Policy Research Initiative
Projet de recherche sur les politiques

Measurement of Social Capital
Reference Document for Public Policy Research, Development, and Evaluation

September 2005

PRI Project
Social Capital as a Public Policy Tool

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Canada

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About this report

The PRI contributes to the Government of Canada’s medium-term policy planning by conducting cross-cutting research projects, and by harnessing knowledge and expertise from within the federal government and from universities and research organizations. However, conclusions and proposals contained in PRI reports do not necessarily represent the views of the Government of Canada or participating departments and agencies.

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Executive Summary

Following a series of studies on social capital, the Policy Research Initiative has concluded that the concept is a valuable public policy tool, as it provides a new and ultimately fruitful perspective for examining how public policies and programs can draw on *social ties* as a potentially vital ingredient for achieving their objectives (PRI, 2005a). According to the PRI, a concrete application of this concept involves a more systematic consideration of relational dynamics and networks of co-operation that exist at various levels and in a variety of spheres shaped by public policy.

But how do we begin? An empirical understanding of the different manifestations of social capital and its methods of functioning is not always easy to achieve. Over the last few years, many government organizations have devoted greater effort to measuring the social capital of populations and generating data that attempt to capture its major dimensions. Various avenues have been explored, from case studies to the development of major trend indicators (for instance, social and civic participation rates) based on survey data. For the most part, however, these efforts have focused on social capital as a dependent variable, that is, a phenomenon requiring explanation.

The PRI was interested in exploring an alternative route by addressing social capital in terms of its role – or contribution – in attaining certain socio-economic or health-related results, matters of interest to public policy. In other words, it was more interested in the concept as an independent variable used to explain other social phenomena. Based on a social capital perspective that focuses on the strategic role of *social networks that provide access to resources and support*, the challenge of measuring social capital therefore involves substantially different variables than those currently of interest to much of the research community in the field of social capital. Consequently, the properties related to networks of relationships between individuals and groups, as well as those that document how they operate in specific circumstances, constitute the basis of the proposals put forward in this reference document on the measurement of social capital for public policy research, development and evaluation.

This document comprises four parts:

- Part 1 provides an overview of the measurement of social capital in the public sector, by distinguishing the various avenues pursued by different national and international statistical agencies based on three major approaches: micro, macro, and meso. The discussion ends with an exploration of the value of the meso approach, whereby social networks constitute the fundamental mediating structures of social capital between individuals, groups, and society.
- Part 2 proposes a useful operational framework for public policy that corresponds with this approach. This model distinguishes between measurable variables that deal with manifestations of social capital and those that deal with how social capital operate. Drawing on the conceptual field and research tools for analyzing social networks, the document proposes a series of social capital indicators and a set of measurement tools that make a distinction between the *structure of networks* (the properties of networks, members, and relationships) and their *dynamic* (conditions for creation and mobilization).
- Part 3 looks at the advantages and limitations of various methodological strategies, both quantitative and qualitative, for examining social capital in the context of public policy, with an emphasis on potential applications in Canada.
- Part 4 discusses the various ways in which social capital can be used as a public policy tool. Without going as far as to propose a research agenda devoted exclusively to social capital within the federal government, this document does recommend pursuing several investigative paths. These paths can be explored simultaneously at several stages in the development of policies and programs already underway, by adding complementary questions to existing or future surveys, by including certain aspects to be documented in case studies financed by government research bodies, or by integrating new performance indicators into program evaluations.

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Background

This document is intended as a reference tool for measuring social capital for use by the public policy research community within the Government of Canada. It presents various methodological options for adopting a social capital approach in the context of developing and evaluating public policy and government programs. Taking into account the potential and limitations of current data and knowledge on social capital in Canada, it proposes avenues for examining this concept for public policy purposes.

This reference document is part of a Policy Research Initiative interdepartmental research project, Social Capital as a Public Policy Tool. Launched in January 2003, the goal of the project is to examine the role of social capital and its potential contribution for public policy and to develop a relevant analytical and measurement framework for the Government.

The federal research community, as well a several accademic researchers and other international social capital experts, contributed to the discussion on measuring social capital by participating in the following activities:

- an interdepartmental workshop on the value of social capital for public policy (June 2003);
- a pre-conference workshop on data related to social capital held in November 2003 during an international conference, The Opportunity and Challenge of Diversity: A Role for Social Capital; and
- an expert workshop on measuring social capital for public policy purposes (June 2004).

This document is comprised of four parts:

1. Developments in measuring social capital in the public sector;
2. Implications for the measurement of a network-based approach to social capital;
3. Possible methodological strategies for studying social capital in a public policy context; and
4. Conclusion and recommendations.

Part 1: Developments in Measuring Social Capital in the Public Sector

1.1 The Value of Social Capital in the Public Sector

The concept of social capital is generally associated with social and civic participation and with networks of co-operation and solidarity. But other, more abstract, concepts are also associated with social capital, such as social cohesion, trust, reciprocity, and institutional effectiveness. Regardless of the context, this concept has been used productively in many areas of research. By 2001, Michael Woolcock had counted at least seven fields that had employed this concept of social capital: families and youth, schools and education, community life, work and organizations, democracy and governance, problems related to collective action, and economic development. Today, physical and mental health, immigration, and public protection could be added to that list.

From a public policy perspective, social capital is clearly an important starting point for renewed debate. Several governments, beginning with major international agencies such as the World Bank, the OECD, UNESCO and the Inter-American Development Bank, have invested considerable efforts in the concept. Government authorities see social capital as a heuristic tool that sheds new light on public intervention and the way in which government services can use this potentially valuable ingredient to attain their objectives.

While the literature on this topic is abundant, the public policy community has had some difficulty embracing it. The concept continues to evolve both theoretically and in terms of how it empirically informs our understanding of this resource. Beyond conceptual concerns, however, the social capital concept has had the merit, over the last decade, attracting considerable attention to the importance of *social ties*.

The following section presents the major social capital approaches that have dominated the literature over the last decade and sheds light on the implications of these approaches for measuring social capital. A description of the main national and international government initiatives and a discussion on how they are positioned in relation to the major approaches is then presented (Section 1.2). Some main findings are presented in the conclusion.

Major Social Capital Approaches

To understand the methodological choices governments make to examine social capital, it is important to situate them in relation to the different approaches to this concept. Put simply, one can distinguish three major approaches to social capital. The micro-approach emphasizes the nature and forms of co-operative *behaviour;* the macro-approach focuses on the *conditions* (favourable or unfavourable) for co-operation; and the meso-approach highlights *structures* that enable co-operation to take place. Let us look at these approaches in greater detail.

The micro-approach to social capital focuses on the value of *collective action.* In this respect, it is similar to a game theory approach, since it deals with the *propensity of actors to co-operate* by way of association or by joining forces to attain certain objectives (Ahn and Ostrom, 2002). This approach defines social capital as the potential of these co-operative strategies (groups, associations, etc.) to strengthen collective capacities. Here, social capital is seen as 1) the product of the actors' motivations for forming an association (the values and aspirations that underpin the co-operative relationship); 2) their behaviour (types of association that define how actors co-operate); and 3) their perception of collective issues (cultural beliefs and influences, etc). The World Bank refers to this as "cognitive social capital" (Grootaert and van Bastelaer, 2001).

The macro-approach to social capital focuses on the value of integration and social cohesion. Like the theories of institutionalism, it emphasizes a community's environmental, social, and political structures that convey values and norms (primarily

trust and reciprocity), which in turn create certain conditions for social engagement and civic and political participation. According to this conception, social capital is analyzed as a product of these structures. As a result, the more these structures instil trust and reciprocity, the more individuals will want to get involved in civic life and the more social capital will flourish. As in the case of the micro-approach, proponents of a macro-approach are interested in social capital as a collective benefit (Putnam, 2001).

The meso-approach is geared toward the more *instrumental* value of social capital. As such, it is akin to the resource mobilization theory, in that it links the concept to the *potential of social networks* to produce resources such as information and support. (Burt, 1984; Lin, 2001; Portes, 1998). This analytical approach is referred to as "meso" because it looks at the structures that may enable co-operation. The World Bank refers to this approach as "structural social capital" (Grootaert and van Bastelaer, 2001). Social networks, the position of members within these networks, the types of interactions, and the conditions in which they occur are all factors that determine the nature of resources and the way in which they are circulated. This approach is based on the premise that social capital is neither an individual nor a collective property, but rather a *property arising from the interdependence between individuals and between groups within a community.* Consequently, social capital is viewed as a resource that emerges from social ties and is then used by members (individuals or groups) of networks. Proponents of a meso-approach are interested in social capital as an *individual benefit* and as a *collective benefit.*

All three approaches recognize the contribution of social engagement – or social ties – to growth and well-being. Each approach, however, addresses the problem of co-operation from complementary angles of analysis[1] (collective action, participation, or social networks) that have different implications for public policy. Over the last 15 years, with the influential studies of Robert Putnam in the United States, the World Bank, and John Helliwell here in Canada, micro and macro analyses have captured widespread attention. We later see how the PRI project has explored the value of the meso-approach to social capital.

1.2 International Initiatives for Measuring Social Capital

In recent years, a number of government and international organizations have embarked on research initiatives on social capital, but their position with regard to the major conceptual models that dominate this field of research is not always explicit. It is possible, however, to identify a few main approaches, including the ways in which they operationalize the concept and their choice of measurement tools. Each approach is tied to certain public policy priorities.

The World Bank

The World Bank was one of the first major political organizations to have taken an interest in the concept of social capital at the end of the 1990s. At that time, the prevalence of limited, highly managerial approaches to development prompted the organization to look for collective capacity-building policies to fight poverty and ensure the provision of and access to health services, education and credit (Woolcock, 2004). Given the variety of political, organizational, cultural and other contexts in the countries of intervention, the World Bank's preferred model for addressing social capital has been based on the importance of contextual variables as a determining factor on collective action (Grootaert and van Bastelaer, 2001). This approach is a combination of cognitive (micro), structural (meso) and institutional (macro) elements of social capital. It emphasizes the individual predispositions (practices and beliefs) that perpetuate poverty, the structure

1 Note that the complementarity of the three levels of analysis of social capital is not always obvious. Grootaert and van Bastelaer (2001) have mentioned the difficulty to link the micro and macro levels of social capital to broader macro institutions. Schuller (2001) went so far as to postulate a qualitative change in the meaning of the term when it is used at different levels. We believe the research on social networks has offered the most concrete answers to this question, based on a hypothesis previously formulated by Borgatti et al. (1998). According to these authors, individual social capital and collective social capital involve the same relational phenomenon observed at different levels: between individuals, between groups, and within groups.

and activities of local groups that create new opportunities, and the elements of the local context that promote or impede collective action.

From an empirical standpoint, the Word Bank's examination of social capital has been based on small-scale case studies to explore how social capital operates in very specific development situations. For instance, research in Indonesia on various models for supplying drinking water showed that the most efficient system for a given community depended on its level of social capital (as defined by the World Bank). In fact, just as different technologies require different levels of collective action, communities that possess some form of predisposition to co-operation have a greater collective capacity to maximize the productivity of a particular system. One of the most important conclusions that resulted from all of the projects led by the World Bank's social capital initiative is that the effect of what they describe as social capital is very different depending on the study site, and the same dimensions do not always come into play. In all cases, however, three indicators seem to be more revealing than others in terms of the presence and effect of social capital (Grootaert and van Bastelaer, 2001):

- Input: Composition and scope of the co-operation networks (individual and collective);
- Input and output depending on the case: Trust in local institutions and adherence to the norms they convey; and
- Output: The scope of collective action, that is, the results of the co-operation.

Based on these results, the World Bank developed a tool kit for examining social capital in developing countries, known as the Social Capital Assessment Toolkit SOCAT (see Appendix 1).

The Organization of Economic Co-operation and Development

The OECD's social capital initiative emerged in a context distinctly different from that of the World Bank. The OECD, which focuses primarily on developed countries, became interested in the contribution of the social capital concept in addressing quite different issues, such as quality of life, healthy aging, human capital, human safety, the integration of immigrants, sustainable development, etc. The OECD was interested in turning the concept into an indicator of well-being, with social capital considered an end result. Based on the work of experts such as Robert Putnam and John Helliwell, and a series of international meetings, the OECD proposed the following definition: "Networks together with shared norms, values and understandings that facilitate co-operation within or among groups." (OECD, 2001: 47)[2]

The OECD adopted this broad approach to social capital and focused its efforts on developing a comparative analysis. The first strategy adopted by the organization was to streamline other countries' efforts to measure social capital into a unified approach with a common direction. This entailed formulating a single definition, identifying the major principles of the concept, choosing similar measurement tools and producing comparable data. These efforts, however, stumbled over the fact that, under this definition, social capital can manifest itself very differently depending on local, regional, and national contexts and can vary widely in form depending on the issue involved. Furthermore, since social capital indicators developed from its approach cannot be incorporated at all levels, the realities to which they refer may differ depending on the scale from which they were derived. Ultimately, developing comparable social capital data does not seem to be a useful avenue. Indeed, this initiative was recently abandoned in favour of guidelines for measuring social capital (defining variables, choices of indicators for each dimension).

The OECD considered another strategy involving the development of a concise module of standardized questions that could be inserted into various national or international surveys (namely, the International Social Survey Program) to produce a limited number of national indicators comparable between countries and over time. In 2003, the initiative was adopted by the Sienna Group for Social Statistics, a group of

2 The definition presented in the French-language version does not exactly match that given in the English-language version, which adds the function of facilitating cooperation within or among groups. (OECD, 2001: 41)

experts working under the auspices of the United Nations whose mission is to examine the shortcomings of social statistics within international organizations. A series of three reports, to be released in the fall of 2005, will present the details of the challenges involved in measuring social capital and an overview of national experiences in their efforts to harmonize social capital indicators. Four major social capital indicators were retained by the Sienna Group based on a module of standardized questions (for more details, see Appendix 2). These indicators are very similar to those adopted in the United Kingdom (below):

- social participation;
- social support;
- social networks; and
- civic participation.

United Kingdom

In the United Kingdom, the Office of National Statistics (ONS) used the OECD definition in adopting a macro-approach to social capital based on its social integration value. Consequently, social capital is seen as an end result, a collective asset resulting from various aspects of the lives of individuals and, specifically, from their associative activities. Five major dimensions of social capital have been identified by the ONS:

- participation, social engagement, commitment;
- control, self efficacy;
- perception of community;
- social interaction, social networks, social support; and
- trust, reciprocity, social cohesion.

The inter-connections between these dimensions are not conceptualized on the basis of a single framework,[3] so the favoured approach for measuring social capital is more pragmatic. It involves a systematic inventory of data taken from various surveys related to one of these dimensions and compiled within a matrix used as a reference tool. One of the most interesting aspects of the project is its association with the Neighbourhoods Statistics Strategy, which offers the possibility of contextualizing social capital at the level of territorial communities. But the real challenge is statistical integration: because data are not produced in an integrated framework, they often lack any connections. One consequence is that the results we seek to measure run the risk of producing contradictory information. In fact, this problem arose in data on general trust that, depending on the survey that provided the data, led to different conclusions (Kelly, 2003). It is noteworthy that the ONS recently developed a module of standardized questions related to its conception of social capital that it has tested through a general household survey (GHS-2004-2005). The data should provide a picture of the distribution of social capital within the population, contribute to estimates at the local level, and document its manifestations specifically among youth.

Canada

Statistics Canada's Cycle 17 of the General Social Survey, Social Engagement in Canada, released in July 2004, is the first large-scale national survey that has successfully integrated the dimensions of social capital as identified by the OECD and the ONS. Developed in the early 2000s, the Survey drew on the extensive literature on this theme before going into the field, although this literature had not necessarily reached full maturity at that time. In this regard, the statistical agency was not able to rely on a consensus acceptance of a unified and strategic conceptual framework. This explains why it chose to document as much as possible the most important dimensions of the OECD/ONS approach by referring to questions already used in its existing surveys. The objective was to explore the major variables at the individual level, such as socio-demographic characteristics, attitudes, behaviours, and their links to the dimensions of social capital identified by the OECD/ONS. Here, social capital was primarily treated as a dependent variable. That is, it sought to explain social capital using a variety of other determinants.

In terms of its analytical potential, the sample of 25,000 people provides a detailed picture of how the major dimensions in the survey are distributed across the country. In addition, it allows to examine

3 Note, however, David Halpern's work with the United Kingdom Performance and Innovation Model in developing a more sophisticated version of this model, with an attempt to integrating the three levels of analysis: micro, meso, and macro (Halpern, 2002).

how some variables can be considered as sources (or determinants) of social capital as defined in the survey. However, the Survey takes only a relatively limited look at the contribution of the concept of social capital as an independent variable to explain certain socio-economic or health-related issues. Indeed, it contains a limited number of variables more closely associated with social, economic, or health-related results that can be correlated with the concept, thereby limiting the analytical scope of the Survey in terms of the effects of social capital. As we have shown, the Survey is not based on an analytical model but rather on a general definition of the concept (that of the OECD), which has the advantage of providing the user with the option of analyzing data in various ways. The flip side, however, is that this flexibility comes with more risks from a public policy perspective. The use of highly heterogeneous variables (receiving informal assistance, voting or abstaining in an election, watching television, volunteer work, feeling safe in one's neighbourhood) can lead to the measurement of quite distinct phenomena that one may be tempted to interpret in the same way. Suffice it say that, as stressed by Sirven (2003), assigning almost any meaning to social capital carries the risk of manipulating the concept in a scientific manner for political ends.

Australia

Australia's initiatives around the concept of social capital are rooted in public policy, research, and statistical considerations. The sophisticated analytical framework developed by the Australian Bureau of Statistics (ABS) following an interdepartmental consultation process constitutes the cornerstone of these efforts (ABS, 2001, 2002). In addition, there is an important discussion paper on the value of social capital for public policy (Productivity Commission, 2003) as well as a series of research and analysis papers produced by the Australian Institute of Family Studies under the Social Capital and Citizenship Project. This co-ordinated initiative on social capital had a significant impact on the development of policies and programs at various levels and in different sectors of government activity, namely families, regional and community development, health, aging, poverty and social exclusion, sports and culture. The social capital dimension is now included in many of Australia's government initiatives.

The Australian model is underpinned by a global approach based on the complementarity of the four major types of capital: natural, economic, human, and social. Social capital is conceptualized on the basis of social networks. A distinction is made between social networks, the determinants of social capital, and its effects. The result is a clear and coherent conceptual framework used by statistical agencies to develop indicators to guide the production of data. The document *Australian Social Capital Framework and Indicators* (ABS, 2004) rigorously defines each element of the model and discusses their interconnections. A set of potential indicators and examples of questions are also presented for each indicator to guide the efforts to measure social capital (see Appendix 3). In terms of developing data, the ABS has, to date, limited itself to proposing a social capital module as a supplement to the General Social Survey and the survey on volunteer work planned for 2006 (Hall, 2004). Apart from the data on social capital that will be generated with these surveys, the Australian government has not yet indicated the avenues it plans to take to further investigate the concept.

Discussion

Depending on the model adopted, strategies to examine social capital within the public sector vary and, consequently lead to very different research directions (development of indicators and indices, comparative analyses, statistical correlations, case studies, etc.). Moreover, these strategies do not all have the same relevance for developing concrete programs and policies that seek to take into account the social capital dimension. Aside from World Bank studies, the empirical analysis of social capital in the public sector has been primarily led by statistical agencies, such as the ONS and Statistics Canada, which have sought above all to gather as much information as possible on every dimension of social capital suggested by a quite diverse litterature. For the most part, these efforts have relied on existing data or questions already used in other surveys to develop new data, in most cases outside any conceptual or analytical framework.

As a result, social capital is widely documented but always understood as an end result, rather than as an explanatory variable for particular socio-economic outcomes.

The Australian initiative stands out from other statistics projects in that it constitutes the first attempt to operationalize the concept and make it more useful for public policy making. The *meso* level of analysis led to a conceptual and analytical framework based on social networks that paved the way to a more concrete understanding of social capital based on an impressive series of indicators that captures many dimensions. But the agency's work essentially remains a statistical inventory, as it does not explain how to implement the concept in a concrete and useful manner from a public policy perspective. Specifically, it does not distinguish between what social capital is and what it does.

In a critical analysis of the concept, Ponthieux of France's Institut National de la Statistique et des Études Économiques has stated that the call to develop tools to measure social capital is a testament to the inability to validate the concept empirically (2003: 242). Similarly, the PRI suggests that three conditions can alleviate this problem:

- The starting point must focus on a specific problem for the concept of social capital to be applied concretely.
- A theoretical framework based on the concept of social capital must be connected to other analytical frameworks built around this issue. In other words, social capital must be analyzed as a complementary explanatory factor.
- Clear hypotheses must be formulated to identify the variables that must be measured and to understand the manner and the order in which they must be applied to the analysis.

The second part of this guide proposes a strategic model of social capital, the operationalization of which will meet three conditions. Based on the *meso* approach, the conceptual model of social capital put forward by the PRI considers social networks as mediating structures between individuals, groups, and society which play a concrete role in several sectors relevant to public policy.

Part 2: Implications for the Measurement of a Network-Based Approach to Social Capital

2.1 Policy Research Initiative: Social Capital Based on a Social Network Approach

In 2003, the federal government's Policy Research Initiative was given the mission of operationalizing the concept of social capital so that it can be used effectively in the context of Canadian public policy. One project objective was strategically to guide the research and analysis of social capital within the Government of Canada. As part of its project Social Capital as a Public Policy Tool, the PRI embarked on a series of activities on the measurement of social capital. These activities were intended to complement efforts already underway by Statistics Canada with the General Social Survey on Social Engagement.

This section deals with the stages that led to the development of an operational framework for social capital, based on a social network approach. The utility of this model from a public policy standpoint will be discussed, followed by a thorough description of its components (Section 2.2). The advantages of employing the conceptual field of social network analysis to develop social capital indicators will then be presented (Section 2.3). Network analysis also provides a series of measurement tools that can be applied to the study of social capital (Section 2.4).

Interdepartmental Workshop on Social Capital

In June 2003, the PRI organized a one-day workshop on social capital that brought together some 50 analysts, researchers and managers representing 15 federal departments and agencies. This meeting was designed to stimulate structured comments around three aspects of social capital: its conceptualization, measurement, and policy impact (PRI, 2003a).

During the discussion, it became clear that concerns about the definition of the concept would directly guide considerations regarding the measurement of social capital. While everyone was aware of the multiple dimensions closely linked to the concept of social capital, it was acknowledged that incorporating them all into a single definition could significantly reduce the utility of the concept, at least for public policy purposes. A consensus was therefore reached on the choice of a narrow, operational definition:

> "Social capital refers to social networks that may provide access to resources and social support."

Using this definition, in which social networks are the central elements of social capital, relatively precise directions were given for an empirical investigation of social capital from a public policy perspective. These include recognizing:

- the importance of determining the components to be measured based on an *integrated* and *strategic* conceptual framework in relation to issues of public interest;
- that the unit of analysis is not individuals, groups or communities but more specifically *relations* between and among them. With regard to measurement, this supposes that an approach based only on the individual will offer only partial information; and
- there is an interest in both individual social capital and collective social capital, while recognizing that one is not the sum of the other. Collective social capital refers, rather, to networks on another scale, namely, groups and organizations.

Workshop on Social Capital Data

In November of the same year, a second workshop on the measurement of social capital was organized in collaboration with Statistics Canada during an international conference, The Opportunity and

Challenge of Diversity: A Role for Social Capital. This one-day pre-conference workshop was designed to present different sources of relatively new data on social capital and to discuss their analytical potential.

The exercise was an opportunity to ascertain the variety of approaches to social capital and, consequently, different principles for operationalizing its components. Depending on the approach used, the analysis potential of various questions may differ widely. In fact, the participants came to the conclusion that strategic questions raised in the context of specific projects, programs or policies should determine the way in which social capital is operationalized. In other words, the aspects of social capital that one chooses to measure cannot be established in the abstract, based simply on a definition of the concept.

The event also highlighted the abundance of data on all the different dimensions associated with social capital. In Canada alone, several major recent surveys contain relevant questions on social capital:

- World Values Survey – Cycle 2000 (University of Toronto);
- Ethnic Diversity Survey (Statistics Canada);
- General Social Survey – Cycle 17 (Statistics Canada);
- Equality, Security and Community Survey (University of British Columbia); and
- Longitudinal Survey of Immigrants to Canada (Statistics Canada).

Only the last survey, however, contains more substantial questions on social networks that enable the contribution of social capital to a specific problem to be explored, namely, integration into Canada. As discussed in the previous section, Cycle 17 of the General Social Survey further explores the determinants and forms of social capital.

Leading experts who attended the workshop agreed that the empirical investigation of social capital could benefit from more exploratory studies, such as qualitative analysis, case studies and social experimentation. It was also suggested that the potential of new measurement tools developed and tested by researchers in recent years, including those used in social network analysis, which provide simple and effective methods for identifying a number of important dimensions associated with social capital, should be further explored.

Expert Workshop on Measuring Social Capital

In June 2004, the PRI organized an expert workshop on the measurement of social capital for public policy purposes in collaboration with the Social Sciences and Humanities Research Council of Canada (SSHRC), with the support of Statistics Canada. This initiative focused on the measurability of social networks that provide resources and support. Some leading experts in the measurement of social capital and social networks in Canada contributed their knowledge and experience to laying the groundwork for a rigorous empirical approach to social capital research.

The impact of this workshop was significant in terms of advancing knowledge in the measurement of social capital. The conceptual field and measurement tools developed in social network analysis are particularly useful for the measurement of social capital for public policy purposes:

- Through social network analysis, strong hypotheses on the various properties of social networks and how they operate in specific situations and contexts can be explored.
- Social network analysis proposes a series of analytical tools and techniques for measuring social capital with relative precision, at both the individual and collective levels.

2.2 A Practical Operational Framework for Public Policy

The conceptual and analytical framework favoured by the PRI is similar to the Australian initiative. Social capital is viewed as a complement to the other forms of capital, that is, as a complementary mean or resource individuals and groups can use to achieve certain objectives. The PRI's framework also approach social capital from a social network perspective.

This section presents a more schematic representation of how the PRI has applied the lessons learned from its activities and how social capital has been

operationalized to make it useful for public policy. We will first present the PRI's strategic integrated model based on social networks as the principal components. We will then discuss the possibilities of applying this model on an individual and collective scale. Last, we will look in greater detail at the elements of the model that warrant measurement for public policy purposes.

2.2.1 Social Networks as an Integrating Element of the Model

The model developed by the PRI in its document *Social Capital: Building on a Network-Based Approach* (2003b) is based on the following definition: **Social capital refers to the social networks that may provide access to resources and social support.** Understanding how social ties and their dynamic constitute an additional means or resource for individuals and communities, and the way in which they can be accessed and used productively, is an avenue that could have a significant public policy impact.

The use of such a model requires a strong hypothesis regarding the relevance of social networks as an essential element of a problematic:

- How do social networks serve as potentially enlightening elements in the context of a problem X?

This is not to suggest that networks must explain everything, but they may be a explanatory factor among others. So it is important to situate the analysis of social capital within a *broader explanatory model* already used to understand the focus of the research, by first asking the following question:

- What are the other explanatory factors that could complement or act as a substitute for the role of social capital?

By proceeding this way, we recognizes that networks do not operate within a vacuum, and that other elements external to networks (e.g., human capital, financial capital, material infrastructures) are also important. This assumes that social networks operate as a complement to other resources, and that they

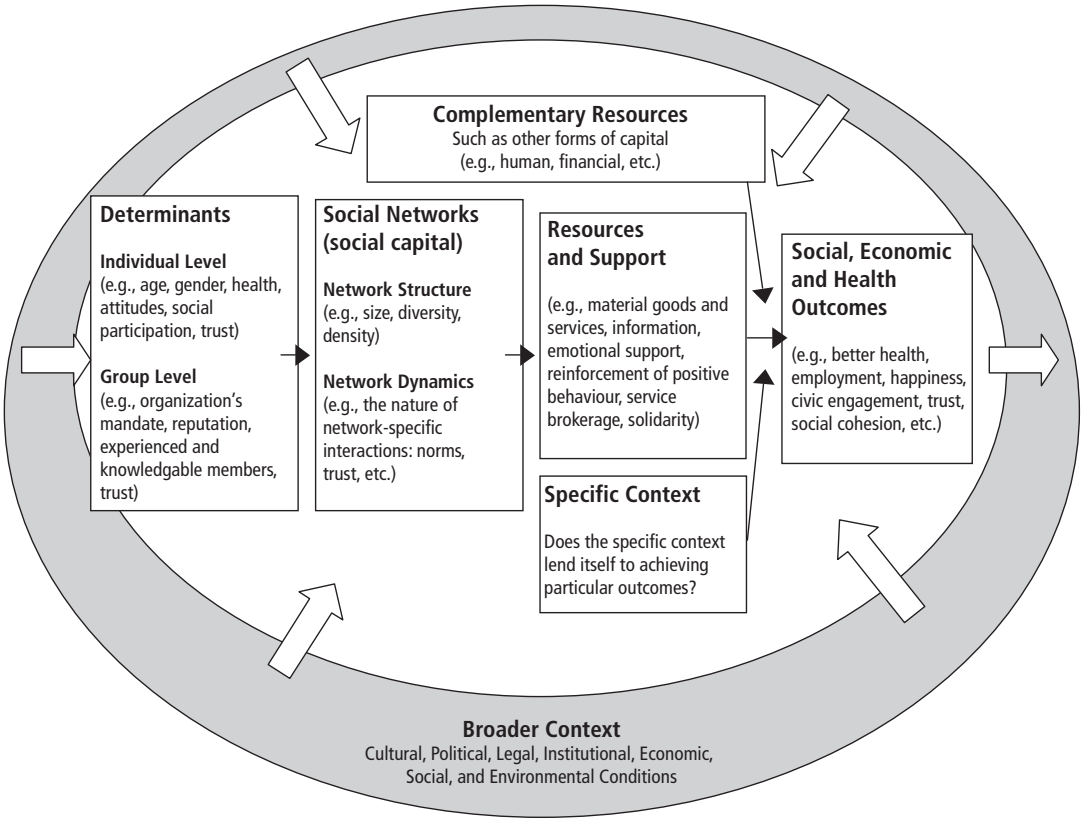

Figure 1. The PRI's Social Capital Framework

can have a *leverage effect* in enhancing the value of those other resources, and vice versa.

The Integrative Value of the Model

The model is considered to be *integrated* to the extent that all the elements it comprises are linked to social networks. The networks act as integrating elements of the model from a theoretical standpoint or as a mediating factor from a more empirical perspective.[4] One advantage of this model is that it distinguishes social capital (networks) from its sources (determinants) and its functions (effects). In addition, this model clearly distinguishes between what social capital *is* and what it *does*. In terms of data measurement and analysis, these distinctions are crucial to avoid confusing explanatory variables with social capital indicators. Consider, for example, the way one treats civic participation or trust: for some these phenomena can themselves be considered to be social capital, while in the model presented here they are more generally seen as a determinant or an outcome of network activity. Admittedly, without trust and civic participation, community groups could not function effectively. By themselves, however, the rate of participation and level of trust cannot explain the associational network dynamics of a given community. They are possible background conditions that account for the creation and functionning of the associational network infrastructure in a community, this being the real (collective) social capital according to the model. At the same time, the associational network infrastructure and dynamics may in turn influence the participation and trust of the citizens. In that case, the model allows one two study these two variables as results of social capital.

Another advantage of this model is that it attributes an essential role to context, be it on a macro level (e.g., socio-economic or political conditions) or in terms of a more specific environment involving local or personal situations. Context constitutes the *opportunity structure* of social capital, or its operational framework: for instance, the presence of specific social, political, or cultural institutions, a person's individual situation, a disturbing event. It is in the context in which social capital operates that research questions emerge and the elements to be measured take on their meaning.

The Strategic Value of the Model

Another advantage of this model is that it makes it possible to analyze social capital as both an independent variable and a dependent variable. This allows us to examine its contribution to attaining specific socio-economic and health-related outcomes. Since the model identifies the elements to be considered in the context of a particular problematic of interest for public policy development, it is considered *strategic*. In fact, the model is based on the premise that social capital operates among people in a particular situation and in a specific context. The model can therefore be applied in various ways:

A first possible application of the model is to question the *distributional issues* with regard to social capital:

- Who (or what type of organization) has access to the resources of a social network X in a particular set of circumstances?

A second possible application of the model is to question the *goal specificity* of social capital:

- Why are social networks being mobilized and what outcomes do they achieve?

The contribution of social capital manifests itself differently depending on the *specific population* (seniors, youth, Aboriginal peoples, women, rural communities, etc.) and *life domains*. On an individual scale, the most common domains of intervention in terms of a social capital contribution are mental and physical health and well-being, social inclusion, and social and economic mobility (van der Gaag and Snjiders, 2004a). On a collective scale, research is conducted primarily in the realm of social order (crime prevention, integration of immigrants, community resilience), promotion of social causes, local development (urban renewal, rural governance), and major problems of exclusion (deprived neighbourhoods or communities in decline.) (Charbonneau, 2005)

The more a public policy question *specifies the scope of the consequences* involved, the more accurately the contribution of social capital can be measured. For instance, we can evaluate the

4 See Cattell (2001) on the mediating role of social networks.

role of social capital more accurately by formulating a question in the following way:

- ✧ To what extent does the support of family and friends help explain shorter periods of convalescence among people who have undergone heart surgery?

A third possible application of the model is to question the outputs of social capital:

- ✧ What types of resources and support can unemployed persons obtain from their support network to start up their own micro-business?
- ✧ What is the network's capacity to produce the resources necessary to help its members (or other beneficiaries) overcome poverty?

In very broad terms, the direct outcomes of activating social networks (or obtaining resources from social capital) can take the following forms:

- *co-operation*, which is often associated with collective action;
- *support*, which can take the form of material resources, financial assistance, service provision, emotional support or sharing of information, advice or expertise;
- *impact on behaviour* in the form of social control, place effects, influence of mentors, etc.; and
- *capacity building* (at the individual and collective levels), which refers to the development of an ability to confront an event or difficulty or to meet a particular challenge.

The fourth and last application of the model is to question the *capacity to create* social capital, by examining the conditions for the formation and existence of networks as well as the role of government in this respect:

- ✧ How do individual or collective actors develop their social networks? What are the conditions that enable or prevent them from developing these networks?

This question is of interest from a public policy standpoint in that it raises the possibility of interventions that can promote or impede social capital, at both the individual and collective levels.

2.2.2 The Social Relationship as a Unit of Analysis of Social Capital

Another important aspect in formulating a model for analysis of social capital is recognizing that the unit of analysis we are interested in is not the isolated individual, nor the theoretical group (household, community) or real group (group, organization), but rather the *relationships* between them (Phillipson et al., 2004: 3). By adopting an approach focused on relationships, the issue around the unit of analysis and the level of aggregation is no longer a methodological question (whether or not it is possible to aggregate social capital that *belongs* to individuals to account for social capital that *belongs* to the community), but rather a purely analytical question. In fact, if social capital is inherent in relationships, it does not belong to anyone. As such, *collective social capital* refers to an analysis of relationships at another level, that is, between groups, which is a research focus that is distinct from *individual* social capital.

Public policy that focuses on **individual social capital** is primarily concerned with questions pertaining to the *individual benefits resulting from the inclusion of the individual within his social environment.* This may involve kin relationships, work relationships, or participation in groups or organizations in which the individual forges ties with others and which are often viewed in terms of civic or political participation or engagement.

Similarly, policies that focus on **collective social capital** deal with questions that refer to the *collective benefits arising from participatory and associative dynamics*, which can be defined socially or on a territorial basis (e.g., networking among community organizations within a given community). The study of collective social capital is extremely useful in understanding activities that create and mobilize resources within territorial communities (urban, rural, regional, etc.) and which some researchers refer to as *socio-territorial capital* (Fontan and Klein, 2004). Whether or not they are territorial in nature, where there are broad challenges that surpass the individual scope of action of groups and associations, these groups and associations are more likely to

work togheter to benefit from collective social capital (Charbonneau, 2005). In this sense, *collective social capital stems from networks of ties between groups or associations that are specifically develop to meet a specific goal*, which is not the case with individual social capital, as the different relationships that actually exist within personal networks pursue a wide variety of cross-cutting outcomes (attachment, identity, belonging, utility, etc.) (*ibid.*) An example of collective social capital would be the creation of a network of local organizations to develop a strategy to fight juvenile delinquency.

Although the two concepts refer to distinct realities, there are still links between individual and collective social capital. For example, when we document the participatory practices of individuals, we have a certain image (or approximation) of collective social capital, that is, the capacity of groups and organizations to use the contribution of individual members to achieve collective benefits. But group membership does not constitute the sum total of collective social capital: it allows essentially for an estimation of the *intra-group* dynamic but excludes important ties that groups forge with other groups. In other words, we cannot claim to have a full picture of the associative architecture of a given community by simply collecting data on the participatory practices of individuals. Thus, it is important to avoid the trap of aggregating individual social capital in order to estimate collective social capital.

2.2.3 Operationalizing Variables from a Public Policy Perspective: The Presence and Operation of Social Capital

In the preceding sections, we identified the various dimensions of the social capital model that must be considered from a public policy standpoint. More specifically, we examined how these dimensions interact with social networks and their operationalization as measurable variables according to the scale most appropriate for answering a given question.

This section examines the central element of the model, that is, the network dimension, and takes a more concrete approach to how the properties of social networks are operationalized to evaluate their contribution to public policy development.

There are two main groups of relevant elements to be measured to diagnose social capital: **a) the presence and manifestations of social capital,** that is, the quantity and forms of social capital to which individuals and groups have access, and **b) how social capital operates,** that is, how social capital is created and used. Taking into account the presence, manifestations and functioning of social capital paves the way for examining the *productive potential* of networks of social ties, which refers to the resources to which these ties provide access.

Presence of Social Capital

A first degree of analysis focuses on a number of elements that characterize the presence of social capital. These elements constitute the visible aspect of social capital; they refer to *network's value* in terms of potential resources that can be produced within a social network and made available to its members when a need arises. Identifying the presence of social capital is particularly important when examining issues of distribution and outputs within a population, that is, to determine which individuals or groups of individuals have access to which resources through their social network.

There is no exhaustive list of the various manifestations of social capital. The resources that can be derived from social relationships come in as many forms as there are needs, from the value of the relation itself, such as friendship, to its use in social or political actions (collective action, social control, influence on behaviours, capacity building), to all of the other forms already mentioned in Section 2.2.1, such as the exchange of services, material goods, information, expertise, emotional support, etc.

In terms of public policy, certain manifestations of social capital are more relevant than others. For example, public health policy may be particularly interested in support networks; public security policy may focus on networks of social control and influence; employment policy may build on information networks; policies to combat exclusion and social isolation may be concerned with various aspects of sociability; community development policy may focus on networks of local organizations; education policy is often interested in mentoring; while immigration policy is often interested in

family matching programs. All these examples illustrate the scope of the potential manifestations of social capital that are of value for public policy.

Generally, an examination of the presence of social capital and its manifestations prompt the following types of questions:

- Are there differences in the quantity or type of social capital that individuals have access to, based on age, sex or ethnic origin?
- Who is included in/excluded from networks that produce resources of social importance?
- What types of community networks (or collective social capital) are most prevalent in a given community?

Other research questions can delve deeper into the links between the presence of social capital and other explanatory factors in terms of achieving certain socio-economic results. For instance:

- How does social capital intersect with the level of schooling to explain the occupational status of youth in their first jobs?
- How has the social capital of community groups in a given geographical area varied since program X was implemented?

We see below how the tools provided by network analysis can be used to measure these various manifestations.

How Social Capital Operates

From a public policy perspective, it is often insufficient to limit one's study to identifying the presence and manifestations of individual or group social capital. It is also important to understand how networks operate, that is, how they are created, maintained and mobilized productively in a specific set of circumstances. This is the dynamic aspect of social capital. In economic jargon, we could talk in terms of capital flows, where inflows are the processes related to the creation of capital stocks and outflows are the processes related to the use of these stocks. In sociological terms, we can simply refer to *processes for the creation and mobilization of social networks that promote access to certain useful resources.*

The functioning of social capital therefore implies that social capital is not a fixed or inert resource. Rather, it is produced and circulates through social interactions; it is transformed through the history and evolution of these interactions; it can dissolve if it is poorly used or if the relationship is terminated. The functioning of social capital therefore refers to particular relational dynamics, life situations, socio-spatial contexts, etc. The dynamic aspect of social capital, however, is not well documented, although this is essential if we wish to understand how social capital produces concrete results. This dimension prompts the following types of questions:

- Do conditions exist that favour or impede the mobilization of the social network of young single mothers in order to obtain help with child care?
- What key elements are needed for a network of local organizations to become active and produce useful resources to fight crime, for example, setting up a neighbourhood watch project?
- What individual or collective capacities are needed to transform this resource (neighbourhood watch project) into concrete results (crime reduction)?

2.3 Developing Social Capital Indicators

Social network analysis enables the resources that circulate between various social actors to be identified by looking at the *relational patterns* between them, that is, by studying the way in which social relationships are structured and how they function. The underlying hypothesis is that the structure of social interactions is a factor that determines the opportunities and limitations to accessing resources, while recognizing that the structure itself is a product of these interactions. The approach is *structural* if the conclusions are drawn from the study of network structures; if the focus is on the way in which the network operates, the approach is *transactional* or *relational.* In all cases, however, social network analysis involves an empirical approach to examining the relationships between entities (individuals and groups) rather than their attributes, which is the focus of traditional social surveys.

The conceptual field of network analysis has much in common with the concept of social capital and can provide important insights, particularly since its based on a proven research tradition. In fact, network analysis is an area of research that is well rooted in theory and uses research techniques and measurement tools that have been proven particularly useful in the study of social capital.

One advantage of network analysis is its potential application to address both individual and collective social capital, thereby capturing simultaneously the utilitarian and social integration value of the concept. In fact, in a network, the units that interact (the "nodes") can be individuals, groups, or organizations, and the research can address two levels:

- At the level of individual social capital, we can explore interpersonal relationships, that is, ties between individuals, or social participation, the ties between individuals and groups or organizations.
- At the level of collective social capital, we can explore the associative dynamic by focusing on the intra organizational ties as well as ties that exist among groups and organizations, within a community and beyond a community.

Another advantage of network analysis is its potential applications to investigating both the *presence* and the *functioning* of social capital. Two components of networks can be used to estimate the value of social capital: the *structural component*, which gives an idea of the presence of social capital by documenting the possibilities of access to resources depending on the relational structure within a social network; and the *transactional component*, which sheds light on the functioning of social capital and the resources actually produced and made available to social actors (Lévesque, 2004).

This aspect of networks also takes the analysis beyond resources and exchanges (the utilitarian aspect of social capital) to questions about the very existence of networks, relational skills, and conditions for social integration. In the following sections, we present a series of social capital indicators provided by the analysis of these two components of social networks, as well as a few simple and effective measurement techniques to develop these indicators. Appendix 4 contains a table of those indicators.

2.3.1 Measuring Social Capital Through Network Structure: Properties of Networks, Members, and Relationships

Network analysis has advanced a series of indicators used to provide an idea of the quantity and quality of social capital based on identifying certain structural elements of social networks. Measuring the social capital of an individual or a group does not mean attributing a value to all the resources that the members of a network can access. The emphasis is, rather, on those resources that are useful in a particular situation and that can be mobilized at a given time. Indirectly, then, the focus is on the *utility of specific resources* and their *potential accessibility.* In certain situations, the fact that several members of the same network possess the same resource does not increase the value of social capital of a member who needs this resource, as a single member is often able to respond to this need. In other situations, however, diverse sources reduce pressure on one source if the need is over a long term (e.g., in the case of social support, varied sources of assistance are vital). In other words, in some circumstances, the variety of resources is valuable, while in other situations, the variety of sources is more important. The utility of resources and their potential accessibility are the main criteria that inform the development of most social capital indicators (van der Gaag and Snijders, 2004a).

We shall limit our discussion to the most useful network structure indicators for the study of social capital for public policy use, specifically those network structure indicators that can be created without requiring a detailed analysis of social networks using graphs (see Section 2.3.3). For a much more extensive list of social capital indicators based on an in-depth analysis of networks, please consult Borgatti et al. (1998).

Properties of the Networks (Size and Density)

The first type of indicator of network structure pertains to the *properties of networks.* In fact, the morphology of a network generally presents

patterns that allow us to predict the possibilities of access or non-access to network resources. For instance, the work by Wellman (1979; Boase and Wellman, 2004) showed that the larger the network, the greater the chance of finding at least one member able to provide resource X. In addition, the larger the network, the greater the chance that several individuals possess the same resource, thereby avoiding the need to refer constantly to the same individual for resource X. This is especially important in the context of social support problems.[5]

Wellman has also demonstrated that the more the members of a network are interconnected (network density), the greater the chance the resources they exchange among themselves will be similar in nature. In a dense network, exchanges occur more easily and are better co-ordinated, although the accessible resource may be less varied. The inverse is true for networks with weak interconnections among members (Wellman, *op. cit.*).

In terms of collective social capital, Tilly (2003) in particular has relied on the number of organizations and on organizational density to estimate social capital in various territorial communities in the Netherlands and its effect on the political integration of immigrants.

Recommended indicators:

- **Network size:** For example, the number of people with whom we maintain different types of relationships (friends, family, acquaintances, neighbours, colleagues, etc).

  Hypothesis: The larger the network, the greater the probability that a particular resource will be available and accessible. Inversely, the smaller the network, the more isolated individuals are, the less access they have to resources to overcome difficulties.

- **Network density:** For example, the degree of interconnections among the members of a network.

  Hypothesis: The greater the interconnectedness between the members of a network, the more the network is closed in on itself (exclusive), and the more the resources circulated within the network are homogeneous (e.g., ethnic enclaves).

Characteristics of the Members (Diversity)

The second type of indicator of network structure pertains to the characteristics of the members of a social network. Studies by Lin and Dumin (1986) revealed a link between individuals' social position and the type of resources they possess. Following in the footsteps of their work, other researchers have expanded the series of indicators of a network's diversity, namely Erickson (1996, 2004a) who has included cultural variables, such as ethnic origin and gender.

The traditional bonding/bridging/linking typology also pertains (in large part, at least) to the degree of diversity of the members of a network and provides an idea of the type of resources that circulate within the network. The more the members of a network have varied profiles, the greater the chance that their resources will be diverse. Bonding relations refers to ties of attachment between relatively homogeneous individuals or groups; bridging relations refers to ties between relatively more socially distant individuals or groups; linking relations refers to ties between individuals or groups of different social strata. On the individual and collective scale, many studies have shown the need to strike a balance between bonding and bridging (CONSCISE, 2003; Germain, 2003).

Recommended indicator:

- **Network diversity:** For example, heterogeneity of the socio-economic status of the members or, the type of organizations (in the case of collective social capital).

  Hypotheses:
  a) Strong social homogeneity creates bonding relations that generally provides access to important resources to help respond to daily problems, allowing individuals to get by. In terms of groups, it is often associated with

5 Other studies have highlighted the negative effect of social isolation on health, including mental health and stress. It is noteworthy, however, that network size does not reflect objective isolation (not being socially supported). Indeed, several studies concur that subjective isolation (not feeling supported) can be just as problematic. Depending on the nature of the study, it can therefore be important to complement network size measurement with measurement of subjective isolation (see Appendix 5).

useful resources for launching a project, as it corresponds to a risky investment, which requires a great deal of mutual trust.

b) Weak social homogeneity creates bridging relations that generally provides access to useful resources that open the door to new opportunities, allowing individuals to get ahead. In terms of groups, it is often associated with openness to resources that are not generally accessible in the immediate surroundings and that help to strengthen and advance a project.

c) Heterogeneity in status can create linking relations which provides access to certain resources that individual or collective actors with power or authority have at their disposal, and which enable them to increase their power.

Relational Properties (Frequency, Intensity, Spatial Proximity)

The third and last type of indicator of network structure pertains to relational properties among the members of a network, which can also document the value of social capital. In terms of individuals, Granovetter's seminal early findings (1973) were very illuminating. They revealed that strong ties, characterized by frequent contact, emotional intensity, and mutual support, tend to be transitive, that is, they create dense groups in which members share the same affinities and, therefore, the same resources. Inversely, weak ties create bridges among groups and circulate "fresh" information or resources. Weak ties are a connection with the outside world (Erickson, 2004b). Not only are weak ties potentially important due to their number, but also because of their diversity, which creates possibilities for access to a variety of resources.

Burt (1992) also developed a strategic perspective by associating the value of non-existent ties ("structural holes") with possibilities of using new resources through the strategic position of certain network members ("brokers") who can serve as a bridge between otherwise isolated individuals or groups. These brokers may be able to leverage their strategic position as a bridge between groups to their advantage. Wellman (1996) added a geographic perspective by revealing the impact of spatial proximity on social capital.

Recommended indicators:

- **Relational frequency:** For example, the number and duration of contacts among the members of a network. In terms of collective social capital, we can measure the frequency of communication among groups and the number of networking activities.

  Hypothesis: Relational frequency and the number of contacts of individuals help to pinpoint their level of "sociability" and, therefore, their access to social capital. The same reasoning applies to groups.

- **Relational intensity:** For example, the strength and nature of a relationship in terms of emotional investment are different in the case of an individual with whom we discuss important matters than with a person we see occasionally and only know by first name.

  Hypotheses:
  a) The stronger the ties among the members of a network, the greater the chance that they will be disposed to exchanging resources requiring a significant emotional, financial, or time investment (e.g., direct support, emotional support, financial resources, etc.)

  b) Weak ties or ties that serve as bridges with other networks provide access to varied non-redundant resources.

- Spatial proximity of members: For example, members with whom we maintain face-to-face relationships on a regular basis.

  Hypothesis: The more ties occur on a level of geographic proximity, the more they contribute to social capital.

2.3.2 Measuring Social Capital Through Network Dynamics: Conditions for the Creation and Mobilization of Networks

The second aspect of social capital that benefits from network analysis is its functioning, that is, how networks are created, how they are transformed over time and how resources are produced and used to obtain specific results. Here, the degree of analysis is more advanced than the preceding, since it seeks to determine whether a network can effectively be activated when a network member is in need of

assistance. We are referring here to the dynamic component of networks which can be used to document the creation and mobilization of networks. In other words, it is not merely a question of determining how many people are part of a network or who they are, but also if they can and do co-operate when a need arises.

The dynamic component can be summarized as the study of the *conditions in which specific networks operate and are mobilized to provide members with access to certain resources:* co-operation, support, or capacity building. These conditions can be external to the network (the general context or a more specific context in which the network operates, the availability of complementary resources), or internal to the network (norms or rules for the functioning of the network, its evolution).

Mobilizing the Network

Even if the network is built on solid foundations, nothing guarantees that in a particular situation all the members will be in a position and willing to share or pool their resources, or to co-operate to create new resources that will benefit other members or the community. There is, therefore, a difference between the resources that belong to the members of a network and are *potentially accessible*, on the one hand, and the members' *willingness or ability to share them* (or to co-operate), on the other hand. Reimer (2002) has shown that there is almost always a gap between potentially accessible resources and those that are actually used. For example, in some communities, certain highly productive networks can potentially produce resources that far exceed the needs expressed by the population. In such cases, we would witness a social capital surplus relative to the actual demand. In other cases, we could witness a social capital deficit, that is a lack of resources in relation to need, or an inability to mobilize the social network: poorly defined needs, interference between supply and demand, temporary unavailability, competing demands, etc.

In terms of measurement, distinguishing between inert social capital and mobilized social capital creates a clearer path for public policy, which strives to enhance the individual and collective capacities of social actors to benefit from and produce social capital. Rather than evaluating all the resources that the members of a network possess and their willingness or capacity to make them accessible, another option is to focus on a series of more essential resources in the context of a public policy issue and to examine how this type of resource is circulated. For example, one could investigate how information on public health circulates within underprivileged communities.

Recommended indicators:

- **Conditions of access to resources:** Existence or absence of alternate solutions, feelings of dependence, difficulty in asking for help, evaluating the limits of the capacity to help, etc.

  Hypothesis: Several elements of the relational context affect an individual's capacity to access the resources within a network. The same applies to a group; a balanced relationship in terms of autonomy and dependence with regard to the network encourages productive and sustained relationships.

- **The gap between perceived resources and mobilized resources:** The anticipated support available from different areas (financial, emotional support, information, etc.) compared with the support actually received during a given period.

  Hypothesis: There is a gap between the perception of available resources and the resources that can genuinely be mobilized when the need arises.

Relational Skills and Conditions for Social Integration

Social capital also refers to the ability of individuals or groups to join social networks and sustain them. This is not simply a question of associating a "level of sociability" with potential access to resources, but rather determining whether, beyond positioning within the network structure, conditions exist that will promote the development of *relational skills* (the ability to forge ties) or, inversely, if there are elements that lead to *relational vulnerability* (difficulty with forging ties). Of course, personal characteristics largely determine individuals' preferences and the way in which they socialize and build their social networks (Negrón and McCarty, 2003).

But sociability is more than a state; it is also a *process.* All relationships have a history, they evolve and change. There are circumstances or times in the life-course when interactions are more sustained and exchanges are more fluid, but obstacles also exist that, at other times, hinder the proper functioning of these interactions. This would include periods of dependence such as illness, aging, or the loss of a job. It is not uncommon, for example, that ties with a network of friends become more fragile following a marital break-up, and it is difficult to mobilize them even though they are most needed during such a difficult transition (Charbonneau and Turcotte, 2002). The same applies to new immigrants who rarely call on their neighbours due to linguistic barriers, even though it is precisely upon their arrival in a new neighbourhood that they most need support. Other studies have showed that social vulnerability can occur in a more insidious manner, through stigmatization as a result, for example, of job uncertainty, such as being on unemployment insurance for a long period (Charbonnel et al., 1993, cited by Cohen).

Recommended indicators:

- **Measurements of relational skills:** Psychometric tests exist that can be used for this type of measurement. (See Appendix 6 for examples of their application.)

  Hypothesis: Certain social skills are necessary to create and maintain interpersonal relations.

- **Measurements of support offered or received in relation to significant life-course events:** Source of support, type of support, intensity and duration in relation to events, such as illness, job loss, bereavement, birth, marital break-up.

  Hypothesis: Life-course events are the first circumstances under which individual social capital is mobilized.

- **Measurements of social network change in relation to major life-course events:** Perceived change in a personal network subsequent to various events, anticipated network change in coming years.

  Hypothesis: Life-course events are a major source of change in the make-up of an individual's personal network.

Similar dynamics can also be observed at the level of collective social capital. Networks of groups and organizations also have a relational history that affects the possibilities for creating and mobilizing resources at different stages of the collective project. For example, Charbonneau's study (2005) shows that when a group network is formed on the basis of pre-existing informal relations, projects have a greater chance of success. Moreover, a relational history helps to prevent interpersonal conflicts, which are a major cause of network failure (*ibid.*). The CONSCISE project (2003: 87) clearly illustrated the influence of social capital

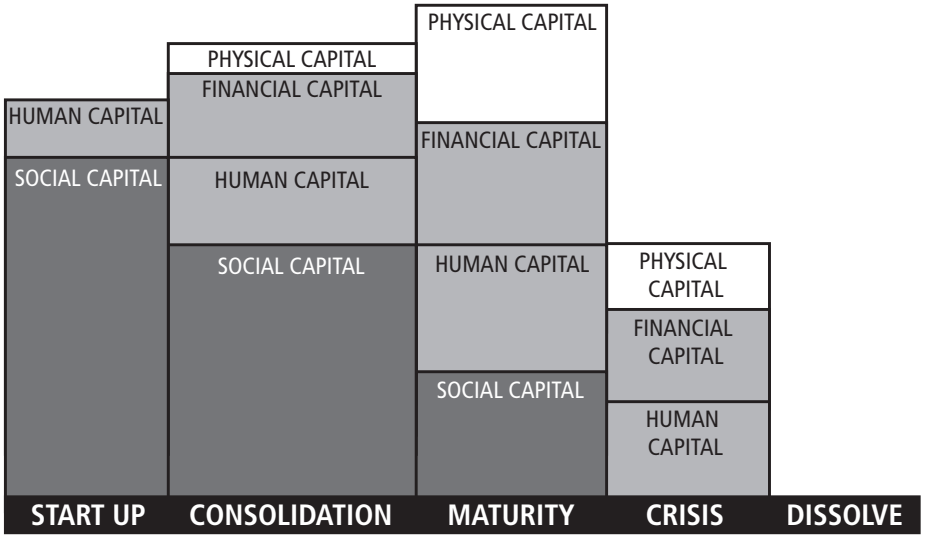

Figure 2. Social Capital in the Capital Mix: One Possible Development Trajectory

at various points along the trajectory of collective projects; without social capital, these projects have difficulty overcoming periods of crisis and tend to dissolve.

A judicious choice of respected and experienced representatives from the community to participate in the negotiation process is a condition that enables a group to integrate properly into a group network and play an active role. Establishing a process that ensures the rapid integration of new representatives can also contribute to network stability. The importance of pivotal individuals or intermediaries who can act as mediators in certain situations is essential, particularly when the convergence of different organizational cultures runs the risk of creating tensions and damaging the co-operative undertaking. Last, reference tools for building healthy relations among network members are a major asset.

Recommended indicators:

- **Measurements of relational stability related to major stages in a collective project:** The existence of prior informal relations between representatives; experience of representatives recognized by the community; integration process for new representatives; presence of intermediaries during the negotiation process in relation to project start-up and the stages leading to maturity, including periods of crisis.

  Hypothesis: Certain key stages in the development of a collective project require the collaboration of experienced individuals with good relational skills to facilitate co-operation between groups.

- **Development of reference tools to facilitate intergroup relations:** Definition of shared operational principles; communication and decision-making protocols between groups; establishment of tools to ensure the updating and dissemination of information pertaining to the network's activities, etc.

  Hypothesis: Recourse to good communication tools and support tools for collaboration facilitate co-operation between groups.

Norms and Rules Internal to the Network

Norms and rules are the social network's internal conditions that provide some understanding of the parameters within which social relations occur, the basis for exchange and the conditions for creating and circulating resources. Multiple and complex norms and rules govern social interactions. Technically, a typology of the rules of exchange based on concepts of reciprocity, symmetry, equality, transitivity, etc. can help to distinguish different forms of exchange and help to understand how different networks operate (Hum, 2004). Rules can also be addressed from different angles. For example, in group networks, decision-making processes and methods of operation differ depending on whether the network takes the form of a joint-action structure, partnership, or coalition. Consequently, the manner in which social capital is deployed and operates may vary as a function of democratic elements, such as the degree of horizontal relations, leadership style, relationships of authority, the voluntary aspect of member participation, and the level of control over issues.

Norms are more implicit and subjective than rules of exchange and, as a result, are fairly difficult to study. Norms often refer to cultural and ethical dimensions of social relations among network members. Social capital research has put a lot of emphasis on the importance of trust and a sense of belonging (or identity) as fundamental norms of social capital; however, depending on the circumstances, other norms may be more important. For example, the Australian analytical framework for social capital identifies sense of co-operation, tolerance (of diversity) and social inclusion as the most revealing norms of social capital. For group networks, other norms include the degree of openness to players outside the network, the compatibility of organizational cultures, the shared vision of the mission (group networks are directed toward a goal) and the respect and recognition of the contribution of each member (Charbonneau, 2005).

The role of norms in social capital is also complex. For example, several studies view trust as a precondition for the creation of networks and the circulation of resources, while all of the research inspired by Putnam considers it a product of social relations. Is trust a determinant or a result of social capital? At the international level, there is no consensus on this point (Kelly, 2003), and many have dismissed it as a tautology. However, as discussed previously, a network-based approach, allows us to clarify the place of norms in the analysis of social capital. Charbonneau (2005) has pointed out that it is precisely the dynamic aspect of social interactions that permits us to consider certain social norms (such as trust) as both a necessary condition and a product of social capital. Over time, a relational dynamic can indeed strengthen or weaken the trust that existed between social players from the outset. In this sense, taking norms, such as trust, into account in the study of how networks operate can be very enlightening, *as long as it is not limited to an oversimplified approximation of the existence of social capital.*

Recommended indicator:

- **Norms and rules internal to the network:** For example, the quality and democratic dimension of interactions; openness and respect among players; a shared perception of the issues; trust in the contribution of each network member.

  Hypothesis: Certain norms and rules allow social capital to operate at its full capacity.

The Context in which Social Capital Operates

Social networks operate within relatively stable *structures or institutions* (political, legal, cultural, social) that enable a shared vision and understanding of issues and adopt specific ways of confronting them. Whether it is through formal institutions, such as laws and policies, or through more informal mechanisms inherited from social practices, different institutional arrangements affect the flexibility of social networks with respect to various socio-economic issues. The broad context in which networks operate is important to consider when making a comparative analysis of social capital, particularly at the national level. At the sub-national level, the cohabitation of different cultures, for example among Aboriginal peoples, also produces institutional frameworks that shape social relations and can have a significant influence on how they are used to create social capital. Recent work by Matthews and Côté (2005) on the role of social capital in Aboriginal community policing clearly illustrates the difficulties that ensue when an organizational structure (police department) is imposed on a culture that operates on the basis of other institutions (Aboriginal community).

Institutional arrangements vary on several scales and influence the way in which social capital is put to work in different communities, as clearly demonstrated in the findings of an extensive research project on the rural economy in Canada (Reimer, 2002). The study of 19 observation areas showed that social capital manifests itself in very different ways depending on prevailing institutional arrangements. For example, in certain rural communities, social capital tends to exist primarily within market-based relations (trade relations, market institutions) while in other communities it circulates primarily within bureaucratic relations (hierarchical relations, government structures).

Local context can also have a profound impact on how social networks operate. Several studies address social capital at the neighbourhood level, where relational practices are deployed in the concrete setting of daily life and social relations play themselves out in a visible manner. The neighbourhood level is not simply a portion of society; at this level, certain dynamics come into play, related to certain "place effects" (Germain, 2003). For example, phenomena such as spatial concentration, neighbourhood stability, and residential homogeneity are important determinants in the functioning and, indeed, creation of certain social networks (Atwood, 2003). Sometimes, residential stability contributes to creating ties, for instance, between neighbours; at other times, residential instability acts as a source of tension in a neighbourhood, leading to the creation of intervention networks.

Institutional structures also influence the very process of social network creation. In fact, through various life-course stages, individuals gradually come into contact with other individuals, first within the family, then the neighbourhood, school, workplace, and in the context of various leisure activities. In countries with a developed welfare state, the government plays an important role in establishing the conditions that promote the emergence and functioning of certain types of "informal" networks. In free market societies, commercial interests influence the creation of other types of networks. In most countries, schools are probably one of the most important institutional frameworks in the creation of personal networks. The post-secondary years are a particularly fruitful time for fostering interpersonal ties that can be mobilized later on, during a professional career. Indeed, some hypothesize that within "weak ties," which are often perceived as the most effective for career advancement, lay latent "strong ties," first created during university years (Charbonneau and Turcotte, 2002). A genuine dynamic analysis of the evolution of networks could verify this hypothesis.

Recommended indicators:

- **Institutional structures and arrangements:** For example, joint action policies, lobby groups, organizational structures, specific methods of co-operation, etc.

  Hypothesis: Certain local, regional, or national conditions are conducive or non-conducive to the creation and functioning of productive social networks.

2.4 Tools to Measure Social Networks and Examples of Their Application

Very sophisticated methods exist to conduct detailed studies of social networks using cartographic methods. Maps illustrate ties and their intensity, the direction of exchanges, the types of resources exchanged, etc. Often, these studies are conducted using sophisticated software based on mathematical graph theory. Mapping networks, however, serves primarily to illustrate the different types of networks observed, and much of the analysis of areas of interest to government can be conducted using simpler methods. In fact, it is possible to provide relevant analyses of networks by analyzing statistical survey data using software like Excel or SPSS. The development of longitudinal surveys has, however, made the processing and analysis of network data more complex.

Since the 1990s, several new tools to measure social networks have been developed that can be applied to government research on social capital. The name generator, context-based generator, position generator, resource generator, or the technique developed by McCarty et al. are instruments that can generate relevant data for several types of research while being flexible enough to adapt to various types of investigation, from large-scale surveys to more qualitative analyses. While these tools have been used primarily to study individual social capital, they can certainly be applied to study collective social capital, where relevant.

In this section, we present these tools, highlighting their basic principles, the types of studies for which they can be used, typical research questions, and their advantages and limitations. This is not an exhaustive analysis, but rather an illustration of how it is possible to conduct a rigorous investigation of social networks without having to resort to very complex methods.[6] Depending on research objectives and available resources, some of these tools, in their original version, may be appropriate. However, it is important to keep in mind that simplified versions can always be developed based on their principles. Ultimately, the research questions determine the level of detail that must be collected by identifying the most revealing aspects of the network.

6 For a more detailed review of name, position and resource generators and a comparison of their performance, see the study "Social relations and networks in the neighbourhood and at the workplace : the Social Survey of the Networks of the Dutch" 1999-2000 (Volker and Flap, 2004).

The Name Generator/Interpreter

This technique, based on the Small World Theory, can be used to investigate certain details of the relationships individuals maintain with members of their network. It is commonly used in qualitative research on social networks, but several surveys have also employed this method. For example, the US General Social Survey on Social Networks, the Wisconsin Longitudinal Study[7] on youth networks, and the German Socio-economic Panel (1985 – 1993) all use this technique to paint a portrait of the interactive network and the significant individuals identified by the respondents. The technique involves the use of two tools, the name generator and the name interpreter. The first tool is used to identify members of a network of family or friends based on various selection criteria. Some researchers will choose individuals with whom the respondent discusses serious matters (McCallister and Fisher, 1978), but other criteria may be deemed important, depending on the research question. A typical name generator question is:

- ✧ Who are the individuals (or representatives of organizations) with whom you have discussed issues of importance (to you or your organization) over the last six months?

The name interpreter then uses the information collected to explore certain properties of individuals and relationships: characteristics of members, type of relationships with members, quality of the relationships, ties between network members, etc. A typical name interpreter question is:

- ✧ Thinking about the relationship you have with the individuals you just mentioned, how long have you known (NAME 1)?

There are several versions of these tools, which are generally adaptable to the study subject, and they come with abundant literature on their performance. Appendix 7 provides an adaptation of the name generator drawn from the US General Social Survey on Social Networks.

This method of measuring social networks offers great analytical potential for research on strong ties, for example issues of *social isolation or support*. Since this approach does not emphasize resources as such, or peripheral relationships that often create social capital, researchers tend to combine several techniques of network analysis. For example, to study the role of social networks in providing access to employment among long-time welfare recipients, Lévesque and White (2001) used three name generators: the first (a) to reconstruct the network of social relationships, the second (b) to reconstruct the network of employment relationships, and the third (c) to reconstruct the organization network:

- ✧ (a) Over the last year, whom did you do small favours for (list of examples)?
- ✧ (b) Who are the individuals you think could help you find a job?
- ✧ (c) When you are facing personal or family problems, or difficulties related to housing, food, clothing, unemployment insurance, workers' compensation, or welfare, which organizations do you tend to turn to for help?

In New Zealand, King and Waldegrave (2003) studied a similar issue among disadvantaged segments of the New Zealand population. They combined the name generator and position generator (see below) techniques as well as biographical analysis. This combination of techniques enabled researchers to reconstruct the respondents' network and to identify obstacles faced by respondents when they tried to mobilize their network to find a job at different life-course stages.

The name generator technique can be quite time-consuming to use in a survey (approximately 15 minutes to study relationships between the respondent and three members of her/his network), and increase respondent burden. Research is ongoing on this tool to try to improve its performance. In a recent article, Marsden (2003) discussed the state of the research and the use of survey tools for

7 The Wisconsin Longitudinal Study looks at the life-courses and social relations of American adolescents over the course of their transition to adulthood <http://www.ssc.wisc.edu/~wls>.

studying networks. In particular, he looked at the effects of tool design, different methods for developing tools, issues related to respondents, and other bias.

Context-Based Generator

The context-based generator can be used to examine networks in terms of the real-life contexts within which relationships among members are conducted. It was developed in the 1990s by researchers from the *Laboratoire d'analyse secondaire et de méthodes appliqués à la sociologie* (LAMAS) as part of a survey on the social and occupational integration of young people during their transition to adulthood (Bidart et al., 2002). Based on this approach, a Quebec team of researchers developed a simplified version of the tool that they tested in three studies now underway in Quebec (Charbonneau and Bourdon, 2004).[8]

The approach begins with applying a name generator using an initial question combining Wellman's (1979) and McCallister and Fisher's *(op. cit.)* technique, to identify the most significant persons in the network: those the respondents feel are closest to them *and* with whom they discuss important matters. Subsequent questions identify other persons present in different current life contexts (school, work, leisure, groups of friends, neighbours, etc.) with whom respondents maintain a relationship that is different from all other contacts within those contexts. It is also important to identify persons in the network who come from past contexts. Twenty or so contexts can be used based on their relevance to the study subject.

The benefit of this method is that it allows a systematic identification of network members. Once all the first names of network members have been identified in reference to pre-defined contexts, a set of information can be obtained on the members, the actual relationship between the respondent and the members of his or her network, and the groups and circles those individuals belong to. Several questions on members' support capacity can be asked to ascertain the individuals the respondent feels would be likely to provide support in various circumstances.

This approach gives a very complete picture of an individual's significant network and support networks. In terms of social capital, this portrait is very useful for identifying a multitude of relational issues that require more accurate knowledge of a network's composition and functioning than the other generators (below). It opens up the possibility of a more in-depth investigation by adding other questions on the characteristics of the network members, the circumstances of their meeting, the duration and quality of their ties, and members' support capacity. In fact, the context-based generator is one of the few tools that provide an accurate evaluation of the density of the network as well as the contexts in which it is used. This type of information is relevant for *epidemiological research* (contagion networks), or *awareness policies* geared toward a target population in specific places (such as the study on gangs). The technique can be especially useful for *research on new social groups.* Questions on the perception of available resources can determine exactly who within the network provides access to given resources, which can be identified based on the type of survey. Given that the entire significant network is inventoried, it becomes possible to identify if there are several sources of assistance or if it is always the same individuals who are called on for help. It is also possible to identify the source of help (neighbours, weak ties, immediate family, etc.). In short, the context-based generator is a tool that is likely just as time-consuming as the name generator, but it does provide a considerable number of research avenues.

Position Generator

The position generator makes it possible to estimate the potential diversity of resources within a network by investigating weak ties

8 Charbonneau, J. Presentation on the context-based generator to the PRI, Ottawa, March 10, 2005. Professor Charbonneau can be contacted to obtain further information on the tool being used in the three Quebec studies.

(or peripheral relationships). This technique was employed in Canada for the 2000 Canadian Election Study as well as in several research projects. The tool involves a series of questions on "weak" ties with individuals from diverse socio-professional backgrounds who, in theory, possess equally diverse resources. Occupations are selected (15 to 30) on the basis of a prestige scale reflecting potential accessibility to diverse resources. The main position generator question is:

- ✧ Do you know someone in the X profession?

Individuals belonging to wealthier, more diversified networks also possess wealthy and diversified social capital. This technique is commonly employed to investigate questions related to *stratification and social mobility* (e.g., for job searches). Different versions of the tool can be adapted to research interests. For example, to conduct a gender analysis, a question on the sex of the network members can be added, or to study change over time, the tool can be integrated into a panel survey. In British Columbia, Enns et al. (2004) developed a version of this tool that distinguished weak ties with individuals in given communities from weak ties with individuals in other communities, to better understand the structure of access to resources in isolated communities. Furthermore, the position generator is a simple and rapid tool (about two to three minutes) that can generate a lot of useful information for social capital research. Appendix 8 presents the classic position generator as developed by Nan Lin, while Appendix 9 presents a version of the tool adapted for the Canadian context by Erickson (2004c).

Resource Generator

This technique, developed by Dutch researchers (Martin van der Gaag and Tom Snijders), questions respondents directly about the *types of resources* they can access within their extended networks. The main resource generator question is:

- ✧ Do you know someone who can potentially give you access to type X resources?

This tool is relatively flexible, since the selection of resources can cover a *wide range of problems:* prestige and knowledge resources, information resources, skills and abilities resources, social support resources. In addition, this tool is based on the concept of plausible access to resources by specifying, in the preamble to the question, that the relationships in question must be "strong" enough that the respondent knows the name of the individuals and occasionally sees them. By specifying the level of intensity of the tie, the resource generator *only identifies ties that can be mobilized*, that is, ties with individuals who would likely provide access to the resources in question. The resource generator is more time-consuming than the position generator, but has the advantage of providing a more in-depth investigation of a wider variety of problems. The challenge is to develop the tool in such a way as to ensure that the most useful resources are included in the list (van der Gaag and Snijders, 2004).

While several social surveys, including Canada's General Social Survey, already use certain questions contained in the resource generator, such as questions on social support, none uses the technique in its entirety. Yet, this method offers an interesting perspective on the resource network that makes it possible to determine if a person's particular network structure has a protective function, such as support resources. The Social Survey of the Networks of the Dutch 1999-2000 is the only survey to our knowledge that has tested this tool (Appendix 10). Appendix 11 presents a version of the resource generator adapted to the Canadian context by Boase and Wellman (2004). It is important to point out that the resource generator can also be enhanced by adding questions about resources actually received under specific circumstances. The difference between anticipated resources and resources received helps to diagnose the problems related to resource mobilization (Charbonneau and Turcotte, 2002).

The McCarty et al. Technique

This simple technique, which has been used in several surveys, can evaluate individuals' access to social capital on the basis of the size, diversity, and density of their network without using a generator. In Canada, it is being employed in the *Pew Social Networks Study* led by researchers at the University of Toronto who are trying to determine the role of

the Internet in the creation of social capital (Boase, 2004). The technique uses a set of simple questions to prompt respondents to provide an inventory of their social networks. These questions include the number of social ties, based on intensity, from very close to fairly close. According to McCarty et al., this provides a sufficiently accurate approximation of the size of the network. The respondents are then asked to classify their ties by category: close family, extended family, neighbours, work, social group, etc. To make this inventory process easier, the respondents can write down the names of people that come to mind and refer to them to answer questions but do not have to name the members of their network as such. For very close ties, the main question is:

- ✧ Among the people with whom you have very close ties (including those with whom you discuss important matters, see regularly or would readily turn to for a favour) how many are a) close family; b) extended family; c) neighbours, etc.?

The question is then adjusted to examine fairly close ties. Note that this tool is *not adapted to study weaker ties*. Experience has shown that respondents cannot clearly recall less frequent contacts. Questions pertaining to network diversity and density are organized according to the type of tie. For example, questions may pertain to sex, occupation, or ethnic origin of the network members. The question takes the form:

- ✧ When you think about the individuals with whom you have very close ties, how many of them are a) from the same ethnic background as you; b) the same sex as you; c) etc.?

Network density is measured by asking questions about the proportion of individuals in the network who know each other, always distinguishing between strong ties and weak ties. Appendix 12 provides an example of the application of the McCarty *et al.* technique, adapted to the context of Canadian studies by Boase and Wellman (2004).

Part 3: Possible Methodological Strategies for Studying Social Capital in a Public Policy Context

3.1 Quantitative Research on Social Capital

This section presents some of the quantitative measurement tools being used or that are potentially useful for the application of the concept of social capital to Canadian public policy objectives. Most of these methodologies are relevant for research, particularly policy research, but can also be used more broadly to develop and evaluate programs or projects. This is followed by a presentation of qualitative measurement tools that can also potentially be used to study social capital (Section 3.2). Any of these tools can employ the social capital indicators recommended in the previous section.

3.1.1 Statistical Data on Social Capital

An inventory or statistical integration approach is generally used in the economic sector, particularly to provide data for national accounting purposes. In principle, data are produced that complete other sources and, combined, shed greater light, for analytical purposes, on a particular phenomenon. In the case of social capital, we saw, in the first part of this document, how a similar approach was employed by the United Kingdom's Office of National Statistics to produce a data matrix on social capital. This idea was adopted in several countries, including in Canada where Statistics Canada compiled such a matrix. The document *Measurement of Social Capital: The Canadian Experience* (Norris and Bryant, 2003) is a very useful tool for identifying the content of statistical surveys available in Canada that produce information related to social capital. Indeed, Statistics Canada has produced a dozen surveys containing useful information on social capital.

In a recent article, Healy (2003b) has presented, in greater detail, a few examples of major national and international European studies of potential interest for social capital research. Most of these studies contain data on what they call "social capital at the community level," that is, formulated in terms of social and civic participation. These studies appear to be more interested in the propensity of individuals to participate in collective action, thus social capital as an end in itself, than in the contribution of social capital to attaining specific results. Moreover, very little attention was paid to other types of social capital, namely, family networks and work relationships, two major areas of importance in terms of sources of sociability and support.

In Canada, the survey by Norris and Bryant (2003) revealed a similar situation: the investigation of social ties in Canadian studies provides only a very sketchy idea of the composition of an individual's social network. As in the case of the other major studies surveyed by Healy (2003), the Canadian studies virtually ignore social relationships in the workplace, as well as other relationships beyond family or close friends. Yet, as more and more time is devoted to work compared with other activities, work colleagues will become an increasingly important source of daily support. The extension of the social network to the workplace may be positively associated with general well-being, occupational mobility, job stability, and several other benefits. Research has even shown that a higher level of social support at work is associated with reduced mental illness (Fuhrer et al., 1999). In short, while social networks may be recognized as an important element, whatever the approach to social capital employed, their measurement has been accorded little attention to date.

3.1.2 Social Capital Indexes

The index approach requires prioritizing the data to be collected so as to create indicators of an essential aspect of the phenomenon to be measured. These are then compiled to create indexes or a scale. In principle, there must be a theoretical link between

the indicators, but a statistical link is not required. In other words, empirically, the indicators can be independent of each other (van Tuinen, 1995). It is important to note, however, that in terms of social capital, several studies have shown that there are coherent empirical links between various dimensions of social capital (Onyx and Bullen, 2000). The index approach is appealing because it opens up the possibility of a comparative analysis in time, space, between groups, or in relation to benchmarks. This method is generally used to generate information on social trends or to evaluate the impact of public policy. For example, for Putnam, one research priority for social capital is to develop typologies of social capital so as to outline theoretically coherent and empirically valid dimensions according to which social capital should vary. He has established, along with the *Saguarno Seminar*, the *Social Capital Community Benchmark Survey*, which has enabled him to create social capital indexes to evaluate community experiences and monitor their evolution through time in relation to a baseline. Eleven indexes have been created for what is considered social capital in this project, namely, trust, political engagement, donations and volunteering, religious engagement, informal socialization, participation in associations, civic leadership, diversity of friends, and civic participation. Each community receives a rating (high, average, or low) on the social capital index for each of the dimensions evaluated so they can be compared.

In Australia, pioneering studies by Onyx and Bullen (1998) are often cited as examples of social capital indexes created on the basis of eight dimensions related to the concept (see Appendix 13). Closer to home, research in Canada by Matthews (2003) on coastal communities in British Columbia and the work by Reimer (2002) have also led to the development of social capital indexes.

While this type of measurement establishes a reference point for the purposes of comparison, its disadvantage lies in the difficulty of choosing the most representative indicators of the phenomenon being documented. In short, it comes down to definition: what dimensions of social capital are the most important to measure? For example, a social capital approach based on social networks proposes indicators, as noted in the second part of this document, that are substantially different from those used in a participation-based approach to the concept.

Grouping several dimensions of social capital together into an index runs the risk of eliminating the very substance of the concept. In fact, all the elements that characterize the nature and functioning of social capital are reduced to a single value, which no longer has the explanatory power of an independent variable. The research report from the *Contribution of Social Capital in the Social Economy* (CONSCISE, 2003) project concluded that the development of a capital index had little policy value, as it revealed nothing about how social capital is created and used.

3.1.3 Special Survey on Social Capital

The special survey is based on the formulation of a main question that we are attempting to answer by creating a micro-data file describing as many different aspects of the study subject as possible. In Canada, the only survey of this type on social capital is Cycle 17 of the General Social Survey, *Social Engagement in Canada.* In terms of analysis, the thematic survey approach establishes links between variables (correlation/regression/ multivariate analysis, etc.) or identifies specific manifestations of social capital among certain segments of the population (typological analysis). To maximize the analytical potential of these surveys, it is necessary to collect a large quantity of variables, use a good sample and obtain a high response rate for each variable, which is obviously an expensive undertaking. Some compromises can be made, including prioritizing the investigation of certain aspects of social capital or using simplified tools, such as the three generators presented in Section 2.4.

Opting for a more in-depth examination of certain aspects of social capital means leaving other dimensions aside. In the case of the *Social Engagement in Canada* survey, the main question selected focused primarily on the presence of social capital rather than on its contribution in specific areas and, consequently, it tells us more about the determinants of social capital than its effects. The concept is therefore primarily understood as a dependent variable. Furthermore, technical considerations (survey

time and burden on the respondents, reliability and simplicity of the questions, comparability with other surveys) have tended to favour examinations of the participation dimension of social capital rather than encompassing several other dimensions, thus limiting the investigation of social networks. Some researchers interested in expanding empirical knowledge of social capital in terms of social networks and public health have recognized this limitation in their recent analysis of the data from Cycle 17 of the GSS (Bouchard and Roy, 2005).

The International Social Survey Program (ISSP), which includes the US General Social Survey, highlighted the social networks theme in the 1986 and 2001 cycles. It opened the door to an in-depth examination of certain types of interpersonal relationships (loved ones), network size and composition, and resources available according to the respondents' type of network (2001 version). The survey used two network analysis tools: the name generator and the name interpreter but other tools could easily have been considered to improve the survey such as the use of a position generator to provide a more complete picture of the respondents' social networks by also documenting weak ties. The Survey provided a good idea of how resources circulate within the network of family and friends; but, as with Canada's GSS on social engagement, it did not document a specific issue, such as the contribution of social capital to improving school performance among youth, for example, or its role during certain family transitions.

3.1.4 The Insertion of a Standardized Social Capital Module in Thematic Surveys

Thematic surveys focus on a strategic question in relation to a target population or area in order to generate information on a fairly specific research or policy question The social capital dimension can be covered by including a module of questions on the dimensions that one is seeking to tie to the survey topic through statistical analysis. The main challenge in developing such a module is identifying the questions that best define social capital. International efforts along these lines by the Sienna Group recently led to the proposal of a standardized module to measure the main dimensions of social capital, as they understand the concept (see Appendix 2). This proposal is largely based on the work of the United Kingdom's Office of National Statistics which, that, since 2004, has included in the General Household Survey a 20-minute set of questions on social capital (Green and Fletcher, 2003). Australia is also planning on doing the same with its General Social Survey (2005-2006) and the Voluntary Work Survey (Hall, 2004). In the first two cases, the content of the social capital module is based on a participation view of social capital and mainly includes questions on individuals' social and civic participation. The proposed modules contain few questions on social networks.

It may be useful to develop a specialized module on networks and include it in several large national thematic surveys. This would not necessarily entail creating social trend indicators related to how networks are used in certain situations, but rather documenting certain processes to inform public policy. The production frequency of such data would not have to be as great as for other studies examining the progression of a certain issue. Individuals' social networks tend to be fairly stable through time, outside of major life transitions (which can be documented through retroactive questions). Consequently, it would be reasonable to think about including a network module in surveys on a quadrennial or quinquennial cycle without undermining the usefulness of data for public policy purposes.

In Canada, the following transversal surveys would be valuable tools for the inclusion of a social capital module:

- General Social Survey (including the five-year time use cycle which is particularly useful for the study of social capital);
- Canada Survey of Giving, Volunteering and Participating;
- Canadian Community Health Survey;
- Ethnic Diversity Survey; and
- Adult Literacy and Lifeskills Survey.

Including a module on social capital in major thematic surveys opens the door to a more detailed examination of the relationship between different forms of social capital and specific policy issues. For instance, the above-mentioned surveys could explore the role of social networks in time use, social engagement, health, tolerance to diversity, and

education, as well as relational skills or conditions of access to resources. Another option would be to apply a social capital module to a sub-group of a survey population to better understand how social capital operates in specific cases. In Canada, the General Social Survey on aging and social support (cycle 16) examines a number of dimensions of the support network of older adult aged 65 and over. The following population sub-groups could be considered for an application of a social capital module:

- newcomers;
- ethnic minorities;
- Aboriginal communities;
- at-risk youth;
- individuals with activity limitations or a chronic illness; and
- individuals in vulnerable situations (single parents, living in poverty, looking for work).

The sub-group can be selected on the basis of a main questionnaire and administered during an interview or within a subsequent interview. The following section illustrates how it is also possible to combine a qualitative module with a quantitative survey, a particularly valuable approach for understanding certain more dynamic aspects of social capital. Last, it is important to note that this type of module can be especially useful in longitudinal surveys, by opening up the possibility of exploring the functioning of social networks as well as assessing their contribution to key issues (causal relationships). Longitudinal surveys tend to target population sub-groups of particular interest for public policy.

In Canada, the Longitudinal Survey of Immigrants to Canada already contains a module on social networks. Among existing longitudinal surveys, the following are interesting candidates for the inclusion of a social networks module:

- National Longitudinal Survey of Children and Youth;
- Youth in Transition Survey;
- Survey of Labour and Income Dynamics; and
- National Population Health Survey.

If these surveys cannot be modified, it would be possible to examine the dynamic aspect of networks by using certain simple techniques, such as the introduction of dynamic variables, which provide some indication of the meaning of the causality, for example: "Did you do action X because the people around you encouraged you to do so?" It would also be possible to encourage the increased use of retroactive questions by using the telescoping method, for example by questioning the respondents about past situations in which they called on their networks.

3.1.5 Longitudinal Survey Incorporating Social Capital

Public policy research is turning increasingly to the analysis of complex, longitudinal, and integrated data to understand the trajectory of individuals and families, as well as the interdependence of various aspects of their lives. Health, work, education, culture, family, and social networks are all interrelated; the time, effort, and individual and collective resources invested, as well as the conditions that affect one domain of our lives, necessarily influence the other life domains. Few statistical surveys are able to meet the challenge of integrating multiple issues from one end to the other of a person's life trajectory. Yet, public policy is increasingly required to take into account these realities when adapting interventions to individuals' concrete situations.

The study of social capital has not escaped the call for an intersectoral approach. A better understanding of the contribution of the social capital of individuals (or groups) to various aspects of their lives, and at different times, will help to optimize the choice of interventions. It would be ideal to have a versatile tool that could monitor the functioning of social networks through time and understand how and why they are activated (or not activated) in specific situations, so as to shape public policy accordingly.

A team of Quebec researchers led by Professor Paul Bernard (Université de Montréal) has created an innovative survey tool that could be very valuable for measuring social capital (Bernard, 2004). *The Socioeconomic and Health Integrated Longitudinal Survey* (SHILS)[9] suggests following a panel of

9 The SHILS ("ESSIL" in French) site is at the following address: <http://www.socio.umontreal.ca/essil/Racine>.

households by examining the interaction between various themes related to health, economic security, knowledge acquisition, and family and social life. The tool emphasizes life transitions and adopts an approach based on the resources that individuals mobilize to move through various life stages and carry through their projects. These resources include government and the market, as well as solidarity networks built around families and groups. The importance placed on the social networks theme within longitudinal surveys represents a major innovation.[10]

On the technical level, the survey contains an annual common core and a biennial and quadrennial rotation of modules that are added to collect more in-depth information on various themes. This cycle-based approach helps to lighten the process for respondents. A specialized module on networks (see Appendix 14) can be activated for certain events: birth, marital break-up, job loss or search, a move, illness, death, and so on, to analyze when and how individuals turn to their networks in certain situations. With a longitudinal approach, it is also possible to monitor changes in the network caused by certain life events. The quadrennial module enables more in-depth specific questioning on conditions of access to resources, anticipated changes in the network and relational skills.

3.2 Qualitative Research on Social Capital

3.2.1 Applying Qualitative Methodology to Statistical Surveys

Several statistics agencies are beginning to introduce qualitative methodology to statistical surveys. For example, in the *Finnish Survey on Quality of Life in the Workplace*, a sub-sample of the population surveyed was selected to answer a series of open questions designed to provide a more in-depth look at certain aspects of this theme (Statistics Finland, 2000: 15). The qualitative component can be incorporated into the survey and activated following a specific response by a respondent (as in the SHILS proposal) or at a later time, along the lines of a post-census survey.

This technique helps to better interpret quantitative data or open up avenues with respect to the direction of certain causal links. It can also be used to explore new phenomena for which there are no strong hypotheses or to clarify more complex dimensions of concepts that are difficult to translate into quantitative indicators. The concept of social capital could benefit from these types of investigative techniques, particularly to clarify issues such as:

- times when individuals activate their networks of relationships;
- informal rules for the circulation of resources within the network;
- the consequences for ties when they are activated to mobilize resources;
- obstacles encountered when activating networks; and
- reasons for changing network composition.

3.2.2 Social Capital Case Studies

One main value of case studies in social capital research is that they can be used to study manifestations of social capital in specific situations or contexts, by combining various methodologies. Consequently, case studies are not a methodological choice but rather a choice of study subject. The case study approach is based on the belief that these cases will lead to a more in-depth understanding of a phenomenon where other sources of information are less illuminating. Case studies are one of the best approaches for capturing the impact of context-related elements on the functioning of social capital.

Case studies can be particularly useful for studies of collective social capital where it tends to be difficult to collect information using traditional surveys. Typical questions include the following.

- What types of collective networks prevail in the community? Bonding versus bridging?
- Formal partnership versus informal relationships? Institutional arrangements?
- What are networks' relationships with groups outside the community?
- What groups are included in/excluded from these networks?

10 A series of thematic reports (physical and mental health, education, work and income, time use, family, and networks) linking the various issues is available on the Internet site.

- What types of interventions or actions are carried out by these networks?
- What is the capacity of these networks to address one or more specific issues?
- How do these networks create or provide access to resources or new opportunities (limitations and potential)?

Recent research by Schneider (2004) in the United States is an example of a case-study approach to the study of collective social capital. The study shows how individuals and community groups draw on resources within social networks that extend well beyond the geographical boundaries of neighbourhood or community. The study focused on four US cities and revealed how public services can facilitate or hinder the development and productivity of these networks. The researcher documented cases by combining several methods. Statistical data were used to draw a socio-economic profile of each community in the study. An ethnographic analysis was performed to identify the effects of successive local development strategies that have been implemented over time in each city and, last, interview material was used to analyze the way in which resources are created and circulated between groups and individuals.

This type of case study offers relevant intervention strategies for general public policy even though the conclusions are based on specific cases. For example, the study revealed that community projects or programs that target the entire community rather than a specific population have a greater chance of creating bridging ties between individuals in the community. Similarly, projects that transcend the community's borders benefit from being able to draw on external resources. The project points to other implications in terms of collaboration between partners.

3.2.3 Meta-Analysis of Social Capital

Meta-analysis involves bringing together data from comparable studies and analyzing them using appropriate tools. An "analysis of analyses" can be conducted using statistical methods, but qualitative methodology can also be used. This method involves grouping together relevant studies that seek to answer a specific question and generate new knowledge, unattainable through individual studies.

This approach is of particular interest for bridging the gap in data on collective social capital. A large number of research projects examine the nature and areas of action of voluntary associations, community groups and other community-based organizations, and look at how they interact to attain shared development goals. However, few studies inventory the results of this research and would enable systematic documentation of the role of collective social capital. In terms of public policy, it is still difficult to determine the impact of interventions that target group activities except in cases of specific initiatives that have been the object of formal evaluations.

In a recent study of collective social capital, Charbonneau (2005) conducted a meta-analysis to develop a tool to evaluate projects on the basis of social capital. Her simple and systematic approach involved identifying different sources of literature on the basis of key words (such as partnership, joint action, network) and to identify, in the bibliography of that literature, references to case studies and case evaluations. Some 40 studies were compiled in this way to conduct a meta-analysis using an analytical grid developed specifically to identify the presence of social capital and understand how it operates. The grid, in essence, consists of the following points.

✧ In what context are networks created?

- Motives for creating networks (e.g., rising juvenile delinquency in certain neighbourhoods);
- Collective objectives;
- List and characteristics of members (which organizations are in networks);
- Types and characteristics of networks. (Are networked organizations homogenous? Are they all from the same geographical community? What kinds of ties are sustained among organizations? With other players? etc.);
- Network history and activities; and
- Funding.

✧ What products of social capital were created during collaborations?

- Assessment of the attainment of objectives;
- Resources shared to attain collective objectives (e.g., provision of human and material resources, expertise);

- Capacity to mobilize external resources (e.g., involvement of the municipality, police department, citizens);
- New resources created (e.g., implementation of a neighbourhood watch committee); and
- Contribution to new attitudes among citizens (e.g., new possibilities for citizen participation).

✧ What conditions are conducive to a successful project?

- Conditions prior to the creation and functioning of the network;
- Structural conditions of the network; and
- Conditions prior to the mobilization and production of social capital.

3.2.4 Social Capital Observatory

Through an observatory, various forms of information on social capital (quantitative surveys, qualitative interviews, archival searches, administrative data, case inventories) can be regularly produced. Different options can be considered for structuring information. Data can be structured using strategic sectors, for example, by tracking an issue or a target population, such as the integration of new immigrants. The observatory can serve as a synthesis tool to provide a broader portrait of interrelated issues within a specific context. In that case, information can be produced using a strategic combination of data from various information sources, covering the same region over a given period. A well-maintained observatory provides the valuable potential of secondary data for producing indicators. This is the case with the *Place Management, Social Capital and Learning Regions* (PASCAL) observatory, which is described a strategic information service bringing together data from various sources, including two social demonstration projects and social capital analyses in the context of learning communities.

With the advent of the Internet, more and more sites with specialized themes are taking on the role of observatory. For example, the electronic site developed by Paul Bullen[11], a pioneer of social capital research in Australia, provides extensive and relevant content on social capital. The site offers resources and links to a full exploration of various approaches to understand the concept of social capital and ways of measuring it, with an emphasis on Australian work. The site also provides access to survey data, university research projects, community intervention initiatives and more theoretical works. It contains an annotated bibliography and links to several inventories of social capital literature. Fabio Sabatini[12] has also developed a comprehensive Internet site providing access to a vast array of useful resources for studying social capital. Unlike genuine observatories established on the basis of an official mandate, these electronic sites are built and maintained at the discretion of their creators.

3.2.5 Using the Social Capital Lens to Develop and Evaluate Projects and Programs

Taking the social capital dimension into account when developing and evaluating projects, programs, or policies means recognizing the value of networks and social ties, and their particular dynamics as complementary tools or resources for individuals or communities. This approach also means paying special attention to the direct and indirect impact that program interventions (government or community-based) may have on how relational networks operate and are mobilized to produce resources or make them accessible for achieving significant socio-economic or health-related results, whether or not those results are the focus of the interventions. In fact, the social capital approach tends most often to emphasize citizen and group initiatives that promote the development of social capital. As previously mentioned, however, this approach must also consider the broader context in which personal and collective networks operate, and thus, the influence of various institutional arrangements that may promote or hinder the production of social capital. It is in this sense that the social capital approach can be used to develop and evaluate projects and programs.

When developing a program, it may be useful to differentiate the clientele on the basis of social capital to offer more suitable intervention strategies. A program designed to support persons with a

11 Bullen, Paul "Resources on understanding and measuring social capital" <http://www.mapl.com.au/A13.htm>.

12 Sabatini, Fabio "Social Capital Gateway". <http://www.socialcapitalgateway.org>.

disability who are involved in a job integration process may benefit, for example, from one approach compatible with a "connected" clientele and another approach targeting a more socially isolated clientele. In certain situations, the program may promote or even target the creation of networks between participants or with other social milieux. The evaluation of the project would focus on the impact of the project or program on the functioning of the networks to the degree to which this is significant in achieving particular outcomes.

Certain criteria for evaluating existing social capital can be applied during the development stage of an intervention project or program:

- ✧ Have an idea of the networks already functioning for a target population. For example, in the case of employment services for the disabled, it may be relevant to evaluate needs by first determining if a support network for candidates already exists and its scope.
  - What is the size and what are the characteristics of the relational network in place?
  - Who are the members of the network?
  - What kinds of ties exist among members?
  - How does this network operate?
  - Is it growing, shrinking? Why?
- ✧ In the case of collective networks (e.g., an association of organizations offering breakfast services in schools in disadvantaged neighbourhoods), other information may be relevant.
  - What problems are these networks trying to solve?
  - What are the objectives of the network's activities?
  - What is the target population and who are the real beneficiaries?
  - What are the nature, scope, and reach of the activities undertaken by these networks?
  - Who are the primary initiators?
- ✧ Assess the value of the networks in the success of a project or program.
  - What is the impact of networking (and the activities it enables) on the project?
  - How can networking contribute to attaining the project's objectives?
  - How can it hinder the attainment of the project's objectives?

Certain criteria can be applied during the evaluation stage of an intervention project or program.

- ✧ Evaluate the impact of a project on existing or potential networks.
  - What are the potential impacts or effects of the project on networks (and the activities it enables)?
  - How can the project help to or hinder the development of these networks?
  - What conditions must be in place or reinforced to maintain or increase the productivity of these networks?
  - How can the project or program maximize the opportunities already created by social networks?
  - How can the intervention project adapt to the evolution of networks?

Some evaluation tools exist that are specifically adapted to the public policy context. For example, the Social Capital Impact Assessment (SCIA), developed by the Saguaro Seminar, can be used to analyze the impact of the implementation of a program or project on social capital. Appendix 15 presents the criteria used for the evaluation.

3.2.6 Demonstration Projects on Innovative Social Capital Policies

More and more countries are using pilot projects or social demonstration projects to try out and gauge the impact of major new policies or programs, so that they can fine-tune them before implementing them on a large scale. In its report on government modernization, the United Kingdom's Performance and Innovation Unit recommended the widespread use of pilot projects, noting that the benefits of policy fine-tuning largely offset the costs in resources and time incurred by trial projects (Strategy Unit, 2003). In Canada, pilot projects are commonly used in the federal policymaking process.

It may be relevant to include social capital social as an evaluation element in some trial projects for public policy or programs. Some programs tested are directly designed for creating networks; in this case, the variables linked to social capital constitute the result of the intervention, that is, the subject of the evaluation. In other situations, implementation of a program may, without being directly geared to networks, nevertheless affect their functioning directly or indirectly. In that case, the variables linked to social capital may be incorporated into the trial as control variables. The impact of the intervention can thus be gauged on the vitality of existing networks (in the service integration field, for example), or on individuals' capacity to mobilize networks.

One of the often mentioned limitations of pilot projects is their contextual sensitivity, and thus the difficulty in reproducing their results. Evaluations often indicate that the same intervention in different contexts actually appears to be different interventions altogether. It is important to bear this limitation in mind, especially given the importance of context for social capital. The contextual elements in which intervention is effected must therefore be well defined, so that their impact on the results obtained can be properly considered.

In Canada, the *Community Employment Innovation Project* (CEIP) is an example of a social demonstration project that has explicitly introduced social capital as a variable to be explored, as both a dependent variable and an explanatory variable. This extensive project was launched by the Social Research and Demonstration Corporation (SRDC) in 2000 and will run for eight years. It is designed to evaluate the performance of a new federal economic integration program. It guarantees 1,500 volunteers, all of whom are employment insurance and income assistance claimants, a "community salary" in exchange for participating in a number of local projects. Each project mobilizes local groups to provide jobs to participants, in return for financial and professional support. Participants acquire work experience while enhancing their social capital through an expanded and strengthened social network.

The study seeks to define the dynamic between public intervention, the formation of social capital social and results at both the individual and collective levels. The social capital dimension is introduced at different stages in the evaluation, both as a dependent variable, to evaluate the program's impact on the affected networks, and as an independent variable to study the impact of networks on individual and collective results. Participants' employability (individual result) is studied in connection with the structure of their social network (size, density and diversity) and the resources the network made accessible (job search assistance, professional advice, emotional support, domestic assistance). A resource generator is used to gather the data. With respect to collective results, the study seeks to evaluate the vitality of community organizations and their capacity to provide and maintain jobs.

The program's impact is evaluated through the prospective nature of the study. The structure of participants' social networks and the structure of local organizations are evaluated before and after the intervention. The mediating effect of social networks on employability and local vitality is thus isolated, by comparing results between trial groups and focus groups.

Part 4: Conclusion and Recommendations

4.1 Conclusion

We are at a turning point in the development of measurements of social capital. On a theoretical level, the concepts are relatively new and few hypotheses have been tested. On the empirical level, however, recent data abound, but are often developed independently of an appropriate analytical framework. Social capital research is therefore advancing on two fronts: theoretical deduction and empirical induction. The difficulty lies in drawing conclusions in this context, especially since social capital is often approached from differing analytical perspectives. As stated by Grootaert et al. in reference to this field of research:

"Some debates, of course, cannot be resolved empirically, and what one chooses to measure (or not) is itself necessarily a product of a particular set of guiding assumptions. Nevertheless, conceptual debates cannot be resolved in an empirical vacuum." (2004:1)

The current trend is to address social capital from a participation perspective, particularly civic participation. We believe the data and indicators that are limited to this perspective circumscribe the explanatory value of the concept of social capital, because they address only one aspect of co-operation phenomena. Moreover, the participation approach to social capital does not elucidate the mechanisms by which civic groups and associations create social capital (Hopkins, 2002).

Few data exist that could be used to evaluate the contribution of social capital to specific public policy issues. The data are even more lacking when it comes to assessing the potential impact of public interventions on social capital. At best, current data provide an idea of the presence and manifestations of social capital within population sub-groups, but offer little notion of how social capital operates. It is possible that at the present stage, social capital theory can only be re-examined on an empirical basis supported by exploratory or inductive studies on the role of social networks with respect to very specific issues and on policy impact on network functioning.

In the years to come, this is the very direction government would be wise to pursue. From a public policy perspective, interest must move beyond social capital as a research topic to social capital as a heuristic tool, which would yield substantial gains in the design, implementation and evaluation of public intervention (Evans, 2004). To that end, federal departments' efforts should be geared primarily to a more systematic consideration of relational dynamics and co-operation networks at different stages of policy development, focusing more on their contribution to the future of individuals and communities. Interconnections between social capital and public policy should be included in existing and future departmental research programs rather than being the subject of a separate research agenda.

The concept of social capital is important for the Government of Canada, because it brings together the theoretical and empirical rationale for considering social ties as a potentially important ingredient of well-being and prosperity in society.

To guide efforts in this direction, the PRI argues that an operational framework based on social networks is particularly useful, because it offers a concrete entry point to the concept of social ties at both the individual and community levels. Using networks of social relationships as the entry point opens up the possibility of looking at the relational aspects of various spheres of life, including the sphere of participation (relationships among family and friends, wider social relationships, work relationships, community relationships, networks of contacts, business networks, local networks, co-operation networks, partnerships, joint action, etc.).

4.2 Recommendations

To promote the concept of social capital for the purposes of public policy development and evaluation within the federal government, the PRI is submitting the following recommendations on the examination and measurement of social capital.

Major Recommendations for the Measurement of Social Capital

1. Where applicable, the Government should adopt a social capital approach to developing research plans, data and policy analysis and evaluation.
2. Adopting a social capital approach involves the examination of three important aspects:
   a) documenting *the existence of social networks* at the individual and/or group level to better identify presence and manifestations of social capital;
   b) examining the *conditions of social network functioning and mobilization* to better understand how social capital operates, and who benefits from it; and
   c) evaluating *the productive potential of social networks in specific contexts* to understand the contribution of social capital to specific issues.
3. Various methods of examining social capital are suggested for the specific needs of different policy areas:
   a) populations at risk of exclusion;
   b) major life transitions;
   c) community development and rural revitalization.

Let us look at each of these recommendations in greater detail:

1. Adopt a social capital approach to research projects, data development, and program or policy analysis and evaluation

It may well be that the most promising approach to the contribution of social capital to various public policy challenges is not to develop research projects focused solely on social capital, but rather to integrate a social capital perspective into the development of departmental projects or research plans. The concept should be used as a type of "lens" to ensure the existence and functioning of social networks are taken into account in public intervention initiatives. This may include, where appropriate, the development of social capital indicators within program evaluation frameworks; it may also be useful to introduce social networks more explicitly and systematically as a variable to be considered within new survey projects, case studies or social demonstration projects when they are likely to have an impact on program results.

2a. Document the existence of social networks at the individual and/or group level to better understand the manifestations of social capital

Social network analysis relies on a diverse conceptual field and tools that can identify both the structural and dynamic properties of networks, at the individual and community levels. We can all benefit from focusing on what this discipline has to contribute to social capital theory on an empirical basis. At the individual level, a number of indicators can be used to document presence and manifestations of social capital relatively accurately. In terms of research, it would be fruitful to identify more systematically the indicators that are the most relevant in a given area of intervention or in the context of specific problems that address public policy concerns. For example, which types of networks are essential for healthy aging, childhood development, integration into the labour market, and cultural integration?

In the study of collective social capital, co-operation networks between groups and associations have received little attention as a form of social capital, even though the federal government is showing growing interest in supporting collective capacity building and community vitality. Government departments may find these networks, particularly territorial networks, interesting for the convergence and harmonization of various public interventions. To better guide the role of government in this area, it would be useful to take a more in-depth look at the contribution of collective social capital to the challenges faced by certain communities.

2b. Examine the conditions of social network functioning and mobilization to better understand how social capital operates

In all areas of intervention and at all levels, there is a lack of empirical knowledge of the dynamic properties of social capital. How social capital is

created and used by different population sub-groups can often be more important from a public policy perspective than the quantity or form of social capital. Examining the conditions of network functioning and mobilization helps explain the circumstances under which individuals have recourse to their networks or the circumstances under which new networks emerge (e.g., networking of community organizations), what elements facilitate or hinder the use of networks, and the degree to which government could or should create favourable conditions.

2c. Evaluate the productive potential of social networks in specific contexts to understand the contribution of social capital to specific issues

Last, the most ambitious direction for social capital research is to try to establish clear ties between the presence of social capital and specific socio-economic and health results in the Canadian context. Evaluating the productive potential of social capital should be based on the verification of strong hypotheses on networks as an explanatory variable, starting with the identification of fairly precise research questions. Departments may wish to identify interrelated public policy issues, since this kind of study involves establishing causal links, which is a complex and costly proposition. For example, a longitudinal survey on youth could document the role of networks in three or four areas of their lives, such as school performance, social integration, civic participation, and transition to adulthood. In terms of collective social capital, case studies could be developed based on the results of studies by Browne et al of McMaster University, for example, which showed how local networks are useful for the integrated implementation of various programs in the areas of health, social services, employability, child-care services, and recreational services for mothers on social assistance (Browne, 2002).

3. Choose the tools to measure social capital according to major policy areas

Some argue that social capital research, at least at this stage, would benefit considerably from multiple investigation methods to consolidate the contribution of empirical knowledge to theory on several fronts simultaneously. The choice of tools for measuring social capital depends on public policy objectives and intervention needs. The PRI has identified three major public policy areas particularly suitable for social capital research and has suggested three different methods for examining social capital for each area.[13]

3a. Populations at risk of exclusion

Seniors, youth at risk of dropping out, young children, persons with disabilities, newcomers, the long-term unemployed or individuals living in poverty, single-parent families, and other segments of the Canadian population are considered vulnerable or at risk of exclusion. The federal government implements many social policies to build the capacity of these individuals to overcome obstacles to their full integration into society. As we saw in Section 2.2.3, the problems faced by various disadvantaged sub-groups vary widely, and while they require different intervention strategies, all can nevertheless benefit, to varying degrees, from the contribution of social capital.

To examine the role of social capital for these specific populations, it is important to work with methodological tools that have been adapted to the various realities under study rather than to use generic tools. For example, the nature of the questions about networks should be different depending on whether one is investigating peer influence on youth or the type of support seniors receive, regardless of the method employed. In Canada, thematic surveys are the preferred method for examining these problems. Most of these surveys already include questions on social ties and support, but they are relatively standardized, mostly because statistics agencies like to reuse existing questions for the purposes of comparability of data between surveys and through time.

A more promising avenue for the examination of social capital would be to develop new modules on social networks that are adapted to the issues addressed in these surveys. Consideration could be given to the use of innovative techniques such as generators (name, position, resources, context-based) and the use of qualitative modules or dynamic variables that provide an idea of the functioning of these networks. Social policy demonstration projects

13 See the PRI final report (2005a) for a rationale of these choices.

that include networks as a control variable and can take into consideration the role of context are also an avenue worth exploring to better understand the differential impact of intervention programs on vulnerable populations.

3b. Major life transitions

Major life transitions constitute a second important area of interest for Canadian public policy in relation to social capital. The transition from school to the labour market, major family changes, the transition to retirement and loss of autonomy are times of uncertainty and instability that, while common to many, present varying degrees of difficulty. We know that networks play a significant role in helping individuals manage these major life-course transitions; however, data currently available in Canada do not provide an accurate picture of how this happens, making it difficult to develop policies or programs to maximize their potential.

Since life transitions tend to be studied through large-scale longitudinal surveys, these would be the ideal vehicles for including standardized questions on social networks, that is, questions that could be reused verbatim in various life transition surveys. This would contribute to an understanding of the impact of networks throughout the life course as well as the impact of the transitions themselves on networks and their functioning. Longitudinal surveys are the best vehicles for documenting the dynamic aspect of networks. While most longitudinal surveys already include questions on social ties and support, they could be re-examined without affecting the longitudinal comparability of the survey.

The type of efforts already deployed to create a set of standardized questions on social capital using a participation perspective could also be directed toward an investigation of social networks. It would be timely for Canada to join the member countries of the International Social Survey Program and the US General Social Survey in developing tools for the production of reliable, complete and standardized data on networks.

3c. Community development

The federal government increasingly recognizes the role of community development in economic growth and the reduction of social inequalities. This is evidenced by considerable recent interest in the social economy as a sector of activity that can offer solutions adapted to local community issues. One government priority has been to support co-operation networks established between various community players at the local, regional, and national levels, as well as with the private, para-public and public sectors. Intervention at the community level has facilitated documentation of these networks through case studies, particularly by university and research communities. While the concept of social capital has not always been used, various studies now exist on the benefits and limitations of community organization networking to address various questions related to community development or rural revitalization. An inventory of these case studies in order to conduct meta-analyses is certainly a research direction worth pursuing. It is also possible that new case studies will have to be developed to better understand certain specific dynamics that may explain the growth or decline of certain communities. Surveying groups and associations may also yield useful data on associative dynamics resulting from community networks.

APPENDIX 1

The World Bank Social Capital Assessment Tool

The World Bank's Social Capital Assessment Tool (SOCAT) is a multifaceted instrument composed of various tools designed to collect social capital data at the household, community and organizational levels. It is an integrated quantitative/qualitative tool. As well, three manuals are available and offer detailed information on the contents of the tools, on implementing them in the field, and on analyzing their results. The components of SOCAT include:

1. An interview guide for developing a community profile and mapping community assets: A community profile is elicited through a series of group interviews conducted in a community during the initial days of fieldwork. A community profile allows the research team to become familiar with community characteristics and issues relating to social capital for reference in later phases of data collection. Several participatory methods are used to develop the community profile. In addition to a focus group format, the data collection includes a community mapping exercise followed by an institutional diagramming exercise. The primary data source material generated by these interviewing, mapping, and diagramming exercises are:

- community maps, indicating location of community assets and services;
- observational notes of group process and summary of issues discussed;
- list of positive characteristics of community assets and services;
- list of negative characteristics of community assets and services;
- list of all formal and informal community institutions;
- case study of community collective action;
- institutional diagrams (Venn) of relative impact and accessibility; and
- institutional diagrams (web) of institutional network relationships.

2. A community questionnaire.

3. A household questionnaire.

4. An interview guide for developing organizational profiles: The overall objective of developing organizational profiles is to delineate the relationships and networks that exist among formal and informal institutions operating in a community, as a measure of structural social capital. Specifically, each profile assesses an organization's origins and development (historical and community context, longevity, and sustainability); quality of membership (reasons people join, degree of inclusiveness of the organization); institutional capacity (quality of leadership, participation, organizational culture, and organizational capacity); and institutional linkages. Between three and six institutions per community should be profiled. The organizations need to be identified through the community interviews and/or household survey as key organizations or those having the most impact or influence on community development.

5. An organizational profile score sheet.

Source: The SOCAT tool can be downloaded in its entirety from the World Bank web site <http://lnweb18.worldbank.org/ESSD/sdvext.nsf/09ByDocName/SocialCapitalMeasurementToolsSOCAT>. It can also be found in Annex 1 of Grootaert and van Bastelaer (2002).

Appendix 2

Social Capital Indicators Proposed by the Siena Group for Social Statistics Based on a Module of Standardized Questions

1. Social participation
   - 1.1 Type of group(s) in which respondent is involved
   - 1.2 Type of active involvement in groups
   - 1.3 Type of involvement by type of group

Alternate option:

   - 1.4 (a) Type of group(s) in which respondent is actively involved

     (b) Frequency of active involvement by type of group

     (c) Type of active involvement by type of group

2. Social support
   - 2.1 Type of informal unpaid help provided to non-household members
   - 2.2 Frequency of provision of informal unpaid help to non-household members by type of help
   - 2.3 Type of informal unpaid help received from non-household members
   - 2.4 Frequency of receipt of informal unpaid help from non-household members by type of help

3. Social networks
   - 3.1 Frequency of contact with friends, relatives, or work colleagues
   - 3.2 Frequency of contact with friends, relatives, and neighbours by type of contact

4. Civic participation
   - 4.1 (a) Engagement in civic action (national issues)

     (b) Engagement in civic action (not restricted to national issues)
   - 4.2 (a) Voted in most recent national election

     (b) Voted in most recent election by level of government

Source: Zukewich and Norris (2005).

Appendix 3

Social Capital Indicators Created on the Basis of the Conceptual Framework of the Australian Bureau of Statistics

Network Qualities		
Norms		Common Purpose
Trust and Trustworthiness	**Co-operation**	**Social Participation**
Generalized trust	Community support	Participation in social activities
Informal trust	Density and openness	Barriers to social participation
Institutional trust	Co-operation in conservation of water resources and electricity	Membership of clubs, organizations, or associations
Generalized trustworthiness	Support for community events	Active involvement in clubs, organizations, or associations
Feelings of safety using public transport	Attitude toward community decision-making capacity	Number of clubs, organizations, or associations active in
Feelings of safety walking in the street	Attitude to social and civic co-operation	Religious affiliation
Feelings of safety at home after dark	**Acceptance of Diversity and Inclusiveness**	Religious attendance
Reciprocity	Friendship	Duration of religious attendance
Civic participation	Transience/mobility	**Civic Participation**
Perception of reciprocity in the community	Acceptance of different lifestyles	Level of civic participation
Donating time or money	Support for cultural diversity	Time spent on community participation activities
Attitude toward contributing to the community	Group diversity	Membership in clubs, organizations, or associations
Sense of Efficacy	Expressions of negative behaviours toward cultural diversity	Active involvement in clubs, organizations, or associations
Perceptions of community efficacy	Perception of change in negative attitudes toward cultural diversity	Number of groups active in
Sense of personal efficacy in the community	Attitude toward the practice of linguistic diversity	Involvement in a committee
Personal/community efficacy		Barriers to civic participation
Efficacy in local decision making		Level of involvement with groups, clubs, and organizations
Perception of efficacy		Knowledge of current affairs and news
		Trade union membership
		Voting
		Representativeness of government
		Membership of political parties
		Naturalization of citizens

Network Qualities	Network Structure	
Common Purpose		
Community Support	**Network Size**	**Transience/Mobility**
Providing help outside the household	Source of support in a crisis	Length of residence in current locality
Providing help in the household	Close relatives or friends who live nearby	Geographic mobility
Participation in voluntary work and activities	Acquaintance with neighbours	Changes in intensity of involvement with organizations
Frequency of voluntary work	Links to institutions	Change in intensity of involvement with organization in which most active
Annual hours spent on voluntary work	**Network Frequency/Intensity and Communication Mode**	Duration of involvement with organization in which most active
Personal donations to any organization or charity	Freq. of face-to-face contact with relatives	Experiences in social, civic, and community support activities as a child/youth
Business donations to any organization or charity	Freq. of face-to-face contact with friends	Child/youth background – parent's voluntary work
Membership in clubs, organizations, or associations	Freq. of telephone contact with relatives	Child/youth background – type of area of residence
Friendship	Freq. of telephone contact with friends	Geographic mobility as a child/youth
Number of close relatives	Freq. of e-mail/Internet contact with relatives	**Power Relationships**
Number of close friendships	Freq. of e-mail/Internet contact with friends	Contact with organizations
Number of other friendships	Freq. of other forms of communication with relatives	Perception of access to public services and facilities
Satisfaction with friendships	Freq. of other forms of communication with friends	Personal sense of efficacy
Work-initiated friendships	Communication through Internet chat rooms	Mentoring
Economic Participation	**Density and Openness**	
Labour force participation rate	Nature of informal networks – family and friends	
Previous work colleagues in current social network	Nature of informal networks – friends	
Trust in work colleagues	Density of formal networks	
Friends and relatives as sources of finance and business information		
Use of local shops and other local businesses		
Membership and participation in unions, professional associations		
Membership of co-operatives		
Membership of bartering organizations		

Network Transactions		Network Types
Sharing Support	**Other Types of Transactions**	
Physical/Financial Assistance, Emotional Support, and Encouragement	**Sharing Knowledge, Information, and Introductions**	**Bonding**
Provision of support Receipt of support Provision of help to work colleague Expectation of help from a work colleague Capacity to seek support	Use of Internet to contact government Friends and relatives as sources of job search information Job search methods Source of information to make life decision	Group homogeneity Density of formal networks
Integration into the Community	**Negociation**	**Group Diversity**
Negotiation Bridging Provision and use of community facilities Attendance at community events Sense of belonging to an ethnic or cultural group, state or territory, and Australia Perception of friendliness of community Extent of acquaintance and friendship networks in local area	Resolving conflict through discussion Confidence in mechanisms for dealing with conflict Willingness to seek mediation Dealing with local problems	Density of formal networks Openness of local community Low bridging
Common Action	**Applying Sanctions**	**Linking**
Applying sanctions Linking Taking action with others to solve local problems Participation in the development of a new service in local area Group participation for social or political reform	Perception of willingness to intervene in anti-social behaviour Willingness to allow behaviour against norms	Links to institutions
		Isolation
		Lack of activity in groups Feelings of social isolation

Source: Adapted from *Australian Social Capital Framework and Indicators,* Australian Bureau of Statistics (2004).

Appendix 4

Social Capital Indicators Suggested by the PRI Conceptual Framework

Elements of Social Capital to Be Measured			Individual Social Capital
			Interpersonal Networks
Presence of Social Capital	Structural Properties of Networks	Size of network	Number of persons with whom one maintains different types of relationships: intimate friends and family, less close friends and family, simple acquaintances, neighbours, work colleagues, etc.
		Density of network	Level of interconnections between network members
		Diversity of network	Heterogeneity of the socio-economic status of network members
		Frequency of contact	Number and length of contacts between network members
		Intensity of contact	Strength and nature of a relationship in terms of emotional investment (weak – strong)
		Spatial proximity of network members	Network members who meet face to face on a regular basis
Functioning of Social Capital	Network Dynamics	Mobilization of networks: Conditions of access to resources	Presence or absence of alternative solutions, feelings of dependency, difficulties with asking for assistance, evaluation of the limits to the capacity for assistance, etc.
		Mobilization of networks: Gap between perceived and mobilized resources	Expectations about available support/resources and questions on the support/resources actually received
		Relational competency and conditions of social integration	Relational skills and effects of life-course events
		Norms and rules internal to the network	Norms: cultural and ethical dimensions of relationships (e.g., trust, belonging, tolerance, inclusion, etc.) Rules: reciprocity, symmetry, equality, transitivity
	External Context in which Social Capital Operates	Structures and institutional arrangements	Formal/informal arrangements which help/hinder the development of relationships and social integration

Collective Social Capital	
Intra-Organizational Networks	**Inter-Organizational Networks**
Number of members in an organization	Number of partners in a network
Level of interconnections between members of an organization	Level of interconnections between partners in a network
Heterogeneity of the socio-economic status of members of an organization	Heterogeneity of the organizational partners in a network
Number and length of contacts between members of an organization	Frequency of communications between the organizations and number of networking activities
Strength and nature of working relationships within the organization	Strength and nature of the relationships between organizational partners
Organizational members who meet face to face on a regular basis	Network partners who work in the same geographic area
Autonomy and interdependence of organizational members	Autonomy and interdependence of partner organizations
Expectations about available support/resources and questions on the support/resources actually received	Expectations about available support/resources and questions on the support/resources actually received
Stability of intra-organizational relations through various events that mark the organization's evolution	Stability of inter-organizational relations through various events that mark the collective project's evolution
Quality and democratic aspect of interactions, openness, and respect of actors, common perception of issues, confidence in the contribution of each member of the organization	Quality and democratic aspect of interactions, openness, and respect of actors, common perception of issues, confidence in the contribution of each of the partner organizations
Formal/informal arrangements that help/hinder the interactions between members of the organization	Formal/informal arrangements which help/hinder the creation and functioning of inter-organizational partnerships

Appendix 5

Measurement of Social Isolation

The UCLA Loneliness Scale

This scale was developed to assess subjective feelings of loneliness or social isolation. It's the most widely used measure of loneliness.

Instructions: The following statements describe how people sometimes feel. For each statement, please indicate how often you feel the way described by writing a number in the space provided. Here is an example:

How often do you feel happy? (Never, Rarely, Sometimes, Always)

1. How often do you feel that you are "in tune" with the people around you?
2. How often do you feel that you lack companionship?
3. How often do you feel that there is no one you can turn to?
4. How often do you feel alone?
5. How often do you feel part of a group of friends?
6. How often do you feel that you have a lot in common with the people around you?
7. How often do you feel that you are no longer close to anyone?
8. How often do you feel that your interests and ideas are not shared by those around you?
9. How often do you feel outgoing and friendly?
10. How often do you feel close to people?
11. How often do you feel left out?
12. How often do you feel that your relationships with others are not meaningful?
13. How often do you feel that no one really knows you well?
14. How often do you feel isolated from others?
15. How often do you feel you can find companionship if you want it?
16. How often do you feel that there are people who really understand you?
17. How often do you feel shy?
18. How often do you feel that people are around you but not with you?
19. How often do you feel that there are people you can talk to?
20. How often do you feel that there are people you can turn to?

Source: Russell (1996).

Appendix 6

Measurements of Personality and Relational Skills

Sense of Mastery Scale by Pearlin and Schooler (1978)

How strongly do you agree or disagree that: (strongly agree to strongly disagree)

1. I have little or no control over the things that happen to me.
2. There is really no way I can solve some of the problems I have.
3. There is little I can do to change many of the important things in my life.
4. I often feel helpless in dealing with the problems of life.
5. Sometimes I feel that I'm being pushed around in life.
6. What happens to me in the future mostly depends on me.
7. I can do just about anything I really set my mind to do.

Self-Esteem Scale by Rosenberg (1965)

Below is a list of statements dealing with your general feelings about yourself. (Strongly agree, agree, disagree, strongly disagree)

1 On the whole, I am satisfied with myself.
2. At times, I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I'm a person of worth, at least on an equal plane with others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

Shyness revised scale by Cheek and Buss (1983)

Please read each item carefully and decide to what extent it is characteristic of your feelings and behaviour: (Very uncharacteristic, uncharacteristic, neutral, characteristic, very characteristic)

1. I feel tense when I'm with people I don't know well.
2. I am socially somewhat awkward.
3. I do not find it difficult to ask other people for information.
4. I am often uncomfortable at parties and other social functions.
5. When in a group of people, I have trouble thinking of the right things to talk about.
6. It does not take me long to overcome my shyness in new situations.
7. It is hard for me to act natural when I am meeting new people.
8. I feel nervous when speaking to someone in authority.
9. I have no doubts about my social competence.
10. I have trouble looking someone right in the eye.
11. I feel inhibited in social situations.
12. I do not find it hard to talk to strangers.
13. I am more shy with members of the opposite sex.

Sociability scale by Cheek and Buss (1983)

Cheek and Buss (1981) define sociability as a "tendency to affiliate with others and to prefer being with others to remaining alone" (p. 330). The items of the scale are:

1. I like to be with people.
2. I welcome the opportunity to mix socially with people.
3. I prefer working with others rather than alone.
4. I find people more stimulating than anything else.
5. I'd be unhappy if I were prevented from making many social contacts.

Social avoidance and distress subscale by Jones, Briggs and Smith (1986)

1. I am often uncomfortable at parties and other social gatherings.
2. I often think up excuses in order to avoid social engagements.
3. I often feel on edge when I am with a group of people.
4. I tend to withdraw from people.
5. I often find social occasions upsetting.
6. Parties often make me feel anxious and uncomfortable.
7. I try to avoid situations which force me to be very sociable.
8. I feel inhibited in social situations.
9. I usually feel calm and comfortable at social occasions.
10. I usually feel relaxed when I am with a group of people.
11. I am socially somewhat awkward.
12. I try to avoid formal social occasions.

Social facility subscale by Jones, Briggs and Smith (1986)

1. Most people think I am outgoing.
2. I am a leader.
3. I often find myself taking charge in group situations.
4. Ordinarily I communicate effectively.
5. I am probably less shy in social interactions than most people.
6. I have little difficulty being assertive, especially when it is appropriate or in need to be.
7. I can express my opinions to others effectively.
8. I do not mind speaking in front of a large group of people.
9. I am usually a person who initiates conversation.
10. It does not take me long to overcome my shyness in new situations.
11. I make new friends easily.

Fear of high status others subscale (intimidation) by Jones, Briggs and Smith (1986)

1. I get nervous when I speak to someone in a position of authority.
2. I get nervous when I must talk to a teacher or a boss.
3. I feel nervous when speaking to someone in authority.
4. I feel nervous when I have to speak to authority figures.
5. I would be nervous if I was being interviewed for a job.

Strategy and Attribution Questionnaire (SAQ) by Nurmi et al. (1995)

The Strategy Attribution Questionnaire is a self reported measure of social and cognitive behavioural strategies. It contains 60 statements which the participants are asked to rate on a four-point rating scale (4=Strongly agree, 1=Strongly disagree). There are four subscales that measure achievement strategies: (1) Success expectations, (2) Task-irrelevant behaviour, (3) Reflective thinking, and (4) Master-orientation. Six different subscales measure social reaction styles: (1) Social avoidance, (2) Task-irrelevant behaviour, (3) Success expectations, (4) Social pessimism, (5) Master-orientation and (6) Seeking social support. Here are some examples of the subscales:

Success expectations subscale

1. In most cases, I feel I get along well with people.
2. People usually relate to me negatively.
3. I have usually gotten along with people.
4. I think that people like me.

Master-orientation subscale

1. One can truly get to know people only after having spent long amounts of time with them.
2. Getting to know and understand people usually demands time and patience.
3. No matter what I do, people have a negative opinion of me.
4. If, in some group, things are not taken smoothly, it is a waste of time to try to listen and understand others.
5. Understanding another person demands times and patience.
6. Getting acquainted with others and making friends often depends on luck.
7. One can even get to know people who are more remote, if one is patiently willing to try.
8. It is difficult to influence the acquisition of friends; things just 'happen'.

Seeking social support subscale

1. It is not worth complaining to others about your worries.
2. I do not often expect much help from others with my own problems.
3. When things do not go smoothly, it is best to talk it over with friends.
4. I know people who I can get support from.
5. If there are some difficulties, it helps to talk them over with another person.
6. It is good if there is someone to whom one can speak.

APPENDIX 7

Name Generator/Interpreter – Version Adapted for the US General Social Survey on Social Networks

From time to time, most people *discuss important matters* with other people. Looking back over the last six months, who are the people with whom you discussed matters important to you? Just tell me their first names or initials.

NAME1 _____

NAME2 _____

NAME3...

BEGIN LOOP

130. Please think about the relations between the people you just mentioned. Some of them may be total strangers in the sense that they wouldn't recognize each other if they bumped into each other on the street. Others may be especially close, as close or closer to each other as they are to you.

- First think about NAME1 and NAME2.

  a. Are (NAME) and (NAME) total strangers?

  b. Are they especially close? As close or closer to each other as they are to you.

131. (NAME) is male/female? Is that correct?

132. Is (NAME) Asian, Black, Hispanic, White or something else?

Spouse	Parent
Sibling	Child
Other family	Co-worker
Member of group	Neighbour
Friend	Advisor
Other	

133. Here is a list of some of the ways in which people are connected to each other. Some people can be connected to you in more than one way. For example, a man could be your brother and he may belong to your church and be your lawyer. When I read you a name, please tell me all of the ways that person is connected to you. How is (NAME) connected to you? What other ways?

133a. Do you and (NAME) *both* belong to one or more of the same groups on this list?

133b. What is/are the group(s) you both belong to? (list)

133c. Did you first meet (NAME) in one of these groups, or did you first meet somewhere else? Which one of the groups did you meet (NAME) in?

134. How long have you known (NAME)?

135. This card lists general levels of education. As far as you know, what is (NAME)'s highest level of education? Your best guess.

136. How old is (NAME)? PROBE: Your best guess.

137. What is (NAME)'s religious preference? Is it Protestant, Catholic, Jewish, some other religion, or no religion? What is your best guess?

Source: Adapted from the US General Social Survey on Social Networks.

APPENDIX 8

Position Generator – Classic Version Developed by Lin

Here is a list of occupations (present a card with the list). Do you personally know anyone who practises these occupations?

Occupation	1 Do you know anyone who practises this occupation?	2 How many years have you known this person?	3 What is your relationship to this person?	4 What is your degree of intimacy with this person?	5 What is the sex of this person?	6 Person's occupation
Occupation A						
Occupation B						
Occupation C						
etc.						

If you know more than one person, tell us about the one you have known the longest.

Note: list of occupations should be fairly long and open.

Source: Degenne (2004).

APPENDIX 9

Position Generator – Canadian Version Adapted by Erickson

Example of introductory statement (face to face or telephone interviews):

I will now ask you whether you know people in some kinds of work, for example, whether you know any carpenters. I will ask you whether you know any women in each kind of work, and whether you know any men. You do not have to know these people really well, but should know them by name and by sight and well enough to talk to.

The list was chosen to vary in occupational prestige, gender composition, and sector, while avoiding very small occupations. The actual question should randomize the order of occupations to avoid order effects.

HIGHER PROFESSIONS
- Lawyer
- High School Teacher
- Dentist
- Pharmacist

MIDDLE MANAGERS
- Sales and marketing manager
- Human resources manager

BUSINESS PROFESSIONS
- Accountant or auditor
- Bookkeeper

OTHER PROFESSIONS
- Computer programmer
- Social worker
- Nurse

ART AND CULTURE
- Musician or singer
- Writer
- Photographer
- Interior designer

SALES AND SERVICE
- Security guard
- Cashier
- Server
- Janitor or caretaker

TRADES AND TRANSPORT
- Carpenter
- Tailor, dressmaker, or furrier
- Delivery driver

AGRICULTURE OR PRIMARY SECTOR
- Farmer
- Miner

MANUFACTURING
- Sewing machine operator
- Motor vehicle assembler

Source: Erickson (2004c).

Appendix 10

Resource Generator – Developed in the Netherlands by Snijders and van der Gaag

I have here a list with a number of skills and resources. Does anyone in your family have those skills or resources? And how about your friends? Are there any acquaintances mastering these skills? With "acquaintance" I don't mean the sales persons you meet when going out shopping, but somebody you would have a conversation with if you met him/her on the street, and whose name you know. I would also like to know if you yourself have these skills, or own these resources.

Interviewer: Hand over the chart of "resources." Begin by asking whether Ego knows a family member owning the resources or mastering the skill. If yes, move on to the next question. If not, then ask about friends. Only if not, ask about knowing an acquaintance owning the resources or mastering the skill. If Ego says that somebody is both a family member and a friend, he or she should be counted as a family member.

1. Do you know anyone who...

   ..can repair a car, bike, etc.

   ...owns a car

   ...is handy repairing household equipment

   ...can speak and write a foreign language

   ...can work with a PC

   ...can play an instrument

   ...has knowledge of literature

   ...has an X education

   ...reads a professional journal

   ...is active in a political party

   ...owns shares for at least $$$

   ...works at the town hall

   ...earns more than $$$ monthly

   ...own a holiday home abroad

   ...sometimes hires people

   ...knows a lot about governmental regulations

   ...has good contacts with a newspaper, or radio or TV station

   ...knows about soccer

   ...has knowledge about financial matters (e.g., taxes, subsidies)

2. If you needed someone for one of the following subjects, is there anyone you can easily ask for help? Family, member, friend, acquaintance?

a. Finding a holiday job for a family member

b. Advice concerning a conflict at work

c. Helping when moving house (packing, lifting)

d. Helping with small jobs around the house (carpentry, painting)

e. Doing your shopping when you (and your household members) are ill

f. Giving medical advice when you are dissatisfied with your doctor

g. Borrowing a large sum of money

h. Providing a place to stay for a week if you have to leave your house temporarily

i. Advice concerning a conflict with family members

j. Discussing what political party you are going to vote for

k. Giving advice on matters of law (e.g., problems with landlord, boss, municipality)

l. Giving a good reference when applying for a job

m. Baby-sitting the children

Perceptions of the Individual Social Network

Note from the authors: The following questions are constructed to be used as personality covariates to explain distributions of social capital measures constructed from any of the preceding measurement instruments. As yet, we have not developed a standard for doing so, and we invite readers to respond with ideas.

In our data for the Netherlands, the 18 questions below can be summarized in four principal components (explaining 40.1 percent of the total variance):

- The desire for more social contacts or, conversely, satisfaction with the present network (items 8, 12, 14, and 15).
- Integration of different types of relationships in the network (items 3, 5, 7, and 16).
- Expectation and propensity to mobilize social resources (items 6, 9, 10, 11, and 18).
- Propensity to make new contacts (items 1, 2, 4, and 13).

To what extent do you agree with the following statements?

(Strongly, agree, agree, disagree, strongly, disagree)

1. Sometimes I do things for others while I don't feel like doing it.
2. Other people often call on me for help.
3. Most of my friends know each other.
4. On my friends' birthday parties there are many people I hardly know.
5. My good friends also know my family members.
6. At work I meet completely different people than during leisure time.
7. My neighbours come to my birthday parties.
8. My colleagues come to my birthday parties.
9. I do not easily ask for help when I need it.
10. You can't expect your neighbours to help you with serious problems.
11. You can't expect your colleagues to help you with serious problems.
12. I would like to have more friends.
13. I easily make contact with others.
14. I would like to have more contact with my neighbours.
15. I would like to have more contact with my colleagues.
16. I send my neighbours Christmas and holiday cards.
17. I have experienced being disappointed in placing my trust in others.
18. Before I trust someone I have to be sure of his/her intentions.

Source: The Social Survey of the Networks of the Dutch,1999-2000 can be accessed at <http://www.xs4all.nl/~gaag/work>.

Appendix 11

Resources Generator – Canadian Version Proposed by Boase and Wellman

These questions measure access to various kinds of resources through social ties that are either very close or somewhat close. These resources are knowledge based, and are designed to include knowledge common to people from a diversity of social backgrounds. The items in this question ask about access to knowledge that is common to people of both high and low socio-economic status, as well as knowledge that varies by gender. This diversity of knowledge will likely be correlated to both size and diversity of the respondent's social network. We also included knowledge that can be used when making major life decisions, since access to this kind of social capital can have a very large impact on a respondent's life.

I'd like you to think ONLY about the first type. We'd like to know if any of these (insert total from a previous question) people you feel VERY CLOSE TO have ever helped you with the following activities. If you've never done the activity, just tell me. Have you ever gotten help with this activity from one of the people you feel VERY CLOSE TO who does not live with you?

a. Find a new place to live

b. Change jobs

c. Buy a personal computer

d. Make a major investment or financial decision

e. Look for information about a major illness or serious medical condition

f. Care for someone with a major illness or serious medical condition

g. Put up drywall in your house

h. Decide whom to vote for in an election

i. Change the spark plugs on a car

j. Use word processing software, such as Word or WordPerfect

k. Prepare a large holiday dinner

l. Mend torn clothing

m. Heal hurt feelings between relatives

* Note that the same scale is asked twice: once for Very Close and once for Somewhat Close network members.

Source: Boase and Wellman (2004).

APPENDIX 12

McCarty et al. Technique – Canadian Version by Boase and Wellman

Social Network Size, Tie Strength, and Social Capital

I'm going to ask you questions about two different groups of people in your life – those you feel VERY CLOSE to who do not live with you, such as close family and friends, and those you feel SOMEWHAT CLOSE to who do not live with you. We'd like to know how many people in your life fit into each one of these categories.

Let's start with the people you feel VERY close to, which might include those you discuss important matters with, regularly keep in touch with, or are there for you when you need help. Thinking about ALL the people who fit this description and who do not live with you, how many are...

a. Members of your immediate family – parents, siblings, adult children, or in-laws?

b. Other relatives?

c. Neighbours?

d. People you know from work?

e. People you know from school or childhood?

f. People you know from church or other religious organizations?

g. People you know from voluntary organizations, such as hobby clubs or other recreational activity groups?

h. Other people who you feel very close to?

Gender, Ethnic Diversity, and Social Capital

I'd like you to think ONLY about the first group – the (INSERT TOTAL) people/person you feel VERY CLOSE TO. How many of them are women?

I'd like you to think ONLY about the first group – the (INSERT TOTAL) people/person you feel VERY CLOSE TO. How many of them are...

a. White?

b. Black or African-Canadian?

c. Hispanic or Latino?

d. Asian?

e. Aboriginal, Native Canadian Indian, Inuit, or Métis?

f. Any other race?

Network Proximity and Social Capital

I'd like you to think ONLY about the first group – the (INSERT TOTAL) people/person you feel VERY CLOSE TO. How many live more than one hour's travel away from where you live?

Network Density and Social Capital

I'd like you to think ONLY about the first group – the (INSERT TOTAL) people/person you feel VERY CLOSE TO. How many know one another? Would you say...

a. They ALL know each other;

b. MOST of them know each other;

c. About HALF know each other;

d. Only SOME know each other; or

e. NONE know each other?

* Note that the same scale is asked twice: once for Very Close and once for Somewhat Close network members. In practice, each scale would be asked soon after the stimulus Social Network Size measures.

Source : Boase (2004).

APPENDIX 13

Social Capital Index by Onyx and Bullen

The social capital scale is one simple indicator empirically derived based on a list of 36 questions on social capital. The use of this scale needs to be fleshed out with other, more qualitative methods, such as the use of case studies and "thick descriptions," and reference to macro-social indicators, such as crime or morbidity rates.

Some of the principal findings from the Onyx and Bullen study are:

- Social capital is an empirical concept.
- It is possible to measure social capital in local communities. There are significant differences in levels of social capital between the five communities that were surveyed.
- A generic social capital factor can be measured.
- There are also eight distinct elements that appear to explain about 50 percent of the variance in social capital.

Four of the elements are about participation and connections in various arenas:

1. Participation in local community
2. Neighbourhood connections
3. Family and friends connections
4. Work connections

Four of the elements are the building blocks of social capital:

1. Pro activity in a social context
2. Feelings of trust and safety
3. Tolerance of diversity
4. Value of life

Source: Onyx and Bullen (1998).

APPENDIX 14

Indicators Used in the ESSIL Survey – "Social Network" Component

Social network indicators were favoured for their potential for longitudinal analysis and their advantage for making international comparisons, as well as for their scientific value. The ESSIL survey methodology is designed to allow for data collection at variable intervals. The social network component will address sets of themes at the following intervals.

A) Annual unit

- Perceived isolation
- Social support measures adapted according to major life events
- Assistance received (material, informational, emotional)
- Satisfaction with assistance received
- Evaluation of limitations in the capacity to assist
- Preferences with regard to private, community, or public assistance
- Assistance offered to loved ones

B) Retrospective – one time only

- Relational skills

C) Biennial unit

- Name generator for significant individuals
- Satisfaction with social relationships

D) Quadrennial unit

- Participation in recreational activities
- Social outings
- Frequency of social contacts
- Complementary name generator (support, financial assistance, advice)
- Complementary questions on name generators
- Presence of negative ties in networks (individuals who are too demanding, unreliable or a source of harassment)
- Review of changes in the network
- Anticipation of changes in the network
- Obstacles to sociability
- Contact with neighbours
- Participation in associations

Source: Turcotte and Charbonneau (2002).

APPENDIX 15

Social Capital Impact Assessment (SCIA)

The Social Capital Impact Assessment (SCIA), developed by the Saguaro Seminar, can be used to analyze the impact of the implementation of a program or project on social capital.

Communities could try to gather two types of information to help assess the SCIA. The first are correlates of social capital (things that are strongly positively or negatively correlated with levels of social capital) or try to gather information directly about the levels and types of social capital.

Impact of action on correlates of social capital (things that will have impact on social capital)

✧ For example, will the proposed action:

- Increase mobility or lower resident tenure (negative for social capital)?
- Increase the size of the community (negative for social capital)?
- Increase average commuting times (negative for social capital)?
- Reduce the amount of public space or the amount of highly used public space (negative for social capital)?
- Increase the average levels of education (positive for social capital)?
- Increase the learning of effective civic skills, like how to chair a meeting, organize others, set agendas, etc. (positive for social capital)?
- Increase the amount of time average residents spend watching commercial entertainment television (negative for social capital)?

Asking social capital questions directly

✧ Social ties with neighbours:

- Will the policy create more/less occasions for people to interact?
- Will the policy create more/less occasions for people to work collaboratively?
- Will the policy create more/less occasions for public interactions (e.g., town meetings, planning boards, or neighbourhood organizations)?
- Will the initiative create more/less occasions for private interactions (e.g., bridge clubs, sports leagues, or religious meetings)?
- Will the initiative create more/less occasions for informal meetings (e.g., guys hanging out on the corners, queues for shopping tickets, etc.)?

✧ Bridging social capital:

- Will the policy create more/less occasions for people to interact with those that differ from them (by race, religion, age, etc.)?
- Will the policy create more/less occasions for people to work collaboratively with those that differ from them (by race, religion, age, etc.)?
- Will the policy create more/less occasions for public interactions (e.g., in town meetings, planning boards, or neighbourhood organizations) with those that differ from them (by race, religion, age, etc.)?
- Will the initiative create more/less occasions for private interactions (e.g., bridge clubs, sports leagues, or religious meetings) with those that differ from them (by race, religion, age, etc.)?
- Will the initiative create more/less occasions for informal meetings (e.g., guys hanging out on the corners, queues for shopping tickets, etc.) with those that differ from them (by race, religion, age, etc.)?

- ✧ Family ties:
  - Will the proposed initiative increase or decrease people's discretionary time?
  - Will the proposed initiative increase or decrease the time family members spend together?
  - Will the proposed initiative shift responsibilities for certain functions from family members to non-family members?
  - Will the proposed initiative increase or decrease the range of possible structures that are treated as a family unit?
- ✧ Trust in institutions:
  - Is the acting institution (the one proposing the initiative) suggesting a process for securing approval of this initiative in which all parties have confidence?
  - Is the acting institution providing opportunities for citizen involvement in the delivery or the planning, oversight, and ongoing review of the proposed initiative?
  - Is the acting institution going to undermine an existing, respected community organization?
  - Is the acting institution proposing an initiative that is likely to be successful?

How to gather this information?

There are four approaches a community or organization could undertake, none of them mutually exclusive.

- ✧ Employ an expert/sociologist in residence for some period (days or weeks) to observe and report to the community on the social interactions that are likely to be affected.
- ✧ Conduct literature reviews on the intersection between X and social capital (e.g., if a proposal was going to increase residential mobility in a community, learning what scholars knew about the impact of increased mobility on social capital).
- ✧ Interview community residents about, for example, their social use of a facility, or where they met their friends in a community, etc.
- ✧ Have community residents or others testify or submit opinions, followed by debate.

Source: Feldstein and Sander (nd).

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* All web sites referred to in this report were confirmed as of May 10, 2005.

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