

Staff Paper

SOCIAL CAPITAL AND ORGANIZATIONS

**Lindon J. Robison
Marcelo E. Siles**

Staff Paper No. 98-27

October 1998



Department of Agricultural Economics
MICHIGAN STATE UNIVERSITY
East Lansing, Michigan 48824

MSU is an Affirmative Action/Equal Opportunity Institution

SOCIAL CAPITAL AND ORGANIZATIONS

by

Lindon J. Robison
E-Mail: robison@pilot.msu.edu

Marcelo E. Siles
E-Mail: siles@pilot.msu.edu

AEC Staff Paper No. 98-27

October 1998

Lindon J. Robison and Marcelo E. Siles are Professor in the Department of Agricultural Economics and Assistant Professor and Director of the Social Capital Initiative at Michigan State University, respectively. Support for this study was provided by the Michigan Agricultural Experiment Station at Michigan State University, East Lansing, Michigan.

Copyright © October 1998 by Lindon J. Robison and Marcelo E. Siles. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

ABSTRACT

An organization is a group of persons who satisfy an established membership requirement. Membership requirements may be based on inherited or earned traits. Organizations provide a place for social capital to reside. Organizations exist because they provide the setting in which members can meet their economic, social, validation, and information needs. As the needs of members change, membership requirements and organizational emphasis may also change. Relationships among an organization's members range from antipathetic to sympathetic. Depending on the quality of relationships or social capital within an organization, power will be exercised using a stick, carrot, and hug. Organizations may experience conflict if members perceive they must compete with each other to satisfy their needs. Finally, in a two-person relationship, social capital is likely to be symmetric or exploitation may exist. In more complicated relationships, social capital is likely to satisfy adding up constraints.

Key Words: social capital, organizations, membership requirements, relationships, economic needs, validation needs, social needs, information needs, social capital symmetry, adding up constraints

SOCIAL CAPITAL AND ORGANIZATIONS

Introduction

This paper is concerned with how social capital investments (disinvestments) are organizationally influenced. Organizations facilitate social interaction by collecting members with similar traits. Those traits around which organizations are formed may then influence the kinds and levels of social capital investments (disinvestments). To analyze how organizations and social capital are related, we consider a framework for classifying organizations. Then, within each organizational type, we might discuss the role and importance of social capital.

What is an organization? One definition follows. An organization is a group of persons who satisfy an established membership requirement. Membership requirements establish a consistency within an organization that permits it (the organization) to function cooperatively. The organization's main activities are likely to be related to its membership requirements. For example, an academic department within the university is an organization. The department's membership requirements require that department faculty and staff contribute to produce the department's teaching, research, and outreach products.

Organizations can be differentiated from each other by their membership requirements. If membership requirements are associated with one's birth or adoption, then membership requirements are inherited and the organization is exclusive, closed to those lacking the inherited traits. On the other hand, if the organization's membership requirements are related to traits that can be developed or acquired, then the organization is inclusive, open to those willing to earn the required traits. One's gender and ethnicity are inherited traits and organizations whose membership requirements are based on gender or ethnicity are exclusive. One's income or political allegiances are generally earned and organizations whose membership requirements are based on one's income and political preferences are considered inclusive.

Some inherited and earned traits used as membership requirements include one's athletic ability, intelligence, religious beliefs, political preferences, marital status, income levels, age, genealogy, gender,

nation of birth, ethnicity of ancestors, education, degree granting university, recreational interests, employable skills, location of birth, place of residence, level of education, height and weight, and interests in art, plays, athletic contests, and construction.

Some examples of organizations include: families, religious sects, ethnic classes, service clubs, communities defined by geographic boundaries, school districts, alumni clubs, gangs, employee unions, terrorist cells, employer alliances, athletic teams, political parties, literary and art societies, electronic chat groups, and nations and states.

An organization's membership requirements will determine the size and strength of relationships among its members. Individuals have a limited supply of social energy that can be used to invest (disinvest) in social capital. As the number of members in an organization increases, the social interaction between any two members is likely to decrease, all other things equal. As a result, the strength of ties is likely to decrease as the size of the organization increases.¹

Some large organizations do indeed maintain strong ties, including ethnic and religious groups. In these cases, the membership requirements often preclude membership in other similar organizations. For example, one might be a member of the Jehovah's Witnesses and if so is unlikely to be a member of other religious denominations. One might be Asian or African American but not a member of another ethnic group. When an organization's membership requirements clearly distinguish members and non-members, it may be possible to have an organization with both large numbers and strong bonds.

To illustrate the more usual case in which an inverse relationship exists between social capital density and the generality of membership requirements that leads to large organizations consider the following. Anyone over 50 and willing to pay modest dues can belong to the American Association of

¹Oliver notes that organizations may enter into relationships with other organizations if, in return, they are validated, have their uncertainty reduced, or gain resource mobilization assistance.

Retired Persons (AARP). The generality of membership requirements has resulted in a large organization with weak ties. (When was the last time you organized an AARP party?)

In contrast to AARP is the Boy Scouts of America (BSA) troop 196 located in East Lansing, Michigan. Their membership requirements are very specific. Boy Scouts in troop 196 are males between ages 11 and 17, wear the same uniform, likely attend the same school, live in the same neighborhood, subscribe to the same book of virtues, share an interest in outdoor activity, and meet together regularly in cooperative activities including cooking meals and tying ropes. Generally speaking, social capital is dense in troop 196. Part of this density is related to their relatively small size facilitated by the specific membership requirements that homogenizes their organization.

Organizations often become social capital's residence. An organization's membership requirements often suggest the common traits around which members relate to each other and the basis for social capital. Organizations also provide an identity for similar people who belong together and provide sponsors for activities that can occur without appearing to be privately owned.

Each organization experiences maintenance costs that vary depending on whether the requirements are earned or inherited. If an organization is based on inherited traits, then the organization exists independent of the actions of its members and maintenance costs are low. However, an organization will experience strong or weak ties depending on the activity level of the members.

Organizations whose membership requirements are based on earned traits will survive only as long as members continue to meet membership requirements. For example, if membership depends on adherence to a particular code of religious beliefs, the maintenance cost is continual confirmation of beliefs. If membership requirements depend on one's financial status, continued financial achievement is the cost of maintaining one's memberships. Still other organizations may require both earned and inherited traits such as the AARP whose requirements are both inherited (one's age) and earned (membership fees).

Michael Woolcock's recent paper suggests that organizations be defined using a two-way classification based on Intra-Community Ties (low to high) and Extra-Community Networks (low to high). Several organizations are then listed that seem to be well classified in this 2 x 2 matrix. This intra- versus extra-organizational focus is another useful classification device.

Based on the organizational characteristics described so far, we might describe and classify organizations by completing the appropriate line in Table 1. For example, a local Rotary Club would complete the line labeled *Service Club*. Membership requirements are earned, it enjoys medium density social capital, its maintenance costs are medium to high, and it has both an internal and an external focus.

Many of the organizations listed in Table 1 overlap and only a few can be considered mutually exclusive. To illustrate, within a geographically organized community exist families, churches, school districts, service and social clubs, and political parties. It is generally expected that as the number of organizations overlap, the social capital of persons in the overlapping organizations increases. However, research is needed to verify the hypothesis that social capital between two persons increases as the number of organizations in which they both participate increases.

Needs and Organizations

Organizations can also be classified by their purposes. All organizations exist to meet the needs of its members or non-members affected by the organization's activities. An organization's purpose is likely suggested by its membership requirements.

Table 1. Where Social Capital Resides (Local Rotary Club)

Where Social Capital Resides	Membership Requirements		Density	Maintenance Costs	Focus	
	Inherited	Earned			Internal	External
Families						
Religious Groups						
Ethnic Groups						
Service Clubs (Local Rotary Club)		X	M/H	M	X	X
Person(s)						
Geographic Communities						
Gangs						
Work Groups/Unions						
Athletic Teams						
Political Parties						
Economic Clubs						
Literary/Cultural						
Electronic Groups						
States/Nations						

L = Low

M = Medium

H = High

Several lists of needs have been suggested. For the purpose of this paper, four needs include: economic needs, social needs, validation needs, and information needs. (1) Economic Needs. This category includes the need for goods and services that provide the means for survival and physical enjoyment. In developed economies, economic needs are met by exchanging labor, effort, and other owned resources for income that is used to buy food, shelter, transportation services, entertainment, and other objects that provide physical satisfaction. (2) Social Needs. Men and women are social beings whose emotional and physical health requires social interaction and a sense of belonging. One form of punishment

is to deny persons in confinement access to social interaction. (3) Validation Needs. Men and women have the need to believe they matter. The need to matter is satisfied through various mechanisms of validation. Means of validation are established in social interactions and must generally be interpersonally valued. Sometimes we seek validation by the work we do, the awards we earn, the positions we hold, our physical appearance, status symbols owned, the people with whom we associate, and the service we have performed. (4) Information Needs. We all have the need for information that helps us understand our environment. Sometimes this information connects consequences with their causes. Information that connects consequences with their causes is of the form if “A” and then “B” and is required for informed decision making. Chaos exists when an ordered connection between actions and outcomes is lacking or not understood. We seek information and understanding about consequences and their causes to rescue order from chaos. Finally, we seek for information of the kind “A” is like or is the same as “B.” This kind of information allows us to transfer lessons learned in one setting to a different one. Table 2 creates a classification of organizations based on the organization’s purpose and the social capital location.

Most organizations strive to meet all four needs though they may vary widely in their emphasis on any particular need. For example, the local Rotary Club meets together socially over lunch. Each lunch meeting, however, includes a guest speaker to meet an informational need. One purpose of the Rotary Club is to provide services organized at the weekly meetings and usually performed on weekends. The Club’s service projects provide a validation service for its members without which the Club would likely cease to exist. Finally, during some social, information sharing, and service/validation activities, members are sometimes arranging a business deal. Thus, the local Rotary Club helps its members meet all four needs.

Table 2. Organizations Described by Their Purpose(s) and Social Capital Location

Where Social Capital Resides	Purpose			
	Economic	Social	Validation	Information
Families				
Religious Groups				
Ethnic Groups				
Service Clubs				
Person(s)				
Communities				
Gangs				
Work Groups/Unions				
Athletic Teams				
Political Parties				
Economic Clubs				
Literary/Cultural				
Electronic Groups				
States/Nations				

1 = Low to 10 = High

Some persons appear to lack a social or a validation need, or if they do, their responses to these needs are weak. The loner, the revolutionary, the social outcast, that person who does it his or her own way challenges the needs theory described earlier.²

²One explanation for the behavior of those who prefer isolation to interpersonal interaction is that social capital requires risk taking and investments. Those who view themselves deficient in social capital building skills may prefer isolation to failed social capital investment efforts. As a result, some individuals go their own way and alone simply because they have been unsuccessful at social capital investments in the future and refuse to risk repeated failure.

One of the issues in any needs discussion is the rank order of needs. Are needs met in some lexicographic order that may be biologically determined? The answer is not clear. From an economist's perspective, the need least fulfilled is the most important. Clean air in abundance is not valued in the market place. Under water where it is not available is when it becomes high priced. Water is generally free. But a thirsty person in the desert would be willing to pay all his gold for a canteen full. When one's economic needs are met, perhaps social and validation needs take on increased importance. So what is Bill Gates working for?

Organization Dynamics

Organizational missions are likely constantly changing. Organizations are dynamic because the relative importance of member needs changes over time and the ability of the organization to satisfy needs also changes. Perhaps the most dynamic of all organizations is the family. New members of the family depend completely on inherited social capital to meet their economic, social, validation, and information needs. As members of the family mature and enter school, their dependence on the family for complete need satisfaction is reduced. Some of their social needs may be increasingly met by friends at school. As children grow, their information is increasingly supplied by persons outside the home through numerous communication channels. Finally, children may join athletic or cultural groups that provide validation, some of which was previously produced at home. So as the age of family members change, so does the relative importance of the needs supplied by the family.

Relationships, Social Capital, and Organizations

An important question about organizations is the extent to which their success depends on social capital. Before this question is answered, we must first be able to measure social capital within the

organization (an important research focus of the Social Capital Interest Group). One way to test for social capital within an organization is to examine the relationship between its members.

Each organization is characterized by relationships between its members and non-members. In our work in economics we describe person i 's (j 's) relationship with person j (i) using the social capital coefficient k_{ij} (k_{ji}). Furthermore, since relationships are dynamic, the magnitude of these coefficients can be changed over time by investments (disinvestments) in social capital.

A positive social capital coefficient, k_{ij} (k_{ji}) > 0 , suggests that person i (j) has sympathy toward person j (i) that can be used if needed to obtain preferential economic treatment, obtain information that is not generally available, and use his/her sympathy to meet social and validation needs. Most often, however, social capital is inventoried for a "rainy day."

A social capital coefficient equal to zero, k_{ij} (k_{ji}) $= 0$, implies an arm's-length relationship. Arm's-length relationships suggest that the only basis for interaction will be a quid pro quo exchange and that only economic needs are being met in the exchange.

Finally, antipathetic relationships characterized by negative social capital, k_{ij} (k_{ji}) < 0 , imply that persons i and j are affected inversely by each other's successes or failures. Indeed, when negative social capital exists, partners are unlikely to exchange on mutually beneficial terms of trade. The goal becomes to reduce the welfare of each other even if one's own well-being is reduced in the process.

An important tendency in relationships is for symmetry of social capital. If person i has a sympathetic relationship toward person j , but person j does not reciprocate with similar feelings, then person j can exploit person i . The famous example of asymmetric relationships is the "rotten kid." The parents love the rotten kid but the rotten kid hates his parents and uses their goodwill for selfish purposes. (The Menendez brothers come to mind.) While asymmetric relationships may exist in the short run,

exploitation of person i by person j will eventually result in the loss of person j 's social capital and produce a more symmetric relationship.

Possible relationships that may exist between persons i and j are described in Figure 1. The 45 degree line passing through the origin represents symmetric relationships. However, any relationship between persons i and j can be represented by a position on the two-dimensional graph. The horizontal row value represents i 's feelings for j . The vertical (column) value represents j 's feelings for i . The positive(negative) dimension of the graph represents sympathy (antipathy). The origin of the graph represents a neutral relationship, the focus of neoclassical economics.

Positions on the graph in Figure 1 can be characterized by language made popular by Kenneth Boulding. He described sympathetic relationships as hug dependent. Arm's-length relationships he described as carrot dependent. Finally, he described antipathetic relationships as stick dependent. The Boulding identifiers are added to Figure 1 to create Figure 2.

The northeast quadrant of Figure 2 involves hug-hug relationships. The origin is a carrot-carrot relationship. The southwest quadrant represents a stick-stick relationship. Asymmetric relationships of stick-hug or hug-stick are described in the northwest and southeast quadrants, respectively. The positive (negative) vertical axis represents a carrot-hug (carrot-stick) relationship while the positive (negative) horizontal axis represents a hug-carrot (stick-carrot) relationship.

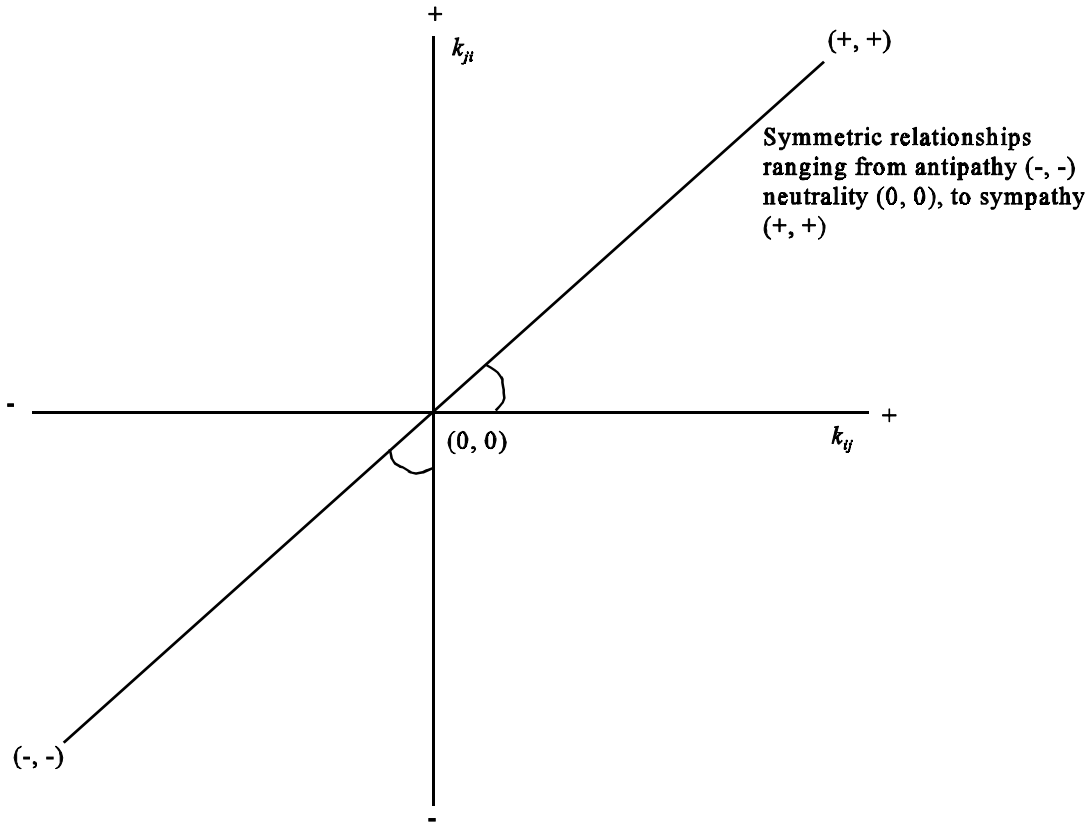


Figure 3. A Graphical Description of Possible Relationships Between Person “*i*” and Person “*j*.” The 45° line represents symmetrical relationships. (The row value represents “*i*” feelings for “*j*” while the column value represents “*j*” feelings for “*i*.”)

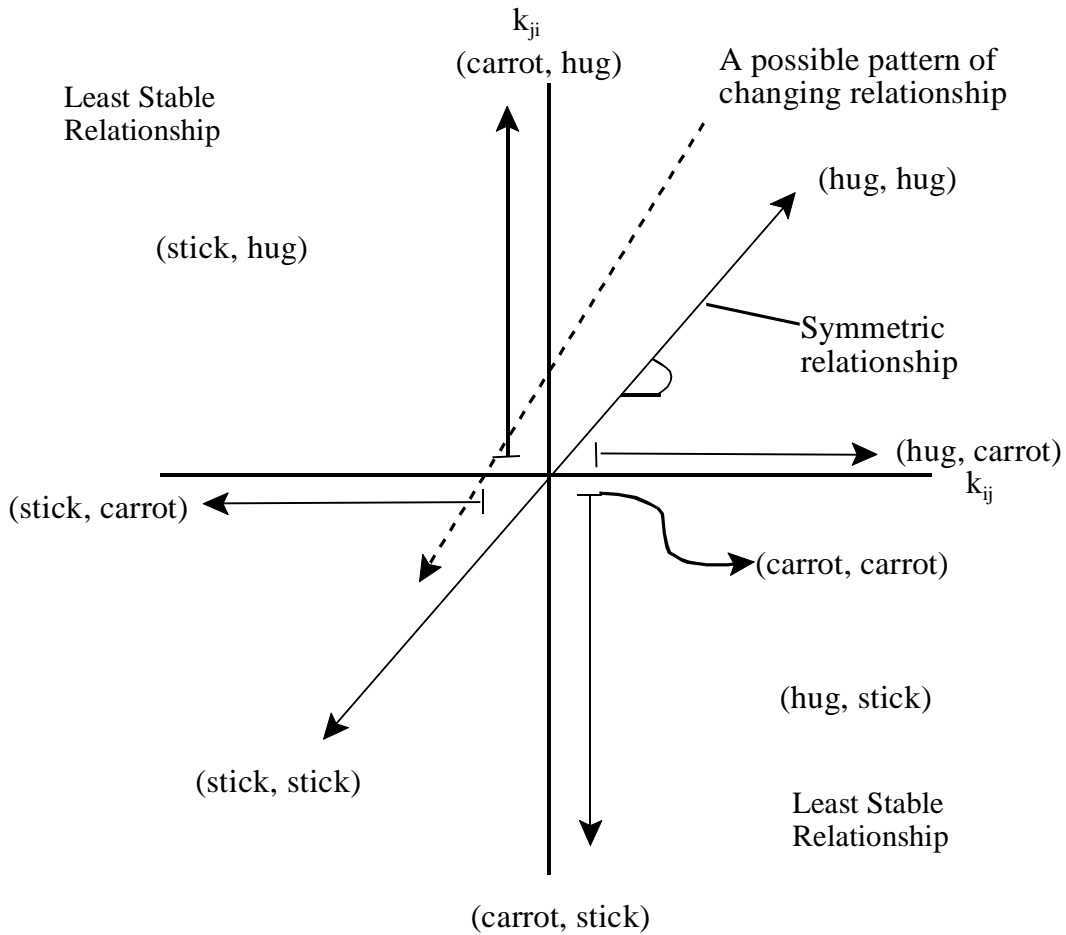


Figure 4. Relationship Between K_{ij} (Row) and K_{ji} (Column) Characterized by Kenneth Boulding as Dependent on the Stick, Carrot, or Hug.

The diagonal lines in Figures 1 and 2 represent symmetric relationships that are inherently stable. Relationships off the diagonal allow or facilitate exploitation and manipulation. The further the distance of the relationship from the line of symmetrical relationships, the less likely is the relationship to be stable. Asymmetric and therefore unstable relationships are not likely to be maintained unless supported by other relationships. For example, we might be kind to our enemies because of our relationship with members of

our religious faith who support our charity. But the expected norm is most likely clustered around the 45° line passing through the graph's origin.

When the interaction between persons i and j is synergistic and mutually beneficial, it is hypothesized that their relationship will move in the northeast direction in Figures 1 and 2. If the interaction is mutually disadvantageous, then it is hypothesized that their relationship will move in the southwest direction in Figures 1 and 2. Finally, when the interaction benefits j (i) but disadvantages i (j), then the relationship moves in the northwest (southeast) direction in Figures 1 and 2. Included in Figure 2 is a possible path of relationships, moving from (hug, hug) to (carrot, hug) to (stick, hug) to finally (stick, stick).

The least stable relationship is the hug-stick or stick-hug. Furthermore, gradual changes in relationships are more likely than radical changes. Thus, changes between adjacent nodes are more likely than changes between non-adjacent nodes. Thus, we might move from hug-hug to carrot-carrot relationships, but it would not be likely to move from hug-hug to stick-stick in one step.

Social Capital and Power

Boulding defines power as one's ability to get what one wants. Sometimes what one wants places the person in conflict with what another person wants. Sometimes what one wants can only be achieved by assisting others. Conflicts characterized by zero sum games destroy social capital and change relationships to the (stick, stick) category. Cooperative ventures or positive sum games move relationships to the (hug, hug) category.

The kinds of methods used to achieve power may be associated with the kinds of relationships that exist. If relationships are stick-stick, then each group is likely to pursue power without regard for the welfare of the other party in the relationship. In such a stick-stick relationship, power must be exercised

with force, since the only motive to act will be to reduce one's losses. Stick methods applied in the past to gain power include boycotts, strikes, embargoes, litigation, physical violence to persons and property, and armed conflicts. Unfortunately, stick-stick relationships are all too common and frustrate economic development programs around the world and at home.

Carrot-carrot relationships characterize the world of neoclassical economists where self-interest dominates all other motives. In such a world, one exchanges with another only if he or she is materially better off as a result. In such a world, morality is enforced through penalties for cheating that make it in one's best interest to play by the rules. Carrot-carrot relationships often have an undesirable outcome. Since individual endowment differs, they trade and barter with distinctly different sets of resources that sometimes lead to stark differences in incomes.

The main point about power and carrot-carrot relationships is the following. Persons participate in arm's-length transactions only when it is in their self-interest to do so. They will neither harm an enemy nor sacrifice to benefit a friend. The ideal environment for carrot-carrot relationships is free markets. Free market economies in which traders are generally allowed to choose their products and trading partners have usually been promoted because they are efficient and able to get rid of their mistakes. It just may be that the main advantage of a free market economy is it provides unlimited opportunities for synergistic combinations that produce social capital and hug-hug relationships. For example, lenders and borrowers who successfully conduct business often produce good relationships in the process that can be used later on for customer retention and preferential loan treatment.

Hug-hug relationships pursue a different kind of power because they have a different kind of relationship. A hug-hug relationship is best characterized by Barry Manilow who crooned: "I'm glad when you're glad and I'm sad when you're sad." In a hug-hug relationship, the well-being of parties to the social interaction are internalized. Thus, it is unlikely that either party will engage in an activity that harms the

other. True, social interactions between huggers require mutually beneficial outcomes just like those in carrot-carrot relationships. The difference between huggers and arm's-length relationships is that huggers benefit vicariously from helping their friends and therefore do more to help than those with arm's-length relationships.

Methods used in hug-hug relationships include mutually beneficial exchanges, offering gifts, offers of friendship, compliments, recognition, persuasion, and maybe even strong force if required to help the other person when the other person isn't aware of his/her danger. Methods for achieving power based on relationships are described in Table 3.

Table 3. Methods Used to Exercise Power That Depend on Relationships

	Stick	Carrot	Hug
Stick	Boycotts, strikes, litigation, threats, destruction to property and life, armed conflict	Ransoms, tribute, fines, etc.	Epitome of religious behaviors in the face of adversity
Carrot		Mutually beneficial exchanges, cheating, and the possible harm from doing so is small	Overpayment for services, executives to reduce their own benefits to save employment for workers
Hug			Gifts, pleasant social interactions, mutually beneficial exchanges, recognition of efforts, persuasion

Satisfying Needs and Relationships

An interesting question to consider is the following: how does social capital affect an organization's ability to meet its members' needs? The answer to the question might begin by examining each need separately.

Economic Needs. Economic needs are satisfied in advanced economies through mutually advantageous exchanges. The likelihood of mutually advantageous exchanges improves with increases in sympathy because sympathetic partners internalize externalities. This internalization process adds to the direct benefits of exchange, the vicarious sense of well-being experienced by an improvement in one's partner's well-being. Antipathy also internalizes the external effects of the exchange. However, it produces a negative effect when an enemy's well-being is improved. Thus, economic exchange and efforts to meet economic needs among enemies will be frustrated.

Social Needs. Social needs may be closely related to validation needs. We seek for social interaction among our own kind (loosely defined). So Spartan fans sit on one side of the field and opposition fans sit on the other side of the field. Northern Ireland is separated by religions. Lebanon is divided by religion and ethnic backgrounds and most cities experience segregation determined by the price of one's residence or whether one owns or rents.

A failed social interaction is one that violates the accepted norm of the guest or host. Successful social interactions are those in which the participants confirm their shared qualities, likes, and dislikes. A successful social interaction may include a discovery that those interacting share political or religious views or that they agree on the solution to an important problem.

One hypothesis is that the ability of an organization to meet the social needs of its members depends on positive levels of social capital that in turn depend on shared traits and agreements. An organization may attempt to meet the social needs of its members by hosting an opportunity for members to socialize; but, if the members have already established antipathy, no social need satisfaction is likely to be served by the event.

Validation. Organizations play a critical role in validation. For example, most organizations establish a means for recognizing "successful" members. These validation tokens in the work place may be

signaled by salary levels, size and location of one's office, access to organization leaders, and public awards. Validation in social organizations may include friendly gestures by other members, election to office, and opportunities to represent the organization to non-member and other organizations. Religious groups may establish still different means for validation including public recognition of its successful members.

Antipathy between members of the group would seem to lead to a rejection of the group's symbols of validation. Indeed, we often characterize the rebellious and turbulent teenage years as efforts to flout and disrespect the validation symbols of adults and others. Body piercing, alcohol abuse, grooming standards, and jay walking may all be efforts to demonstrate a disrespect for accepted symbols of validation.

Information. Finally, we consider information needs. Information is only valuable when it is trusted. We trust friends whose well-being is connected to our own. Roman Emperors had to wonder if their needs had been poisoned. They could ask their servants, but then they often could not trust their responses. So, they had to hire tasters who would sample the meal before they believed the food was safe. In the modern world, we employ USDA inspectors instead of tasters.

So now comes the car salesperson with a "one time" good deal. He/she provides information, but we sense this information is tainted by his/her desire to sell cars. We would be much more comfortable if the salesperson were someone we trusted.

In conclusion, it seems that social capital plays a critical role in satisfying all four human needs. Furthermore, if organizations exist to meet member and non-member needs, then social capital is essential for organizational success. We might ask: what can organizations achieve that lack social capital? Can we successfully pursue our economic needs without social capital? The answer is probably no, unless the other needs are being met in other organizations. Successful arm's-length exchanges occur all the time and

the economic profession devotes itself to explaining why they are socially desirable. Yet, the fundamental question not answered in arm's-length analyses is: how are one's other needs being met? Scrouge employed Bob Cratchit at first because it met his selfish needs. When Tiny Tim developed social capital with Scrouge, employment conditions for Bob Cratchit improved significantly.

Economic agents may sometimes successfully pursue their economic needs even when parties to an activity are antipathetic. Their methods, however, will depend on sticks. We can, for example, litigate, strike, and threaten violence to achieve economic goals. It is unlikely, however, that we can successfully pursue our social and validation needs without social capital because carrots and sticks cannot buy caring and sincere praise. So, an organization can exist without social capital but the needs of its members that it can successfully meet will be limited to economic and possibly information ones.

The essence of this discussion is that social capital improves the organization's performance to meet all four needs. Social needs cannot be met without genuine caring. Validation from enemies is not valued. Information from the antipathetic is not trusted. And, economic gains earned in cooperation with one's enemy makes one a traitor. Of course, the need for social capital is not absolute in each category. For example, some persons work in settings that provide neither social, validation, nor information services. But, their work does provide them the economic resources to maintain themselves in other valued organizations such as their families. But, organizations that supply only economic needs are not stable and members are less loyal than members in organizations that supply more than one need.

If the only need satisfied by an organization is economic, then organizations might vie for the resources of competing organizations but they could only compete on the basis of their ability to meet economic needs. But, competition between organizations for members who find their economic, social, validation, and information needs met within the organization cannot be hired away with only offers of a higher salary.

Conflict versus Cooperation

A natural extension of our discussion is to suggest that different kinds of relationships facilitate the fulfillment of different kinds of needs. When individuals interact over needs, they do so in the environment of their relationship. Their relationship, in turn, influences the methods they will pursue to achieve their needs.

Nevertheless, there is a natural limit placed on the possible methods employed to meet one's needs. The natural limitation is associated with the need being pursued. Suppose, for example, person A has a social need for B's friendship. It is unlikely that A could arraign B before a magistrate and seek for a legal redress that would require B to supply friendship to A. On the other hand, one may be unwilling to accept increased friendship in place of a mortgage payment.

Information is also an important commodity. Certain types of information can be purchased in the market place. But most information is not traded in the market place but instead is exchanged between friends. Two friends may exchange inside information about personal circumstances, the condition of a friend, economic opportunities, the attractiveness of one's appearance, and one's supply of social capital.

As an individual considers satisfying his/her basic needs through social interactions with members of an organization or with non-members, he/she may consider using a stick, carrot, or a hug. The success of each method will depend on his or her social capital. The likelihood of success is described below in Table 4.

A table similar to Table 4 (Table 5) could describe an individual's likelihood of success in meeting his/her social needs using alternative methods of exercising power and having access to alternative levels of social capital.

Table 4. The Likelihood of an Individual Meeting His/Her *Economic Needs* Using a Stick, Carrot, or a Hug When Endowed with Various Levels of Social Capital

Person <i>i</i> 's Social Capital Invested in Person <i>j</i>	Stick	Carrot	Hug
High	Destroys social capital, outcome unknown	Likely successful	Likely successful
Zero	Depends on the size of the stick	Likely successful	Not likely to be successful
Negative	Will be mutually disadvantageous	Not likely to be successful	Not possible

Table 5. The Likelihood of an Individual Meeting His/Her *Social Needs* Using a Stick, Carrot, or a Hug When Endowed with Various Levels of Social Capital

Person <i>i</i> 's Social Capital Invested in Person <i>j</i>	Stick	Carrot	Hug
High	Low	Medium	High
Zero	Low	Low/Medium	Medium/High
Negative	Low	Low	Low/Medium

Areas of Conflict and Cooperation

Organizations and individuals interact over needs economic, social, validation, and information. These interactions may position the parties in zero or negative sum games or in positive sum or synergistic games. One may characterize these interactions generally as cooperative or competitive. The possible areas of cooperation and conflict are described in Figure 3. The areas of interaction need not be symmetric. For example, a conflict between Albanians and Serbs may be focused on validation issues. Their conflict, however, may place them in conflict with the economic interests of other countries and the United States. Another conflict closer to home is between farmers who sell cull carrots to deer hunters who use the carrots

to bait deer. Certain animal rights groups believe deer baiting is an immoral trick on the deer and oppose its practice. For the animal rights group, deer baiting is a validation issue. For the farmers, it is an economic issue. The main point here is that the levels of social capital play a critical role in determining whether areas of conflict are competitively or cooperatively resolved.

		k_{ji}			
		Economic	Social	Validation	Information
k_{ij}	Economic	GM versus UAW			
	Social	Service clubs, family business	Weddings		
	Validation	Farmers versus animal rights	Award ceremonies	Serbs versus Albanians	
	Information	Professional consulting	Social hours	Journal publication	Book reviewing

Figure 3. Nodes of Social Interactions Between Individuals and Organizations Attempting to Satisfy Needs

Facilitators of Organizations

The important question to be resolved is: “Why do organizations form?” Or stated another way: “What advantages give rise to one organization versus another?”

One essential for all organizations is a means for coordinating interconnected activities. When members are isolated from each other, all organizations that require coordinated actions cease to exist. When methods for coordinating interdependent actions require physical contact and face-to-face exchanges, geographic proximity define what organizations are possible. As methods for maintaining coordination

improve, many new organizations are allowed to form including chat groups who often have never been connected physically.

Facilitators for other organizations depend on the relative importance of the organization's need. For example, like-minded men and women may form political parties to meet validation needs. For such organizations, a similarity in political views is essential if validation is to be achieved.

On the other hand, if the need being met is economic, being like-minded politically, religiously, or having a common ethnic background is insufficient to maintain the organization. Nevertheless, if members of the group meet each other's social and validation needs, they may be more committed to helping the organization succeed economically. For example, members of the Mayflower compact formed first for validation purposes. Yet, this like-mindedness facilitated their economic survival.

Communities form often for economic reasons that lead members to locate in physical proximity to each other. Then, because of their physical proximity, they have a facility to seek other needs. Thus, community members seek for areas of like-mindedness and shared values. This advantage created by physical proximity may lead to the formation of churches, schools, literary, cultural, and service clubs within the community to meet the social, validation, and understanding needs of their members.

Social Capital Balance Equations

An important issue for the authors is the interface between economics and the other social sciences, particularly those that focus on the importance of social interaction. One of the important impediments to improving the interface focuses on the issue of tastes.

A foundation article in the economics literature by George Stiglitz and Gary Becker argues that tastes do not change only resource constraints change. The difficulty of changing tastes in economics is analogous to the difficulty of attempting to climb to the top of a mountain that is continually shifting.

Maximizing an unstable utility function reflected by changing tastes poses a similar problem. In a recent *Wall Street Journal* article, Amitai Etzioni declared economists were wrong and it was silly to argue tastes do not change. So much for an easy truce between sociologists and economists.

The social capital approach assumes that our tastes and hence our utility function (the mountain to climb) are derived from relatively stable needs. Furthermore, just because we have enjoyed an ice cream cone and do not desire another does not mean our taste for ice cream has been extinguished. What we allow for is that the path up the mountain depends upon available resources and opportunities, some of which are characterized by social capital coefficients which can be altered by investment or disinvestment. For us, social capital performs roles similar to other forms of capital including changing the productivity of other resources. Increasing person j 's social capital coefficient increases the relative importance of person j 's income to person i .

Introducing social capital into the economist's model using social capital coefficients leads to its acceptance and management in ways similar to the use and management of other forms of capital. But, treating social capital as another form of capital leads to a new discussion. Are there constraints on the investment, use, and disinvestment in social capital? Indeed, can the supply of social capital be created at all? And, are there balancing equations placing limits on social capital similar to those applied in other economic models?

Our response to these questions at this point in our work is that social capital can be created and destroyed, making the total supply of social capital a variable. Furthermore, based on our earlier discussion on symmetry, it seems reasonable to impose the following balance restriction. All the social capital one has to offer is equal to the total amount of social capital claimed. In equation form, this restriction requires for a person i that:

$$\sum_{j=1}^n k_{ij} = \sum_{j=1}^n k_{ji}$$

The balance restriction requires that if $n=1$, then the relationship is symmetric ($k_{ij} = k_{ji}$). Asymmetry is possible according to the balance equation when surpluses (deficits) have been generated in other relationships. For example, the social capital between some parents and their children may be imbalanced because their own relationship with their parents is not in perfect balance.

The story “Le Miserable” contains an interesting illustration of imbalance. Jean-Paul steals from a priest but the priest forgives him giving him his silver candle holders in addition to the items stolen. This social capital imbalance leads Jean-Paul to later create a social capital imbalance with one of his workers and her daughter Coset.

There are many unanswered questions associated with the social capital balance equation. One such question is: How is social capital created? If a child grows up endowed with social capital in his or her home, what processes produce in the child the ability to withhold or extend social capital to those with whom he or she has not exchanged social capital before? And, is the creation of social capital related to learned behavior? As a child learns to create social capital in one environment such as a family, does this ability then make it easier to build social capital in other settings?

Some Reflections

Exchanges designed to meet the economic, social, and validation information needs occur within and between organizations. Moreover, there is usually more than one possible exchange relationship that requires a choice of exchange partners. Partners are selected on their contribution to the four needs. For

example, a large grocery chain hires friendly faces because they are supposed to provide a social as well as an information and economic service to their customers. However, asymmetry of relationships may hinder the store meeting its goals. For example, suppose that the store's employee has just been threatened by his/her boss (a stick). Will this employee likely be ready to hug the store's customers? The difficulty of the U.S. auto industry occurred when the relationship between the employees represented by the union related to the managers and owners only through a stick or carrot. What the companies found out was that they could not extract from the employees all that was needed to successfully build a car when employees were motivated only by the stick or the carrot. Success required efforts that were not spelled out in the formal contract.

Thus, the Saturn organization attempted to change the relationship to more of a hug, not relying exclusively on the carrot. The important point here is that the carrot met only one of the needs of the employees economic (when the pay was sufficient). The carrot did not meet the social, information, nor validation needs. When we ask each other how we like our jobs, we are asking about more than is your pay sufficient for you to meet your economic requirements? We are asking: how do you get along with your boss and co-workers? Is your work appreciated? Are you kept informed about developments that will affect you in your work?

REFERENCES

- Boulding, K.E. *Three Faces of Power*. Newbury Park, CA: Sage Publications, 1989.
- Etzioni, E. "The Mapping of Man." *The Wall Street Journal*, May 15, 1998, p. W11.
- Oliver, C. "Network Relations and Loss of Organizational Autonomy." *Human Relations* 44(1991):943-61.
- Stigler, G.J. and G.S. Becker. "De Gustibus Non Est Disputandum." *American Economic Review* 67(1977):76-90.
- Woolcock, M. "Microenterprise and Social Capital: A Framework for Theory, Research, and Policy." Mimeograph, 1998.