

## **Understanding Social Capital: its Nature and Manifestations in Rural Canada**

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## **Abstract**

This presentation discusses an interpretation and analysis of social capital that is strongly integrated into a framework of social relations. We argue that social capital is organized in four fundamental types of social relations: market, bureaucratic, associative, and communal. Each type of relation is distinguished by its own norms, rules of engagement, institutions, and control mechanisms. As a result, the processes by which social capital is created, maintained, and used will vary by each type. Using national community and household data collected as part of a research project on rural Canada (The *New Rural Economy Project* of the *Canadian Rural Revitalization Foundation*), we outline the framework, propose measures of the four types of social capital, demonstrate their multidimensional nature, and test a number of hypotheses regarding their relation to community and individual characteristics. Finally, we conclude with some theoretical and research implications for investigating rural communities and rural programs.

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# **Understanding Social Capital: its Nature and Manifestations in Rural Canada<sup>1</sup>**

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## **1. Introduction**

There are two major reasons why rural Canada is a useful place to investigate social capital. The first is theoretical. Rural places have traditionally been relatively self reliant. We would expect, therefore, that social capital has been relatively high within rural communities. Over the last 40 years, however, major economic, demographic, and political changes have meant that they now show greater diversity, mobility, and integration with national and global institutions. The extent and nature of social capital is therefore likely to be changing, creating a useful context for analyzing structures and changes in social capital.

The second reason is more strategic in nature. Over the past 5 years, the Canadian Rural Revitalization Foundation (CRRF) has been conducting a national research project entitled Understanding the New Rural Economy: Options and Choices (NRE). As part of this project, 32 rural communities have been systematically selected and research teams have been operating in 20 of them over the past few years. This provides a rich source of comparative information for the investigation of social capital. Each of the sites represents a different social capital environment – providing us with a unique opportunity to compare the organization and processes of social capital in relatively isolated contexts.

Our objective in this paper is to outline a theoretical framework for understanding social capital and to explore its implications in the rural context. We begin by setting that framework within the current discussion of social capital as found in the academic literature. We then elaborate a perspective that distinguishes four types of social capital. Based on this perspective, we propose some indicators using the NRE data and provide preliminary analysis regarding social capital. This analysis follows 3 primary questions: “Under what conditions are the various types of social capital likely to be found?”, “Who uses the various types of social capital?” and “What are the various outcomes of those uses?” Finally, we conclude this paper with some strategic suggestions and include several research implications for analyzing rural communities and rural programs.

## **2. Social Capital: constructing a framework**

Putnam (2001:41) suggests there are many forms of social capital. In the process, he hints at a number of typologies and distinctions that might differentiate these forms. These include a

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<sup>1</sup> As usual, these ideas reflect the contribution of many people in the New Rural Economy Project (NRE) of the Canadian Rural Revitalization Foundation (CRRF). I thank them for their insights and inspiration. Whereas I have borrowed liberally from their ideas, the particular formulation here is not an official position of the NRE or CRRF.

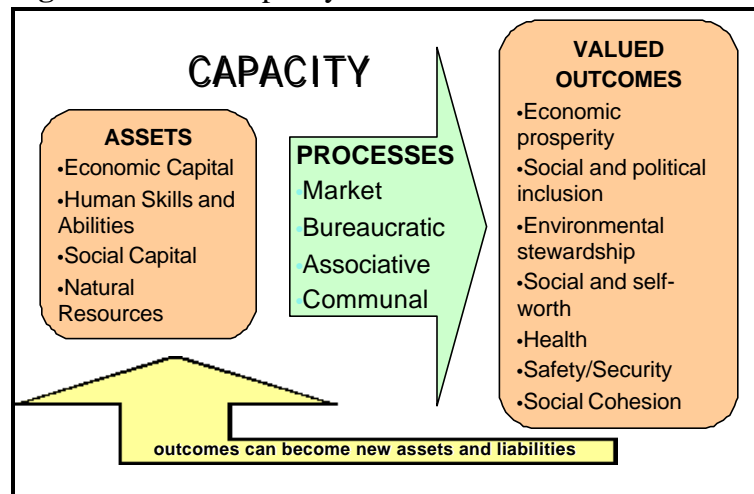
classifications based on what they might “be good for”, a distinction between formal and informal, and one that emphasizes the density of their interconnections. To these we might add several others found in the literature, such as the distinction between bonding and bridging social capital (Gittell and Vidal, 1998).

Although these distinctions are useful for particular purposes, they remain limited since they are unconnected to more general frameworks that could provide a strong basis for understanding the processes involved or for generating hypotheses relating to social capital. The result is a plethora of definitions and uses with little basis for deciding between them.

Our approach to social capital avoids this problem by rooting the concept firmly within our concern for rural revitalization and the importance given to social capacity as a key to that revitalization. A brief outline of that framework will therefore be presented as an introduction to our interpretation and measurement of social capital.

Social capacity refers to the ability of people to organize their assets and resources to achieve objectives they consider important. These objectives may be reactive, where people are faced with a challenge – or innovative, where new visions are established and pursued. As illustrated in Figure 1, the analysis of capacity requires a consideration of the assets and resources available to rural people. These include economic, human, social, and natural capital in various forms. It also requires an analysis of the outcomes that are valued by the various actors. The most important aspect of the framework, however, is the analysis of the structures and processes involved in producing those outcomes from different arrangements of assets and resources.

**Figure 1: Social Capacity Framework**



From this perspective, social capital is one type of asset or resource that can be used to achieve valued outcomes. As *capital*, it is a part of production that is reinvested into future production. As *social capital* it refers to social forms as reflected in organizations, collective activities, networks, and relationships. From this point of view, social capital is a relational, as opposed to an individual characteristic. It is also distinguished from social cohesion, but can be directly connected to it. Social capital can be used to increase (or decrease) social cohesion, just as social cohesion can be used for productive ends, thus providing a form of social capital. Both social capital and social cohesion are part of the capacity process – the former as an asset and the latter as an outcome.

### 3. Social Capitals: meaning and elaboration

In the traditional economic literature, capital refers to anything in which we individually or collectively invest to create a durable asset. In most cases, it is discussed with respect to those assets that can be used for productive purposes. Social capital, therefore, refers to social assets, either with respect to the source of investment or with the goods or services produced. Since these assets are embedded in social relations, the identification of social capital becomes particularly difficult, for it may be considered as the means by which an asset is created and the asset itself.

For example, as I plan a picnic with my friends and relatives, I am simultaneously building social capital and using it. Where this occurs in market relations such as a company picnic, a similar process occurs. With each successful transaction, I am reinforcing the social capital that was there and at the same time, making use of the social capital for productive ends. Thus, we find in the literature, that social capital is treated as stock in some cases (networks, institutions) and flow in others (social participation, collective action). It is often unclear whether they are distinguished by many authors.

To avoid this confusion, we will treat social capital as a stock that can be drawn upon primarily, but not exclusively, for economic ends. Although this goes beyond the traditional interpretation of 'capital' it is consistent with many of the interpretations used in the literature and recognizes the multi-functional nature of social relations – relations that must be developed and nurtured. As a result, understanding social capital requires an understanding of social relations: their formation, transformation, vulnerabilities, and resilience. Only in this way will we be able to clarify how social capital might function in a similar or different fashion than other forms of capital. It is to this issue that we now turn.

We propose that social capital can be best understood as a feature of four fundamental modes of social relations. They represent four relatively coherent ways in which people organize their relationships to accomplish tasks, legitimize their actions, distribute resources, and structure their institutions. Since such relations stand as the basis for social capital, our understanding of this type of capital should begin there.

#### 3.1. Market Relations

Market relations are those based on the exchange of goods and services within a relatively free and information-rich context. The classical economic market, for example, is envisaged as individuals bringing surplus goods, searching for those things they desire, and striking an exchange that is mutually acceptable. This may take the form of barter, where goods or services are exchanged for other goods or services, or it may involve the mediation of money, where goods and services are exchanged with the help of some currency. To exchange in this way, people must be willing and able to equate their goods and services to a common standard or currency and they must be confident that the exchange will be completed in a dependable manner. Distribution within this system is primarily based on principles articulated by classical economics for free markets: supply and demand, pricing, transaction costs, and information flow.

Market relations function best where information is plentiful, mobility of goods and labour are high, contract-related trust is high, uncertainty is low, and people are relatively free to move in and out of relationships. The relationships established tend to be short-term and limited for the purpose of exchange. Encounters outside exchange negotiations are most often directed to the collection of information relevant to trade and the maintenance of trust and loyalty for purposes of exchange.

The creation and maintenance of this form of social capital requires access to tradeable goods or services, adequate information about markets and prices, good negotiation skills, and a high level of mobility. Individuals and groups that have such qualities are likely have high levels of market-based social capital.

### 3.2. Bureaucratic Relations

Bureaucratic relations are those based on a rationalized division of labour and the structuring of authority through general principles and rules. They are the 'rational-legal' relationships originally explored by Weber: impersonal and formal, with the distribution of resources based on status positions rather than productivity. Individuals relate to each other through the roles they are assigned rather than individual characteristics. Examples of these types of relations are found in state or corporate structures organized as hierarchies where authority is delegated from central to subordinate positions. Bureaucratic relations may also be organized using a more flat structure so long as there is considerable division of labour and power and control are assigned to positions rather than individuals. A critical feature of such relations is the explicit or implicit articulation of rights and entitlements through these positions and statuses.

Distribution within this type of relationship is primarily based on the allocation of rights and entitlements through formal charter or legal document. As with any formal system, they are usually backed up with law and access to enforcement related to law. Bureaucratic relations are status-related with integration requiring authority over some and deference to others, largely because of the positions they hold.

Bureaucratic relations function best under conditions of stability or predictable change. Since they require explicitly coordinated rules of relationships, they take time to establish and tend to resist change as the individuals involved form expectations and take on commitments dependent on the bureaucratic relations. The articulation and enforcement of objectives, strategies, and structures also require a context where the rule of law is legitimized and mechanisms for its enforcement are in place.

Bureaucratic relations create and maintain social capital through the formulation of objectives and the organizational structures created to reach those objectives. The charters and by-laws of government and corporate organizations are key points of reference for identifying the allocation of rights and entitlements. The level of social capital, therefore, is strongly related to the ability of institutions to enforce those rights, either formally or informally (Stinchcombe, 1968:149ff). At a more individual level, social capital maintenance requires individuals and groups to meet the personal and collective conditions of formal structures. This includes the cognitive ability to operate in terms of roles and generally applied principles, the facility to frame individual and

collective interests in terms of those principles, and sensitivity to the manner by which formal organizations operate including at an informal level. Those who are unable to separate persons from roles or who are highly committed to more personalized relations are likely to find themselves excluded from the distribution of resources or services controlled through bureaucratic relations.

### 3.3. Associative Relations

Associative relations are primarily based on shared interests. Individuals come together in order to accomplish goals and express concerns that are common to the group. Clubs, social action groups, internet chat rooms, spectator events, hobby groups, and food banks are examples of these relations. They are often characterized by focused objectives, informal structures, and short-term lifespan, but they can address more long-term objectives by being transformed into more formal structures.

The distribution of resources within these relations is typically based on acceptance of the group objectives and perspectives. In some cases this will require individuals to follow closely those objectives, even where it may involve some compromise on their part in order to benefit from the collective. In others, the group interests may be more limited and specific, allowing for people with very divergent backgrounds and interests to accomplish very specific goals.

Social capital of an associative form is likely to be highest where information about others' interests is easily available, interests merge, where the symbols of commitment to the goals are clear, and where there is considerable contribution to the goals on the part of members. The classical measurement of social capital in terms of volunteer group participation and charitable giving is primarily sensitive to this type of social capital. Much of the empirical investigation, therefore, focuses on the analysis of social capital based on associative relations.

### 3.4. Communal Relations

Communal relations are based on strongly shared identity. Members are treated as equivalent, usually referring to ascribed characteristics of birth, ethnicity, or location as a basis for such equivalence. Family, friendship, gang, and clan relationships are common examples of such relations. The rights and obligations of members are strongly associated with this identity, largely developed and maintained by custom.

Goods or services are usually distributed equally to all members according to need rather than status or ability to pay. Exchanges typically involve obligations beyond the goods themselves and they are often mediated through networks of relations that carry indirect obligations by virtue of common identity. Family members, for example, may be held responsible for one member's debts: an obligation that may be transferred to subsequent generations. Complex networks of reciprocity are the norm.

Communal relations require a high level of trust and loyalty, especially where exchanges are long term or the 'objects' of exchange are unclear. For that reason, they are often associated with strong



markers of inclusion and exclusion such as rituals, symbols, rites of passage, and ascribed characteristics. This form of social capital tends to require a long time to develop, but it is also relatively resistant to erosion and forgiving of abuse.

### 3.5. The Coherence and Inter-relation of the 4 Modes of Relating

These four modes operate with considerable internal coherence. Norms of behaviour, values, perspectives, and ways of operating surround each of them in such a way that particular expectations emerge to reinforce the legitimacy of action and the particular bases for the distribution of resources. In many cases, these norms become formalized in law with associated methods of enforcement. As a result, people come to depend on the secure operation of the system for access to resources and services. Threats to the operation of the system will activate resistance and those who benefit from it are likely to champion its survival and expansion. In this respect it can become self-regulating in a weak or strong sense.

On the other hand, the modes of relating are not isolated. All four of them usually operate in a specific situation, although only one or two may be dominant. This may be seen in a social action group where associative relations can become transformed into bureaucratic ones as the group articulates its interests as general principles and establishes the norms and regulations to enforce them. In this case, the bureaucratic and associative relations may reinforce one another. To the extent that the common interests of the associative relations are organized to match the bureaucratic objectives, the advantages of the two systems might be realized. However, this is not always the case. Where the associative interests of a group are short-term, flexible, and spontaneously generated, the relative inflexibility of bureaucratic relations may undermine the original objectives, or divert them to a more limited set of goals. Hence the suspicion of bureaucratic modes of operating in many fledgling social movements.

### 3.6. Literature

The literature regarding social cohesion is extensive, and growing. There are a number of excellent summaries of the issues it raises (Isuma, 2001) the ways in which the four types of relations discussed above contribute to the value of the concept.

The four modes identified above are reflected in a wide range of literature from economics, anthropology, psychology, political science, and sociology. By far the most extensive is the treatment provided by Fiske (1991) in his analysis of the elementary forms of human relations. Indeed, our formulation can be seen as context-bound manifestations of the four basic forms of human relations that he identifies. Focusing on the cognitive aspects of human relations, he proposes four elementary structures to describe social relations: Market Pricing, Authority Ranking, Equality Matching, and Communal Sharing. Except for one major difference, they parallel the four modes we have outlined above. His work extends our analysis to include implications for values, social motives and emotions, intuitive social thought, and moral judgement.

According to Fiske, “Market Pricing” relationships are guided by values determined by market principles. In this respect they are similar to the market relations as we have identified them

above. People coordinate their actions on the basis of estimated exchange values for the goods and services of the other. These exchange values in turn are determined by the operation of a wider market – where alternative sources for the goods and services exist.

Our primary difference from Fiske occurs where he identifies ‘market pricing’ with ‘rational-legal’ legitimacy and a ‘social contract’ orientation (Fiske, 1991:27). Although market pricing may include such structure as a means of reducing deception and deceit, the structure need not be of this form. In fact, rational-legal structures may serve as a basis for non-market types of relations. Indeed, Weber contrasts the bureaucratic distribution of resources based on status rather than productivity as one of the important points of difference from market relations (xxx). The abstract, formal, universalistic nature of rational-legal rules are better understood as a type of social relationship that is independent from the market form. Market calculations are often made outside of a rational-legal framework just as rational-legal structures of authority operate outside of market relations.

Fiske’s “Authority Ranking” relationships are most similar to the bureaucratic systems we have identified above. In both, it is the social status of the person that is important, not their personal qualities alone. Fiske’s approach is more general than ours, however. Whereas Fiske emphasizes the obedience of inferiors out of respect and loyalty for the superior, we prefer to point to the rational-legal aspects of the relations as the critical distinguishing feature. This provides for the operation of organizations without strong hierarchies – the relatively flat structure of smaller bureaucracies and some ‘new corporations’. Under this framework, obedience is a reflection of the legitimization afforded to the general rules and norms supported by the society or its institutions. In most cases, respect and loyalty arise from the position, not the person. Where they are the result of a more personal or charismatic characteristic, they are more closely allied to associative or communal relations.

Fiske’s last two forms of relations (equality matching and communal sharing) are very similar to the associative and communal systems we have proposed. Equality matching bears some correspondence to associative relations insofar as people are considered equal but separate. But Fiske’s emphasis on in-kind reciprocity and equal compensation moves away from the common cause emphasis of associative relations.

Communal sharing is close to communal relations in that individual identities are subordinated to those of the group. Our emphasis is more on the elaborate network of obligations that occurs among the individuals, however. These obligations are established by norms of reciprocity that go beyond the two people involved in the most elementary form of relationships.

As Fiske points out, all these relationships go beyond the dyadic relationship (Fiske, 1991:170). Not only must the people directly participating in the relationship fulfil the norms and obligations, but even “people with social links to the primary parties have a duty to react when the primary parties fail to meet their obligations” (Fiske, 1991:171). This feature not only provides a basis for testing the veracity of the classification, but helps explain higher level emergent social phenomenon. In this way the four-fold classification holds promise as a framework for integrating multiple levels of analysis.

Polanyi's three 'modes of economic integration' (1944) provided the initial inspiration for understanding inclusion processes, but we have modified them somewhat to suit contemporary social relations. Polanyi's framework identified 'market exchange', 'redistribution' and 'reciprocity' as three basic forms. We use market relations in essentially the same way as he did, but argue that 'redistribution' takes two different forms in contemporary society.

The first is the bureaucratic form, where integration occurs through the division of labour in hierarchic organizations, using rules and roles. Giddens (1991) identifies this form as one of the major characteristics of modernity. It becomes a key mechanism of reflexivity.

The second is the associative form, whereby integration occurs through the sharing of common interests. In contemporary society, single-interest groups of this nature may occur within a wide range of contexts - including the Internet (where space and time are no longer necessary elements for the relationships to occur).

This distinction also has the effect of modifying Polanyi's interpretation of the reciprocal mode. It places more emphasis on the multiplicity of exchanges that take place under reciprocity and reserves single interest relations to those found more often in the associative form. By doing so, we reduce the geographical restriction that underlies Polanyi's classification and recognize the distinct form of single interest associations, whether they be organized within neighbourhoods, across regions, or globally, over the Internet. We suggest that such relations are significantly different than the multiple-interest interactions of communal relationships.

#### **4. Measuring Social Capital**

The NRE project is a five-year research and education initiative involving over 30 researchers, 13 universities or institutes, policymakers, and rural citizens. It includes a program of conferences and workshops, macro-level analysis using census and survey materials, community-level analysis, household-level analysis, and an extensive dissemination program to researchers, policymakers, in rural people.

As part of that project we have systematically selected 32 rural sites for comparative case study analysis. For the past four years we have had teams of researchers and local citizens working in 20 of those sites collecting information, conducting analysis of them, developing strategic policy options, and exchanging insights between sites. The 32 sites were randomly selected within a sample frame constructed using five strategic dimensions. As a result of previous research, we identified these five dimensions as most critical for comparative research purposes. The first four dimensions reflect key ways in which the rural sites are connected to global and national economic and policy characteristics. They are the following:

- whether the site is strongly integrated into the global economy or not;
- whether the site has a relatively stable or fluctuating economy;
- whether the site is relatively close to or far away from a major urban centre; and
- whether the site has a large number of public institutions or not.

The fifth dimension reflects an outcome:

- whether the site is leading or lagging on a number of socio-economic variables such as income, employment, and housing.

Within the sites we have collected site-level information regarding their history, economic enterprises, voluntary and third sector organizations, public institutions, major events, governance structures, and a variety of social action activities. In the summer of 2001 we conducted randomized, structured interviews in 1995 households in 20 of our field sites. The survey gathered information on the demographic and labour force characteristics of the household, use of public and private services, major changes they faced and the responses they made to those changes, social cohesion, and informal economic activities. The result is a database that allows us to conduct hierarchical analysis at the household, field site, and regional levels while linking the sites to important national and global conditions.

This is the material we will use to test the reasonableness of our approach to social capital. It provides an opportunity to consider various measures of social capital, their conditions of availability, who makes use of them, and their outcomes for both households and communities. In the process it provides a basis for a critique of other approaches and claims regarding social capital.

Social capital is embedded in four basic types of relationships. It is these types of relationships, therefore, to which we turn to develop indicators. In each case, we rely primarily on data collected as part of the NRE Project but the measures frequently reflect similar indicators in other literature regarding social capital. What distinguishes much of our work, however, is the fact that we have collected information at both the site or community level and at the individual or household level. This allows us to avoid two limitations of the individual-level data most often represented in the literature.

First, researchers frequently use participation and volunteering to measure social capital. These indicators assume that the *use* of particular social resources is equivalent to the *availability* of those resources. From our perspective this difference is very important. Rural people may have access to social capital that they do not use. In fact, considerable effort on the part of community development programs is directed to identifying and learning to use social capital that goes unrecognized. Since we have site-level in addition to individual-level data it is possible to distinguish the *availability* of social capital from its *use*.

Second, using site-level data makes it possible to represent the institutional forms of social capital. For example, the social capital embedded in a school, hospital, or food bank is often overlooked because their existence is difficult to infer from information provided by individuals. We argue that such institutions and organizations (both formal and informal) are key repositories of social capital. They consist of highly coordinated social relations, strong (often formalized) norms, and well-structured mechanisms of social control – all features of social capital. Information about such institutions and organizations is directly available from our site-level data.

The four types of relations are found in most situations. For that reason, our organization-based indicators will not be strongly exclusive of one type of relation or the other. Instead, we classify situations and organizations on the basis of their predominant type of relations. Indeed, in a few cases, we classify them as reflecting more than one type.

#### 4.1. Social Capital Embedded in Market Relations

The NRE database provides considerable information regarding the primary institutions and organizations in which market relations predominate. Enterprises and commercial businesses are among the most obvious. They represent the organization of financial, labour, and commercial markets for both owners and workers. Rural sites that have a large number of such enterprises are considered to be relatively high with respect to social capital. We include in this total, organizations such as credit unions and micro-financing groups since they provide training and resources that reflect market relations as well as those of an associative nature.

Most of the institutional manifestations of social capital require local citizens to travel to particular centres or meeting places in order to develop or make use of them. We felt that in such cases, travel times of 30 minutes provides a useful point of reference for establishing whether the enterprise or service is relatively easy to access. This period of time not only reflects a common perception of proximity, but it translates well across ages and into an urban-based context. This latter feature holds promise as we move to compare rural and urban conditions in the future.

An important component of market relations is the access to information that is required for making choices. For this reason, we include media and communication tools that are available to people in the sites.

Using material from the 2000 field site surveys, we identify the following indicators for market-based social capital.

- total number of enterprises in the site (within 30 minutes travel) (pr7a) [pr7a]
- total of: banks, credit unions, ATM Machines, Micro-financing groups, insurance offices in the site (within 30 minutes travel) (pr64a1 to pr64e1) [msserv]
- total of: cable TV, Internet, public access terminals, local newspaper, regional newspaper, national newspaper, community newsletter, local radio station, number of available radio stations [mcomser]
- rating of commercial services in the following way: [pr8]
  - 1 minimum convenience centre (gas and basic groceries)
  - 2 full convenience centre (minimum plus some general merchandise, full grocery store, implement dealers)
  - 3 partial shopping centre (above plus selected merchandise – small malls)
  - 4 complete shopping centre (above plus extensive retail merchandise – large malls)
  - 5 secondary wholesale-retail centre (above plus some wholesale)
  - 6 primary wholesale-retail centre (above plus central wholesale outlets)

A summary index for market-based social capital [msite] is constructed from the sum of the four items above. It is then standardized on the basis of population size [dnmstot] since the availability of social capital with these organizations is likely to be affected by the number of people drawing upon it.

#### 4.2. Social Capital Embedded in Bureaucratic Relations

Proceeding from a similar rationale to the one above, we have used the number of bureaucratic institutions and organizations as a key indicator for social capital. Our data allows us to identify a large number of formal and informal institutions in each site. When selecting our list for this measure, we concentrated on those organizations that operate on the basic principles of bureaucracy as identified above: relations based on roles, entitlements based on general categories, and objectives formulated as general principles. The indicators include the following.

- the total of the following organizations in the site (within 30 minutes travel): [bsserv]

elementary school	phyiotherapist(s)
high school	speech therapist(s)
CEGEP or community college	occupational therapist(s)
university	police
continuing education or extension courses	fire department
other educational institutions	911 emergency line
hospital	lawyer(s)
blood/urine test facility	notary(s)
X-ray facility	citizenship court
baby delivery facility	employment insurance office
nursing home	Revenue Canada office
doctor(s)	provincial automobile licence office
nurse(s)	welfare office
dentist(s)	town hall
dental surgeon(s)	band council
optometrist(s)	post office
home care/visits	bus
Victorian Order of Nurses	passenger train
social Worker(s)	freight train
pharmacy	airport

ambulance	heliport
emergency services	boat
public health nurse	taxi service

- the total of: Internet, public access terminals, national newspaper [bcmser]

As with market relations, the total for organizations was calculated from the two items above [bsaccess] and standardized by the population in each field site where they are located [dnbsacc].

#### 4.3. Social Capital Embedded in Associative Relations

This indicator was constructed using the list of services offered in each field site. Services that were likely to be largely organized on associative principles were selected. In some cases an organization was considered to be organized in such a way that more than one type of social relation played a major role (e.g. co-ops). In these cases, the organization was added to the totals for both types of indexes. The index was constructed using the following items.

- the total of the following organizations in the site (within 30 minutes travel): Credit Union, Micro-financing group, food bank, clothing exchange or depot, second-hand stores, drop-in centre, half-way house, personal aid services, curling rink, municipal swimming pool, municipal skating rink, community playing field, community gym, community centre, YMCA/YWCA, athletic club, theatre, cinema, museum, library, park. [asserv]
- the total of: Internet, public access terminals, local newspaper, regional newspaper, national newspaper, community newsletter, local radio station, number of radio stations available in the site, community bulletin boards, community ‘welcome’ sign, community flag, community symbol. [acomser]

The total for organizations was calculated from the sum of the two items above [asaccess], then standardized by the population in each field site where they are located [dnasacc].

#### 4.4. Social Capital Embedded in Communal Relations

This indicator focused on those social characteristics relating to family life. Family structure is a key feature of communal relations for it usually serves as a centre of reciprocity and multi-lateral obligations. Although the definition of communal relations goes well beyond family, it is very difficult to create indicators for the less visible relations such as ethnic groups, clans, gangs, or other very close-knit group. To reflect the level of this type of social capital we used the following information.

- the average size of census families in the site [v1p100]. This variable reflects the relative availability of family members. An economic family includes “husband and wife or common-law partners, with or without never-married sons or daughters at home, or a lone parent and at least one son or daughter who has never been married.” It also “includes all blood, step- or adopted sons and daughters who live in the same dwelling and have never married.” (Statistics Canada, 1992:90)

- the number of daycares and senior citizens retirement homes within 30 minutes of the site [pr6mn39, pr6mn40]. The care of both the very young and very old involves a multiplicity of demands and obligations that reflect communal relations.
- the number of churches or other religious organizations in the site [nchurch]. Religious organizations typically cater to the multifarious needs of individuals and families. This multidimensional character of their typical mandate separates them from the usual single-element focus of associationally-based organizations. Although a more sensitive variable might include an indicator of the number of people and their type of involvement, this information is not available at this time, so we have proceeded with this more crude indicator.
- the number of community-integration events in the site [nevents]. This variable reflects the number of events such as festivals, community picnics, or celebrations that bring the site people together on a regular basis. In many cases, this are held only once a year (sometimes over a weekend or a whole week), but they may also be held more frequently. We consider such events as indicators of communal relations, since they encourage and facilitate multiplex relations such as those found in the communal type.

## 5. Results

### 5.1. Univariate distribution of social capital

Table 1 provides information regarding the basic characteristics of the indicators selected for the four types of relations.



Table 1: Social Capital Indicators - 4 Types of Relations

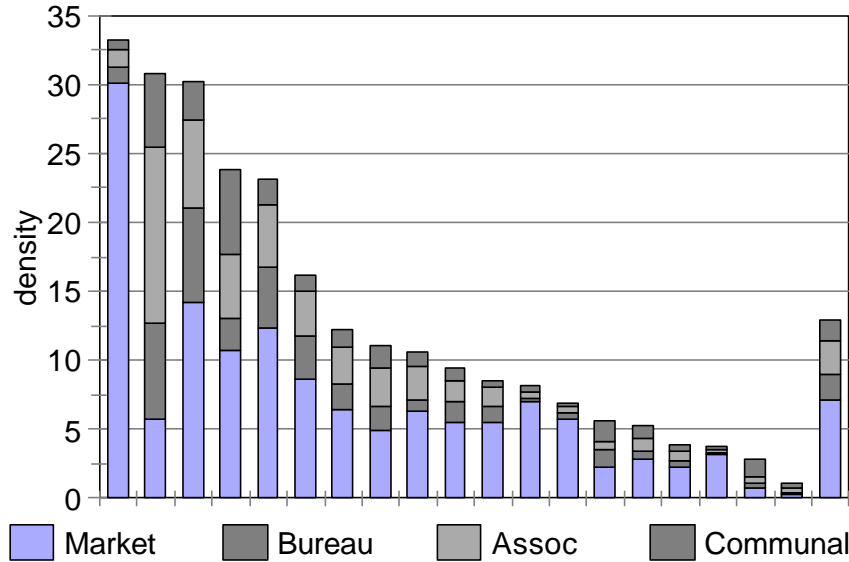
	N	Min	Max	Mean	Std. Deviation
<b>Market Relations</b>					
number of businesses [pr7a]	17	4	350	77.53	104.09
no of market-based services within 30 minutes [msserv]	19	0	5	1.74	1.76
no of market communication services [mcomser]	19	1	8	6.00	1.73
commercial shopping code from iwg survey [pr8]	19	0	3	1.16	0.90
total of business and market services for site [msite-sum of 4 above]	19	5	359	78.26	102.48
<b>density of enterprises and market services per 100 people [dnmstot]</b>	<b>19</b>	<b>.30</b>	<b>30.07</b>	<b>7.09</b>	<b>6.68</b>
<b>Bureaucratic Relations</b>					
no of bureaucratic-based services within 30 minutes [bsserv]	19	0	32	9.37	8.82
no of bureaucratic communication services [bcomser]	19	1	3	2.68	0.75
no of bureaucratic access services within 30 min of site [bsaccess-sum of 2 above]	19	2	35	12.05	9.04
<b>density of bureaucratic services per 100 people [dnbsacc]</b>	<b>19</b>	<b>.10</b>	<b>7.01</b>	<b>1.93</b>	<b>2.09</b>
<b>Associative Relations</b>					
no of associative-based services within 30 minutes [asserv]	19	0	18	6.68	5.20
no of associative communication services [acomser]	19	1	11	7.58	2.55
no of associative access services within 30 min of site [asaccess-sum of 2 above]	19	3	28	14.26	6.78
<b>density of associative services per 100 people [dnasacc]</b>	<b>19</b>	<b>.19</b>	<b>12.74</b>	<b>2.52</b>	<b>3.02</b>
<b>Communal Relations</b>					
average number of people in census families [v1p100]	20	3	4	3.07	0.32
number of communal-based services in site [csserv]	19	4	12	5.63	1.98
index of communal relations - basic [csaccess-sum of 2 above]	20	4	14.9	8.40	2.13
<b>density of communal index [dnacsacc]</b>	<b>20</b>	<b>.10</b>	<b>6.15</b>	<b>1.45</b>	<b>1.62</b>
<b>Total of 4 types of social capital [totsoapl]</b>	<b>20</b>	<b>4</b>	<b>412</b>	<b>107.00</b>	<b>110.40</b>
<b>Density of 4 types of social capital [dntsoapl]</b>	<b>20</b>	<b>.10</b>	<b>33.2</b>	<b>12.40</b>	<b>10.40</b>

The items used as indicators for Social Capital qualify as “cause” indicators according to Bollen’s (2001) classification. Such indicators are presumed to act as “causes” of the underlying concept rather than as “effects”. In the example above, we presume that the greater the density of businesses in a site, the greater the opportunities for market relations. Similarly, the greater the density of other market services in the site, the greater these opportunities. We do not assume, however, that there need be a high correlation between the density of businesses and the density of other market services in the site. As a result, conventional item and validity analyses based on such correlations are inappropriate.

Figure 2 provides data regarding the distribution of 19 NRE field sites by the density of the four types of social capital. It makes clear the considerable variation in levels of total social capital as well as the differences in the distribution of types. The site with the highest level of social capital, for example, (located at the left hand side of the figure) has the largest component of its social capital provided by market-based social relations. This site is special since much of the market capital is provided by a large number of small businesses – services catering to the local forest industry and small operations directed to tourism, both of them highly seasonal. On average (indicated at the right hand side of the figure), market-based capital is highest of the four types represented. Associative-based relations are next, and communal-based relations are the lowest.

The variation represented here, provides considerable promise for the investigation of differences, their conditions, and outcomes.

**Figure 2:** NRE Field Sites by 4 Types of Social Capital



### 5.2. Interrelationships among the 4 types of relations

We argue that social capital is embedded in four types of social relations. They are not necessarily correlated, however, since they represent independent ways in which social capital is generated or maintained. On the other hand, there may be some empirical relationship between them since the first three (market, bureaucratic, and associative) are frequently rooted in enterprises or organizations that are likely to be found in geographical proximity. Those sites with a large proportion of enterprises, for example, are likely to have a large proportion of education or health institutions per population. Some intercorrelation is also expected since we have included some of the same communications media in our indicators for market, bureaucratic, and associative relations.

Correlation coefficients for the 19 sites with complete information on social capital are provided in Table 2.

Table 2: Correlation between indicators of four types of Social Capital (19 NRE sites)

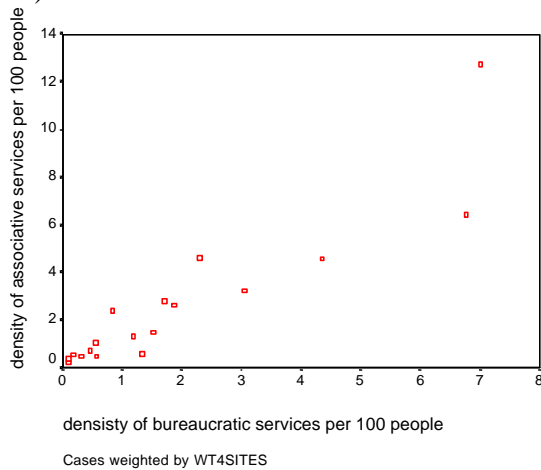
	Density of Bureaucratic Services	Density of Associative Services	Density of Communal Capital
Density of Market Services	.31	.20	.14
Density of Bureaucratic Services		.91**	.67**
Density of Associative Services			.80**

\*\* Correlation is significant at the 0.01 level (2-tailed)

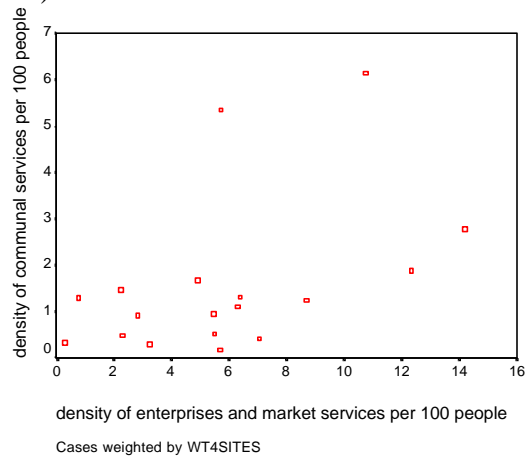
\* Correlation is significant at the 0.05 level (2-tailed)

It is clear from these results that bureaucratic and associative social capital are strongly related in our NRE sites. Those sites with a high proportion of bureaucratically organized services are also likely to have a high proportion of associative types of organizations (cf. Figure 3). On the other hand, the relationship between market and communal-based social capital is relatively weak (cf. Figure 4). A closer look at the sites represented suggests that the strength of the relationship reflects characteristics of scale: smaller centres have a higher per capita representation of market, bureaucratic, and associative services. In fact, as shown in Figure 1 above, one small centre has a very high number of commercial businesses – significantly affecting the correlations with market services. Removing this site from the analysis produces correlations between market and bureaucratic services of .68\*\*, between market and associative services of .51\*, and between market and communal capital of .47. The special characteristics of this site warrant closer scrutiny in the future.

**Figure 3:** Scattergram of bureaucratic and associative types of social capital (18 NRE sites)



**Figure 4:** Scattergram of market and communal types of social capital (18 NRE sites)



This approach to understanding and measuring social capital is somewhat different than that found in much of the literature. Rather than measure it by the extent to which people perceive or use their social relations, we have focused on the social capital available to them and measured it on the basis of the many organizational forms it can take – both formal and informal. The empirical

results show how these types of social capital are related – at least in the rural context. They also warn us that the relations between them are not simple.

### 5.3. Availability of Social Capital

Our first research question asks about the conditions under which the various types of social capital are likely to be available. We can respond to this question in a couple of general ways. The first is to look at the correlates of social capital at the level of the field sites. The second is to examine these correlates at the level of the household.

We have considerable information regarding the field sites, both from our own profiles and from the Canadian census materials. At this point, we have focused on census-related variables. This allows us to consider the utility of our framework and at the same time explore the extent to which the standard variables of the census are sensitive to the various aspects of social capital.

Most of the indicators chosen are from the 1996 census. They cannot, therefore, be considered the result of current (2001) conditions of social capital. However, more recent data is not yet available, so we are using the 1996 data as an approximation of current conditions in the sites. As soon as the new census data become available, we will re-evaluate these assumptions.

Table 3 provides the correlation coefficients for our investigation of the relationship between some census variables and the various indicators of social capital.<sup>2</sup> We have included indicators for the four types of social capital, one that summarizes them, and another that computes the index of qualitative variation for the four types. This last variable allows us to investigate the extent to which the variety among the four social capital types is likely to be related to site characteristics. It allows us to examine whether sites that are ‘specialized’ in one or two types of social capital are different than those with a variety of types.

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<sup>2</sup> Only those coefficients where the level of statistical significance was 0.05 or lower are included.

Table 3: Correlation coefficients - Types of Social Capital by Selected Site Characteristics (20 NRE Field Sites;  $p < .05$  only)

Correlations	Market	Bureaucratic	Associative	Communal	Total	IQV
Leading status (1=leading; 0=laging)						
Population percentage change, 1991-96						
% separated or divorced - 1996						
% of lone parent census families - 1996						
% visible minority - 1996						-0.650
participation rate - 1996						
unemployment rate - 1996						
% producer service workers - 1996				0.640		
% paid workers - 1996				-0.437		
% less than grade 9 education - 1996						
% grade 9 to 13 education - 96	0.01			0.744		
% with trade or other certificate - 1996		-0.503	-0.518	-0.562		
% with some university - 1996						-0.586
% government transfer payments - 1996						-0.618
median census family income - 1996		-0.464	-0.607	-0.785	-0.439	
LICO - economic families - 1996		-0.513	-0.564	-0.591	-0.498	
LICO - individuals - 1996			-0.488	-0.528		
Prairies, BC, and North (dummy) - 1996		0.691	0.659	0.534	0.442	

Table 3 suggests several directions to explore in future investigations of social capital. Overall, social capital may be most strongly related to labour force and income variables, but in some surprising ways. Looking at the Total column we see that social capital is highest in those sites where the percentage of families living under the Statistics Canada Low Income Cutoff is low and where family incomes are relatively low. These reflect bureaucratic, associative, and communal social capital only. Market-based social capital appears unrelated to these variables.

Education appears related to social capital, but not in a straight-forward fashion. Sites with high levels of communal-based social capital are also those with a relatively high proportion of people with some high school experience. On the other hand, in those with a high level of trade or other certificates, the levels of bureaucratic, associative, and communal social capital are low. Finally, sites with a high proportion of university educated people have low values on the index of inter-quartile variation. This indicates the variation in the types of social capital they have is rather low – one or two types tend to predominate. These same conditions occur in sites where there is a high proportion of people receiving government transfer payments.

In order to explore potential inter-relations between the site characteristics, we identified a series of linear regression models using the four types of social capital plus the total social capital as dependent variables. The one site with a very high number of businesses was removed because of its extreme position in the analysis. Table 4 provides the coefficients resulting from stepwise regression.

Table 4: Significant R<sup>2</sup> and beta coefficients for 5 Social Capital models (17 NRE sites)

	<b>Market</b>	<b>Bureaucratic</b>	<b>Associative</b>	<b>Communal</b>	<b>Total</b>
<b>adjusted R<sup>2</sup></b>	.64	.82	.73	.80	.48
MB to BC location	.90	1.01	.79		.52
LF participation rate - 1996	-.58				
% unpaid family labour - 1996	.33			.62	
% visible minority -1996		-.70	-.35		
% paid workers - 1996		.44			
% with some university - 1996			-.37		
median census family income - 1996				-.69	-.44
% below LICO - 1996				-.46	

The most noticeable feature of this table is the wide diversity of significant coefficients for the models. This reinforces our proposition that each type of social capital is sufficiently different from the others to warrant separate consideration.

We see from Table 4 that the most consistent condition for high social capital density is the location of the site in the Western part of Canada. Beyond that, each type of social capital differs. Market social capital is primarily related to labour force characteristics, bureaucratic to visible minority and employment conditions, associative to education and visible minority status, and communal to income and family labour. Overall social capital is highest in the West and within sites where the family income is relatively low.

These results point to the importance of conditional factors on the level of social capital in these rural sites. Location, labour force, and minority status characteristics are largely beyond the control of local citizens, yet they influence the level of social capital available. At the same time, several of these factors are amenable to policy influence at the federal and provincial level, suggesting policy strategies that might be used in order to create local conditions favourable to higher levels of social capital.

#### 5.4. Who Uses Social Capital?

Our second question focuses on the use made of the available social capitals. In this case, we turn to data from the NRE household survey, conducted in 1995 households across 20 of the field sites. As part of this survey, one adult member of the household was randomly chosen and asked to provide information regarding their own and their household's characteristics. From this information, we are able to construct indicators for the use of social capital according to the decisions below.

#### 5.4.1. Using Market-based Social Capital

Market-based social capital was measured using the following information.

- the level of employment and self-employment (Q8 - employ and employer) [maccess]
- the number of ways the Internet is used involving market relations (Q25: contacting businesses or obtaining market information, making on-line purchases, paying bills or banking on-line, searching for a job or contacting potential employers, conducting paid employment) [imuse]
- the number of market-based services that have been used in the last 12 months (Q26: gas station, grocery store, drug store, home furnishing or furniture store, ATM or banking machine, bank or credit union, financial advice services, homemaking services) [smuse]
- the number of employment organizations in which the respondent participates (Q31, Q32) [mpart]
- the number of sources for household income that are market-based (Q48: wages and salaries, income from self-employment, farm income, dividends and interest) [mincome]
- the number of persons or groups from whom the respondent sought market-based support for the change that had the most impact on the household (Q21: employer, financial advisor, business friend(s), a business, accountant, employment and economic organization, or other business people) [tmarket]

These items are used to construct an index for market-based involvement of each respondent [muse]. When aggregated to the site level, this provides a value to estimate the extent to which the site people turn to market relations to meet their objectives.

#### 5.4.2. Using Bureaucratic-based Social Capital

Following a similar approach, we identify the extent to which the respondent makes use of bureaucratic relations. The items used are the following.

- the number of ways the Internet is used involving bureaucratic relations (Q25: obtaining information or communicating with federal or provincial governments, completing government forms on-line, contacting health-care providers, finding health information) [ibuse]
- the number of services based in bureaucratic relations that have been used in the last 12 months (Q26: legal services, family doctor, dentist, ambulance services, emergency room at hospital or clinic, therapy services, home support services, visiting nurse, social services such as child or family intervention programs, public health nurse, post office, public library, public adult education service, provincial government service, federal government service) [sbuse]
- the number of actions addressed to a bureaucracy that have been taken over the last 12 months (Q33: written a letter to a municipal, provincial, or federal representative) [baction]
- the number of sources for household income that are bureaucracy-based (Q48: employment insurance, worker's compensation, Canada or Québec pension plan, retirement pension, old age security, guaranteed income supplement, child tax benefit, provincial or municipal social assistance or welfare) [bincome]

- the number of persons or groups from whom the respondent sought bureaucracy-based support for the change that had the most impact on the household (Q21: doctor or other health professional, lawyer or legal professional, counsellor or other social service professional, teacher or other education professional, mayor or council member, municipal staff member, economic development officer, contacting other government resources or employees, applying to one or more government programs, contacting an elected representative, law or justice organizations) [tbureau]

These items are used to construct an index for bureaucratic-based involvement of each respondent [buse].

#### 5.4.3. Using Associative-based Social Capital

Following a similar approach, we identify the extent to which the respondent makes use of associative relations. The items used are the following.

- the number of ways the Internet is used involving associative relations (Q25: as part of volunteer work) [iause]
- the number of services based in associative relations that have been used in the last 12 months (Q26: second-hand clothing store, meal program) [sause]
- the number of groups of an associative nature in which the respondent currently participates (Q32: environment/wildlife, arts/culture, health, law/justice, social service, sports/recreation, public benefit, religious, education, women, men, youth, casual/social) [apart]
- the number of actions taken reflecting an associative involvement (Q33: written a letter to the editor of a newspaper, called a radio talk show about a public interest issue, signed a petition, given money for an emergency action, volunteered for a specific community action, posted a comment to an e-mail or web-based discussion groups about a public issue) [aaction]
- the number of persons or groups from whom the respondent sought associative-based support for the change that had the most impact on the household (Q21: community or voluntary organizations that had a health, social service, public benefit, religious, or education/youth development focus) [tassoc]

These items are used to construct an index for associative-based involvement of each respondent [ause].

#### 5.4.4. Using Communal-based Social Capital

We identify the extent to which the respondent makes use of communal relations in the following way.

- the number of ways the Internet is used involving communal relations (Q25: keeping in touch with family or friends) [icuse]
- the number of family and extended family members with which the respondent shares locally grown fruits and vegetables, wild foods, meat, wild meat, or firewood. (Q38 to Q42) [t1share, t2share]



- the number of family and extended family members with which the respondent shares skills and services such as painting, carpentry, plumbing, mechanical or electrical work, sewing or knitting, housework, babysitting or child care, adult respite care, automotive or boat repair, technical or professional services, snow removal, garden work, or transportation. (Q46) [nshserv]
- the number of persons from whom the respondent sought communal-based support for the change that had the most impact on the household (Q21: spouse, parents, children, other relatives, close personal friend, friend, work-mate, or neighbour) [tcommune]

These items are used to construct an index for communal-based involvement of each respondent [cuse].

It is important to note that these items do not allow us to distinguish the occasions where the various forms of social capital were used for economic, social, or individual objectives. Instead they focus on the use of these various types of capital whenever they occur. This focus on the use of social capital makes the measurement of this concept essentially identical to a measure of social cohesion.<sup>3</sup> This is not surprising since we consider social cohesion to be “the extent to which people respond collectively to achieve their valued outcomes and to deal with the economic, social, political, or environmental stresses (positive or negative) that affect them.” (Reimer, 2002) Making use of social capital is one of the primary ways in which this occurs. The only difference between the two is where individuals make use of their social relations for objectives that are non-productive. Under these conditions, the activity would not fit a strict interpretation of ‘capital’.

### 5.5. Exploring the Indicators for the Use of Social Capital

Table 5 provides information regarding the basic characteristics of the indicators selected for the four types of relations.

Table 5: Indicators of the Use of Social Capital - 4 Types of Relations

	N	Min	Max	Mean	Std.Deviation
<b>Market-based Use</b>					
access to market relations - employ or own business [maccess]	1995	0	14	2.12	2.01
use internet for market relations [imuse]	1995	0	4	0.47	0.88
market public services used [smuse]	1995	0	12	5.65	1.22
number of market participation groups [mpart]	1995	0	4	0.08	0.31
income from market sources [mincome]	1995	0	4	1.40	0.98
total market supports [tmarket]	1995	0	4	0.19	0.49
<b>summary indicator for market-based use [muse]</b>	<b>1995</b>	<b>0</b>	<b>27</b>	<b>9.77</b>	<b>3.79</b>
<b>Bureaucratic-based Use</b>					
use internet for bureaucratic relations [ibuse]	1995	0	6	0.53	1.09
bureaucratic public services used [sbuse]	1995	0	14	5.37	2.16
number of bureaucratic actions taken [baction]	1995	0	1	0.13	0.34

<sup>3</sup> We have constructed an index for social cohesion that uses the same items as the ‘use of social capital’, but with the condition that the group, organization, or person used is within 30 minutes of the site.

	N	Min	Max	Mean	Std. Deviation
income from bureaucratic sources [bincome]	1995	0	7	1.38	1.15
total bureaucratic supports [tbureau]	1995	0	7	0.49	0.80
<b>summary indicator for bureaucratic-based use [buse]</b>	<b>1995</b>	<b>0</b>	<b>21</b>	<b>7.90</b>	<b>3.07</b>
Associative-based Use					
use internet for associative relations [iause]	1995	0	1	0.06	0.24
associative public services used [sause]	1995	0	2	0.29	0.46
number of associative participation groups [apart]	1995	0	21	2.24	2.88
number of associative actions taken [aaction]	1995	0	5	1.37	1.16
total associative supports [tassoc]	1995	0	4	0.12	0.38
<b>summary indicator for associative-based use [ause]</b>	<b>1995</b>	<b>0</b>	<b>26</b>	<b>4.07</b>	<b>3.66</b>
Communal-based Use					
use internet for communal relations [icuse]	1995	0	2	0.50	0.73
total types of sharing from family and friends [cshare]	1995	0	11	2.34	1.93
total communal supports [tcommune]	1995	0	8	1.00	1.47
<b>summary indicator for communal-based use [cuse]</b>	<b>1995</b>	<b>0</b>	<b>15</b>	<b>3.84</b>	<b>2.67</b>
<b>Total of 4 types of use [totuse]</b>	<b>1995</b>	<b>4</b>	<b>59</b>	<b>25.58</b>	<b>9.03</b>

Figure 5 shows the distribution of the use of social capital by the 20 NRE available sites. Once again, we see how there is considerable distribution across the sites, both with respect to the amount of use in each type of social capital and in the relative distribution of types across sites.

**Figure 5:** Use of Social Capital by NRE Sites (1995 NRE Households)

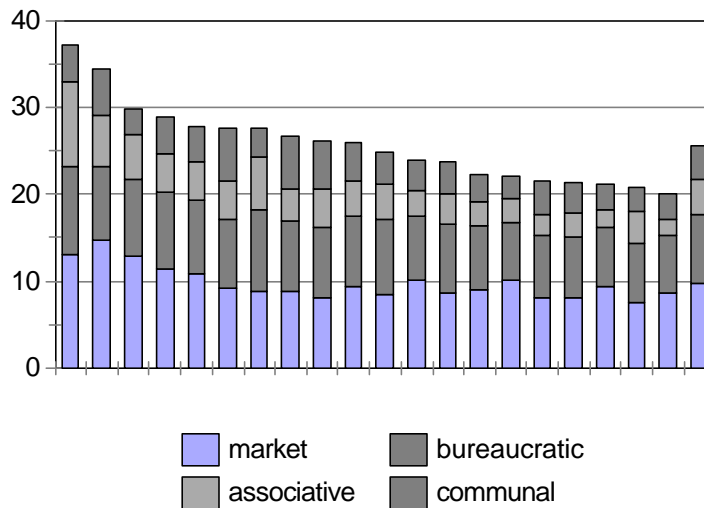


Table 6 provides an indication of the correlation between each of these indicators. As with the indicators of social capital, the various types of use all show positive relations, although the levels are generally lower as would be expected from the larger sample size. Those households that use market capital, for example, are likely to make use of bureaucratic capital as well, but less likely to make use of communal capital.

Table 6: Correlation between Indicators of Use of Social Capital (1995 NRE Households)

	Use of Bureaucratic Capital	Use of Associative Capital	Use of Communal Capital
Use of Market Capital	.32**	.29**	.19**
Use of Bureaucratic Capital		.38**	.32**
Use of Associative Capital			.22**

\*\* Correlation is significant at the 0.01 level (2-tailed)

The availability of social capital in a site does not always mean it will be used. In fact, Table 7 shows how weak the relationship is between the availability of social capital in a rural site and the use of that capital. All of the correlation coefficients are small and some of them are even negative, especially with respect to communal types of capital. The overall index for social capital shows no significant correlations with the overall index for its use.

Table 7: Social Capital by Use of Social Capital (NRE Household Survey - 1849 cases)

	density of enterprises and market services per 100 people	density of bureaucratic services per 100 people	density of associative services per 100 people	density of communal services per 100 people
use of market capital	.045	.058*	.039	-.061**
use of bureaucratic capital	-.098**	.055**	.019	-.032
use of associative capital	-.070**	.025	-.020	-.077**
use of communal capital	-.048**	.067**	.026	.043

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

These results caution us with respect to any analysis confounding the direct measurement of social capital and its use. Unfortunately, much of the published work on this topic includes a significant dependence on use measures, sometimes mixed with those that indicate more institutional characteristics. Without a more detailed analysis of the relationships between the two, we are likely to find continuing controversy as a result of the empirical work.

We are still able to consider our second question regarding the characteristics of people who use the various types of social capital, however. To do so, we have identified 10 characteristics from the NRE household survey that are likely to be related to the various types of social capital use. As with our analysis of social capital, we conducted stepwise linear regression analysis on each of the use types with each of these characteristics. The results are provided in Table 8.

Table 8: Significant Beta Coefficients

	<b>Market</b>	<b>Bureaucratic</b>	<b>Associative</b>	<b>Communal</b>	<b>Total</b>
<b>adjusted R<sup>2</sup></b>	<b>.41</b>	<b>.06</b>	<b>.06</b>	<b>.04</b>	<b>.16</b>
income	.32		.16		.16
education	.14	.15	.12		.17
HH size	.11				.16
Married	.09				
0-6 in HH	-.08	.14			
7-12 in HH				.11	
20-34 in HH	.12		-.07	.16	
35-49 in HH	.08	.12			
65+ in HH	-.23	.11			-.10

These results suggest that those with higher incomes, education, household size, and younger families are most likely to make use of social capital. They also show that the use varies by type of social capital. Bureaucratic-based capital, for example, is more likely to be used by households with young children and the elderly. Household size is important only with respect to market-based capital.

## 5.6. Outcomes of Social Capital

Our model of capacity places particular importance on the relationship between the types of capital available and the outcomes produced within rural sites. It is the ability of the citizens to produce those outcomes that are the core of their capacity. Within this framework, we have identified a number of variables reflecting outcomes of interest to researchers, policy-makers, and rural citizens.

We expect the distinction between site characteristics and outcomes to be blurred. The framework we have been using acknowledges that outputs at one point in time may serve as assets, liabilities, or resources at a subsequent point. Our strategy at this point is to maximize the exploratory advantage of our analysis by considering a greater number of these ambiguous variables rather than eliminating them. The central criteria is that they are not included as part of the measuring procedures for the indicators of social capital.

The NRE household survey includes several questions that might be considered to be outcomes of site-level social capital. At the individual level, we understand the types of social capital as a resource pool for residents: a pool that might be drawn upon to produce outcomes. Table 9 provides the results from an examination of several of these outcomes.

Table 9: Social Capital outcomes - NRE HH Survey (Minimum N=1826; p < .05 only)

	Market	Bureaucratic	Associative	Communal	Total	IQV
government transfer payments	-0.056*	0.047*		0.119*		0.162**
receive low income supports	-0.130**				-0.114**	0.094**
income	0.113**	-0.107**	-0.102**	-0.171**		-0.148**
education	0.203**			-0.071**	0.132**	-0.217**
perceived social cohesion	-0.101**		-0.052*	-0.058**	-0.118**	0.084**
commitment to community	-.092**	-0.076**	-0.074**	-.074**	-.112**	0.055**
perceived Neighbourliness						

Table 9 shows relatively small coefficients for the relationships, but some hints are suggested for further investigation. As indicated in the ‘Total’ column, social capital at the site level is positively related to individual-level education, and negatively related to indicators of low income, suggesting the economic benefits of social capital as argued by many in the literature (Putnam, 2001). It is, however, negatively related to an index of social cohesion developed using items from the Buckner scale (Wilkinson, 2001). A similar negative relationship with statements of commitment to the community are found, suggesting that high levels of bureaucratic or associative social capital, at least, are not necessarily related to feelings of attachment. Social capital also appears to be unrelated to the respondents’ perception of the extent of neighbourliness in their communities.

## 6. Summary and Conclusions

Our approach to social capital has provided a conceptual framework that is useful in many different ways. Theoretically, it allows us to distinguish social capital from other types of capital and similar concepts such as social capacity and cohesion. At the same time, we have demonstrated one way in which the central concepts might be measured. This is done for social capital by focusing on the institutions and groups that are the most visible manifestations of particular types of social relations.

Our framework also highlights the dynamic nature of social capital. It is a characteristic based in social relations, but these relations are always changing and they may be used for a variety of objectives. As a result, an organization, group, or network might at one point be used for learning and pleasure, while at another point it may serve as a basis for a business venture. This venture might in turn, contribute to an increase in social cohesion that augments the social capital that generated it in the first place.

Finally, the framework identifies how social capital reflects not one, but at least four different but interdependent types of social relations. By distinguishing market, bureaucratic, associative, and communal types of social capital, we integrate previously disparate perspectives, provide new understandings of the role of social capital, and open new questions about its impacts and contributions. This approach also provides a basis for measuring social capital – a critical step for examining its manifestations.

In this paper, we have used data from a national project on rural Canada to refine and test some of our proposals. Social capital has been measured using site-level data since this is the level where institutions and groups are most visible. Our data has also allowed us to independently examine the use of social capital by focusing on the individual and household level. In much of the literature, these two levels have been confounded since the availability of data does not afford such multi-level analysis. This has contributed to the lack of theoretical clarity since the inability to distinguish levels has meant that the various aspects of social capital have been lost when operationalization is involved.

Our empirical analysis provides an opportunity to test the utility of our framework, explore some of its implications, and identify key areas for future investigation. Some of them are the following.

- The level of social capital varies considerably from one location to another. This bodes well for the sensitivity of the measures and the potential for analysis.
- There is also considerable variation with respect to the four types of social capital identified. This also supports the value of the framework and the potential for increased understanding regarding the significance of the four types.
- The four types of social capital are all positively related, but not at the same level. Bureaucratic and associative relations, for example, are strongly related within sites ( $r=.91$ ), but market and communal relations show a relatively low ( $r=.14$ ), statistically insignificant relations. These results suggest that the four types of relations do not always serve to compensate one another – a conclusion that would emerge if a negative correlation were to be found. Those sites that tend to be high on one type of social capital also tend to be high on others.
- Some anomalies are to be found in the indicators for social capital. Several of the more isolated sites, for example, showed very high levels of market-based social capital as a result of a large number of small businesses. These are often seasonal and resource-based characteristics.
- Overall, social capital appears to be most strongly correlated with location and income characteristics. High levels of per capita social capital are found among sites in western and northern Canada and in those with relatively low incomes.
- Once we distinguish the various types of social capital, however, the range of conditions increases. Labour force characteristics are related to the market type, minority and employment to bureaucratic, minority status and education to associative, and income to communal.
- There are significant, but weak relations between the availability of social capital and its use by local citizens. The maximum correlation coefficient, for example, is .088. Several of the coefficients are negative. This finding suggests that considerable caution must be used when drawing inferences about social capital from data gathered directly from individuals regarding their use.
- Individuals with higher incomes, education, larger households, and younger families are more likely to use social capital than others. The data also show that the type of social capital makes a difference to the characteristics of the person using it. For example, communal social capital is more likely to be used by families with young children.
- The various types of social capital also vary with respect to the types of outcomes for individuals and households. Persons in sites with high levels of social capital were less

likely to be poor and were more likely to have high levels of education. We were surprised to find that they were also more likely to perceive their site as having a low level of social cohesion. There were some variations from this pattern if the type of social cohesion is taken into account.

This analysis is preliminary and in some ways only suggestive. The site-level data taken from the census, for example, is five years out of date since we were using the 1996 information. As soon as the data for 2001 is made available, this problem can be rectified, however, since it coincides with the year in which the NRE household survey was conducted.

A closer analysis of the social capital measures is also in order. One of the advantages of our long-term work in the field sites is that we are able to compare the general, aggregated figures with the more details information from each of the sites. As a result, we will be able to explore the details behind the social capital measures that have produced some of the outliers in our data. The high level of market-based capital in a few of our sites, for example, may be tied to the particular organization of enterprises or entrepreneurial culture that we find in those sites.

Finally, our long-term, comparative, participatory approach to the research will provide us with a strong basis for exploring some of the more dynamic features of our theoretical model. Using this general analysis, we will be able to focus on particular developments and transformations in a comparative way – providing further opportunities to test the model and at the same time explore the strategic implications of social capital for rural revitalization.

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