**DEVELOPMENT AND USE OF SOCIAL CAPITAL
IN A WORLD OF TERROR**

Ross O'Brien
College of Business
Dallas Baptist University
Dallas, TX 75211
Tel: (214) 333 – 5399
Fax: (214) 333 - 5472
E-mail: rosso@dbu.edu

Abstract: *The study of social capital continues to grow across disciplines. In each, social capital finds its strength in the structure of social networks as well as the resources those networks provide. These structures and resources are critical to the survival of organizations facing environmental crises. This study focuses on the role that social capital plays in the survivability of organizations enduring natural disasters, terrorism, war, and industrial disasters.*

For some time now, organizational theories have endeavored to demonstrate how organizations might plan for, and successfully deal with, dynamic environments. Such studies have focused on developing slack resources (Galbraith 1973), specialization or generalization (Hannan & Freeman, 1977), contracts and behavior monitoring (Jensen & Meckling, 1976), or solidifying and diversifying supplier channels (Pfeffer & Salancik, 1978), to name a few. However, there are points in time when an environmental crisis takes organizations beyond their ability to prepare for environmental dynamism. The following story is one such example.

Prior to the storm of 1900, Galveston, Texas had grown into one of the wealthiest cities in the country. More than 70% of the nation's cotton crops passed through the port of Galveston. Yet little could have prepared the island-city for the impact of a hurricane that left 6,000 dead (almost one-sixth of the city's population) and destroyed more than 3,600 homes. The monetary loss in today's dollars reached $700 million. The storm still ranks as the deadliest natural disaster in U.S. history.

Perhaps the most amazing part of this story follows the disaster itself and centers on the many citizens and organizations that stayed to rebuild the city. A committee, composed of residents, organized the city's clean-up and started the process of burying

the dead. These residents also planned a rebuilding program that would raise the city's elevation approximately 17 feet at the seawall and included the construction of a new sea wall extending 10 miles around the island-city. The rebuilding process cost more than $100 million, based on current dollars, and involved a network of organizations and individuals including national, state and local governments, privately and publicly-owned firms, civic and religious organizations and concerned citizens.

More recently, the terrorist attacks of September 11, 2001 took the victims and the world by surprise. Security systems at the Twin Towers could not have forewarned the occupants of the attack, nor could contingency plans fully deal with the massive devastation to life and property. Like the Galveston story, people from all backgrounds came together to bring hope and healing in the aftermath.

Just as demonstrated here, there are critical times when a crisis overpowers any single organization's ability to plan for, or sufficiently deal with, exogenous contingencies. These crisis periods go beyond what has been previously discussed as environmental jolts (Meyer, 1982), because these kinds of crises are *totally* unpredictable and do more than simply disrupt the organization's current way of conducting business. Further, crises are not necessarily targeted at an industry or population but rather single out a particular organization or are limited to a specific geographical area.

In response to these situations, organizations look both inside and outside their boundaries for resources that may aide in their survival. This paper focuses on organizations' reactions to these periods of crises. More specifically, this study focuses on the role social capital plays in the survivability of organizations that find themselves in the midst of such crisis environments. We discuss decisions and their implications for

managers who find themselves at the helm in the midst of a storm, be they leading public or privately held firms, government agencies, not-for-profit social agencies, religious organizations, or non-government organization (NGO). The research questions leading this discussion include: (1) How do organizations react when faced with environmental crises? (2) What role does social capital play in the survival of organizations in periods of crisis? (3) What happens to an organization's social capital in the post-crisis environment?

ENVIRONMENTAL CRISES AND SOCIAL CAPITAL

For our purposes, environmental crises include: (1) natural disasters, such as earthquakes, fires, floods and storms, (2) wars, police actions and acts of military aggression, (3) acts of terror, and (4) industrial accidents such as those occurring at Three Mile Island, Chernobyl or on the *Exxon Valdez.* While it is impossible to predict crises, Mitroff & Alpaslan (2003) believe that it is possible to prepare for all these forms of crisis. Preparation includes creating a "crisis portfolio" by evaluating readiness across the categories of crises, role playing, and establishing cross-fertilization of ideas, which takes place when organizations dialogue with individuals and other organizations outside their daily operations. By the very nature or crises, one cannot predict when disaster might strike. Yet, for those organizations that seek to prepare themselves for crisis, the payoffs include a reduction in the number of crises impacting the organization, longer survivability, stronger financial performance, and an enhanced reputation (Mitroff & Alpaslan, 2003).

One of the most prominent resources created in crisis preparation and utilized when crisis situations materialize, is that of social capital. However, there is some ambiguity as to what social capital actually is and how it is utilized by different individuals or organizations in different situations. In fact, the breadth of research on social capital has led some to criticize researchers as shaping the concept to fit their interests (Narayan & Pritchett, 1997). Generally, social capital can be defined as the social interactions, trust, and reciprocity that produce "collective outcomes" (Grootaert & van Bastelaer, 2003: 1). This definition recognizes how individuals and organizations often work together to promote a socially beneficial cause in the midst of a challenging situation. In fact, one could extrapolate the concept to predict that the very lack of environmental munificence might stimulate social interaction and increase social capital. That social capital, in turn, plays an important role in organizational survival rates (Pennings & van Witteloostuijn, 1998).

Social capital is seen as a means of enforcing normative behavior among partners and individuals within organizations. This cooperation allows firms to take greater risks. The role of normative behavior shaping is an important component of social capital. In closed systems where all organizations are networked together, there is a strong impetus to behave in ways the network can support. However, in more open networks, actors are not forced or coerced into set behavioral patterns. Yet, in times of crisis, there seems to be a collective sense of duty to seek a utilitarian view of behavior in which actors work for the greatest good for the greatest number of people. This voluntary self-sacrifice on the part of actors provides a level of trust in which other actors can operate more

efficiently with greater risk taking. Trust and the expectation of normative behaviors facilitates survivability.

Further, embeddedness plays a role in relationship-development promoting feedback and organizational learning (Uzzi, 1997). Embeddedness in dense networks leads to effective interfirm cooperation (Granovetter, 1985). These cooperation, feedback and learning functions become part of the content of social capital through interorganizational relationships. As organizations deal with the effects of war, natural disaster and terror threats, information is critical to survivability. Interfirm networks must allow for the smooth flow of information. However, the very event that causes disruption to normal business activity (the crisis) can often hinder the free flow of information. To facilitate this information flow, organizations must take steps to become more a part of their partners' daily traffic patterns. They must become more embedded.

Finally, learning plays a role in interorganizational development (Kraatz, 1998). Accessibility to information is a key component of social capital, and allows organizations to learn from the successes and failures of their network partners. In crisis situations, where decisions carry greater weight than in normal situations, one would predict that actors would watch carefully and see what results follow the decisions of leading actors.

The studies mentioned demonstrate the role social capital plays among organizations, although none of them deal directly with the topic of organizational survival in crisis environments. Therefore, we will use the following paragraphs to extrapolate from previous studies of social capital how organizations increase their survivability when caught in crisis environments.

Social Capital Development in Crisis Situations

Figure 1 provides a graphic model demonstrating the phases of social capital development within organizations in crisis environments. It also contains reference to four propositions that we develop later in our discussion regarding this model.
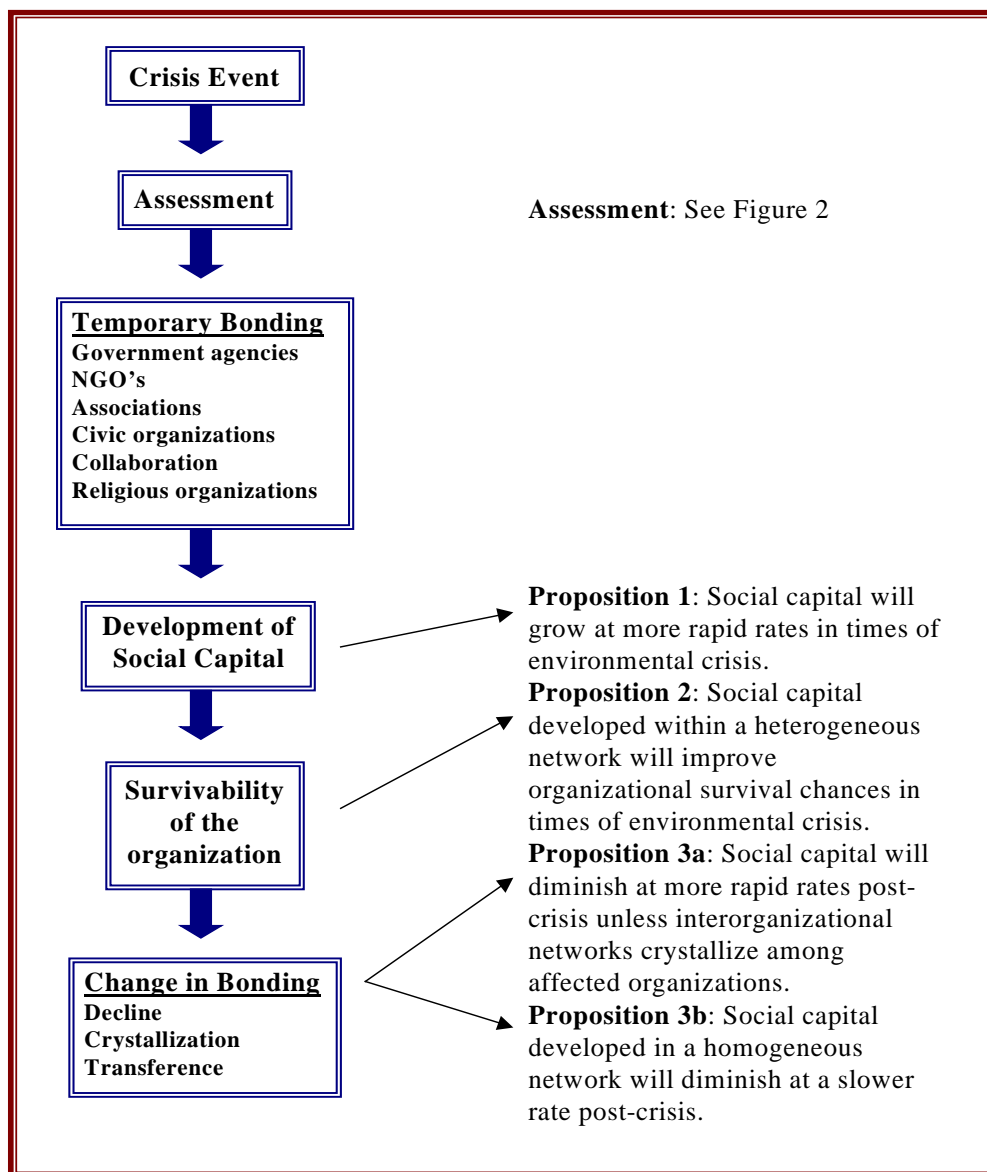
Researchers define social capital in a variety of ways depending on the focus of their research. However, in most cases researchers establish the basis of social capital within the context of interpersonal exchange (Coleman, 1988; Adler & Kwon, 2002; Grootaert & van Bastelaer, 2003; Nahapiet & Ghoshal, 1998; de Souza Briggs, 1997). The benefits of social capital include trust, reciprocity, information sharing and cooperation. These benefits are sources of value creation for those firms established within a social network (Putnam, 1995).

In crisis situations, this capital takes on very tangible forms, as evidenced in post 9/11 New York City when business partners offered unlimited credit towards products, expedited orders, assistance in immediate relocation, and an assurance of "whatever it takes" cooperation (O'Heir, et al., 2001). Social capital has also been used to explain the transformation of The Bronx, the site once labeled "the worst slum in America," into a livable community with ten thousand new dwelling units, lower crime rates, Little League baseball teams sponsored by local businesses and safe, well-maintained parks (von Hoffman, 2003).

Social capital relies in large part on trust among network members. Trust is seen as critical to the viability of relationships in particular and societies in general (Blau, 1964; Rotter, Chance & Phares, 1972; Bok, 1978; Hosmer 1995). Expectations shape and direct trust (Barber, 1983). First, trust reduces complexity in the midst of a chaotic world by giving a sense of assurance that "some things will remain as they are or ought to be" (Luhman, 1980: 4). This sense-making component of trust is most challenged, as well as most needed during times of severe crisis. Second, trust carries with it a sense of expectation of competency. One can only trust those who demonstrate an ability to do

what they claim they can do. Finally, beyond the scope of ability, trust carries a moral expectancy, anticipating that actors will place the interest of others before their own interests. Instead of the expectation of "self-interest seeking with guile" (Williamson, 1985: 47) associated with agency theory, relationships marked by trust assume that actors will not act opportunistically (Uzzi, 1997). In crisis environments, organizations look to their networks to reduce uncertainty, provide technical expertise, and to do so in such a way as to make network members better off without making anyone else in the network worse off. Trust serves a crucial role in these settings.

Networks "bind individuals together into a coherent system." (Powell and Smith-Doerr 1994: 368-370) These systems of institutional linkages reduce mortality rates (Baum & Oliver, 1991), lower failure rates. (Miner, Amburgey, & Sterns, 1990), and increase social capital (Walker, Kogut & Shan, 1997). Following this reasoning, one could predict that interorganizational relationships help foster social capital. With this resource of social capital, organizations have a stronger prospect for weathering environmental storms.

In times of social disequilibrium, people tend to associate in ways they might not do under normal circumstances. For instance, group travel into foreign countries often results in participants sharing personal information and establishing trusting relationships with perfect strangers. Or, during medical emergencies, patients and their loved ones tend to divulge information not only to the doctors treating them, but oftentimes to nurses, orderlies, unit secretaries, and other patients.

Beyond simple information sharing, individuals thrown together in times of crisis sacrifice resources and safety to support others in their group, even when they know

nothing about the others involved, and even when their sacrifice may or may not be reciprocated. They also depend on each other, trusting in the other's honesty and willingness to help. The bond of social interaction that binds people together usually takes time to develop. Yet in crisis situations, a sense of shared experience replaces the element of time in fostering these relationships.

Organizations also follow this pattern of "fast-forming" bonds with other organizations in times of extreme environmental dynamism. Trusting relationships that normally take years to develop spring up quickly out of necessity and awkward uncertainty. Hosmer (1995) explains Zand's view of trust as "expectations of behavior under conditions of vulnerability." In times of mutual vulnerability the risks associated with trusting are offset by the benefits of collaboration and interconnectedness. Therefore, the social capital that grows out of interorganizational networks, usually over a period of time, grows more rapidly in the threatening climate of crisis.

Proposition 1: Social capital will grow at more rapid rates in times of environmental crisis.

The most trusting relationships occur between people of like backgrounds. Closed networks provide a set of effective sanctions that monitor and guide behavior (Coleman, 1988). De Souza Briggs (1997: 113) indicates that "because it is stored in social relationships, social capital is organized, whether we like it nor not, along the very fault lines that relationships, neighborhoods, and social participation often are in our world." Extrapolating on this concept, organizations of similar type understand each other's needs and experiences. These organizations form homogeneous networks, which can be based on similar industry or geography. In fact, most interorganizational networks fall into this

category. Only when an organization moves outside its daily operations does it begin to establish linkages with distinctly different types of organizations. For instance, technology firms tend to relate best to other technology firms. However, some expand their relationships to include universities, civic organizations and government agencies to name a few. We refer to these interdisciplinary networks as heterogeneous networks. Heterogeneous networks reflect the "information-flow" component of social capital (Coleman, 1988). They do not typically establish norms or sanctions and cannot foster a sense of obligation or expectation.

In most cases, a member of a heterogeneous network will only trust others in the network to provide information. However, in times of environmental crisis, it is these heterogeneous networks that provide the greatest resources for sustainability. Crisis fosters trust even among such diverse memberships.

We hold that in times of crisis, networks comprised of diverse organizational types will create more social capital and make that capital available to members of the network (Baum & Oliver, 1991; Mitroff & Alpaslan, 2003). Those organizations that are willing to both trust in, and give back to organizations quite different from themselves will open the door for a more resource-rich environment. Some might shy away from diverse networks in an attempt to "circle the wagons" while under attack. While this may be a natural response, it forces organizations to limit their participation in available resources while seeking to retain greater control over themselves.

In a time of crisis, government agencies, civic and religious organizations, NGO's and businesses might all comprise a heterogeneous network. An open network such as this might be seen as less reliable since members have few control mechanisms to shape

behavior. The diversity of the groups also hinders the unity found in social norms. However, the nature of the crisis itself acts as a bond that causes participating organizations to go beyond the letter of the law and behave in non-opportunistic ways. Therefore, heterogeneous networks can have a similar level of control and influence to behave in expected ways while also opening the door to a greater number of resources.

Proposition 2: Social capital developed within a heterogeneous network will improve organizational survival chances in times of environmental crisis.

At this point, we must consider the distinction between content and structure of social capital. While the structure, "the formal structure of the ties that make up the social network," (Adler and Kwon, 2002: 23) provides the mechanism for social capital to exist, it is the content, shared norms, beliefs and abilities, that give this form of capital its value. Both structure and content are necessary, especially in crisis situations. Crisis response efforts have failed due to the lack of clear structure, competing interests and failed communication. However, just as fruitless are the efforts of response teams that fail to develop worthwhile resources within their highly organized networks.

Closely associated with both content and structure of social capital are interorganizational networks. "IOR's (interorganizational relationships) are the relatively enduring transactions, flows, and linkages that occur among or between an organization and one or more organizations in its environment." (Oliver, 1990: 241) Organizations usually base their decision to associate with other organizations on multiple contingencies. The same should hold true in times of severe environmental crisis, with some differences in the length of time the organizations maintain the relationships. In an effort to absorb environmental uncertainty, organizations tend to reach out for the

assistance that a network of relationships can bring. Scarce resources can result in cooperation rather than competition, leading to an environment of reciprocity. The resulting networks may serve as temporary support systems, or can develop into longer-term networks.

However, because enduring networks take time to develop, those relational bonds that quickly grow in a crisis situation will also quickly diminish once the time of crisis has passed. Social capital dissipates when norms grow weak (Coleman, 1988). As was evidenced in the 9/11 terrorist attack in New York City, the fast-growing interest in spiritual matters that brought people from various backgrounds together to seek philosophical and spiritual answers to their crisis soon evaporated as passions waned and daily life again took over the attention of New Yorkers.

At the outset, the focus in crisis tends to be on the content of networks; the resources made available by various network actors. However, if little or no attention is given to the structure, as the content becomes less important (due to other sources of content) the network will diminish, as will social capital within the network. Again, Coleman (1988: 118) states that "…most forms of social capital are created or destroyed as by-products of other activities."

So what can mitigate the loss of this social capital? As participating organizations take the initiative to establish more formal relationships through shared resources, joint ventures and embedded actors, they create a mechanism that crystallizes the relationships. Over time, the network has a greater potential for survival, as do the organizations that comprise the network. However, if no mechanisms develop,

crystallization will not take place and the network will die out as soon as alternative resources are found within the control of the individual members.

As crisis lifts and social exchange normalizes, organizations will tend to migrate their network relationships to encompass organizations with which they have some level of commonality. As has already been discussed, like organizations attract. This will diminish the level of social capital available to society as a whole, but facilitate organization-level social capital for the long run. In fact, if these homogenous networks have sufficient resources to see their members through times of crisis, network members will be less likely to enter into heterogeneous networks in the first place.

Proposition 3a: Social capital developed in a heterogeneous network will diminish at a more rapid rate post-crisis unless interorganizational networks crystallize among affected organizations.

Proposition 3b: Social capital developed in a homogeneous network will diminish at a slower rate post-crisis.

DECISION IMPLICATIONS AND DISCUSSION

Based on this research and associated propositions, organizational leadership can anticipate their reactions and even prepare their organizations to deal with crisis, though they cannot predict the nature or time, or even the occurrence of crisis events. With an awareness of the role that social capital can play in increasing survivability of organizations, leadership can assess their capability to survive with or without additional resources, and the short and long term trade offs involved in seeking external resources in

crisis situations. Figure two provides a decision tree that organizational leaders can

follow in determining the need for external resources in these times.

Figure 2: The Assessment Process For Leadership
in Crisis Situations

1. Self Sufficiency

Can the organization survive the crisis on its own?	If no, examine existing networks of relationships.
If yes, should it do so or would joining a network provide slack resources and legitimacy?	If so, evaluate the benefits of slack resources and legitimacy compared to control and independence.

2. Existing Network Support

Will existing networks support all members through the crisis?	If no, expand the organization's network of relationships.
If yes, should the organization join other networks anyway for slack resources and legitimacy?	If so, expand the organization's network of relationships.

3. Network Types

If expanding the organization's networks, should the organization seek to join heterogeneous or homogeneous networks?	Join heterogeneous networks to maximize resource availability immediately and in the short term.
	Join homogeneous networks to maximize resource availability over the long term, but be aware of homogeneous network limitations.

4. Crystallization vs. Transference

If expanding into heterogeneous networks, are the organizations in the network ones that could become beneficial, long-term partners?	If no, receive and share resources within the network while it is available, but do not expend resources to maintain the network.
If yes, what can the organization do to crystallize the relationship?	If so, establish joint ventures, contractual relationships, ongoing associations and other mechanisms for maintaining the relationship.

Point 1 deals with the organization's level of self-sufficiency. In times of crisis, the organization must assess its ability to weather the storm alone. Even if the organization can survive on its own, its leadership must decide if going alone is the best path to take. The material and social capital made available through joining networks can provide slack resources as well as social legitimacy that can make network membership attractive, even to the point of giving up some level of autonomy and sacrificing material capital to network members in need.

In Point 2, organizational leadership evaluates the level of strength of existing networks to determine if these networks can support all their membership or if an organization should go outside these networks to seek additional resources. Once again, the decision to rely upon existing resources or seek outside resources is not as simple as it appears. While the legitimacy and slack resources made available through new networks might be attractive, as seen in Point 1, those organizations with commitments to existing networks must evaluate whether their involvement in new networks will compromise their ability to honor existing commitments. There exists a negative potentiality of networks collapsing when key members leave the network. If involvement in a new network will cause damage to organizations in existing networks, organizational leadership must ask difficult questions about seeking those external resources.

In Point 3, organizational leadership must evaluate the type of network to join. As seen over and over, government agencies, NGOs, humanitarian organizations and even for-profit businesses respond in times of crisis. The heterogeneous networks that develop in these situations provide immediate resources for individuals, families, communities

and organizations of all types. These networks tend to be resource-rich as they draw upon resources from multiple sources both local and outside the region impacted by the crisis.

In addition, existing associations and homogeneous networks comprised of industry-related organizations establish stronger bonds during these times as well. Organizational leadership must determine whether industry-related networks can provide sufficient levels of resources both immediately as well as for the duration of the crisis. Since these networks tend to be comprised of local organizations, they are not as resource-rich as heterogeneous networks.

In both types of networks, the interaction of organizations fosters the development of social capital. The amount of social capital that develops, and what happens to that social capital after the crisis abates is addressed in Point 4. Organizational leadership must consider the amount of resources they invest in the networks and the expectation of network longevity based on network type. Heterogeneous networks tend to develop quickly and die out quickly. Therefore, unless the organization sees benefit in that network continuing on in some fashion beyond the crisis period, it should limit the amount of resource invested in the network as well as its own expectation of the availability of resources through that network for the long term. If, however, the organization sees potential for longer-term relationships with heterogeneous network members, it should seek to crystallize those relationships through establishing joint ventures, contract relationships or other mechanisms. The social capital that develops in these networks will either continue to grow as the network endures past the crisis period, be transferred to the relationships that grow out of these networks, or die out if no crystallization actions are taken by network members.

CONCLUSIONS

In this paper, we have sought to identify the role that social capital plays in sustaining organizations that find themselves in crisis environments, such as natural disasters, wars, terrorism and industrial accidents. While much of the existing literature lends general principles to this study, none address the topic directly. Our first initial question asked about the way organizations react in times of severe crisis. From the literature and from general observation we see that organizations cooperate, network and trust each other for assistance. Given the sense of immediacy that accompanies crisis situations, these relationships develop more quickly than under normal circumstances.

The second question asked about the role that social capital plays in the survival of these organizations. By extrapolating existing research, we predict that social capital will play the same role in crisis situations that it does in non-crisis situations by supporting the members of networks and increasing survival rates. While a crisis situation, by nature, forces weaker organizations out, social capital can reduce the potential of organizational mortality due to the crisis.

Third, in the post crisis environment, social capital will either decline, move from heterogeneous networks to homogeneous networks, or, if crystallization mechanisms are established, continue to grow through the heterogeneous networks that arise during the crisis. These heterogeneous networks can provide a greater variety and number of resources than homogeneous networks, but are more difficult to maintain.

Finally, we provided organizational leadership with a model decision tree that can assist in making decisions regarding the development and use of social capital in

sustaining the organization through crisis situations. This practical model is founded on the theoretical research and propositions established by the authors.

Conclusions regarding the role of social capital in crisis environments provide grounds for future research. The findings of such research could have very practical implications for organizational leadership working in crisis environments, whether the organization is private or public, for-profit or not-for-profit.

For governments and government agencies, the role that social capital plays can facilitate disaster recovery, reducing time and cost requirements. The types of networks that develop can either support or deter long-term recovery efforts. The mechanisms that allow for networks to crystallize could also play an important role in social capital maintenance.

For businesses, the research indicates the importance of moving beyond the "comfort zone" of like organizations, as well as establishing crisis management plans that include laying the foundation for heterogeneous networks. For all organizations interested in working in crisis environments, the concepts of trust and embeddedness will play an important role in the development of social capital-building relationships.

One limitation of this study involves the origin of the crisis. Crises caused from sources internal to a nation, city or organization will add a unique dimension to the growth of social capital. Actors will find it more difficult to place trust, a critical element of social capital, in those around them since there may be no guarantee of the trustworthiness of the person or organization. Further, in situations where the crisis is an ongoing situation, actors may also find it difficult to place trust in others, unless clear evidence provides confidence in the safety of that person or organization.

In addition, while the proposals established in this study are based on existing research, grounded conjecture and observable information, they need to be proven through quantifiable research. The resulting study will provide an important resource for businesses, disaster recovery organizations, governments, civic and religious organizations.

REFERENCES

Adler, P.S. & Kwon, S.W. 2002. Social capital: prospects for a new concept. Academy of Management Review, 27(1): 17-40.

Barber, B. 1983. The logic and limits of trust. New Brunswick, NJ: Rutgers University Press.

Baum, J.A.C. & Oliver, C. 1992. Institutional embeddedness and the dynamics of organizational populations. American Sociological Review, 57: 540-559.

Blau, P.M. 1964. Exchange and power in social life. New York: Wiley.

Bok, S. 1978. Lying: Moral choice in public and private life.

Coleman, J.S. 1988. Social capital in the creation of human capital. Journal of Sociology, 94: S95-S120.

de Sousa Briggs, X. 1997. Social capital and the cities: advice to change agents. National Civic Review, 86: 111-117.

Galbraith, J. 1973. Designing complex organization. Reading, MA: Addison-Wesley.

Granovetter, M. 1985. Economic action and social structure: the problem of embeddedness. American Journal of Sociology, 3: 481-510.

Grootaert, Christiaan & van Bastelaer, Thierry. 2003. Understanding and measuring social capital: a multidisciplinary tool for practitioners. Washington, D.C.: World Bank.

Hannan, M. and Freeman, J. 1977. The population ecology model of organizations. American Journal of Sociology, 82: 929-964.

Hosmer, Larue Tone. 1995. Trust: the connecting link between organizational theory and philosophical ethics. Academy of Management Review, 20: 379-403.

Jensen, M.C., Meckling, W.H. 1976. Theory of the firm: managerial behavior, agency costs, and ownership structure, Journal of Financial Economics. 3: 305-360.

Kraatz, M.S. 1998. Learning by association? interorganizational networks and adaptation to environmental change. Academy of Management Journal, 41: 621-643.

Luhmann, N. 1980. Trust and power. New York: Wiley.

Meyer, A.D. 1982. Adapting to environmental jolts. Administration Science Quarterly, 27(4): 515-538.

Miner, A.S., Amburgey, T.L. & Sterns, T.M. 1990. Interorganizational linkages and population dynamics: buffering and transforming shields. Administrative Science Quarterly, 35: 689-713.

Mitroff, I.I. & Alpaslan, M.C. 2003. Preparing for evil. Harvard Business Review, 81: 109-115.

Nahapiet, Janine & Ghoshal, Sumantra. 1998. Social capital, intellectual capital, and the organizational advantage. Academy of Management Review, 23: 242-266.

Narayan, D. & Pritchett, L. 1997. Cents and sociability: household income and social capital in rural Tanzania. Washington, D.C.: World Bank.

O'Heir, Jeff, Campbell, Scott, Rogers, Amy, Darrow, Barbara, Savage, Marcia, Montalbano, Elizabeth, Kovar, Joseph F., & Clancy, Heather. 2001. Computer Reseller News, 963: 3-4.

Oliver, C. 1990. Determinants of interorganizational relationships: integration and future directions. Academy of Management Review, 15: 241-265.

Pennings, J.M., Lee, K. & van Witteloostuijn. 1998. Human capital, social and firm dissolution. Academy of Management Journal,41: 425-441.

Pfeffer, J. & Salancik, G. 1978. The external control of organizations: a resource dependence perspective. New York: Harper & Row.

Powell, W.W. & Smith-Doerr, L. 1994. Networks and economic life. In N. Smelser & R. Swedberg (Eds.), Handbook of economic sociology: 365-402. Princeton, N.J.: Princeton University Press.

Putnam, Robert D. 1995. Bowling alone: America's declining social capital. Current. 373: 3-10.

Rotter, J.B., Chance, J.E. & Phares, E.J. 1972. Applications of a social learning theory of personality. New York: Holt, Rinehart and Winston.

Uzzi, B. 1977. Social structure and competition in interfirm networks: the paradox of embeddedness. Administrative Science Quarterly, 42: 35-67.

von Hoffman, A. 2003. House by house, block by block: the rebirth of America's urban neighborhoods. New York: Oxford University Press.

Walker, Gordon, Kogut, Bruce & Shan, Weijian. 1997. Social capital, structural holes and the formation of an industry network. Organization Science, 8: 109-125.

Williamson, O.E. 1985. The economic institutions of capitalism. New York: Free Press.