous study focusing on
understanding when and why organizations enter alliances, it is highly important to examine the question of who is linked with whom within alliances.

**Formation of Partnership Ties through Shared Organizations**

To examine the strengths of shared-membership between collaborative partnerships needs understanding on why an organization would join a partnership to be part of a collaborative relationship, as well as the significance of membership to a partnership.

From the perspective of an organization, the decision to join collaborative partnerships or other forms of coalitions is often made due to benefits associated with the expanded network as well as the enhanced capability to accomplish complex goals that are beyond the scope of any single organization to address (Provan & Milward, 2001). For example, through bringing together local government officials, nonprofit agencies, business leaders, and interested citizens, collaborative partnerships are able to improve certain outcomes, obtain complex goals, or address shared concerns over time (Brinkerhoff, 2002; Eilbert, 2003; Kernaghan, 2008; Mohr and Spekman, 1994). In addition, joining with other agencies and individuals can benefit an organization through enhancing accessible resources, building community and professional networks, and expanding personnel and expertise (Butterfoss & Kegler, 2009). Compared to traditional organizational configurations such as markets and hierarchies, network forms of organizations allow participating partners to more easily learn new skills or acquire knowledge, gain legitimacy, improve economic performance, and manage resource dependencies (Podolny & Page, 1998).
From the perspective of partnerships, membership composition is recognized as a critical aspect of assessing capacity of collaborative partnerships (Foster-Fishman et al., 2001; Provan & Milward, 1995). Previous studies suggest that whether collaborative partnerships are able to involve key organizations as members is a key determinant of what kinds of information, skill sets, political support, and financial support that the partnership is able to access (Feinberg et al., 2004; Provan & Milward, 2001; Stuart et al., 2011; Zakocs & Edwards, 2006). The breadth and heterogeneity of membership is believed to be a significant factor to influence client effectiveness and network level performance (Florin et al., 2000; Hasnain-Wynia, 2003; Turrini et al., 2010; Zakocs & Edwards, 2006). Furthermore, member participation, member turnover, members’ social connection, and member empowerment are found to be significant predictors for partnership behavior and outcomes (Zakocs & Edwards, 2006; Turrini et al., 2010). In a word, who are involved in a collaborative partnership and the actions of these members can significantly influence the behavior and success of the partnership.

**Exogenous and Endogenous Approach to Explain Network Tie Formation**

In their work discussing where interorganizational networks come from, Gulati and Gargiulo (1999) argued that the formation of network ties are driven by two categories of factors: exogenous factors and endogenous factors. The exogenous approach sees tie formation as a result of underlying resource dependence (Gulati, 1995; Gulati & Gargiulo, 1999, Pfeffer & Nowak, 1976), and views alliance networks as “a dynamic process driven by exogenous interdependencies that prompt organizations to seek cooperation and by
endogenous network embeddedness mechanisms that help them determine with whom to build partnerships” (Gulati & Gargiulo, 1999, P1441). According to Gulati & Gargiulo (1999), although the exogenous approach is a good explanation of the factors that influence the propensity of organizations to enter ties, it overlooks the question of with whom to enter such ties. In this sense, an endogenous approach would be valuable and complementary in emphasizing the embedded network relationships that organizations build with other organizations, which internalizes information and trust that facilitates formation of ties.

Gulati and Gargiulo emphasized that both exogenous factors such as resource dependency on external environment and endogenous factors such as structural embeddedness are dynamics that drive network tie formation. Their study also empirically confirmed these arguments through a longitudinal study examining formation of network alliances in business sector.

This current study poses a question for public and nonprofit alliance networks which has rarely been explored by the past literature: are linkages between collaborative groups in the public and nonprofit sectors also associated with both the exogenous and endogenous factors? As organizations’ motivation to collaborate may differentiate between different sectors (Gazley & Brudney, 2007), it is important to ask whether network ties between collaborative partnerships are also driven by the endogenous and exogenous factors as Gulati and Gargiulo found in the business sector.

This study thus aims to enhance our understanding on dyadic partnership ties through adopting Gulati and Gargiulo’s framework, examining whether funding portfolio (an exogenous factor) and Simmelian network ties (an endogenous factor) are associated with the strength of two partnerships in terms of shared organizational members. The following
sections discuss existing literature and then present hypotheses built based on these two perspectives to explain dyadic ties between partnerships.

**Exogenous Resource Dependence as Dynamics of Tie Formation**

In explaining why organizations enter partnerships, resource procurement and resource dependence literature argue that a key driver of inter-organizational cooperation is organizations’ needs to acquire complementary resources from their external environment (Gulati, 1995). Resource dependence theorists view organizations as open systems that depend on external organizations and environmental contingencies (Pfeffer & Salancik, 1978). Based on this view, the needs to manage external dependency and to reduce environmental uncertainty drives organizations to seek out ties with partners who can help them to manage their strategic interdependencies (Gulati, 1995; Pfeffer, 1972; Pfeffer & Salancik, 1978). According to Gulati and Gargiulo (1999), strategic alliances are vivid examples of voluntary cooperation, in which organizations combine resources to cope with the uncertainty created by the environmental forces.

If we examine dyadic ties between partnerships through the same perspective, the strength of partnership ties could be understood by the different needs of organizational members to manage external dependencies through joining collaborative partnerships that have the resources that they depend on. In other words, according to resource dependency theory, it is because of the resources that organizations are in need of that an organization chooses to join a certain partnership. For example, Oliver (1990) reviewed literature on such exogenous drivers of inter-organizational relations and found organizations voluntarily
initiated cooperative ties to address a number of their needs resulting from their external interdependence, including asymmetry, reciprocity, efficiency, stability, and legitimacy. Other needs that can drive organizations to enter alliances are such as to share the costs and risks of technology development or large-scale projects, to develop existing markets or penetrate new ones, or to pursue resource specialization strategies (Mariti & Smiley, 1983, as noted by Gulati & Gargiulo, 1999).

This study particularly tests whether an organization would join two collaborative partnerships due to the similar sources of funding and associated advantages that the organization is in need of. Funding of nonprofit organizations has been well recognized as critical factors for nonprofit survival (Carroll & Stater, 2009; Froelich, 1999), and a key factor in the ignition and sustainability of public health partnerships (Varda & Retrum, 2012). Financial support of different sources provide the key financial resources that organizations need to accomplish complex common goals; in addition, different sources of funding bring unique advantages and constraints that associated with the expectation and constituency of the particular funders. Resource dependence literature suggests that in face of diverse funding sources, each funding source bears a different level of risk and requires a different level of administrative maintenance. For example, a funding environment driven by private donations, dues, and service fees may lead nonprofit organizations to act as profit seekers, and have a vastly different position than those that are financed largely by governmental funding (Jang & Feiock, 2007). In comparison, government funding usually provides stability for a nonprofit agency as well as higher level of bureaucratic demands, but
also associated with higher likelihood for organizations to lose of administrative autonomy (Hodge & Piccolo, 2005; Froelich, 1999).

According to resource dependency theory, environmental dependence encompasses two sets of considerations: resource procurement and uncertainty reduction (Galaskiewicz, 1985). As inter-organizational cooperation is a means by which organizations manage their dependence on other organizations in their environment and attempt to mitigate the uncertainty generated by that dependence (Gulati & Gargiulo, 1999), organizations may choose to be part of a certain partnership due to the resources that are provided by the funder as well as the type of opportunities and constituency that the organization depends upon (Pfeffer & Salancik, 2003). This suggests that organizations may join two partnerships and therefore make possible the formation of dyadic partnership ties due to its needs to depend on certain types of resources, opportunities, or constituency that are associated with certain sources of financial supports, which can be provided by both the partnerships. Accordingly, the following hypothesis is made:

**H1**: The more similar two partnerships’ funding portfolios are, the stronger their ties would be in terms of the level of shared organizational members between them.

**Structural Embeddedness as Dynamics of Tie Formation**

In contrast to exogenous dynamics that drive organizations to join partnerships, the endogenous approach emphasizes the embeddedness and its role as conduits for organizations to acquire trust and information for whom to partner with. Gulati and Gargiulo (1999) argued that while the exogenous approach stresses interdependence as the driver for
inter-organizational collaboration, it does not offer sufficient cues to explain dyadic tie formation; particularly, the endogenous factors such as inter-organizational embeddedness are important for understanding how organizations decide on with whom to build strategic alliances. This is because the motivation for tie formation is not only driven by the resources that organizations depend on, but also by the extent to which organizations can acquire relevant information on the competencies, needs, and reliability of potential partners. In this sense, information is often gained through different mechanisms of network ties, such as through “organizations’ previous direct alliances, from their indirect alliance ties through third parties, or from the reputation that results from the potential partner’s position in the network of preexisting alliances” (Gulati & Gargiulo, 1999).

This study is particularly interested in the role of one type of structural embeddedness: Simmelian ties, or the relationships in which two actors are reciprocally tied to each other and if they are each reciprocally tied to at least one third party in common (Krackhardt, 1999).

Indirect connections through common partners are believed to play an important role in leading to new alliances between organizations (Gulati, 1995). Simmel was among the first scholars to argue that a strong social tie could not exist without being part of a triangle (Opsahl, 2013; Simmel, 1908 [1950]). In study individual level of network, he argued that a person is likely to share contacts with hers or his close contacts, and the close contacts are more likely to know each other due to the shared contact. In sociological research, triadic closures are believed to promote greater trust among individuals, to reinforce the willingness
and motivation for partners to invest time, and to facilitate energy and effort in sharing knowledge with each other (Reagans & McEvily, 2003; Ter Wal, 2009; Uzzi, 1996).

According to the Simmelian ties perspective, actors separated by one intermediary are the most likely to become connected in subsequent time periods (Nick et al., 2013; Simmel, 1908 [1950]). The intermediary can connect the two actors and facilitate communication through these two actors, which may ultimately lead to the connection of these two actors. For example, existing study confirmed that investors are more likely to get connected in innovation network if they have a collaboration partner (Ter Wal, 2009). Empirical study on advice and friendship triads found that that two people embedded in Simmelian triads were more likely to show higher agreement with each other than ordinary dyads concerning the informal social structure of organizations (Krackhardt & Kilduff, 2002).

At the organizational level, Simmelian ties are believed to facilitate tie formation between two organizations for at least two reasons: first, it makes organizations aware of each other’s existence; second, it serves as an important basis for enforceable trust which is key to collaboration (Gulati, 1995). Recent studies on health service provider networks suggest that dyadic relations between organizations who share a common-third party tie are more collaborative, durable, and consensual than an isolated dyad (Huang, 2014). Network perspectives stress the notion that an organization’s economic action is embedded in social networks, where embeddedness refers to the extent that economic actions are informed, influenced, and enabled by the network of accumulated stable and preferential social relations (Granovetter, 1985; Lynall et al. 2003). Such social structure provides information and creates repetitive circuits, which is likely to promote greater awareness and confidence.
among potential partners and in turn to lead to ties between them (Gulati, 1995). Simmelian ties serve as mechanisms of structural embeddedness between organizations, so that two organizations with Simmelian ties are likely to have access to more information about each other than firms with no such connection. In addition, the larger the number of third partners two firms share, the more information these two firms are likely to have about each other (Gulati, 1995).

Based on the Simmelian ties literature, this study argues that two partnerships that are both connected to a third partnership would be more likely to connect with each other through shared organizational members. When two unconnected partnerships both share organizational members with the same third partnership, information about each partnership can flow through the intermediary to one another, the process of which facilitates the knowledge of those organizations who were originally only members of one partnership; in addition, it also facilitates trust between organizations to join the new partnership. Therefore, the more Simmelian ties that two partnerships share in a community, the more likely that their dyadic relationship will be stronger in terms of sharing higher number of organizational members. The following graph illustrates Simmelian ties between three partnerships (see Figure 4.1). In this example, Partnership A and B are believed to be more likely to form ties with each other in terms of sharing organizational members due to their shared Simmelian ties with Partnership C.
The following hypothesis is made accordingly:

**H2**: The more Simmelian ties that any pair of collaborative partnerships have in terms of sharing organizational members with the same other partnerships, the stronger the tie between them would be in terms of the level of shared organizational members.

**Methodology and Data**

This case study uses network data collected from thirty-four health collaborative partnerships in one county of North Carolina in Spring 2012. Health partnerships are defined in this study as community collaborative groups that are composed of three or more organizations, meeting on a regular basis, and focusing on improving community health and wellness. This dataset contains population level data for this county in that all health partnerships that are identified in the county through a process of snowball sampling approach were included in the dataset; yet the data is tested in this study as a sample of a
broader population data to reveal patterns of dyadic partnership relationships. All these 34 partnerships identified themselves to have their major mission to be improving community health and wellness. Among the 34 partnerships, 71% of them administer and manage their own programs or services, while 44% of them reported to focus significant time and energy on policy change initiatives. Partnership age ranged from less than one year to over 26 years, with an average partnership age of 9.33 years. On average, one partnership in the sample has 24 organizational members. The size of these partnerships ranged from the lowest of 6 members to the largest of 103 members. A partnership in the sample is connected to an average of 64% of other partnerships in the community through sharing organizational members. A pair of any two partnerships in the sample shares an average of 2.139 organizational members with each other.

The dataset for this study is one-mode network data, and is prepared from two-mode network data collected from the community, which records ties between two sets of entities: health partnerships and the organizations that are members of these partnerships. The embeddedness level of partnerships within the broader community network is defined as the degree to which partnerships share organizational members with other partnerships in the community. Network data for dyadic partnership tie strength were prepared from a 34-by-34 network matrix presenting the number of shared organizational members that any two partnerships have in this community. Network data for funding portfolio similarity, Simmelian ties, and all control variables are each presented by a different 34-by-34 matrix table, which were constructed by using UCINET “Attributes to matrix” function. In total, there are 561 different dyadic relationships in the matrix datasets.
Key Variables and Measures

It is important to note that the unit of analysis for this study is the relationship between pairs of partnerships; therefore all variables are at dyadic level.

Dependent Variable

*The level of shared membership between two partnerships:* measured by the number of shared organizations that were both listed as active members by any two collaborative partnerships in the sample. The network data is presented in a $34 \times 34$ matrix, in which the number in cell $ij$ represents the number of shared organizational members that Partnership $i$ and Partnership $j$ have.

Independent Variables

*Similarity in funding portfolio:* measured by how many same categories of financial sources any two partnerships have based on the following categorization: Federal, state county, grant, city, public donation, fundraisers, national foundations, local or state foundations, and other funding. The network data is presented in a $34 \times 34$ matrix, in which the number in cell $ij$ represents the number of the same funding sources that Partnership $i$ and Partnership $j$ have.

*Number of Simmelian ties for a pair of partnerships:* the number of mutual ties to a third party that a pair of partnership has, measured by UCINET Simmelian/Embedded Ties analysis. The network data is presented in a $34 \times 34$ matrix, in which the number in cell $ij$ represents the number of Simmelian ties in terms of shared partnerships ties that Partnership $i$ and Partnership $j$ have.
Control Variables

**Similarity in mission**: whether two partnerships focus on the same category of mission focus. The network data is presented in a $34 \times 34$ matrix, in which a 1 in the cell $ij$ represents that Partnership $i$ and Partnership $j$ have the same mission, while a 0 in the cell $ij$ represents that Partnership $i$ and Partnership $j$ have different types of missions.

**Similarity in target population**: whether two partnerships focus on the same category of target population. The network data is presented in a $34 \times 34$ matrix, in which a 1 in the cell $ij$ represents that Partnership $i$ and Partnership $j$ focus on the same type of population target, while a 0 in the cell $ij$ represents that Partnership $i$ and Partnership $j$ focus on different types of population targets.

**Difference in age**: Measured by calculating the absolute difference of age between two partnerships. The network data is presented in a $34 \times 34$ matrix, in which the number in cell $ij$ represents the number of absolute difference of the number of years that Partnership $i$ and Partnership $j$ have come into existence.

**Difference in partnership size**: measured by calculating the absolute difference of total number of active organizations represented in a partnership. The network data is presented in a $34 \times 34$ matrix, in which the number in cell $ij$ represents the number of absolute difference of total number of organizations that Partnership $i$ and Partnership $j$ have.

Analysis

In order to test the hypotheses, this paper uses Quadratic Assignment Procedure (QAP) correlation and QAP regression (also known as MR-QAP) techniques. The
relationship between QAP correlation and regression is the same as between their analogues in ordinary statistics (Borgatti et al., 2013). The QAP techniques enable the analysis of dyadic data and the results of such analysis can be interpreted in a fashion similar to the results of ordinary multiple regression (Borgatti et al., 2013; Tsai, 2002).

QAP allows direct comparison of matrix-level data and corrects the autocorrelation problem that is inherent in network data (Krackhardt, 1988; Tsai, 2002). Network actors respond to relational questions with reference to one another, thus the observed level of shared membership between partnerships were not independent from each other. QAP regression overcomes the problem which violates the statistical independence assumption in standard inferential tests (Huang, 2014; Krackhardt, 1988).

QAP correlation and regression are particularly useful for analyzing dyadic relationships (see e.g., Borgatti & Cross, 2003; Tsai, 2002). QAP involves computing the Pearson correlation between the off-diagonal values of a data matrix with the off-diagonal values of a structure, or hypothesis, matrix, which is each treated as a vector (Brewer & Webster, 1999). Thus, QAP enables the modeling of the values of a dyadic dependent variable (such as strength of partnership ties) using multiple independent variables (Borgatti et al., 2013).

In a QAP analysis, ordinary least squares (OLS) regression coefficients are first calculated in the usual manner across corresponding cells of the dependent and independent matrices; second, it randomly permutes rows and columns of the dependent matrix and re-computes the regression, which generates regression coefficients and R square values. This step is repeated thousands of times so that standard errors as well as a reference distribution
of regression coefficients and R square values are estimated (Borgatti et al., 2013; Huang, 2014). Standardized regression coefficients for independent variables in QAP can be interpreted in the same way to those in OLS regression (Bell & Zaheer, 2007; Huang, 2014).

UCINET was used to analyze the network data for this study. For QAP regression, I used the Double-Dekker Simi Partialing (DDSP) method, which is particularly robust to autocorrelation problems (Dekker et al., 2007; Huang, 2014).

Results

First, QAP correlation is conducted for all key variables. Table 4.1 summarizes the mean values, standard deviations, minimum value and maximum value for all constructs in the study.

As is shown, a pair of partnerships in the dataset shares an average number of 2.139 organizational members with each other and shares an average of 12.947 Simmelian ties. In other words, each pair of partnerships in this data on average shares organizational members with almost 13 common peer partnerships. This indicates that the partnerships in the data are connected with each other through shared members to a high degree. On average, any two partnerships in the dataset share 5.135 categories of funding sources with each other (range= 0 to 9).
Table 4.1: Descriptive Statistics of Key Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 Strength of relationship</td>
<td>2.139</td>
<td>2.823</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>X2 Simmelian Ties</td>
<td>12.947</td>
<td>10.378</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>X3 Funding Similarity</td>
<td>5.135</td>
<td>1.889</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>X4 Mission Similarity</td>
<td>0.178</td>
<td>0.383</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>X5 Target Population Similarity</td>
<td>0.264</td>
<td>.0441</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>X6 Age Difference</td>
<td>8.583</td>
<td>6.357</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>X7 Size Difference</td>
<td>19.053</td>
<td>20.245</td>
<td>0</td>
<td>97</td>
</tr>
</tbody>
</table>

Table 4.2 below presents the results for QAP correlation for all the constructs in the study. QAP correlation analysis reveals several important findings: first, strength of dyadic relationship is shown to be significantly correlated with Simmelian ties at a high positive degree (r=0.69, p = .000). This result provides initial evidence for the hypothesized relationship between strength of relationship and Simmelian ties, indicating that the more Simmelian ties that two partnerships share in the community with other partnerships, the higher level of organizational members that they will share with each other. Second, the correlation matrix table also shows that funding similarity is *not* significantly correlated with the strength of dyadic relationship as hypothesized. Last, among the four control variables, size difference is the only variable that is shown to be significantly correlated with the strength of dyadic relationship (r= .409, p= .010).
Table 4.2: QAP Correlation Analysis

<table>
<thead>
<tr>
<th></th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>X6</th>
<th>X7</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 Strength of relationship</td>
<td>1</td>
<td>0.69**</td>
<td>-0.018</td>
<td>-0.016</td>
<td>-0.011</td>
<td>-0.012</td>
<td>0.409*</td>
</tr>
<tr>
<td>X2 Simmelian Ties</td>
<td>0.69**</td>
<td>1</td>
<td>-0.054</td>
<td>-0.015</td>
<td>0.012</td>
<td>-0.067</td>
<td>0.215*</td>
</tr>
<tr>
<td>X3 Funding Similarity</td>
<td>-0.018</td>
<td>-0.054</td>
<td>1</td>
<td>0.018</td>
<td>-0.047</td>
<td>-0.111^</td>
<td>-0.047</td>
</tr>
<tr>
<td>X4 Mission Similarity</td>
<td>-0.016</td>
<td>-0.015</td>
<td>0.018</td>
<td>1</td>
<td>0.44**</td>
<td>0.034</td>
<td>0.036*</td>
</tr>
<tr>
<td>X5 Target Population Similarity</td>
<td>-0.011</td>
<td>0.012</td>
<td>-0.047</td>
<td>0.44**</td>
<td>1</td>
<td>0.058^</td>
<td>-0.024</td>
</tr>
<tr>
<td>X6 Age Difference</td>
<td>-0.012</td>
<td>-0.067</td>
<td>-0.111^</td>
<td>0.034</td>
<td>0.058^</td>
<td>1</td>
<td>0.043</td>
</tr>
<tr>
<td>X7 Size Difference</td>
<td>0.409*</td>
<td>0.215*</td>
<td>-0.047</td>
<td>0.036*</td>
<td>-0.024</td>
<td>0.043</td>
<td>1</td>
</tr>
</tbody>
</table>

Next, QAP multiple regression was conducted for three different regression models; Table 4.3 presents the results of QAP multiple regression analyses for these tests. In the first model, only the two independent variables Simmelian ties and funding similarity are included to test hypothesized relationships with dyadic strength of partnership ties; In the second model, independent variables and all control variables were included to examine the effects of independent variables after controlling for relevant factors.

Hypothesis 1 of this study predicts that the more similar two partnerships’ funding sources are, the stronger their ties would be in terms of the level of shared organizational members between them. The results in all three models reveal a non-significant coefficient of funding similarity in QAP multiple regression tests, indicating that funding similarity is not
statistically significantly related with strength of dyadic partnership relationship. Thus, Hypothesis 1 in this study is not supported.

Hypothesis 2 predicts that the more Simmelian ties that any pair of collaborative partnerships has in terms of sharing organizational members with the same other partnerships, the stronger the tie between them would be in terms of the level of shared organizational members. Results from all three models reveal a significant and positive relationship between Simmelian ties with the strength of dyadic relationship. In the first model, QAP regression shows Simmelian ties as the only significant predictor for strength of partnership relationship (B=0.691, p= .000) among the two independent variables. In Model 2 where all control variables are included, Simmelian ties and size difference between partnerships are shown to be significant predictors for strength of partnership relationship. Size difference is shown to be positively related to strength of partnership relationship (B=0.276, p=0.024), indicating that the bigger differences that two partnerships have in their size of members, the more likely that their dyadic tie is stronger. Considering that one of the partnership in the dataset reported much larger partnership size than other partnerships (largest partnership size =103, while average partnership size=24), this significant result found for size difference might be partially only the result of the existence of an incomparably large partnership in the dataset.

Based on results from these two models, Hypothesis 2 (Simmelian ties) is confirmed for this study.
Table 4.3: The Effects of Simmelian Ties and Funding Similarity on Relationship Strength: Results of QAP Multiple Regression

<table>
<thead>
<tr>
<th>Categories</th>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent</strong></td>
<td>Simmelian Ties</td>
<td>0.69076**</td>
<td>0.63029**</td>
</tr>
<tr>
<td>Variables</td>
<td>Funding Similarity</td>
<td>0.01999</td>
<td>0.03797</td>
</tr>
<tr>
<td></td>
<td>Mission Similarity</td>
<td></td>
<td>-0.00653</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>Target Population</td>
<td></td>
<td>-0.01085</td>
</tr>
<tr>
<td>Variables</td>
<td>Similarity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age Difference</td>
<td></td>
<td>0.02356</td>
</tr>
<tr>
<td></td>
<td>Size Difference</td>
<td></td>
<td>0.27653*</td>
</tr>
<tr>
<td></td>
<td>$R^2$ (Adj $R^2$)</td>
<td>0.476 (0.475)</td>
<td>0.552 (0.549)</td>
</tr>
<tr>
<td><strong>Model fit</strong></td>
<td>P value=0.000</td>
<td>P value=0.000</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01, *P<.05, ^P<.10

Discussion

Formation of social network ties and strength of ties have been identified as key questions in network studies, yet past network literature has paid insufficient attention to understanding how and why organizational networks emerge. Gulati and Gargiulo (1999) argued that the formation of network ties are driven by both exogenous factors such as interorganizational dependence, and endogenous factors such as structural embeddedness; nevertheless, this argument is rarely tested for collaborative partnerships in the public and nonprofit literature.

Following Gulati and Gargiulo (1999)’s framework, this study seeks to test whether similarities in funding portfolio (an exogenous factor) and the level of Simmelian ties (an
endogenous factor) are associated with the degree of shared membership between two partnerships within a community. Through testing hypotheses using a dataset that is prepared from a two-mode network, this study confirmed the endogenous factor of Simmelian ties as a significant predictor for strength of dyadic partnership ties, yet did not find evidence for the exogenous factor funding portfolio. Analysis results from QAP correlation and QAP multiple regression revealed that the number of Simmelian ties that two partnerships have with other partnerships in the community is positively correlated with how strongly the two partnerships are connected through shared organizational members; in other words, the more “common friends” that two partnerships have, the more likely that they come into having a strong dyadic relationship tie. In comparison, different from Gulati and Gargiulo’s argument for exogenous factors, partnerships’ similarity in funding portfolio was not found to be a significant predictor for the level of shared membership in a dyadic relationship.

In the network literature, dyadic relationship and triadic closure have been studied mostly at the level of individuals, but rarely for collaborative groups that are comprised by multiple organizations. In examining the factors that predict dyadic relationship between collaborative partnerships in terms of the level of their shared membership, this study is among the first to test Simmelian ties theory for partnerships. Previous network literature suggests that organizations’ decision of with whom to partner is driven by structural embeddedness, which provides mechanisms for organizations to gain key information about their peers and build trust in collaboration (Gulati, 1999). When two actors are connected by an intermediary, they are more likely to build connection with each other than actors that do not share such intermediaries (Nick et al., 2013; Simmel, 1908 [1950]). This study
empirically confirmed this argument with collaborative partnerships that are embedded within a broader community network. The number of Simmelian ties that two partnerships have is found to be positively related to the strength level of dyadic tie between these two partnerships, confirming that formation of partnership tie is driven by structural embeddedness of the partnerships, depending on which partnerships organizations have joined in.

In finding that partnerships who are densely connected with each other are also the ones who are highly embedded in network closures, this study finds potential evidence for Simmel’s argument that a strong social tie could not exist without being part of a triangle (Opsahl, 2013; Simmel, 1923 [1950]), suggesting the necessity to put more emphasis on network closure in partnership studies. On average, a pair of partnerships in this sample is found to share 12.947 Simmelian ties with other partnerships in the community, indicating the existence of a high degree of triadic closures in the community. As previous studies suggest that dyadic relations embedded in triads are more durable and stable over time (Krackhardt, 1998; Simmel, 1950), it would be interesting to test whether dyads that are less embedded in triadic closures would have less durable dyadic relationships over time.

The finding from this study also speaks to board interlocks literature. The board interlocks literature has suggested that shared members between organizations can serve as mechanisms for dissemination of practices and information (Shropshire, 2010); through serving as conduits for information transfer between firms, board interlocks are able to impact an organization’s adoption of certain practices or structures. The finding of this study confirms that shared organizational members between partnerships may serve the same role
as interlocking board members between firms, taking information about partnerships around the community to other partnerships that they are also part of, serving as conduits of knowledge and facilitating the dissemination of information. Such a finding confirmed the importance of further examining the shared membership between collaborative partnerships as well as the consequences it potentially has on partnerships, including on partnership governance, strategy, and success, such as discussed for firms in the board interlocks literature. The finding that the level of shared membership between two partnerships is related to how they are connected to the rest of their community also confirms the importance to study collaborative partnerships at the “population and community” level, an argument made by population and community ecology theorists (Hannan & Freeman, 1977, P934). Within a community where partnerships are highly connected with their peers through shared membership such as in the current case, it would be hardly possible to fully understand partnership membership and partnership behavior without the understanding of the ecology of the partnerships’ field and community.

The finding of relevance of Simmelian ties and triadic groups with the shared-membership of partnerships also points to importance of giving more attention to clique groups in policy-making process. This study finds that organizations join partnerships and work together not due to certain financial supports or associated opportunities that are provided, but this decision on which partnership to join (and consequently, which projects to work on) is highly driven by the embeddedness of this organization within other partnerships in the community. The existence of cliques that are found in this study may suggest that certain groups of organizations are only involved with the peers that they are familiar with
through their network ties. In the same sense, when a new partnership is being built in the community, it is highly important which are the organizational members that are involved into this partnership, because these organizational members potentially also bring their relationships from the community.

**Limitation and Future Direction**

This study did not find relationships between funding portfolio similarity and dyadic partnership relationship as resource dependency literature argues; partnerships do not appear to connect more strongly with peers who depend on similar funders from them, but more strongly connect to those that are embedded in more numbers of triadic closures with them. However, it is worth noting that resource dependency theorists have suggested a number of resources that could drive organizations to join a partnership (e.g., asymmetry, reciprocity, efficiency, stability, and legitimacy, as summarized by Oliver 1990), and this study only tested one type of resources, the funding portfolio. It could be possible that other types of resources that organizations are in need of, such as the amount of financial support, the level of legitimacy provided, the degree of information access, would be relevant in explaining dyadic partnership tie. Future study should also consider testing the endogenous and exogenous factors in a wider range of categories; for example, research question that worth exploring include to what extent previously existing relationships influences the formation of dyadic ties, and in what ways the level of dependency on information access or the level of legitimacy drives organizations to join a partnership.
Using a cross-sectional dataset, this study could not reveal causality between the strength of dyadic ties and Simmelian ties, thus the finding of this study should not be explained in this sense. The question of whether Simmelian ties lead to stronger dyadic partnership ties need to be tested with a more rigorous design such as with longitudinal data. Such studies will be valuable for understanding what are the specific roles that Simmelian ties play in shaping the formation of dyadic ties; for example, future studies are encouraged to investigate the process of how information flows between different partnerships through Simmelian ties in terms of shared-membership, whether mutual trust is increased due to newly built Simmelian ties, and whether sharing more Simmelian ties also lead to a higher level of dyadic tie strength, etc.

Designed and tested as a case study, the findings from this study should be only applied to cases that are similar to the current one. For example, funding portfolio similarity might play a larger role in driving dyadic partnership relationships in communities where funders pose higher level of constrains for partnerships, or where partnerships are less connected with each other through shared membership. In the same vain, structural embeddedness such as Simmelian ties might play a weaker role in communities where collaborative partnerships are less densely connected with each other.
References


Chapter 5: Discussion and Conclusion

Social network perspectives have been well developed in the past decades to explain organizational design and behavior. Social networks perspectives have found rich evidence that embeddedness of organizations within their networks can significantly influence the behavior, design and success of organizations (Mizruchi, 1996; Shropshire, 2010). For example, studies on board interlocks in the business literature found rich evidence on how interlocking boards are associated with organizational strategies, designs, and structures of firms (Geletkanycz et al., 2001; Gulati & Westphal, 1999; Haunschild, 1993; Shropshire, 2010; Westphal, Seidel, & Stewart, 2001). Numerous network studies confirmed that embeddedness plays a significant role in serving as conduits for knowledge sharing, organizational learning, and interorganizational imitation (Davis, 1991; Haunschild, 1993; Mizruchi, 1996; Useem, 1984). These studies have enhanced our understanding about how organizations collaborate, why they collaborate, what are the outcomes of interorganizational collaboration, and how social embeddedness serve as important mechanisms for diffusion and change of organizational practice.

In comparison to organizational level of studies, we know much less about how collaborative partnerships are embedded within their community networks, and how this relates to partnership design and behavior. Network perspectives and embeddedness literature have been rarely been applied to the “partnership” of level of analysis, to examine how external relationships of collaborative partnerships and their embeddedness can help to explain design and behavior of partnerships. Instead, previous literature has predominantly
studied partnerships as in isolation from their community context, overlooking the environmental factors and external relationships in their community. Such a lack of attention given to partnership embeddedness within their broader community network prevents a much more complete understanding of partnership behavior. As network literature increasingly suggests the importance of network embeddedness in understanding organizational behavior, it becomes highly important for public and nonprofit scholars to study partnerships within their community context and with their external relationships, to understand what different network mechanisms may be active between multiple partnerships, how embeddedness relates to partnership behavior, and how different network mechanisms help to explain partnership performance.

With the hope to enhance our understanding on the role of partnership embeddedness and shared-membership between partnerships, this dissertation asks three independent research questions regarding different aspects of partnership embeddedness, each becoming one paper in this dissertation. Paper One examines the relationship between partnership embeddedness and partnership design; Paper two focuses on how partnership embeddedness relates to partnership symbolic performance; Paper Three examines explanation for strength of dyadic partnership ties in terms of using structural embeddedness argument versus resource dependency explanation. Table 5.1 below summarizes the three papers contained in this dissertation, aspects of each paper’s research design, and the key findings (see Table 5.1).
Table 5.1: Summary Table of Studies

<table>
<thead>
<tr>
<th></th>
<th>Paper 1</th>
<th>Paper 2</th>
<th>Paper 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Question</td>
<td>Is partnership design under mimetic pressure to be isomorphic with modal designs of their embedded networks, or under strategic pressures to be different from its connected peers?</td>
<td>Under the context of embedded network, is being isomorphic with or different from institutional norms in a community associated with higher symbolic performance?</td>
<td>To what extent resource dependency theory (exogenous factors) and network perspectives (endogenous factors) help to explain the level of shared membership between any two partnerships in a community?</td>
</tr>
<tr>
<td>Unit of Analysis</td>
<td>Partnerships</td>
<td>Partnerships</td>
<td>Dyadic partnership relationships</td>
</tr>
<tr>
<td>Types of network mechanisms that are relevant</td>
<td>Ego network and respected network</td>
<td>Respected network and whole network</td>
<td>Dyadic ties in whole network</td>
</tr>
<tr>
<td>Dependent variables</td>
<td>• Match of partnership design (strategy, structure, funding) with ego network • Match of partnership design (strategy, structure, funding) with respected network</td>
<td>Partnership symbolic performance: • Self-perceived effectiveness • Peer-perceived effectiveness</td>
<td>• Strength of dyadic partnership relationships in terms of the level of shared organizational membership</td>
</tr>
<tr>
<td>Independent variables</td>
<td>• Strength of modality (ego network) • Strength of modality (respected network)</td>
<td>• (Strategy/structure/funding) Isomorphism with respected network • (Strategy/structure/funding) isomorphism with whole network</td>
<td>• Similarity in partnership funding portfolios • Simmelian ties</td>
</tr>
<tr>
<td>Major findings of significant relationships</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The stronger the strength of modality is in a partnership’s strategy designs in its ego network, the more likely it will present a different strategy design from its ego network.</td>
<td>• Structure isomorphism is positively correlated to a partnership’s self-perceived effectiveness at 0.10 level.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The stronger the strength of modality is in a partnership’s funding portfolio in its ego network, the more likely it will present different funding portfolios from its ego network.</td>
<td>• Funding isomorphism with respected network is negatively related with a partnership’s self-perceived effectiveness at 0.10 level of significance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Strength of modality and size of ego network interact with each other in their relationships with the match of partnership design.</td>
<td>• Funding diversity is positively related with a partnership’s level of peer-perceived effectiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The more Simmelian ties that two partnerships have, the stronger the dyadic tie is between the two partnerships in terms of level of shared organizational members.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As one of the first studies to investigate how partnership embeddedness within a broader community network relates to partnership design, partnership success, and strength of dyadic partnership ties, this dissertation makes several important contributions to the literature of collaborative management and network embeddedness. Consistently, findings
from all three papers in the dissertation point to the importance of the role of embeddedness in understanding partnership behavior and design.

First, this dissertation finds that a partnership’s organizational design is not an exclusive function of internal characteristics of partnerships, it also relates to the external relations and community context of the partnerships: the extent to which the partnership is embedded within the broader community network and with whom the partnership is embedded. By sharing organizational members with certain other partnerships that work on the same domain in the community, collaborative partnerships create a mechanism for social comparison and information sharing across partnerships. However, contrary to institutional assumptions of mimetic isomorphism, this dissertation finds more evidence argued by strategic alliance literature. Partnerships are more likely to deviate from the modal design of their ego-networks. Further, the more homogenous the characteristic is within the ego network, the more likely the partnership is to be different. This finding strongly suggests that partnerships are not independent from their community or their peer partnerships in the community. In fact, organizational members from partnerships seem to be watching what different partnerships are doing and trying to make a joining decision accordingly; organizational members are also likely to take their information to different partnerships, possibly driving partnerships to be varied in their designs, so that the work of different partnerships in the community would complement to their peers’ work rather than to duplicate. Shared-membership therefore serves as important mechanism of network embeddedness, which enables organizational members from different partnerships to learn knowledge and practices in the community and act accordingly. In a word, finding from this
dissertation indicates that it would not be possible for us to fully understand a partnership’s design without understanding the whole community network that partnership is embedded in, what organizational design other partnerships in the community are using, and how this partnership is connected with its peers.

Furthermore, findings from this dissertation also provide evidence that partnership embeddedness serves as important mechanism for social comparison between collaborative partnerships in one community. In examining partnerships’ self-perceived and peer-perceived effectiveness and their relations with partnership embeddedness, this dissertation finds that collaborative partnerships are using funding portfolio as an important indicator for rating the level of effectiveness; as they use the substantial level of a partnership’s funding diversity to evaluate peer partnership’s effectiveness level, they use their respected networks as the mechanism to compare how effective themselves are. Self-perceived effectiveness thus is associated with who are perceived as most effective partnerships by a focal partnership, and the deviation in funding portfolio between the focal partnership and its respected peers. In other words, the criteria of effective partnerships would be varied based on the level of the partnership’s embeddedness in terms of whom they respect as high effective partnerships in the community. As self-perceived effectiveness is believed to influence membership sustainability and level of resources gained by a partnership (Perry-Smith & Blum, 2000), the social comparison fact found by this dissertation suggests that network embeddedness of partnership may potentially influence a partnership’s performance and serves as important approaches for understanding social psychology of partnerships.
At the organizational level, the embeddedness of partnerships in a community is found to relate to which partnerships organizations may consider joining. On one hand, organizational members tend to join a diverse group of partnerships as in profiles (strategies and funding portfolios), which is believed to provide a broader range of resources, skillsets, information, knowledge and perspectives to organizations (Luo & Deng, 2009); on the other hand, organizations may also use existing network ties as key references to decide with whom new relations should be built. For example, findings of this dissertation reveal that strength of dyadic partnership ties is positively related to the number of Simmelian ties that the two partnerships share in the community, confirming Gulati & Gargiulo (1999)’s argument that structural embeddedness could serve as mechanisms for dyadic tie formation. This indicates network embeddedness of shared-membership can help to internalize information and trust that facilitates new formation of ties between partnerships (Gulati & Gargiulo, 1999).

With the main focus on partnership embeddedness, this dissertation also contributes to the network literature through investigating and comparing a range of different network mechanisms for partnerships: partnerships’ ego network, partnerships’ respected network, the whole network, and Simmelian ties. Findings from the dissertation suggest that ego network, respected networks, and Simmelian ties might be playing a more significant role than the mechanism of whole network in terms of serving as important conduits for partnerships to learn information, know other peers’ practices, build standards based on which to evaluate own effectiveness, and gain trust for building new relationships in the community. The network mechanisms of ego network, respected network, and Simmelian ties are also found
to be associated with different functions of partnerships, and thus should not be viewed to be playing equal roles. For example, in rating self-perceived effectiveness, partnerships are looking at their respected networks rather than their ego networks to make comparison; yet their designs in strategy and funding portfolio are found to be associated with external pressures flowing through their ego network rather than respected networks. Such findings on the association between different network mechanisms and varied aspects of partnership behaviors point to the necessity for us to further understand how partnerships use different network mechanisms to make decisions and strategies.

In testing hypotheses built upon institutional theory, this dissertation also finds preliminary evidence that different aspects of organizational attributes (such as strategies, structure, and funding portfolio) might have different relationships, and thus should be studied independently in examining institutional effects. For example, Paper Two finds that structure isomorphism with the whole network shows a trend of being positively correlated to a partnership’s self-perceived effectiveness (P= 0.10); yet funding isomorphism with the respected networks is negatively related to partnerships’ self-perceived effectiveness (P= .05). This indicates that the isomorphism in organizations’ design of structure and funding portfolio might relate differently with organizational performance. This is important to note because studies from previous literature paid inadequate attention to differentiating organizational attributes in testing institutional effects, which potentially leads to a mixed finding of institutional studies (Heugens & Lander, 2009). Ashworth et al. (2009) and Villadsen (2013) both have argued that certain organizational characteristics might be more susceptible to isomorphic pressures than others. Although only found preliminary evidence,
This finding points to the necessity to treat different organizational attributes differently in future institutional studies.

This dissertation has several limitations that worth being pointed out. First, with all hypotheses tested by using a cross-sectional dataset, findings from this dissertation cannot reveal any direction of causality in relationships. For example, as analyses results from Paper Three might reveal that existing Simmelian ties increase the likelihood for two partnerships to build a strengthen relationship, it may alternatively indicate that a strengthened dyadic partnership relationship facilitates the formation of more Simmelian ties shared by two partnerships. The same limitation in explaining direction of causality is across all three papers. Such a limitation needs to be resolved by using more rigorous research designs such as testing hypotheses with longitudinal data. For example, future research should consider examining whether changes of network embeddedness cause any changes in partnership design, behavior, and effectiveness, longitudinally examining whether Simmelian ties facilitate information flow between partnerships that lead to new relationships.

Secondly, using a secondary dataset, the hypotheses in this dissertation are tested on a limited number of partnership attributes, and might be missing on other important variables from the model. For example, data analyzed are based on three measures for partnership structure and three measures for partnership strategies, thus findings on how different attributes are under different levels of isomorphic pressures might be different when other aspects of partnership characteristics are added or tested, such as the absolute amount of financial support, partnerships’ specific strategies to create and build effective programs, strategies to build new relationships and enroll partners, level of formality in working
procedures, and approaches to making goals and evaluate outcomes, etc. Future research should consider extending to a broader range of partnership attributes for investigate partnership design.

In addition, as a case study, the findings from this dissertation have limited generalizability and should only be applied to communities that are similar to the current case in profiles. For example, the current community contains 34 health partnerships that are highly connected to each other through sharing organizational members (each partnership connects to 64% of the rest of community on average), thus it reveal findings that are very different from a community where collaborative partnerships are weakly connected through shared-membership. Therefore future research should examine the effects of partnership embeddedness in broader contexts, such as in communities where the difficulty of resource access is at a different level, where local governments may provide a higher/lower level support for collaborative partnerships, or for partnerships that work on social domains other than community health. A design of multiple case studies would also be valuable for comparing similarities and differences displayed in partnership characteristics and its relationship with partnership behavior in different counties.

Future studies should also consider extending partnership attributes and outcomes that are associated with partnership embeddedness. For example, one question that is yet to be answered for understanding partnership success is, how partnership embeddedness relates to partnerships’ substantive performance (Heugens & Lander, 2009) in comparison to what is found in this dissertation in its relationship to partnership symbolic performance. Similarly, future research should consider how partnership embeddedness could help to understand
other types of partnership and organizational level of outcomes that have been discussed in
the literature, such as partnership external capacity (Foster-Fishman et al., 2001), partnership
synergy (Lasker et al., 2001), organizational capacity strengthen by participating
collaborative partnerships (Nowell & Foster-Fishman, 2011), organizational cliques in
partnerships (Provan & Sebastian, 1998), sustainability and evolution of partnerships (Provan
et al., 2003), and network governance structure (Milward et al., 2009).
References


