

**NOURISHING COMMUNITIES: EXPLORING THE
RELATIONSHIPS BETWEEN LOCAL-FOOD-SYSTEM
DEVELOPMENT AND COMMUNITY CAPITAL**

by

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Abstract

Consumer concerns regarding food safety and quality, a crippling farm crisis across North America, and growing criticisms of the environmental consequences of intensive agricultural practices are leading to increased scrutiny of the dominant, industrialized food system. Faced with uncertainty, many communities are pioneering new, decentralized models of food production, with a view to designing systems that are more economically, ecologically and socially sustainable. At their essence, these local food systems appear to embody a new form of ‘capitalism’, one that values, depends upon, and seeks to strengthen or preserve all stocks of community capital: natural, human, social, and economic.

Employing a case study approach, this research explores ways in which a local food system’s development depends upon the interplay of a community’s capital stocks, as well as ways in which a local food system may serve as a site for the creation or strengthening of these capital stocks, with a particular focus on social capital. The two communities studied are: Kingston, Ontario and Hardwick, Vermont. Both communities have been actively pursuing local-food system development through various initiatives. Face-to-face interviews, participant observations, and a review of written information served as the main sources of data for this study. A conceptual framework was also developed and served to guide the research, including the analysis of findings.

Case study findings revealed the interdependent nature of community capital stocks, highlighting the importance of maintaining or enhancing all capital stocks over time. Social capital proved to be particularly integral to development efforts, with social networks sourcing economic and human capital for local-food system initiatives. Notably, many of the local-food initiatives carried out served to strengthen social and human capital, highlighting the potential for a restorative system. Overall, findings suggest that a more all-encompassing valuation of capital stocks is necessary to capture the ways in which a local-food system can contribute to community betterment and sustainability. It is anticipated that the case studies of Kingston and Hardwick will provide practitioners and scholars with insight regarding how community capital stocks are deployed and created through local-food initiatives.

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List of Abbreviations

CAE - Center for an Agricultural Economy (Hardwick, VT)

CMA- Census Metropolitan Area

CSA - Community Supported Agriculture

EC- Economic Capital

FDTR - Food Down the Road (Kingston, ON)

HC – Human Capital

NC – Natural Capital

NFP - New Farm Project (Kingston, ON)

NFU - National Farmer's Union (Canada-wide, with local chapters)

NGO - Non-governmental Organization

NHC - Natural Human Capital

ON - Ontario

SC - Social Capital

VT - Vermont

USDA - United States Department of Agriculture

UVM – University of Vermont

Chapter 1

Introduction

1.1 Framing the Issue

'This contest between industrialism and agrarianism now defines the most fundamental human differences, for it divides not just two nearly opposite concepts of agriculture and land use, but also two nearly opposite ways of understanding ourselves, our fellow creatures and our world.' (Berry, 2002)

The industrial revolution and subsequent adoption of a centralized model of production, as well as agriculture's Green Revolution have played significant roles in dramatically altering the food systems of many nations during the twentieth century (Friedmann, 1993; Ilbery & Maye, 2005; Koc & Dahlberg, 1999). Many have heralded the globalized, industrialized food system that has emerged a triumph of human ingenuity and technology. By embracing economies of scale, utilizing highly mechanized farming practices, and applying chemical pesticides to soils, humans have become extremely efficient at producing, processing, and delivering food to plates far from the farms on which they were grown.

In recent years, however, the sustainability of this centralized food system has increasingly come into question (Jones, Comfort & Hillier, 2004; Maxey, 2006; Renting, Marsden & Banks, 2003). Consumers are expressing concerns, particularly with regards to food quality and safety, and the implications of both on human health. Issues of regional and national food security are also rising to prominence, especially in light of the recent global food shortages in staple foods such as flour, rice and corn (McMullen, 2008; Smith & Edward, 2008). At the same time, the majority of today's conventional farmers are experiencing a crippling squeeze of their farm income, where fierce competition in a heavily-subsidized commodity market, an inherently long supply chain, reliance on expensive machinery, and investments in fossil fuel and pesticides have led to the current farm crisis facing many countries, including Canada and the US (Friedmann, 1993; National Farmers Union, 2005). Concerns about the environmental impacts of an industrialized food system are increasingly taking centre stage, with the popular media and consumer groups criticizing many of the practices inherent to the current model of food production (Pawlick, 2006; Pollan, 2006; Renting et al., 2003). That this dominant, industrialized food system is

coming under attack reflects, perhaps, a broader climate of political, economic, social, and environmental instability, where globalization and neoliberalism are coming under increased scrutiny, and the consequences of unfettered economic growth are being considered more carefully.

Faced with an uncertain future and the desire to determine their own destiny, many communities are pioneering new, decentralized models of food production with a view to designing systems that are more economically, ecologically and socially sustainable (Maxey, 2006; Feenstra, 2002). Most often referred to as local-food systems, but also termed foodsheds or alternative food networks, these new models of food production and distribution are gaining prominence in regions across the globe. Perhaps most notable, however, is the resurgence of local food in communities across North America and Europe, where the industrial food system arguably has its deepest roots and is a pervasive part of Western culture. In pockets throughout Canada and the US, from rural communities to small towns to concrete cities, these new food models are gaining in popularity. While these emergent local-food systems are inherently place-based and thus developing in relation to a diverse number of elements that distinguish one community from another, at their essence they appear to embody a new form of ‘capitalism’, one that values, depends upon, and seeks to strengthen or preserve all stocks of community capital: natural, human, social, and economic.

Kingston, Ontario and Hardwick, Vermont represent two regions with evolving local-food systems. Employing a case study approach, this study explores ways in which the development of a local-food system depends upon the interplay of a community’s capital stocks, as well as ways in which a local-food system may serve as a site for the creation or strengthening of these capital stocks, with a particular focus on social capital and social network relationships. Ultimately, this study seeks to contribute insight into whether this emerging food model represents a system that is self-sustaining and restorative in respect to all forms of capital.

1.2 Research Motivation and Objectives

This research study draws its motivation from a recognition that the current systems paradigm that dominates Western society may very well be flawed. Many systems, including the conventional food system, are threatening to collapse because they have been built on the premises, cultivated by classic economic theory, that infinite growth is possible and desirable, that only certain ‘things’ should be ascribed

value, and actors in a system act only out of self-interest. The result is a system of food production, processing, and procurement that relies heavily upon unvalued forms of natural capital, but does not seek to restore the stocks that have been depleted. Furthermore, this dominant food system arguably erodes human and social capital as it ‘deskills’ its labour force, replacing artisans with machines and agrarians with linemen, and enables anonymous economic transactions that are faceless and placeless, where farmer and eater need never meet and whole communities become reliant on food shipped from far distances. While such a system may appear efficient and productive by economic measures, its linear design and devaluation of natural, human, and social capital are strong indicators that it is neither resilient nor sustainable.

The topic of this thesis, therefore, emerged as a means by which to explore an alternative systems paradigm for food production and consumption, one that is place-based, and purports to value all forms of capital through a restorative, system. Specifically, the objectives of this research study were to:

- *Examine how the availability of different forms of capital impacts the development of a local-food system and identify which forms of capital are essential to development.*
- *Explore the interplay of capital stocks and the interdependent relationships that emerge during the evolution of a local-food system.*
- *Consider if and how the development of a local-food system can contribute to the enhancement of a community’s ‘stocks’ of capital, with particular focus on human-created forms of capital.*
- *Conduct a comparative analysis of two regions pursuing local-food system initiatives in order to identify common experiences, unique challenges and successes, and lessons learned.*

Ultimately, the purpose of this research study is to offer insight regarding how local-food systems depend upon and, concurrently, contribute to a community’s stocks of capital, and whether this food model is restorative. It is the hope of the researcher that the case studies and analysis provided herein will also contribute to the growing body of literature concerned with social capital and social networks, by highlighting ways in which a local-food system depends upon social capital and is also an important site of social capital creation. Finally, it is anticipated that stakeholders in Kingston and Hardwick will benefit from the analysis and findings presented in this report, and that other regions involved in local-food system

development will gain valuable insights that they can apply in their efforts going forward.

1.3 Justification for Research

A review of the literature revealed a gap with respect to studies of local-food-system development from a systems perspective. Rather, most research has tended to focus on individual operations (see, for example, Blay-Palmer & Donald, 2006; Ilbery & Maye, 2005; Maxey, 2006;), or the role of specific stakeholders with respect to local-food-system development (see, for example, Cox et al., 2008; Eaton, 2008; Magnani & Struffi, 2009). There is some, albeit limited, evidence of scholarly research that takes a broader systems-based approach to understanding local-food-system development (Feenstra, 2002; Qazi & Selfa, 2005). While these scholars offer valuable first insights, several authors (see, for example, Goodman & DuPuis, 2002; Maxey, 2006; Venn et al., 2006), observing a lack of empirical research in this arena, have called for research that is broader in scope and examines the relationships between actors in the network. This research study responds to that call, providing insight into how a local-food system develops vis a vis investments of a community's stocks of capital, with a particular focus on the value derived from social relationships amongst the many stakeholder groups involved in local-food initiatives.

An additional justification for this research is that it will contribute to the emerging body of literature concerning social capital. While it has been acknowledged that the concept of social capital is a very old one (Portes, 1998), its place within the academic realm is relatively recent, with Coleman (1988) solidifying its spot in the literature and Putnam (2000) popularizing the term and concept. Local-food systems are often characterized by elements of social embeddedness (Hinrichs, 2000) and thus offer a promising arena from which to consider social capital, both as a form of investment and as an outcome of development. This research study considers how social capital contributes value to a local-food system, and how a local-food system, in turn, might serve as an important site of social capital creation.

A final justification for this research is evidenced in the findings of this study. Access to all stocks of capital is necessary for a local-food system's development. Human capital has proven to be especially important with respect to conducting valuable research that can aid local-food stakeholders as they consider different development options. In this sense, this study represents an investment of the researcher's human capital through her existing knowledge and capabilities, as well as a means by which she has enhanced her knowledge and therefore her future potential to contribute to local-food initiatives and research projects.

Chapter 2

Literature Review

2.1 Introduction

The literature review served as an important component of the research study, both prior to and following the data collection phase. Early in the research process, a review of the academic literature highlighted the key arenas of discourse regarding local and alternative food systems, while a further review of the literature following data collection focused on the different forms of human-created capital and their relevance to local-food systems and community development. Relevant themes and theories, including sustainability and social capital theory were explored in-depth.

Examples of search terms used in the literature review include those pertaining to local-food-system development (alternative food systems, small-scale agriculture, community food systems, rural development, farmers' markets), forms of capital (social capital theory, natural capital, human capital development, financial capital) and other themes such as social networks and relationships, and sustainability. Databases searched included EBSCOhost, JSTOR, Scholar's Portal, and Google Scholar. Literature reviewed was drawn from a diverse and large number of sources, however, a number of journals proved especially fruitful including the *Journal of Rural Studies*, *Agriculture and Human Values*, and *Sociologia Ruralis*.

The literature review is organized in three sections. The first section sets the context for this study by providing background information regarding local-food systems, including the definition of 'local food', the key characteristics of the system, and the stakeholders involved in the local-food system. The second section offers an overview of studies regarding local-food systems and highlights gaps in the existing literature to which this thesis will contribute. In the third section, literature on the main themes of the research study and relevant theory is reviewed: sustainability as it relates to local-food systems; different forms of capital; and social capital theory. A conceptual framework is presented at the end of the chapter; its design was informed by the literature review and served to guide the research process and inform the study's findings, as discussed in Chapters 4, 5, and 6.

2.2 Contextual Background

2.2.1 - Defining and Conceptualizing 'Local Food'

Within the literature, a major and recurring theme explored by academics concerns the definition of 'local food' and the conceptualization of this phenomenon. The term 'local' is a value-laden term that often engenders positive connotations with respect to trusting relationships, community building, and a moral high-ground, where environmental stewardship and social justice are presumably prioritized and their costs internalized by producers and consumers (Allen, Fitzsimmons, Goodman & Warner, 2003; Jones et al., 2004). Dupuis and Goodman (2005), however, caution against accepting the romanticized ideals of moral integrity that tend to dominate the American literature. In some cases, the term 'local' is employed as a means of identifying geographic boundaries in which production and consumption of food occurs, whether these are specific (e.g. 100 miles) or more ambiguous in nature. In Europe and increasingly in the US, the term can also be associated with sites of production, and the product differentiation that accompanies them (i.e. the *terroir*) (Allen et al., 2003).

The tendency to create a binary comparison of 'local' to 'global' has also been challenged by many scholars. Hinrichs (2003) suggests that 'making "local" a proxy for "good" and global a proxy for "bad" may overstate the value in proximity, which remains unspecified, and obscures the more equivocal social and environmental outcomes.' (p. 35). Born and Purcell (2006) argue that measuring the justness or sustainability of a food system by its scale is not appropriate, but rather that the outcomes of a food system are dependent upon the agenda and goals of the social actors involved and are scalable. In Blay-Palmer and Donald's (2006) case study of Toronto's new food economy, the authors acknowledge that creating a false duality between the conventional, industrialized food system and alternative food systems can be counterproductive because such binaries can ignore fuzzy borders and important opportunities for analysis. They also argue, however, that there is some analytical value in separating out these systems, particularly given the disconnect that exists between these new food economies and the government-supported regulatory regime that currently directs the agriculture industry in Canada. Qazi and Selfa (2005) deliberately avoid the term 'local-food system' when discussing their Washington case study, noting that local-food networks are not always imbued with environmentally sound and socially just characteristics, they may simply represent shorter supply chains, particularly in regions with a strong agricultural industry.

2.2.2 Characteristics of a Local-Food System

While there remains a great deal of ambiguity and discourse regarding the definition and conceptualization of 'local food', there appear to be a number of generally agreed upon characteristics that make it distinctive. Most obviously, a local-food system draws attention to where food is grown and sold, implicitly or explicitly identifying geographic boundaries for all those involved in its production, sale and consumption. Less obviously, as Hinrichs (2000) notes, a local-food system both rejuvenates and relies on emotional ties to the land and the people, engendering a sense of place and of care. Local-food networks also afford farmers/producers and consumers new ways to interact (often directly), creating shorter supply chains and opportunities to embed value in the 'story' of the food (Cox et al., 2008; Feagan & Morris, 2008; Hinrichs, 2000; Selfa, Jussaume & Winter, 2008).

A number of scholars, including Hinrichs (2000), Sage (2003), and Feagan and Morris (2008), examine the concept of social embeddedness as it pertains to value creation within local-food systems. Drawing on economic sociology, Hinrichs (2000) examines how direct markets (i.e. farmers' markets and community supported agriculture) are constructed through the interplay of economic and social factors. She argues that, regardless of the setting, it is difficult to separate the economic from the social and that neither exists in a vacuum. Sage (2003) sets out to present a case for 'the significance of mutual regard as a non-economic dimension of personal relationships between producers, consumers and others that comprise an alternative good food network' (p. 60), but ultimately concludes that mutual regard is not sufficient as a rationale for participation and acknowledges that economic factors are necessary qualifiers of social embeddedness. Feagan and Morris (2008), discuss embeddedness as it pertains to their case study of a farmers' market in Brantford, Ontario. They note that embeddedness is often employed as means of describing the non-monetary characteristics of a transaction that neo-classical economics neglects to value.

2.2.3 Local-Food-System Stakeholders

Attention given to stakeholders in local-food system development is primarily focused on producers and consumers, also referred to as farmers and eaters. A significant proportion of academic studies have examined the relations between producers and consumers, often with a focus on specific sites of interaction such as farmers' markets (see, for example, Cox et al., 2008; Feagan & Morris, 2009; Hinrichs, 2000; Macias, 2008; Sharp & Smith, 2002). These studies contribute to an understanding of the

underlying motivations, values, expectations and experiences of these stakeholder groups. Much attention is given to the social constructs of these interactions, with general agreement amongst scholars that producer-consumer relationships are complex, ever-evolving, and not always free of tension. On the other hand, the literature also suggests that face-to-face interactions between these stakeholder groups engenders trust between actors and promotes a higher level of support and appreciation for the producers (Cox et al., 2008; Sharp & Smith, 2002).

Several studies focus solely on the producer/farmer stakeholder group. Brasier et al.'s (2007) research on small -farm clusters reveals that within this stakeholder group, there is significant heterogeneity, based on gender, immigrant status, culture, values, etc. Clusters, therefore, can serve as a means of bonding homogenous subgroups, such as female farmers, or they can bring members of a heterogeneous group together in order to pursue a common goal, as demonstrated in the authors' case study of a dairy co-operative. Magnani and Struffi's (2009) case study of farmers in the Italian Alps revealed that even within a seemingly homogenous group of farmers dedicated to environmentally-sound practices, heterogeneity with respect to goals and strategies to meet this ideal became evident during an attempt to encourage adoption of a new manure management practice. Maxey (2006) relates the experiences of small-scale producer-suppliers over a seven-year period, observing many commonalities in the challenges they faced and their motivations for operating such a business (e.g. all experienced a steep learning curve, all indicated that environmental sustainability was a driving motivation).

Although producers remain a key focus of researchers, several other stakeholders are also identified within the literature including economic development agencies, chefs, value-added processors, retailers, non-profit or non-governmental organizations, and academic institutions. Lee et al. (2005) consider the role of social networks as a means of rural development in Europe, highlighting findings from case studies carried out in Scotland and Sweden. Their findings suggest that strong social networks have the potential to be leveraged in the pursuit of rural development initiatives. Inwood et al. (2009) examined the role of chefs and restaurants as important partners in the promotion of local-food system. Findings from their study, which involved 71 restaurants in the state of Ohio, highlighted a lack of network associations across restaurants and between restaurants and producers, which stymied the diffusion of local food. Distribution and lack of convenience were also identified as key barriers to widespread adoption

Institutions of higher education can also serve as stakeholders in local-food-system development in many capacities such as: carrying out valuable research; offering relevant courses and programs; providing technical assistance; and acting as connectors between other stakeholders. Block et al. (2008) consider how the value webs concept can be applied to local-food-systems development by examining higher education-community partnerships that enabled 'green' product development, provided valuable support services to sustainable seafood businesses, established a student-centered value web to address food issues in NYC, and aided in bringing together a number of community groups with diverse food-related concerns.

While the discourse regarding local-food system stakeholders considers a variety of issues, a key theme that emerges from the literature is that strong social relationships amongst actors in the network are highly valuable and integral. This subject is explored further in section 2.4.

2.3 Local-Food-System Development

Over the past fifteen years, scholars have expressed a growing interest in understanding local-food systems, particularly in North America and Europe, as evidenced by the burgeoning number of publications on the subject (see, for example, Blay-Palmer & Donald, 2006; Dupuis & Goodman, 2005; Feenstra, 2000; Hinrichs, 2000; Jones et al., 2004; Selfa et al., 2008; Venn et al., 2006). Countries such as Cuba and Brazil are also attracting attention from scholars (see, for example, Rossett, 2000; Wittman, 2009). These emerging food systems have captured the attention of academics from several disciplines, with the resultant literature drawing on bodies of knowledge from rural sociology, agricultural economics, political ecology, human geography, economic geography, and many other arenas.

The majority of these researchers have employed a case-study approach to explore various topics pertaining to local-food systems. Several authors examine the sustainability of local-food operations, particularly those involved in production. For example, Ilbery and Maye (2005) conducted a case-study analysis of six businesses in the Scottish/English borders in an effort to determine whether local/alternative food systems are, in fact, economically, socially and environmentally sustainable. Employing a set of criteria developed by a national non-profit dedicated to sustainable farming and food issues to analyze each operation, the authors found that only one operation could be considered sustainable. Maxey (2006) carried out ethnographic, cross-country case-study research of six small-scale producer-suppliers in south Wales and southern Ontario to determine whether they could be considered sustainable food operations, with

consideration given to each business' commercial success as well as their commitments to the environment and social justice. His findings suggested that while each business appeared at first to be highly sustainable, closer examination of how the projects were maintained over time and the experiences recounted by participants revealed that their operations were inherently fragile. These case studies suggest that sustainability, with respect to balancing economic, environmental and social elements, remains largely elusive in the actual practice of local and small-scale food production, processing, and supply. Notably, however, the challenges facing many of these operators are a direct or indirect result of economic, social and political contexts that both support and result from the dominant food system paradigm (Maxey, 2006; Qazi & Selfa, 2005). These challenges include, but are by no means limited to: a regulatory climate that favors large-scale operations, consumer perceptions regarding the cost of food, and access to markets.

The influence of political, geographical, and socio-economic factors on local-food-system movements is also explored within the literature (see, for example, Eaton, 2008; Qazi & Selfa, 2005). Qazi and Selfa (2005), examined an agricultural region in central Washington to determine how regional politics could hinder or aid the growth of alternative food networks and proposed that 'the transformative capacity of alternative food networks is locally contingent, shaped by political ideologies and consumer acceptance of existing social constructions of agricultural systems' (p.45). They also suggest that how a network develops is place-contingent, with local farmers proximate to urban, social elite centers facing fewer challenges in terms of consumer acceptance and market penetration. Eaton (2008) presents a case study of sustainable food projects in the Niagara region of Ontario, Canada, demonstrating how two distinctly different forms of governance, neocommunitarianism and neoliberalism, at the provincial level during the 1990's defined the underlying values and goals driving these community economic development efforts. She argues that a turn to the local does not necessarily equate to a commitment to ecological and social betterment, or away from the neoliberal ideologies that have shaped the conventional food system. It is clear from the literature that the arena in which agricultural and food systems reside is heavily laden by political, geographical, and socio-economic conditions that are dynamic and evolutionary in nature.

Several studies in the academic literature focus on the motivations of stakeholders in the system and relations between stakeholders. Maxey's (2006) study of small-scale producer-suppliers revealed a number of ethical and emotive motivations for engaging in alternative farming, including a high level of

concern for environmental sustainability, and the fulfillment and pleasure received from growing food and meeting customers needs. This study and others (Cox et al., 2008; Feenstra, 2002; Hinrichs, 2000; Magnani & Struffi, 2009; Renting et al., 2003; Sharp & Smith, 2002) highlight relations between and within stakeholder groups, with most focusing on consumer-producer relations or producer-producer relations. Such relations are often marked by co-operation and trust, however, they also shed light on tensions that can exist between consumers and producers (Cox et al., 2008; Maxey, 2006). The motivations of consumers who choose to join community supported agriculture (CSA)¹ schemes has captured the interest of a number of researchers (Cone & Myhre, 2000; Cox et al., 2008; Hinrichs, 2000; Lamine, 2005; Wells, Gradwell & Yoder, 1999), with studies revealing a broad range of motivations amongst individual consumers including access to seasonal/local/organic food, sharing the financial risk with the farmer, being engaged in community building, and reducing food miles.

While empirically-driven research from a systems perspective is significantly less common within the literature, scholars that have taken this approach offer findings that are particularly relevant to this research study. Block et al. (2008) consider whether the concept of a 'value web' could provide a framework for the creation of collaborative partnerships between various actors in a local-food system's development. The term 'value web' is, arguably just another label for a social network, with a key feature of the web being trust amongst the actors that engenders less costly transactions and collaborative efforts. The authors' case-study findings suggest that using a value-web model does not guarantee the success or longevity of collaborations, however, they also observed that in all four case studies, the value web served as 'a productive way of thinking about, engaging in, and advancing the work of local-food systems development' (Block et al., p. 387).

Feenstra's (2002) case-study analysis of a number of community food systems in California sheds light on the many challenges and opportunities encountered by stakeholders. She puts forth the argument that four types of 'spaces' must be created and protected in order to develop and maintain sustainable local-

¹ Community Supported Agriculture (CSA) is defined by the USDA (2010) as a form of farming consisting of 'a community of individuals who pledge support to a farm operation so that the farmland becomes, either legally or spiritually, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production. Members or shareholders of the farm or garden pledge in advance to cover the anticipated costs of the farm operation and farmer's salary. In return, they receive shares in the farm's bounty throughout the growing season, as well as satisfaction gained from reconnecting to the land. Members also share in risks, including poor harvest due to unfavorable weather or pests.'

food systems: social spaces, the physical places and opportunities that allow for social capital creation; political spaces, particularly with respect to policy-making; intellectual spaces, where the vision and conceptualization of the system are developed, and where education, justification and opportunities for evaluation and reflection must occur; and economic spaces, where ‘recirculation of local financial capital is a key element in successful community food system projects’ (Feenstra, p.104).

Overall, the literature suggests that local-food-system development can be viewed as a complex and dynamic process that is highly dependent upon successful relationship building or social capital creation and the preservation of these relationships over time. Further, investments in human capital, particularly through education, and access to local financial capital, will also aid development.

2.3.1 The Rise of Local-Food in North America

Despite its relative infancy and the continuing debates over its conceptualization within the academic community, local food is growing exponentially, both in terms of its mainstream popularity and the number of communities actively engaged in the development of local-food networks. Authors such as Michael Pollan, Barbara Kingsolver, and Eric Schlosser have drawn attention to the many faces of food, inviting eaters to think more critically about what they are eating, and how it came to find its way onto their plate. Grassroots food movements have also been successful in penetrating the mainstream media and psyche, as evidenced by the fact that terms such as ‘locavore’, ‘Slow Food’ and ‘The 100 Mile Diet’ have found their way into the vernacular of ‘non-foodies’. The United States Department of Agriculture (USDA) also offers some insight into the phenomenal growth that local food has seen. Its handbook, *Supply Chain Basics: The Dynamics of Change in the US Food Marketing Environment*, reveals, for example, a near threefold increase in the number of farmer’s markets operating in the country over a fourteen year period (1994 – 2008) from 1,755 to 4,685. Between 1997 and 2002 alone, the value of direct-to-consumer sales in the US grew by 37%, reflecting large growth in the number of, and accessibility to outlets, such as farmer’s markets and CSAs, particularly in urban and suburban areas (Tropp, Ragland & Barham, 2008)). The handbook also notes that ‘the exponential growth in access to direct market outlets...appears to have stimulated significant growth in the value of locally grown food sold to consumers’ (Tropp et al., p. 9), noting that market research estimates the consumer demand for locally grown food could rise as high as \$12 billion by 2012, from \$4 billion in 2004.

Across Canada and the United States, local-food initiatives, large and small, have been undertaken by individuals, groups, organizations, communities, and governments with goals such as: increasing physical and/or economic access to local food, providing education and/or skills training, enhancing community food security, establishing environmentally-sustainable food-production methods, and pursuing economic development (e.g. culinary tourism). In Prince Edward County (PEC), ON, the economic development office has played a key role in the revival of local food and successful development of a creative rural economy, with key investments to promote viticulture, culinary tourism, and knowledge-based industries. The office has also partnered with academic institutions, consultants, and local entrepreneurs to develop a strategic vision for the region's future (Prince Edward County - Canada's First Creative Rural Economy, n.d.). The Ontario Culinary Tourism Alliance, acting as an umbrella organization for 27 partnering organizations, has also pursued investment and development strategies with target regions across the province, including PEC, Niagara, and Kingston (Ontario Culinary Tourism Alliance, 2009). Eaton (2008) discusses the efforts of one NGO to initiate various food projects in the Niagara region, including a Good Food Box and offers insight regarding the ongoing challenges facing organizations dependent on government funding.

Feenstra (1997) reviews a number of successful local food initiatives from across the United States, highlighting successful partnerships between community stakeholders. The Hartford Food System, for example, represents one of the oldest and most successful efforts to develop an equitable and sustainable food system. The organization works in partnership with numerous organizations to deliver a variety of food-related programs.

Throughout the literature, both academic and 'grey', the key role of farmers/producers in spearheading and supporting local-food initiatives is ever-present. Many farmers' groups have actively pursued local-food projects aimed at providing educational opportunities to community members, including schoolchildren, university students and the general public (see, for example, Block et al., 2008). Through CSAs, farmers' markets, and other direct selling methods, farmers have enabled greater access to healthy, local food in both urban and rural areas. Farmers are also integral to gleaning programs and contribute to other food security initiatives, usually through product donation. For example, the Greater Pittsburgh Community Food Bank runs a number of food procurement programs, including a gleaning program that

involves volunteers harvesting excess produce from farmers' fields (Greater Pittsburgh Community Foodbank, 2010). These examples and many others confirm that the growth of local food throughout North America cannot be attributed to one particular development strategy or group; various stakeholders have successfully driven an array of local-food projects in pursuit of a number of goals.

2.4 Themes and Theories

2.4.1 Sustainability

In 1987 the United Nations World Commission on Environment and Development, also known as the Brundtland Commission, produced a report entitled *Our Common Future*, which defined sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. Prior to this report, the term 'sustainable' was often a source of contention and ambiguity. Unfortunately, the establishment of a commonly agreed upon definition did nothing to alleviate this. Since *Our Common Future* was first published, the term 'sustainable' has been employed in every fashion imaginable, its original meaning overshadowed by the (often) vested interests of those seeking to derive value from the 'green' factor (Ramus & Monitel, 2005). There is, nevertheless, value in considering whether activities, industries, systems, and the underlying paradigm of thought directing these developments are sustainable.

While the criteria to measure sustainability will vary depending on the application, there are three generally agreed upon categories that must be considered simultaneously in order for sustainability to be achieved. Most often referred to as the 'pillars' of sustainability they are: economic development, environmental protection, and social development (United Nations General Assembly, 2005). These three factors broadly represent a litmus test of sustainability that can be applied universally – from applications in industry to institutional practices to individual activities. Given that the conventional food system appears to respond to primarily economic drivers, often at the expense of environmental concerns (e.g. pesticide usage, food miles, soil fertility issues, water use, etc.) and social issues (e.g. fair wages for farmers and workers, inclusivity/accessibility for all, access to healthful foods, etc.), it is not surprising that its sustainability is increasingly being questioned (Friedmann, 1993; Koc & Dahlberg, 1999; World Commission on Environment and Development, 1987). At the same time, local-food movements appear to be gaining a reputation as a sustainable alternative to industrial food production and distribution,

undoubtedly the result of the assumed values and practices associated with human-scale, place-based food production. Whether local food is, indeed, deserving of such a reputation is the source of much discourse in the literature.

In recent years some researchers, including Kloppenburg et al. (2000), Feenstra (2002), Ilbery and Maye (2005), and Maxey (2006), have begun to examine the complex issues concerning the sustainability of local-food systems and operations. Kloppenburg et al. (2000) provide an excellent overview of the many faces that sustainability has worn since it became synonymous with being green and good. As the authors observe, the ‘semantic plasticity of sustainability is nowhere clearer than in its manifestations in the agrifood sector’ (p. 3), noting that the behemoth Monsanto and the organic farmers of the Madison Area Community Supported Agriculture Coalition both claim to be sustainable, however, these entities attach very different meanings to the term. They also discuss early attempts by scholars to define sustainability in terms of local-food systems, arguing that they exclude the input of those actually involved in local-food networks. The authors attempt, therefore, to develop a set of sustainability criteria that reflect the conceptualizations of both academics and stakeholders.

Ilbery and Maye’s (2005) study, which considers the sustainability of specialist food producers in the Scottish/English borders, utilizes a framework developed by one of the UK’s leading agencies on aspects of sustainable development and local-food supply chains, SUSTAIN. In her discussion of local-foodsystem development and community spaces, Feenstra (2002) draws attention to three important requisites for appropriate development: public participation, new partnerships, and a commitment to the three pillars of sustainability. Maxey (2006) suggests that the triple bottom line concept of sustainability is simplistic and argues that actual adherence to these principles requires a paradigm shift away from neoliberal thought. He thus proposes that sustainability should be understood as a process, rather than an end point, which enables engagement amongst actors and the construction of new norms and agendas.

2.4.2 Forms of Capital

Historically, within classical economics, the term ‘capital’ has referred to the measurement of wealth held by an individual, community, corporate or nation through ownership of property, such as land, buildings, equipment, or money that can be easily exchanged for goods and services (Fedderke, De Kadt & Lutz, 1999; Hancock, 1999; Lin, 2001). In recent years, however, academics and practitioners from a wide

variety of disciplines, including sociology, ecology, health, and education, have charged that this narrow definition of capital does not accurately measure wealth; that there are, in fact, other forms of capital which, when combined with economic capital, equate to the total wealth of an individual, community, company, or society. From this broader, multi-disciplinary perspective, academics and practitioners have engaged in discourse regarding the value of natural capital, human capital, and social capital (see, for example, Callaghan & Colton, 2008; Coleman, 1988; Hancock, 1999; Hawken, 1993; Putnam, 2000; Tolbert, Lyson & Irwin, 1998). A summary of the key characteristics of each form of capital is provided in Table 2.1.

Table 2-1: Forms of Capital and Characteristics

Form of Capital	Identifying Characteristics	Examples Pertaining to Food System
Economic Capital	Physical property or currency that can be readily exchanged for physical property, labour, and other forms of 'wealth'	Money, farm equipment, warehouses, trucks, animal feed, fertilizers, bank loan, farm credit, grants
Social Capital	Social relationships and networks; trust; norms of reciprocity	Farmers' groups, community garden groups, university-community partnerships, informal social groups, co-operatives, collaborations
Human Capital	Knowledgeable/skilled individuals; healthy individuals; innovative individuals	Farmers with special skills in organic/sustainable agriculture, entrepreneurs, facilitators/co-ordinators, artisan food producers
Natural Capital	Renewable and non-renewable resources; nature's services	Soil, water, domesticated animals, insects, nutrient cycling, erosion control

2.4.2.1 Natural Capital

Natural capital refers to those resources that are provided by the planet's ecosystems, including water, soil, land, non-renewables (e.g. fossil fuels), renewables (e.g. trees), and associated services such as pollination and erosion control (Hawken, 1997; Callaghan & Colton, 2008; Pretty & Ward, 2001). Many academics and environmentalists argue that natural capital has been exploited and degraded by humans and, in particular, industry because it is undervalued by the dominant economic system (Constanza & Daly, 1992; Hancock, 1999; Hawken, 1993; Pretty & Ward, 2001; Wackernagel & Rees, 1997). Pretty and Ward (2001) observe that the environment is, at least in part, conceived of as a public good and, as such, does not have a market value. This tends to lead to an overuse and underinvestment in natural resources, as there is

no cost associated with use and no clear benefit to restoring what has been used or taken, thus a classic tragedy of the commons scenario arises. Several authors argue that natural capital is the foundation upon which all human development depends; it is a necessary prerequisite for the creation of economic, human and social capital, and must therefore be preserved (Callaghan & Colton; 2008; Hancock, 1999; Hawken, 1997; Pretty & Ward, 2001).

The call for a new form of capitalism that is restorative and ecologically-sound is gaining traction amongst academics, concerned citizens, and some members of the business community (see, for example, Nattrass & Altomare, 1999) and is particularly relevant to the future of agriculture. The environmental impacts of current agricultural practices that dominate in the West are significant and extensive. Soil quality has been detrimentally impacted by practices such as tilling and the application of man-made chemicals to such a degree that life, above and below the soil, is often exterminated or substantially reduced, and nutrient cycling by nature is inhibited. Erosion of topsoil is also a common byproduct of intensive agricultural practices. Water tables and quality have met similar fates as a result of extensive irrigation, pesticide runoff, etc. (McLaughlin & Mineau, 1995; Skinner et al., 1997). Entire habitat types have also been eliminated or drastically reduced through conventional agricultural practices, including, for example, tall grass prairies and wetlands in Canada (McLaughlin & Mineau, 1995).

Closely correlated to habitat loss is the negative impact of agriculture on biodiversity of flora and fauna, which are often displaced by agriculture. Tilman (1999) observes that ‘agriculture has caused a significant simplification and homogenization of the world’s ecosystems’ (p. 5995) and that it has traditionally focused on producing high yields at minimal costs without regard for the environmental impacts. Projecting into the future, he suggests that continued pursuit of the same agricultural practices will dramatically affect the planet’s remaining natural ecosystems and limit their ability to provide ecosystem services integral to society. It is evident from the literature, then, that natural capital is essential to agriculture and its depletion has been, in large part, a result of its undervaluation and the related pursuit of economic growth. The adoption of an ecological model as the foundation of all economic activities would seek to preserve and restore nature through mimicry of its closed-loop system, which entails efficient use of resources, elimination of waste and return to an equilibrium state (Hawken, 1993).

2.4.2.2 Human Capital

Definitions of human capital vary within the literature, often along lines of paradigmatic thought (Lin, Cook & Burt, 2001), however, it most commonly refers to those experiences that enhance an individual's productivity in the workplace. Callaghan and Colton (2008) observe that these experiences are often presumed to be formal education or training (Bingen, Serrano & Howard, 2003; Oliver, 2001), but suggest that when considering human capital in the context of community development, this does not suffice. Rather, the authors argue that the types of knowledge and skills a community would benefit from depends upon the community's goals for the future, which may be more complex than those of a business pursuing economic growth, as well as the specific context of the community (e.g. farming community vs. community of technology-based start-ups). They propose that, in addition to education and skills, the development of human capital depends upon an individual's level of personal spirituality, moral character, emotional stability, and physical health. Hancock (1999), also adopts a view that extends beyond the workplace, suggesting that the realization of human capital is the main goal of anthropogenic development, and consists of 'healthy, well-educated, skilled, innovative and creative people who are engaged in their communities and participate in governance'(p.276).

The link between human capital and the development of a sustainable, local-food system is discussed in the literature. Macias (2008) proposes that the creation of "natural human capital" (NHC) is key to successful development. He defines NHC as a marriage of human and natural capital, comprised of knowledge about the natural world that we accrue over a lifetime, as well as an awareness of our collective dependency on nature for human survival. Examining three different models of local agriculture, he finds that community gardening enables high levels of NHC creation through direct experience and learning from other gardeners, CSAs offer some opportunities for parents to teach their children where their food comes from, while an organic market farm operation offers few opportunities for NHC creation because customers do not visit the farm. Bingen et al.(2003), although focused on rural development programs in three African communities, offer some insights that may be universally relevant. Strategies that concentrated on the development of skills and social capital through investments varying from literacy programs to marketing activities to involvement in decentralized development planning provided farmers with important networking opportunities and encouraged the development of leadership and negotiating skills. The authors

found that an investment in human capital, when compared with profit-driven business strategies or product/technology investments, was the only strategy that would, in the long term, provide farmers with the ability to effectively act as independent political and economic actors.

2.4.2.3 Social Capital

Social capital (SC) is particularly relevant to understanding local-food systems, which are characterized by social embeddedness (Hinrichs, 2000), and enabled by co-operative networks and relationships amongst stakeholders. Despite roots that can be traced back to the earliest human societies, where collective efforts were taken to survive harsh living conditions (Heffron, 2000), SC is a relative 'newbie' on the academia block, having only cemented its place in the literature during the latter part of the twentieth century. Since then it has enjoyed a meteoric rise in popularity amongst academics and practitioners from many disciplines. Although definitions are proliferate and varied, the literature generally agrees that at its essence, social capital represents the potential resources or value made available to actors through an investment in social relations, including networks and other forms of social organization (Lin, 2001; Portes, 1998).

Conceptualizations of SC diverge along a number of lines; key amongst these is the controversy concerning whether SC should be viewed as a public good or an individual asset (Lin, 2001; Magnani & Struffi, 2009; Portes, 1998). Bourdieu viewed social capital as a resource that individuals seek for personal gain and argues that this is the primary motivation for participation in groups, thereby inferring that there is a "profit" motive underpinning social capital (as cited in Portes, 1998, p. 3). Lin (2001) argues that while collective assets such as culture, trust, and social norms may enable or enhance social capital, it does not follow that these assets are forms of social capital unto themselves and that SC is distinguishable as a relational asset. Other scholars, including Coleman (1988) and Putnam (2000), conceive of SC as an intangible public good with value that accrues to members of a group (Magnani & Struffi, 2009). In his seminal work, *Bowling Alone*, Putnam (2000) suggests that social capital has both a private and public face. He notes that individual actors may form social connections to reap personal benefits and enjoy companionship, but also observes that not all the benefits or costs of SC accrue to the actors engaging in social relations; some accrue to the community at large.

An important concept discussed within the literature pertains to two types of SC: bonding and

bridging. Putnam (2000) is credited with identifying the distinction between forms of social capital that are inclusive and open (bridging) and those that are exclusive and closed (bonding). Bonding forms of SC are characterized by homogenous networks (e.g. race, social class, religion) and solidarity; they tend to reinforce the narrower self identities. Relations between heterogeneous actors characterize bridging forms of SC; they encourage linkages to external assets as well as information diffusion and engender broader identities and generalized reciprocity. Notably, bonding and bridging do not represent mutually exclusive categories that forms of social capital can be divided into; rather they represent the end points on a continuum, with most forms of social capital representing some mix of both (Putnam, 2000).

Drawing on the social capital literature, Pretty and Ward (2001) identify four key aspects of SC: relations of trust; reciprocity and exchanges; norms, rules and sanctions; and connectedness, networks and groups. As Putnam (2000) observes 'trustworthiness lubricates social life. Frequent interaction among a diverse set of people tends to produce a norm of generalized reciprocity' (p. 21). Notably, reciprocity and exchanges can also serve to increase trustworthiness (Pretty & Ward, 2001). Norms, rules and sanctions direct the behaviors of actors through implicit or explicit agreement and tend to embrace a communitarian ideology, whereby the group or community's interests are held above those of the individual. Networks and the relationships they enable are crucial to the creation of social capital, acting as the vehicle through which social connections are created and maintained. Putnam (2000) notes that these social networks and connections vary significantly, particularly along the continuums between informal and formal, repeated versus episodic, and strong versus weak. He cites, for example, a unionized group of steelworkers, a local chapter of the Parent-Teacher Association, and a women's book club constitute social groups that vary in formality, but who are likely to interact repeatedly and predictably for meetings. Through discussion and analysis of the key components of SC, scholars have been able to offer valuable insight regarding the benefits it can deliver.

From an economic standpoint, the main benefit of SC is that it reduces the transaction costs of commercial and everyday life (Putnam, 2000; Rydin & Holman, 2004; Sabatini, 2009). As Putnam (2000) observes 'a society that relies on generalized reciprocity is more efficient than a distrustful society, for the same reason that money is more efficient than barter' (p.135). In business, SC has been found to influence career success, aid job-seekers, encourage resource exchanges and product innovation, reduce turnover

rates, facilitate entrepreneurship, strengthen supplier relations, and enable inter-firm learning (Adler & Kwon, 2002). In civic life, the structure of social capital, particularly networks, facilitates information sharing, collective action, and decision-making (Grootaert, 2001). Social capital is often credited with enabling change to occur and its absence with explaining why change does not occur (Rydin & Holman, 2004). Of particular interest, is the argument put forth by Woolcock (as cited in Magnani & Struffi, 2009, p. 232) that SC promotes local development, through its deployment by actors pursuing a development initiative and its creation/reinforcement through the interactions that follow.

Over the past two decades, scholars have become increasingly interested in examining the role of high/low social capital in relation to many individual and community-level measures of well-being and success. Coleman's (1988) study considered the role of social capital in human capital development, and revealed that dropout rates amongst high school students were lower where high levels of social capital existed. Putnam's (2000) study offers, perhaps, the most comprehensive study of how American community life is influenced by social capital. His findings reveal a positive correlation with educational performance, economic opportunities (e.g. jobs, promotions), child welfare, health outcomes, and happiness. Inverse relationships were found with respect to tax evasion, pugnacity, and violent crime rates; where social capital was highest, these undesirable elements of community life were lowest. Notably, economic inequality and civic inequality were lowest where social capital was high, suggesting that community and equality are mutually reinforcing rather than incompatible goals. His research sheds further light on the case study of Hardwick, Vermont, which is presented in Chapter 5. In comparison to other US states, Vermont has a very high level of social capital and benefits from the associated outcomes discussed above.

Understanding the means by which social capital is created and maintained is critical, particularly to studies concerning change over time. Falk and Kilpatrick (2000) propose that social capital can only be created and/or used when interactions between actors occur; it cannot appear out of thin air. Citing evidence from Putnam's study of Italian civic associations, Onyx and Bullen's (2000) extensive analysis of social capital in five Australian communities, revealed significant differences with respect to the general and specific factors used to measure social capital. Of the five communities studied, the two rural communities had higher levels of social capital, reinforcing, as the authors noted, Coleman's (1988) claim

that social capital is highest in closed communities. Grootaert (2001) observes that embodied social capital can take many years to build and reach its full potential. Noting that it is also easier to destroy trust, the foundation of social capital, than to rebuild it, he suggests that social capital maintenance requires a continued investment of resources, usually in the form of time. Magnani and Struffi (2009) consider translation theory and contrast it with social capital, suggesting that the former highlights the process of negotiation and transformation of problems and identities during development of a network, while the latter assumes relations and identities are static and not contingent on context.

The effects of social capital are not always positive and SC that is strongly bonding can contribute to negative outcomes (Magnani & Struffi, 2009; Portes, 1998; Sabatini, 2009). For example, members of a group may use their SC in pursuit of parochial interests or development goals that conflict with the vision of the broader community (Sabatini, 2009). Portes (1998) also highlights cases where certain ethnic groups have managed to maintain dominance in certain trades or businesses, such as the Irish/Italian/Polish control of New York City's fire and police unions, and the Cuban stronghold on many areas of business in Miami. It is important, then, for researchers to remain cognizant of the potentially negative consequences that may arise from the creation of SC, especially given that the affected groups or community may lack a voice to express their grievances.

Although Coleman (1988) and Putnam (2000) are often credited as pioneers of social capital theory and research, their work has faced criticism. Lin, Cook & Burt (2001) argue that Coleman's (1988) functional view of social capital, whereby the potential causal factor can only be defined by the effect, creates a tautology by folding cause and effect into a singular function. Along the same lines, Portes (1998) suggests that Putnam's (1993; 2000) analyses of Italian civic associations and American communities is rooted in circular logic. He argues that beginning with the effect and searching for an ultimate explanation of observed differences often results in a relabeling of the original effect as the causal factor. Scholars such as Healey et al. (as cited in Rydin & Holman, 2004) also criticize Putnam's work as being tautological because he claims that trust can serve to enhance social capital and also result from social interactions. These charges have been rebuked by others who argue that this condition points to strong, positive feedback loop where social capital is reinforced and strengthened the more it is used (Pretty & Ward, 2001). Social capital's regenerative character is especially relevant to this research study, which examines how social

capital is harnessed to pursue local-food system development and how local-food system development can also serve to strengthen social capital.

2.4.2.4 Social Capital - An Empirical Understanding

Increasingly, social capital is being recognized alongside human and economic capital as an important factor in the pursuit of many community and societal goals (Fedderke et al., 1999). Understanding the linkages between social capital and community development is pertinent to this research study given that many places pursue local-food system development as a means by which to revitalize and strengthen a community (Feenstra, 1997). Literature specifically examining the role of social capital in local/sustainable food system development is also relevant.

Through their analysis of interactions within and between the local networks of a small, rural community, Falk and Kilpatrick (2000), sought to identify processes that might contribute to the development of social capital. They conclude that through the processes of interaction, social capital can simultaneously be used and created. Whether social capital creation occurs depends on the quantity and quality of those interactions. As the authors note 'Social capital cannot be built unless opportunities for this to occur exist, or are provided... (this) implicates an attention to collective processes for communities-of-common-purpose that is often ignored' (Falk & Kilpatrick, p.106). The quality of interactions is also key and depends on three elements: the quality of the knowledge resources inhered in the actors and degree of knowledge sharing that occurs; the quality of identity resources and degree to which community members contribute to the positive identity development of each other; and trust, which the authors suggest is situated and necessary for positive communications/interactions.

Research and projects related to rural development offer fertile ground for examining the significance of social capital in efforts that typically involve agricultural development. Shucksmith's (2000) review of an EU rural development initiative, the LEADER program, considered ways that the program contributed to building social capital and promoting inclusion of marginalized community members. The author observed that rural development initiatives do not typically consider the value of social capital: the short timescales of projects do not take into consideration the long time period required to build social capital, indicators consider economic measures such as job creation rather than social development targets, and social inclusion is rarely an explicit objective. He also found that endogenous

rural development projects such as LEADER tend to lead to an appropriation of social capital by the dominant class within a community, those who possess the social connections, education, and power to take advantage of program funding and other opportunities. In a related article concerning the LEADER initiative, Lee, Arnason, Nightingale and Shucksmith (2005) argue that social capital cannot be viewed as a collective asset that is equally available to community members; rather, it is unevenly distributed amongst individuals/groups that compete for membership in social networks. They also found that ‘fostering networks and social capital are examples of interventions in the process of development that can have beneficial results. At the same time, however, networks and social capital can be used by individuals or groups to limit the supply or extent within the population of benefits resulting from change’ (Lee et al., p. 280).

Magnani and Struffi (2009) considered social capital and sociology of translation in their study of a project to promote sustainable agriculture and rural development in the Italian Alps. The social capital analysis was useful in identifying the social networks that existed in the farming community and highlighting the prevalence of bonding forms of SC between farmers and the lack of bridging ties with external institutions and organizations. The quality of social ties amongst and between different actors also revealed that farmer-farmer interactions were generally positive, but that farmers’ relations with the tourism sector, non-farmer community members and local administrators were of lower quality. While these findings offered valuable first insights into the state of the community’s SC and its networks, the scholars noted that the SC analysis was limited in both its scope (it did not consider non-human factors) and its assumption of static relationships. The sociology of translation analysis was able to shed further light on the dynamic, evolutionary nature of network and identity construction, which were shaped by the problem definitions and context of the project being pursued.

2.4.3 Networks

While networks have been considered extensively in relation to social capital theory, scholars have also examined them from many other perspectives including actor-network theory (see, for example, Davies, 2002; Maxey, 2006); supply-chain management (see, for example, Jarosz, 2000), ‘clustering’ (see, for example, Brasier et al., 2007; Romero-Martinez & Montoro-Sanchez, 2008), and political economy, to name but a few. Although the literature concerning networks extends beyond social capital discourse, it is

evident that there are many commonalities across the theories and concepts, most notably with regards to their social construct and economic value. The literature abounds with discourse concerning networks, thus the focus in this section is to explore the potential of networks to contribute to the development of a community's social and economic capital, as well as rural and local-food system development.

Block et al. (2008) examine how local-food-system development is enabled through value webs. They distinguish value webs from value chains, observing that the latter tends to suggest linear interactions and the one-way flow of information (e.g. from producer to end consumer), while the former embodies the idea that connections are multi-directional, relationships can exist between all members, and information can flow in different directions (e.g. consumers can influence producers). Drawing on findings from four case studies of partnerships between educational institutions and community groups engaged in local-food projects, the authors found that the value web concept proved useful as a framework for the development of partnerships. The value web allowed for an accurate illustration of the relationships and information flows between all actors. Furthermore, while the value chain concept focus is very business-oriented, the value web also highlights sociological, philosophical, and political elements of interactions, encouraging broader thinking about local-food system development by academics and practitioners.

Industry clusters are typically defined as 'geographic concentrations of firms or businesses in a particular field that co-operate, share local resources, exchange knowledge, and also compete' (Brasier et al., 2007, p.207). While firms clearly benefit from the cluster effect, the literature also highlights many benefits which accrue to the community including higher wages, increased jobs, economic growth, increased training opportunities, and the fostering of entrepreneurship (Brasier et al., 2007; Gibbs & Bernat, Jr., n.d.; Romero-Martinez & Montoro-Sanchez, 2008). The literature tends to highlight the economic benefits of industry clusters, however, they also share many characteristics with networks (Brasier et al., 2007) and can contribute to social capital formation. Typically, research and theory concerning industry clusters has focused on urban centers (see, for example, Kuah, 2002; Montana & Nenide, 2008) and knowledge industries (e.g. Silicon Valley), with little consideration for the role of clusters in rural development, particularly with respect to agriculture. Responding to this gap in the literature, Brasier et al. (2007) examined six agriculture-based clusters in northeastern United States. They found each cluster unique in many aspects including structure, motivations for forming, membership make-up, size, and

geographical proximity. In addition to the commonly cited economic benefits, several other positive community outcomes were identified by cluster members, including: spillover of improved viability for farms not participating in the cluster; opportunities for underrepresented groups in agriculture to learn and increase their skills in a positive environment; educational opportunities for local residents; further development of tourism; and potential multiplier effects of members' higher incomes. The authors argue that 'the network of relationships that support the cluster is the central locus for deliberate effort...emphasis should be placed on forming relationships across the value chain, creating an environment in which open sharing of information is the norm, (and) developing trust among all members' (Brasier et al., p. 21).

Through an analysis of social networks, Lee et al. (2005) consider the role of social capital in rural development. Focusing on case studies from Western Europe, the authors found that rural peoples formed identities tied to their region and were resistant to attempts by 'outsiders' to changes that might threaten these identities and related ways of life. Perhaps more notably, they found that the success of networks created specifically to support development initiatives varied more than those that relied on established social constructs and activities. The authors also highlighted the importance of social inclusiveness and networks that are bridging, as opposed to bonding. Their findings contribute to a deeper understanding of the links between identity formation, social networks, and rural development initiatives.

2.4.4 The Interplay and Balance of Capital Stocks

Stocks of human, social, natural and economic capital do not exist in isolation, rather, they are intimately bound together. The current economic paradigm from which the dominant food system has emerged tends to place a high value on the accumulation of economic capital, often depleting the other forms of capital in an effort to maximize monetary returns (Tilman, 1999). This system is not sustainable; it ignores the interdependency of capital stocks and the need to continuously regenerate stocks of capital that have been used (Hancock, 1999). The literature offers insight into how positive relationships between capitals can be fostered and is pertinent to this research study.

Hancock (1999) suggests that human capital should be the main goal of anthropogenic development. He argues that to achieve this goal it is essential to pursue a new form of capitalism that seeks to conserve all forms of capital (human, social, natural and economic) and refers to the sum of these capitals as community capital. He cites community gardens as an example of one way to invest in

community capital. Community gardening can contribute to the development of human capital by enhancing the knowledge and skills of garden members, encourage the formation of networks that strengthen social capital, provide a habitat for insects and birds and ensure organic food production, and reduce the cost of food for members. As a component of a local-food system, the community garden appears to serve as a potentially valuable site for both food production and capital creation that is self-sustaining.

Callaghan and Colton (2008) echo Hancock's (1999) sentiments, arguing that community resiliency and sustainability can only be achieved through investments in all forms of capital: environmental, human, social, cultural structural, and commercial. The authors attempt to develop a comprehensive framework that captures all of these capitals, allowing academics and practitioners to explore the interrelations. The resulting model is a pyramid that reveals important interdependencies between all the forms of capital. Natural/environmental capital forms the foundation of the pyramid, reflecting a view that stocks of this capital are necessary for the development of all other forms of capital, while commercial/economic capital sits at the top of the pyramid, suggesting that its formation is dependent on all other forms of capital. Two-directional arrows between each form of capital indicate that relationships can flow in both directions and should be reciprocal in nature (see Figure 2.1 in Section 2.5 for an adaptation of this pyramid in the conceptual framework). The authors posit that each community must find and maintain its own balance of capitals, however they acknowledge that establishing a consensus on the balance will be a challenge because heterogeneous stakeholders will place different values on the capitals, depending on their own needs. Despite this limitation, the model offers valuable utility to those interested in exploring relationships between forms of capital and was therefore incorporated into the conceptual framework developed for this thesis.

Dinda (2008) evaluates the relationships between human capital, social capital, and economic growth. Employing a quantitative approach, the author demonstrates that investments in human capital in terms of education and health result in the development of social capital because education provides individuals with skills to interact and an appreciation of the benefits that can be derived from collective action. Social capital's contribution to economic prosperity is then considered, with the author using trust as an indicator of social capital. In line with much of the research regarding clusters, Dinda finds that social

capital has an impact on income level and economic growth and should thus be considered a factor of production, along with economic and human capital.

Several scholars have explored the role of social capital in the development of human capital, including health and education outcomes (see, for example, Bingen et al., 2003; Callaghan & Colton, 2008; Dinda, 2008; Putnam, 2000). Coleman (1988), laid the foundation with his study, which examined the lack of social capital on high school drop out rates and revealed that where social capital was highest, the probability of dropping out was lowest. In *Bowling Alone*, Putnam (2000) highlights several links between high social capital and positive education and health outcomes. For example, the author found that in US states with high levels of social capital, students had higher SAT scores and stayed in school longer. Furthermore, mortality rates were lower in these states and health indicators were better. Notably, the author highlights the strong positive feedback loop, whereby higher adult education levels are considered a driver of social capital development. Putnam's findings extend to the economic realm as well and demonstrate an equally compelling relationship between social capital and economic prosperity.

Pretty and Ward (2001) argue that social and human capital development in rural communities can contribute to sustainable management of natural capital resources. They suggest that while economic incentives might provide a band-aid, short-term means of preserving natural resources, social and human capital are necessary to shift people's attitudes and ensure sustained investment in conservation efforts. The authors make the case for a combination of existing social and human capital, and externally-facilitated development (i.e. external agencies, institutions or individuals) that can further strengthen these stocks. Reviewing empirical evidence on collective management programs pursued by local groups, Pretty and Ward (2001) demonstrate that these social networks have effectively employed their social and human capital to properly manage watersheds, pursued forest-protection practices, and established schools where farmers can experiment with integrated pest management. As the foundation of all capital development (Callaghan & Colton, 2008) and a public good, natural capital is, perhaps, most at risk of being depleted and undervalued, however, Pretty and Ward's (2001) findings suggest that there are ways to ensure the preservation of natural capital that do not rely on economic interventions or fall victim to a tragedy of the commons scenario.

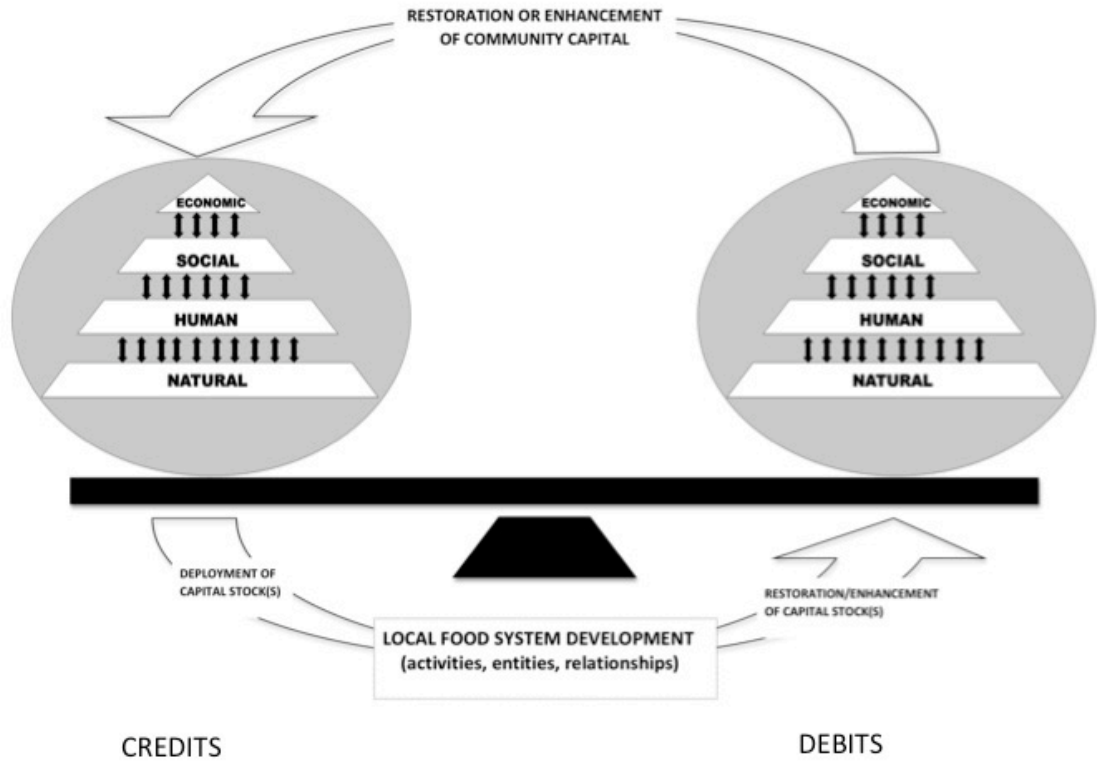
The interplay of capitals discussed in this section and other sections of the literature review reveals the constant fragility of these capital stocks, the need to direct efforts towards valuing and balancing these capitals in a sustainable manner, and the potential to pursue community capital development rather than economic development.

2.5 Emergence of a Conceptual Framework

The conceptual framework developed to guide this case study research was informed by the themes and theories discussed in the literature review. Callaghan and Colton's (2008) argument that the preservation of community capital is integral to the pursuit of sustainability and resiliency heavily influenced the development of this framework. For many communities, the development of a local-food system represents an important effort to enhance long-term resiliency, sustainability and health. As Feenstra (1997) argues 'the way food is grown, distributed and eaten ... profoundly affects the environmental, social, spiritual and economic well-being of the community' (p.28). The conceptual framework (see Figure 2.1) seeks to integrate these ideas by illustrating how initiatives pursued in local-food-system development rely upon and/or contribute to community capital. Identifying the appropriate balance of capital stocks and engaging in activities that promote the preservation of these stocks whilst also meeting the community's goals becomes the ultimate and on-going challenge for regions pursuing sustainable development and community betterment. The framework is one tool that can aid researchers and practitioners that are studying or planning local-food system activities.

The pyramid depiction of the capital stocks in Figure 2.1 that make up community capital is adopted from Callaghan and Colton (2008), although the researcher has modified the list of capital stocks. The two-directional arrows between the different types of capital highlight the interdependency of all capitals. Together, these four types of capital form the total stock of community capital, represented by the grey circle encompassing the pyramid.

Figure 2-1: Conceptual Framework



The Conceptual Framework is informed by the literature review and guided the research process, including the questions, methodology, and analysis. The figure depicts existing community capital stocks on the left and capital stocks that result from local -food development activities on the right. Debits and credits from each activity can be traced and the 'return on investment' identified. The scales indicate the importance of identifying and maintaining an appropriate balance of capital stocks so that all forms can be restored to the community. The pyramid depiction of the capital stocks represents the interdependencies, as proposed by Callaghan and Colton (2008).

Likened to a bank account, the community capital on the left hand side represents existing stocks of community capital available for ‘debit’ by stakeholders pursuing local-food initiatives. The right hand side represents credits to community capital stocks resulting from these activities. Debits occur when capital is deployed to carry out events; develop and execute programs; establish organizations, businesses or distribution channels; and pursue other activities or relationships that are intended to aid development of the local-food system. Ideally, these withdrawals represent wise investments of capital that provide equal or greater returns (credits) to the account. In turn, these capital stocks can be invested again in activities that further strengthen the community’s capital stocks and its local-food system, thus creating a restorative system with positive feedback. The scales illustrate the need to identify an appropriate balance of the four forms of capital and engage in development that seeks to maintain that balance.

The case studies presented in Chapters 4 and 5 consider how two communities pursuing the development of a local-food economy are deploying and/or creating community capital stocks. The conceptual framework guides the analysis; it considers various events, entities, relationships, and other activities aimed at enhancing the local-food system and identifies the associated investments and returns of capital stocks. It is important to note that whilst an activity may deploy one form of capital, it may return another form. For example, stakeholders may utilize an existing social network in order to plan and execute an event aimed at enhancing consumer knowledge (human capital). In doing so, the stakeholders may also enhance social capital as they work together and strengthen relationships within the network. In the dominant food system, natural capital is often deployed in an effort to gain greater returns of economic capital. Increased economic capital may, in turn, reduce human capital as tractors and assembly lines replace skilled and knowledgeable farm workers. It is important, therefore, that the analysis of local-food system development consider the total investments and returns of community capital, as well as the balance of these capitals.

2.6 Summary

The literature review considered definitions and conceptualizations of a local-food system. It also described key characteristics of a local-food system, traced development efforts in communities throughout North America, and presented important research findings regarding local food from a range of disciplinary perspectives. This component of the review highlighted the importance of social relationships, stakeholder

involvement, economic sustainability, and community betterment in the localization of a food system. It also revealed gaps in the literature with respect to understanding local-food-system development from a systems perspective, with most scholars focusing on singular components (e.g. farmer-consumer relationships or the role of farmers markets) and with regards to considering the importance and interplay of different forms of capital. As a result, a review of themes and theories concerning forms of capital (with an emphasis on social capital), social networks, sustainability, and related topics was conducted. It served to further inform the researcher's understanding of how social, natural and human capital, in addition to economic capital, might serve to support local-food-system development and also result from development efforts. Gaps in the literature, as well as the key themes and theories explored served to inform the development of the conceptual framework. The conceptual framework considers how local-food-system initiatives carried out by various social networks and stakeholder groups both relies upon and contributes to the community's capital stocks. Ultimately, the conceptual framework provides a lens through which to identify interdependencies amongst different forms of capital and consider whether a local-food system can serve to restore or strengthen a community's capital stocks. The literature review and conceptual framework provided an important foundation for the case study analyses presented in Chapters 4 and 5.

Chapter 3

Methodology

3.1 An Empirical Approach

At this point it is important to acknowledge that the researcher's original research questions, literature review, and conceptual framework were refined following the data collection stage of the research process. Initially, the researcher set out to gain insight into how local-food systems develop, examining enablers and inhibitors, as well as successes and challenges faced by individuals and the system as a whole. The original intent was to explore these questions from an economic perspective, with a view to understanding how financial capital was accessed to develop the system and support the initiatives of individual stakeholders (e.g. producers, non-profit organizations, retailers), and how the development of the system contributed to the creation of financial capital (e.g. local money exchange, infrastructure, etc.). Further, it was the researcher's intent to consider the subject of sustainability as it applied to the economic elements of local-food systems.

During primary data collection, however, it became apparent that the themes emerging from the researcher's interviews with various stakeholders and her engagement in the communities selected as case studies for this research study were not exclusively or even predominantly dependent upon or concerned with financial capital. Rather, the data told a narrative about non-economic resources that were being harnessed and created through various relationships, networks, and initiatives amongst local-food stakeholders. The primary data collected prompted the researcher to return to the literature in order to refine her research questions and redesign her conceptual framework prior to data analysis. The result is this research study, which provides a comparative exploration of the interplay of different forms of capital with respect to local-food-system development. Particular emphasis is given to how social capital supports and is concurrently created through local-food initiatives.

3.2 A Comparative Case Study Approach

A comparative case-study approach was employed in order to explore the inter-dependent relationships between various forms of capital and local-food-system development. As Yin (2008) explains, the case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its

real-life. The case study is especially useful when investigating ‘how’ and/or ‘why’ questions where relevant behaviors cannot be manipulated and the boundaries between phenomena and context are not clearly evident (Yin, 2008). Given that the questions driving this research study were primarily concerned with understanding *how* different forms of capital contribute to and result from the development of a local-food system, a case study approach was most fitting.

The researcher elected to pursue a comparative case study approach, while also limiting her research to two case study regions. This afforded her the opportunity to conduct a more in-depth analysis of each system, while also providing for valuable insight through a comparative analysis. For the purposes of this study, the researcher chose to study local-food networks in the following two regions: Kingston, Ontario and Hardwick, Vermont. The rationale for selection of these case study regions appeals to both research-driven and pragmatic factors.

3.2.1 Selection of Local-food-System Case-Study Regions

The researcher chose to restrict her case study selection to northeastern North America because of her proximity to, and familiarity with, the region. Noting the advantages of a multiple case-study analysis contained within a homogenous political and economic realm (see, for example, Ilbery & Maye, 2005), as well as the arguments put forth in favor of cross-country studies (see, for example, Maxey, 2006), the researcher selected case-study regions that, in some respects appeared to reflect relative homogeneity (e.g. democratic political systems, similar climates), and in other respects offered insights into how differences in dominant ideologies, population densities, geographies, or socio-economic conditions may impact the ‘stocks’ of capital and development of a local-food system.

The selection of Kingston and Hardwick from amongst a number of accessible case study sites was based upon the researcher’s sense of which communities she could learn the most from, echoing the advice of Stake (Denzin & Lincoln, 1998). Stake offers further guidance in this respect, noting that this may mean choosing the case that the researcher can spend the most time with, which led the researcher to choose Kingston as one of her cases. Hardwick, on the other hand, appealed to the researcher as a site for potential learning because its local-food-system development appeared to be well ahead of many other regions in North America, with *Gourmet* magazine labeling it one of the most important food towns in America (Hewitt, 2008) and Michael Pollan observing that Vermont is about 30-years ahead of the rest of the

country in its local-food-production efforts (Podhaizer, 2008). As Stake notes, ‘often it is better to learn a lot from an atypical case, than a little from a magnificently typical case’ (Denzin & Lincoln, 1998, p. 101). While the opportunity for learning was the main criterion for case selection from regions in northeastern North America, the researcher also limited the pool of potential sites to those that appeared to be actively engaged in local-food-system development and had been pursuing development for at least five years.

Finally, the researcher selected these case study regions because there is no evidence that either has been the site of an academic, empirical study concerned with understanding local-food-system development through the lens of community capital development. Notably, however, both case-study regions have benefitted from practitioner-generated research, media coverage and, in the case of Hardwick, an entire book dedicated to understanding the town’s local-food system, providing a rich compendium of grey literature which the researcher could draw upon.

3.3 Data Collection

Data for this study were collected from a number of sources. Accessing multiple sources of evidence is likely to provide for more depth and breadth of information, while also ensuring that the weaknesses of one source are compensated for by another source (e.g. inaccuracies of interviewees due to poor recall can be mitigated by accessing archival records and documentation) (Yin, 2008).

3.3.1 Interviews

Interviews served as the primary method of data collection for this research study. The researcher employed in-depth, semi-structured interviews, which allowed for a rich and flexible dialogue to emerge (Yin, 2008). Based on her literature review and other secondary sources, such as reports and websites, the researcher identified ten key stakeholder groups that could potentially be active participants in the local-food networks of Kingston and Hardwick (see Table 3.1). The researcher then compiled a list of potential interviewees from each group, based on relevant websites, media reports, and other secondary sources for each case study region. The researcher correctly anticipated a ‘snowball effect’ would also occur, with interviewees offering valuable information regarding key contact persons within the food network, thus she continuously revised her database of potential interviewees.

In order to gain a comprehensive understanding of the each case study region, the researcher

sought to interview the broadest cross-section of stakeholders possible. Based on her literature review and a recognition that stakeholder groups are not homogenous entities, but rather comprised of individuals and entities that may have divergent views, value and experiences, the researcher also noted the value of interviewing more than one representative within each stakeholder group. Acknowledging the time constraints of her study, the researcher endeavored to strike a balance between breadth ‘across’ and depth ‘within’ groups.

Table 3-1: Potential Local-food Stakeholder Groups

Stakeholder Group	Members of Group (examples, not exhaustive)
Primary Producers	Farmers, Gardeners, Homesteaders
Distributors	Wholesalers, Delivery Services, CSAs
Processors and Value-Added Producers	Abattoirs, Cheesemakers, Bakeries, Meal Preparation
Retailers	Farmers’ Markets, Specialty Stores, Grocery Stores, Co-operatives
Consumers	Individuals, Families, Organizations, Institutions,
Government/Public Organizations	Municipal, State/Province, Federal, Public Health, Public Schools
Community Groups	Community Gardens, Church-based Groups, Women’s Institute, Local-food Activists, Community Organizers
Other Organizations, Including Non-Profits	Environmental Organizations, Land Conservation Groups, Business Associations
Academic Institutions	Universities, Colleges, Student-run groups
Media	Print, television, radio, social networks

In total, thirty-two stakeholders were interviewed, with twelve contributing to the findings of the Kingston case study and twenty to the Hardwick case study. All interviews were conducted in-person, with the large majority being conducted at the interviewee’s place of work. The majority of interviews were one-on-one, however, in four instances two participants from the same organization/business were interviewed concurrently. The length of the interviews ranged from 21 minutes to 1 hour and 48 minutes, although the majority were 50 to 70 minutes. With permission granted, each interview was recorded as a podcast with GarageBand and fully transcribed. The researcher also took hand-written notes during the interview in case technical difficulties arose, and completed a contact summary form following each interview (see Appendix A).

The interviews required approval from the General Ethics Research Board of Queen’s University: approval was received June 4, 2009. Each interviewee was provided with a letter of information prior to the

interview, which summarized the research study and objectives, the interview process and contact information. A consent form was attached to the letter (see Appendix B for GREB Approval Letter and Letter of Information/Consent Form). Participants indicated on the consent form whether they agreed to be digitally recorded and whether quotes could be attributed to them by name. All interviewees agreed to be recorded and a significant majority consented to being identified by name; however, the researcher chose to create a coding system to maintain the anonymity of all participants. Appendices C and D provide details regarding the interviews conducted in Kingston and Hardwick respectively. When appropriate, quotes in this study are identified by the pseudonyms assigned to the interviewees.

A set of questions was designed to guide the interviews, with a recognition that the dialogue would flow freely and could diverge from the outlined questions. While some of these questions specifically addressed the economics of local-food-system development, many of the questions were broader in scope, seeking to understand participants' views regarding the evolutionary path of the system, milestones, challenges and successes. It was these paths of inquiry that led to valuable insights regarding the non-economic forms of capital that contributed to the system's development. Interview data, therefore, contributed to reformulation of the research objectives and development of the main themes, provided background information regarding each case study region, and served as a key source of information in the comparative analysis.

3.3.2 Participant Observation

Participant observation was also undertaken in both case study regions. This research technique serves several purposes that cannot necessarily be achieved through the interview process. For example, observations can provide an understanding of the context underlying interactions, permit the researcher to see things that may escape the awareness of those involved in it, and learn things people might be unwilling to discuss in an interview (Patton, 2002). The researcher participated in the settings along a continuum between complete immersion as a full participant to complete separation from the setting as a spectator (Patton, 2002). In most of her observations, the researcher sought to engage at a moderate participation level, maintaining a balance between observing and participating. Observations served as a means of networking with potential interviewees and gaining insights into how various interactions amongst local-food actors might rely upon and/or serve to enhance the community's stocks of capital, directly or

indirectly. Many of the observations were the result of snowball sampling, as she was informed of or invited to meetings and events by interviewees. Appendix E provides information regarding each observation.

In sum, these observations provided the researcher with an understanding of ways local-food stakeholders were actively seeking to enhance the stocks of social, human and economic capital available to local-food-system actors, and the broader community. These observations also revealed ways in which local-food stakeholders were dependent upon existing stocks of capital in order to build and maintain network relationships, host events, and deliver programs aimed at strengthening the local-food system. In some instances, observations served as a means of complementing or reinforcing information collected during interviews. Finally, the observations afforded the researcher the opportunity to meet with many stakeholders that she may otherwise not have discovered. In some cases she was able to arrange interviews with these stakeholders.

It should also be noted that while the observations represent those that the researcher engaged in for the explicit purpose of collecting data and networking, she also chose to take on a variety of roles in each case-study region during her fieldwork to enhance her understanding of the local-food systems and make contacts. As Patton (2002) notes, ‘getting close to people in a setting through firsthand experience permits the inquirer to draw on personal knowledge during the formal interpretation of analysis’ (p. 264). Certainly, the researcher’s perspectives and impressions were shaped, in part, by her personal experiences in each community. Some of the roles that she chose to adopt included: CSA workshare member (Kingston), community gardener (Kingston), localvore (Hardwick), and co-op grocery working member (Hardwick).

3.3.3 Secondary Data

Secondary data sources included: practitioner’s studies, written reports, administrative documents, media archives, and websites. These sources served as a ‘jumping off’ point for the researcher’s field research, as well as a means of triangulating interview data. Non-written sources of information, including documentaries and video clips, provided insight into non-academic perspectives of the local-food systems. The local-food story of Hardwick, for example, had been picked up by a number of national television shows, including the “Dan Rather’s Report” and Emeril Lagasse’s “Green Planet”. The secondary data,

along with the academic literature, aided in the identification of the themes for this study.

3.4 Data Analysis

An analysis of the data collected from the field involved techniques designed with the aim of gaining insight into the research questions outlined above. Firstly, the researcher attempted to create some preliminary order to the data by developing a matrix of categories and coding interview data to the relevant categories. Tabulations of the data were then conducted, including frequency of different themes and, where useful, information was placed in chronological order (Yin, 2008). Information collected from interviews was triangulated with secondary sources, such as publications and media reports, to confirm or refute accuracy. For the main analysis, a number of techniques were employed, including pattern matching, the compiling of chronological events, and cross –case synthesis (see Yin, 2008, for more detail regarding these techniques). The researcher used the software program, NVivo, to assist in the data coding and analysis.

Data analysis contributed significantly to an understanding of how each case study region depended upon and contributed to the formation of the community’s capital stocks, especially its social and human capital. It also aided in the comparative analysis of the case studies, presented in Chapter 6.

Chapter 4

Case Study – Kingston, Ontario

4.1 Introduction

Kingston, Ontario is a medium-sized Canadian town that is, perhaps, most well known for its institutions of higher learning, Old Fort Henry, and numerous correctional facilities. It was also, albeit briefly, the capital city for the united Canada (present-day Ontario and Quebec) before Canada's Confederation and lays claim to being the home of Sir John A. MacDonald, Canada's first Prime Minister. Despite its poor-quality farmland, Kingston also has a rich agricultural tradition and, in recent years, has begun to sew the seeds for a local-food movement. The case study provided herein, offers insight into how local-food initiatives in Kingston and the surrounding areas have both been shaped by and shaped the community.

For the purposes of this case study, the researcher chose to focus her analysis of Kingston's local-food-system development to the time period from 2000 to 2010, because several stakeholders identified this decade as critical to the re-localization of food in Kingston. It is important to recognize, however, that this latest iteration of Kingston's local-food system has been shaped by macro events (e.g. food safety scares, economic conditions), as well as historical events and conditions unique to the region². Details regarding Kingston's geography, economy and agricultural history are presented in Section 4.1, while Section 4.2 provides an overview of local-food-system development in Kingston and surrounding areas. This contextual background serves as the basis for the discussion and analysis of community capital deployment and creation that follows in Sections 4.3 and 4.4. Finally, it should be noted that all appendices cited in this chapter have been grouped in a separate appendix, labeled Kingston Case Study Appendices and all appendices are labeled as follows: Appendix K-X.

4.1.1 Geography, Population, and Economy

Kingston is situated in the eastern part of Ontario, Canada, where the St. Lawrence River flows into

² As many scholars (for example, Feagan & Morris, 2009; Hinrichs, 2003) acknowledge, the localization of food in the twenty-first century could more accurately be described as the re-localization of food. Communities are seeking to re-establish systems of food production and distribution that were, in many cases, abandoned over the past half century in favor of industrialization, centralization, and specialization, the earmarks of today's dominant food system. It is difficult, therefore, to pinpoint the beginning of a community's local food system development, because in most cases it is more akin to a reawakening than a birth.

Lake Ontario (see Figure 4.1). It lies almost equidistant between Canada's two largest cities, Toronto and Montreal, approximately 275 kilometers to either metropolis, and is only 200 kilometers from the nation's capital, Ottawa. The city and surrounding areas benefit from proximity to Highway 401, which connects southern Ontario with Quebec, as well as most other major highways in the province. As of the 2006, Kingston's CMA³ had a population of 152,358, occupying a land area of 1,906 km².

Public service institutions, including two universities and a Canadian Forces base, dominate Kingston's economy, while its private sector industries are heavily service-oriented. Paradoxically, Kingston boasts the largest number of Ph.D. holders per capita in the nation and the largest concentration of federal penitentiaries (Canoe Travel, 2009). In March of 2010, the city had an unemployment rate of 4.6%, virtually unchanged from one year previous in March of 2009 (Statistics Canada, 2010). While this suggests a stable and strong economy, it is worth observing that Kingston has a significant population of students (not considered unemployed) that fuel the economy for nine months of the year. Further, Kingston's close proximity to the country's largest urban centers provides job seekers with an alternative to remaining in Kingston and becoming an unemployment statistic. As of 2000⁴, the average individual income of a Kingstonian was \$30,600 and the average family income was \$68,396. Comparatively, Kingston's average family income is higher than several cities in eastern Ontario (e.g. Peterborough, Oshawa, Belleville, Brockville), but significantly lower than other cities (e.g. Ottawa, Waterloo, Guelph, and London) (Natural Capital Resources Inc, 2008).

4.1.2 Agriculture in Kingston and Surrounding Areas

Agricultural production in the City of Kingston and surrounding areas, including Frontenac, Leeds & Grenville and Lennox & Addington counties, has historically been hindered by the quality of the region's soils and its topography. Since Europeans first established a fur trading post at Cataraqui in 1673 to the present day, settlers and farmers have faced challenges growing crops and pasturing animals on lands dominated by limestone and granite (Osborne, as cited in McBay & Grinvalds, 2007). A 2007 agricultural study commissioned by the City of Kingston identified these Farmington loam soils (limestone) and rocky outcrops (granite) as problem soils with limited use for agriculture and further reported that within the

³ Statistic's Canada's Census Metropolitan Area (CMA) statistics are used because they are more representative of the case study research area, which considers surrounding rural areas. The Census Metropolitan Area includes the City of Kingston, the Frontenac Islands (Township), Loyalist (Township) and South Frontenac (Township)

⁴ Data from 2000 is used to provide comparison with latest data available for Hardwick case study.

boundaries of the City there are few large (i.e. over 1000 acres) contiguous areas of good quality agricultural land (see Clark Consulting Services, 2007). The area is dominated by soils that are Classes 4, 5, 6, or 7, indicating that these lands that are only marginally suitable for cropping (Class 4), or pasturing (Classes 5, 6, and 7). (See Clark Consulting Services, 2007, for detailed soil maps of the area).

Despite these natural limitations, farmers have been pursuing a variety of agricultural activities in the region since Europeans first settled. Osborne’s account of agricultural evolution in the area (as cited in McBay & Grinvalds, 2007), reveals that, throughout history, farmers have been aware of the region’s constraints, and been cropping and pasturing accordingly. During early British Settlement (1783 - 1851), oats, peas, hay, and a variety of livestock dominated the agricultural landscape. Like most communities settled before the advent of modern-day transport and infrastructure, the region developed a local-food system out of necessity. By the early nineteenth century, Kingston had established a formal market (1801) and land was opening up for settlers willing to persevere the hardships of life as a pioneering farmer (Osborne, as cited in McBay & Grinvalds, 2007). While some trade occurred, road and weather conditions wreaked havoc on the flow of goods thus, as Osborne suggests, ‘it was essentially a local and easily disrupted system of supply and demand’ (as cited in McBay & Grinvalds, 2007, p. 17).

Figure 4-1: Geographical Location of Kingston, ON



Source: Kingston Tourism, 2010

The latter part of the nineteenth century and first half of the twentieth century saw major changes in food production and distribution throughout British North America, as several converging factors, including transportation advances and the industrial revolution, swept over these newly settled lands. In Kingston, ‘the impact on local imports and exports was tremendous. The local market-square was soon competing with commercial butcher-shops and grocery stores able to supply exotic produce all year round’ (Osborne as cited in McBay & Grinvalds, 2007, p.17). In Frontenac County, this shift towards agricultural specialization saw the acreage of cultivated land decline, while dairy farming grew substantially and the area began to pursue cheese production for local and extra-local use.

As the twenty-first century unfolds, dairy farming remains an important element of Kingston and area’s agricultural mosaic, although trends suggest a significant decline between 1991 and 2001 (McBay & Grinvalds, 2007). Beef farming has become particularly popular in Frontenac and Lennox & Addington counties, with just over half of the farms reliant on beef production (McBay & Grinvalds, 2007). Corn cropping has also seen significant growth in recent years, while land for vegetables, pasture, barley, and mixed grains has decreased since 1991 (McBay & Grinvalds, 2007). Notably, despite less than ideal soil conditions, over 55% (19,097 Ha) of the City’s rural land is in agricultural use (Clark Consulting Services, 2007). While farming continues in the area, Kingston, like the majority of urban centers in North America, has become increasingly dependent on an ever-growing globalized, industrialized food system. Many of the farms in the region are entrenched in this commodity-based food-supply system; however, in recent years, a number of converging issues have reignited supply and demand of locally and sustainably produced food.

4.2 Local-Food-System Development

This section highlights motivations and key milestones in the development of Kingston’s local-food system from 2000 to mid-2010. Information presented in this section was gathered via interviews with representatives of key stakeholder groups. Secondary sources including media reports, websites, and non-academic research reports provided additional information and served to validate primary source accounts. Stakeholders, activities, events, projects, networks, challenges, opportunities, and other important elements/components of the system’s evolution are discussed; this information underpins the analysis that follows in Sections 4.3 and 4.4.

4.2.1 Motivations for the Pursuit of a Local-Food System

In *From the Ground Up*, a primer on Kingston and area's food system prepared for the National Farmers Union (NFU) Local 316, authors McBay and Grinvalds (2007) identify a number of macro issues related to the dominant food system that have spurred efforts to move towards a local-food system including a growing farm income crisis, the ecologically unsustainable nature of the current food system, and concerns regarding access to healthy food. Similarly, the NFU Local 316 Education Team (2006) highlights a number of reasons to choose local food including protection of the environment, supporting the local economy, and building a vibrant community.

Interviewees echoed similar motivations and rationale for pursuing local-food-system development, with different stakeholder representatives tending to highlight issues pertinent their livelihood or role. For example, producers/farmers were more likely to identify the farm income crisis and lack of environmental sustainability as drivers of development, while an interviewee from the health sector discussed issues concerning food security and access to healthy food for low-income residents, and respondents from a local business-development agency highlighted the importance of pursuing strategies to strengthen the local economy and attract tourists. Two interviewees (a public official and a retailer) cited increasing consumer awareness and concerns for food safety as a driver of demand for local food. It appears, then, that the rejuvenation of local food in Kingston has been motivated by a number of social, economic, and environmental concerns, most stemming from failures of the globalized system to sustain farmers, eaters and the ecosystem. These issues have motivated individuals, groups, organizations, and institutions in Kingston and area to engage in activities, host events, and carry out projects/programs intended to strengthen the local-food movement.

4.2.2 Key Activities and Events

Interviews and secondary sources revealed that various stakeholder groups have pursued several initiatives over the past ten years in an effort to enhance Kingston and area's local-food system. Cumulatively, these efforts have contributed to the current state of the local-food movement. A number of these initiatives were identified by representatives across stakeholder groups as being integral to the movement's growth – Feast of Fields, Food Down the Road, the New Farm Project, and Local Food, Local Chefs - and are therefore discussed in greater detail herein.

When asked to discuss key events in Kingston's local-food-system development, seven interviewees identified the Feast of Fields as an early and important milestone. The Feast of Fields, an initiative of the National Farmer's Union, Local 316, was held annually for three years, from 2004 to 2006. Hosted on the field of a different local farm each year, the celebratory event provided visitors with the opportunity to sample local foods prepared by chefs from Kingston and area restaurants. An on-site farmers' market, farm tours, children's activities, and educational displays offered attendees further opportunities to meet farmers and other community members, and learn more about agriculture and local food. The project was conceived as a way to increase the awareness of the area's local-food system and encourage the development of relationships between producers and eaters, with organizers citing preservation of the family farm, environmental sustainability and a growing disconnect between eaters and food as driving motivations (Reynolds, 2004). For instance, one interviewee, who holds several roles with respect to local-food-system development in Kingston and assisted in organizing the inaugural event, indicated that 'there were a whole bunch of layers of things we were doing there and a big part of it was really connecting farmers with eaters and having that direct connection and I think that's been very powerful for our movement here in Kingston' (K4).

Despite its overwhelming success (the sold-out event attracted more than 700 visitors in 2006), the Feast of Fields did not continue in 2007, in large part because the farmers who organized it were busy planning another NFU event, a local-food summit. The Feast was not revived in 2008, although a similar celebration of local food, the Fare in the Square, has been held annually since September 2008. Unlike the Feast of Fields, the Fare takes place in downtown Kingston's Springer Market Square during the regular Saturday farmer's market. Local restaurants offer visitors samplers of local fare, while activities such as cooking demonstrations, a corn roast, and heirloom tomato tastings take place throughout the day. In 2010, the Fare on the Square, run by the Downtown Kingston Business Improvement Area (BIA) benefitted from \$40,000 in funding from the Ontario government's Ministry of Tourism, via the Celebrate Ontario program. (Ontario Festivals and Events, 2010)

In December of 2006, the NFU Local 316 established Food Down the Road (FDTR); it was identified by nine of twelve interviewees as integral to development efforts. The initiative, which received funding and support from local businesses and organizations as well as the Government of Canada and

Province of Ontario (through the Agricultural Management Institute), aimed to advance the development of Kingston and area's local-food system through research, education, advocacy, visioning and community building (Food Down the Road, 2009). In June 2008, FDTR published a booklet, "Sharing Food Down the Road", detailing the evolution and goals of the community project, including the many activities, events and initiatives that were carried out during its first year (2007), which included organizing four Spring Speakers Series events, launching the FDTR website, writing/publishing *From the Ground Up: A Primer for Community Action on Kingston and Countryside's Food System*, and holding a three-day Local Food Summit (see Appendix K-A for a more comprehensive list).

The four-part Spring Speakers Series was identified by organizers as being particularly important in the lead up to the Local Food Summit, with each event addressing key issues from different perspectives. Three of the four events targeted both the general public and specific stakeholder groups, with sessions on topics such as building a vibrant local-food campaign; marketing strategies; successes and challenges faced by other communities in Ontario; and, structures that support local-food development. Each event attracted between one hundred and fifty to two hundred people, and was designed to ensure attendees were given a voice through, for example, question and answer sessions and table discussions.

In November 2007, FDTR held its premiere event, a three-day Local Food Summit, at St. Lawrence College. The event attracted over 400 people and included a keynote address, 18 workshop sessions, and a collective effort to create a Local Food Declaration for Kingston and area. Dr. Homer-Dixon⁵, the keynote speaker, discussed the importance of decentralized, well-connected networks, proposing that such networks are more resilient than large, centralized networks, and will be better prepared to weather the impending global crises of the twenty-first century, including Peak Oil and climate change (NFU Local 316, 2008). The summit marked the last major event organized by FDTR. While its first year was considered by many to be extremely successful, funding to carry on the work was not secured. As one interviewee noted:

I think the whole Food Down the Road initiative even though it's not as active as it was, you know, it's not as engaged right now as it has been, it's created a lot of awareness and engagement that would not have happened otherwise... it was an AMAZING, amazing year, like we had amazing workshops, we had a spring series with four events with at least a hundred people at each event... I

⁵ Dr. Homer-Dixon holds the Centre for International Governance Innovation Chair of Global Systems at the Balsillie School of International Affairs in Waterloo, Canada, and has authored several books including "The Upside of Down" and "The Ingenuity Gap". His most recent research has focused on threats to global security in the 21st century and on how societies adapt to complex economic, ecological, and technological change. Source: www.homerdixon.com

think one had two hundred people. You know, fantastic turnout. (K4)

After four years devoting its energies to developing awareness of farming/food issues and increasing the demand for local food, NFU Local 316 turned its attention to building up farm capacity. In 2008, it launched the New Farm Project (NFP), a 4-year initiative geared towards providing education, training, and support to new, established, and transitioning farmers. As one interviewee observed ‘we are realizing we have to keep building the two parts in tandem – the demand and the supply’ (K2). Five of the twelve stakeholders interviewed specifically identified this project as key to the continued development of the system. One interviewee made the following observation regarding Heifer International, the major funder of the project:

Well I think the (New Farm Project) is really interesting and the reason I find it so fascinating is that I’m quite certain that people don’t realize that Heifer International was founded for third world countries to better their agricultural systems and here we are using it in Ontario, in Kingston. To me that is just shocking...we meet the criteria, which is in itself an enormous statement about the state of agriculture in Canada. (K7)

Partnering with CRAFT (Collaborative Regional Alliance for Farmer Training) Ontario, a provincial network of organic farms, the NFP launched CRAFT Kingston in 2009, which provides individuals with the opportunity to take part in a farming internship. In 2010, fourteen farms in the Kingston area offered internships. In addition, the NFP offers free monthly hands-on workshops on a variety of topics such as cheese-making, beekeeping, on-line marketing, and agri-tourism. It also collaborates with other groups in Kingston and area to advance knowledge, research and action on farm and food issues. For example, project coordinators worked with the Kingston Sustainability Centre to host a monthly Food Film Fridays series and collaborated with local community group, Urban Agriculture Kingston, to host a session regarding the possibility of establishing a farmers’ co-op. The NFP has also provided conference bursaries for Kingston area farmers, offered farm tours, and hosted a number of gatherings for celebratory, networking and learning purposes. A unique attribute of the project is that participants who ‘receive a gift’ of seeds, equipment, training, etc., were required to sign an agreement to ‘pass on the gift’ by sharing a similar one with the community (New Farm Project, 2010). This strategy of circular giving and receiving is a requirement of the project funder, Heifer International, and is intended to foster self-reliance and sustainability within the community beyond the project’s funding.

In 2009, the Downtown Kingston! BIA received a grant from the Ontario Market Investment Fund to

carry out a Local Food, Local Chefs (LFLC) initiative. While the Downtown Kingston! BIA will oversee and coordinate this project; the initiative represents a partnership between the Kingston Public Market Vendors' Association, the Downtown Kingston! BIA, the City of Kingston, Kingston Accommodation Partners, Kingston Economic Development Corporation, and the Ontario Culinary Tourism Alliance. This diverse group of stakeholders was able to agree upon key objectives for the proposed project, namely to increase the availability and sales of local food at retail shops and the farmers' market in downtown Kingston, as well as restaurants in the downtown core, of which there are approximately one hundred (K11; Kingston Food, 2010). Since the project was rolled out in the fall of 2009, a number of initiatives have been carried out including two Farmer-Chef Meet & Greets aimed at providing networking opportunities; the launch of two websites (www.kingstonfood.ca and www.kingstonpublicmarket.ca); a Toast to Tapas event that featured 13 restaurants pairing local food with local wine/beer during the City's annual winter festival; and a number of advertising/marketing campaigns.

Over the past decade, the initiatives discussed above as well as several others have been carried out in an effort to raise awareness about farming, local food, sustainability, food security, and a number of other related issues (see Table 4.1 for a summary of key activities and events). While it would be difficult to measure the success of any one initiative in raising awareness, Section 4.2.3 focuses on the increase in sites of production, distribution and social interaction, suggesting that both demand and supply of local food in Kingston and area have increased over the past decade.

4.2.3 Sites of Production and Distribution

Sites of food production and distribution are essential to the development of a local-food system. Sustainability can only be achieved if farmers and gardeners have access to arable land and sustainable practices are employed to ensure the long-term fertility of the soil and, ultimately, the system. Producers (e.g. farmers and value-added producers) require viable outlets for marketing and selling their goods to consumers who have become accustomed to the conveniences of the supermarket. Over the past decade, Kingston and area producers and consumers have both benefitted from the growth of these types of sites.

Table 4.1: Summary of Key Local Food Initiatives In Kingston Examined (2004 - 2010)

Year(s)	Initiative	Led by	Highlights	Objectives
2004 – 2006	Feast of Fields	NFU Local 316	<ul style="list-style-type: none"> • Samples of local food prepared by local chefs • On-site farmers’ market • Farm tours • Educational displays • Children’s activities 	<ul style="list-style-type: none"> • to raise awareness of local food, farming issues, etc. • to foster relationships between farmers and eaters
2005 – Present	member-based network of local farm producers, restaurants and outlets (113 members in 2010)	Frontenac Arch Biosphere	<ul style="list-style-type: none"> • Website with local food maps (producers & outlets) • Farm to Fork Tours • Open Farms Day 	<ul style="list-style-type: none"> • to build on the strengths of the region by increasing the sustainability of the local food supply and the farmers who produce it • to bring together local producers and consumers, creating an economic and social partnership that benefits the entire community.
2007	Food Down the Road	NFU Local 316	<ul style="list-style-type: none"> • 4 Spring Series events • 3-day Local Food Summit • Publication of ‘From the Ground Up’ and ‘Sharing Food Down the Road’ • Launch of website and database • Numerous presentations, displays, courses and workshops 	<ul style="list-style-type: none"> • to strengthen the connections between local farmers, food processors, distributors, retailers, social justice advocates, cooks, and eaters of all income levels, so that each part of the local food system is in harmony with the other parts and with the whole, for the benefit of all
2007 - Present	Fare in the Square	Downtown BIA	<ul style="list-style-type: none"> • local restaurants serving samples of local food • farm & food vendors • heirloom tomato tastings • chef demonstrations 	<ul style="list-style-type: none"> • increase awareness of public market and local food vendors • increase awareness of restaurants that sell locally-sourced foods • celebration with interactive educational opportunities
2008 – 2012	New Farm Project	NFU Local 316	<ul style="list-style-type: none"> • CRAFT farm internships • Monthly hands-on workshops • Equipment Sharing Co-op • Events including annual Fall Gathering, Food Film Fridays, and farm tours 	<ul style="list-style-type: none"> • to build the capacity of farmers to plan and manage their farm operations to benefit from the growing demand for local food from local markets • to provide farmer education, training, and support aimed at strengthening the Kingston region’s farm community and local food system
2009	Local Food, Local Chefs	Downtown Kingston! BIA	<ul style="list-style-type: none"> • Farmer Chef Meet & Greet Events • A Toast to Tapas • Kingston Food website and Kingston Public Market website • External advertising and LFLC logo development 	<ul style="list-style-type: none"> • to increase sales of local food at the Public Market • to increase the number of restaurants and shops featuring local food • to build regional market opportunities for local food • to build Kingston as an authentic culinary tourism destination • to increase consumer awareness of local foods

Farmers' markets represent an important site of distribution for producers and, as Feagan and Morris (2008) observe '(they) are increasingly being positioned as a means to move towards more sustainable and localized food system' (p.236). Kingston is home to Ontario's oldest farmers' market, established in 1780 (Farmers' Markets Ontario, 2010), and is presently held three days of the week in the heart of downtown at Springer Market Square. In 2010, the market will benefit from a significant investment (\$250,000) from the Local Food, Local Chefs initiative, which will be targeted at raising the sales of local food.

For many years, the Kingston Public Market was the only market in Kingston, however, since 2005 a number (at least four) of new farmers' markets have been established throughout the City and surrounding area, providing increased access to local foods for community members. Perhaps most notable amongst these 'newbies' are the Farmers' Market at Queen's University (FM@Q) and the Community Harvest Market. The FM@Q began operating in October 2006. It is a volunteer-based project that seeks to raise awareness of, and encourage, sustainability by providing students, University staff/faculty, community members, and local producers with the opportunity to interact and support the local-food system. Blay-Palmer (n.d.) offers valuable insight into the research efforts, collaborations and network formations amongst various stakeholder groups that led to, and enabled, the establishment of the FM@Q. She observes that 'the FM@Q represents a unique combination of citizen, producer and private/public institutional co-operation and relationships' (p. 5). Since its inception, the market has evolved from a once-per-month activity to a once-per-week activity. One interviewee involved with the project observed that 'the vendors are really thrilled and I think the students are really thrilled and it certainly is the culmination of an educational institution taking an active role in food aggregation' (K7).

The Community Harvest Market hosted its grand opening in May 2009, on the grounds of the Wally Elmer Neighbourhood Centre in North Kingston. The market was initiated by a working group of Loving Spoonful, a food justice organization with a mission to combat hunger, reduce food waste, and increase food security. The goals of the market are to enhance access to fresh, locally grown and produced food for residents of the Rideau Heights area (typically a low-income housing area) as well as to other residents of the City; to promote "buying local", and to help create a community marketplace (Loving Spoonful, 2010).

In addition to farmers' markets, restaurants and retail shops serve as important sites for the promotion and distribution of local food. Kingston's local-food scene benefits from the support of a number

of restaurants that incorporate locally produced foods into their menus, and a growing number of retail outlets that specialize in or feature local foods. Eight of twelve interviewees identified restaurants as an important distribution channel for local food in Kingston and while all acknowledged that there is some buy-in from restaurateurs and chefs, most also indicated there is room for expansion of products being purchased (e.g., buying local meat and dairy, in addition to local produce already being bought), and other restaurants to come on board. Interviewees less commonly cited retail outlets as an important distribution channel for local food, reflecting, perhaps, the limited number of outlets that have historically featured local food. One interviewee from the retail sector observed that, in the past, the demand for local food did not justify stocking shelves with perishable produce, nor was the supply always reliable or of consistent quality. In the past two to three years, however, increased supply and demand have encouraged a number of existing retailers in Kingston to feature local products, and new enterprises have emerged to serve the local market exclusively, including a door-to-door delivery service and outlets providing ready-made foods.

Community gardens and community-supported agriculture (CSA) represent two sites of production that have seen significant growth in Kingston and area over the past decade. In the spring of 2010 five community gardens were operating on City land, with a sixth starting its first season on the campus of Queen's University. Of the five operating on municipal land, all but one was established within the past ten years. In 2009, the growing demand for community gardens (almost all of them had waiting lists) led the City of Kingston to pursue the development of its first Community Gardens policy. In addition to providing local community members with the opportunity to garden for free or a minimal plot fee, all of the gardens encourage members to donate surplus produce to a local-food bank (some of the gardens have dedicated donation plots), and provide educational opportunities for gardeners, youth, and other community members. One of the newest community gardens in Kingston, Oak Street Garden, has seen significant growth since its first season, when it consisted solely of a donation plot tended by community members. In its second year, the garden's organizers added individual plots, a demonstration garden and educational programming. Working in conjunction with the Ontario Public Interest Research Group (OPIRG), the garden received funding in the winter of 2010 to carry out educational programs in partnership with an early learning centre as well as a culinary school. The purpose of these partnerships, as stated in meeting minutes posted by the garden's organizers, was to help raise awareness about and increase interest in community gardens and

encourage groups to become autonomous in their gardening. One interviewee who has been involved with the garden also indicated that it has benefitted from the support and involvement of the broader community, observing that ‘there’s a big volunteer network that comes out through Loving Spoonful...(and) we’re getting people, like strangers, coming too, which is good and we want to build those (connections)’ (K12).

The CSA model has been growing in popularity throughout many regions of North America, including Kingston. Over the past decade, pioneering individuals from many walks of life have been establishing and fine-tuning CSA operations in the area. In 2010, a new urban agriculture CSA, run by a local, student-run business was able to secure land use agreements with several non-profit organizations that owned green space (usually a front lawn or backyard). Some of the area’s CSAs have expanded their operations over time, both in terms of number of shares available and products included in the share. For example, one CSA offers an egg share along with the classic vegetable share, while another provides members with the option of a winter CSA and opportunities for bulk processing and canning of their produce. Many CSA farmers have demonstrated a commitment to organic practices as well as educating their members and the general public about sustainability, farming and food by hosting on-farm events and workbees, and volunteering their time to give talks at schools, universities, etc. As one interviewee indicated:

I think that often the CSA model is helpful because it involves a lot of participation by the members so it really increases awareness. You know we have a lot of events out here through the year to try to get members to actually come out, give people a better idea of what actually goes on, how much work is involved (K2).

The growth in sites of production and distribution for local food may, to a certain degree, indicate that the activities and events carried out by the NFU Local 316 and other groups/organizations have been successful in enhancing awareness and demand for local food amongst Kingstonians. In turn, the growing number of CSAs, community gardens, farmers’ markets, retail outlets, etc. will serve to strengthen the local-food system by enhancing the convenience factor for consumers, enhancing awareness and educational opportunities, and providing non-farmers with opportunities to garden or participate in a CSA workbee.

4.2.4 Engaged Stakeholder Groups

Several stakeholder groups have been involved in the development of Kingston’s local-food system, whether through specific projects, such as the Farmers’ Market at Queen’s, or through programs/projects

intended to strengthen the system as a whole, such as FDTR. While it is important to recognize the contributions of all stakeholder groups to the growth of Kingston's local-food system, it is also worth considering which stakeholder groups have demonstrated leadership and have been able to carry out successful initiatives, as it will aid the analysis and discussion of social capital in Section 4.3.1.

Interviewees were not necessarily asked to identify which stakeholder groups had made significant contributions to Kingston's local-food movement; however, the milestones and important activities that they discussed indicated that farmers/producers and community groups have been integral to development. Most of the activities and events discussed in Section 4.2.2, as well as the sites of production/distribution discussed in Section 4.2.3, were initiated by groups comprised of farmers/producers and/or concerned community members. This suggests that to a large degree Kingston's local-food movement has been grassroots in nature, although the support of government, public agencies, institutions and the business community has also been important to some development efforts. In Chapter 6, further consideration is given to how a local-food system's development is shaped by the stakeholder groups that are most actively involved

4.3 Community Capital - Deployment and Creation

An analysis of how community capital has been deployed and created through efforts to strengthen Kingston's local-food system is presented in this section. The conceptual framework introduced in Section 2.5 guided the analysis presented here, which is drawn from data collected via interviews, observations and secondary sources. Each subsection provides insight into how local-food system development efforts have deployed and/or created different forms of community capital.

Natural capital is considered quintessential to the formation of all other capitals; however, data collected for this study focused on human-created forms of capital and thus the discussion of natural capital is limited. Instead, social capital is discussed first because findings from interviews suggest that, in many cases, this form of capital is deployed in an effort to enhance other forms of community capital. Collaborations, networks, trust, relationship-building, social events/activities and other elements of social capital were also discussed most frequently by the interviewees. Analyses of human capital and economic capital follow, as they were also repeatedly referred to in interviews and secondary sources. The analysis closes with an exploration of the interplay between all forms of capital.

4.3.1 Social Capital

Local-food systems, in stark contrast to the centralized and industrialized food systems that dominate North American society, both depend upon and foster social relationships amongst and between various stakeholder groups. The development of Kingston's local-food system provides a lens through which to explore how social capital has been deployed and enhanced over time. An analysis of secondary sources and interviews conducted with a diverse range of stakeholders offers insight into some of the opportunities and challenges encountered as individuals, groups, organizations, and institutions worked to build social networks, engage community members, carry out activities and events, and, ultimately, enrich existing stocks of capital.

4.3.1.1 Social Networks

Existing social networks were integral to some of the first major efforts to re-localize Kingston's food system. Every interviewee identified the NFU Local 316 as a contributor to development efforts. As a well-established group of farmers with common interests and concerns, they were able to deploy the social capital imbued in their social network to carry out a number of highly successful events and activities, as discussed in Section 4.2.2. The group was able to access economic capital (e.g. government funding) and human capital (e.g. volunteers within and outside the network), which was then used in efforts to enhance social capital, human capital and economic capital. For example, FDTR provided opportunities for NFU members to work together on numerous projects and draw in new members/volunteers, while many FDTR activities/events provided venues for new social relationships to develop. The FDTR projects also provided network members with the chance to enhance their knowledge and skills (i.e. human capital), as organizers, researchers and participants. Notably, the enhancement of human capital was not limited to members in the NFU network. Rather, the goal of FDTR was to inform and educate members of the community about farming and food issues. Finally, many of the initiatives were directly or indirectly tied to the goal of enhancing the sustainability of the local-food economy, whether through awareness-raising events or the development of marketing tools for local producers (e.g. FDTR website; Local Harvest newspaper).

In "Sharing Food Down the Road", the NFU Local 316 (2008) suggested that 'one way to summarize the role of FDTR is to call it a catalyst, drawing together a network to change a system' (p. 20). Four interviewees who had been involved with FDTR shared similar sentiments, with one observing:

It was the project that the National Farmers' Union ran here to do that outreach with building education among members of the community, partners in the community and building networks with the other stakeholders in the system so the conference that we had, called the Local Food Summit, was, I think, extremely successful (K9)

Other projects and activities pursued by the NFU were similarly structured to simultaneously deploy and create social capital, whilst also seeking to enhance community stocks of human and economic capital.

New social networks and collaboratives also developed in order to address challenges and opportunities related to farming and local food. For example, the Downtown BIA partnered with several organizations in order to carry out the Local Food, Local Chef initiative, while the Farmers' Market @ Queen's was realized through collaborations between several stakeholder groups from both the University and the community. In other cases, social networks formed out of the persistent efforts of a few engaged community members. One interviewee recalled becoming involved in coordinating a community-garden project after receiving a knock on the door from two neighbours looking for assistance with the project.

The activities and events that resulted from these new social networks and partnerships in turn offered opportunities to further build and strengthen social networks, whilst often simultaneously enhancing human and/or economic capital. For example, Oak Street Community Garden was established through the efforts of a small number of local residents who worked together to plant and harvest a 500 square-foot donation plot. In a report regarding the first year success of the garden, Kingston's local newspaper, *The Whig Standard*, revealed how it had come into being:

The Oak Street Community Garden started with a simple e-mail last winter from councillor Vicki Schmolka to Payne about using the municipal property as a garden. Payne leapt at the opportunity. Soon, city staff were involved with initially preparing the area. A handful of volunteers did the rest. "Somebody came and just planted a pumpkin, somebody else planted marigolds - we don't know who," he said. Local farmers donated seeds and plants and it took off from there (Pritchett, 2008).

The volunteers collaborated with Loving Spoonful to ensure local-food banks received the harvested food. The following season saw significant expansion of the garden, particularly its educational programming, and the recruitment of more volunteers and gardeners. Oak Street Community Garden represents an initiative that resulted from the commitment of a few individuals who came together with a shared vision for their community and were able to transform that vision into a site that encouraged further creation of social and human capital.

In line with Putnam's (2000) proposition that social capital has both a private and a public face, many of the initiatives pursued by Kingston's local-food networks appear to have benefitted network

members, as well as the broader community. Interview findings suggest that members of these networks have, for the most part, been motivated by both self-interest (typically economic in nature) and altruistic values/goals related to community betterment, environmental sustainability, etc.

4.3.1.2 Sites of Social Interaction

Social capital can only be created when opportunities for interaction exist (Falk & Kilpatrick, 2000). A local-food system is inherently designed to facilitate social interactions through events/activities (e.g. festivals, workshops) that engender a sense of community, as well as the establishment of venues where members of the community can interact (e.g. farmers' markets, restaurants). The development of Kingston's local-food system during the past decade has resulted in more events and venues where social interactions can occur. Appendix K-B presents accounts of how local-food events and venues have contributed to the development of social capital in Kingston. The most popular events and venues are discussed below.

Given the nature of an event, opportunities for social-capital development will always exist, thus, as Falk and Kilpatrick (2000) suggest, the quality of events and interactions should also be a measure of the local-food system's contribution to community capital stocks. The Feast of Fields and, to a lesser extent, the Fare in the Square, were identified by the majority of interviewees as important sites of social interaction. Bringing farmers, chefs, food activists and members of the community together, these events afforded opportunities for the creation/strengthening of bridging social capital. The Spring Speaker Series and Local Food Summit hosted by FDTR in 2007 were also considered valuable in fostering a sense of community and enabling social interactions. Given that there were a number of FDTR events held throughout the year, repeat interactions between regular attendees provided more opportunities (in comparison to an annual event) to build trust, share information, and, ultimately, create social capital.

Farmers' markets and community gardens appear to represent the most popular venues for social interaction in Kingston's local-food scene. It is important to recognize that these sites serve multiple purposes. Farmers' markets are typically established as a distribution channel for farmers/producers, however they also rely on social embeddedness (Feagan & Morris, 2008). The most obvious social interactions at a farmers' market are between the farmer and eater, but the market also provides opportunities for vendors to build relationships with each other and for shoppers to engage in conversations

with fellow shoppers. Community gardens also offer ample opportunities for interaction. While the primary purpose of community gardens is to provide a space for members of the public to grow food, the venue enables gardeners to share information and conversation, and can also act as a location for educational programs and celebratory events that attract a diverse cross-section of community members (Hancock, 1999).

Appendix K-C provides a summary of events and venues that have enabled social capital development in Kingston's local-food system. It is worth noting that, in most cases, social capital had to be deployed first in order to create these sites/events.

4.3.1.3 Bridging and Bonding Forms of Social Capital

During the past decade, many formal and informal networks in Kingston and area have leveraged their social capital in order to strengthen the local-food system. The networks discussed above have been integral to the creation of all human-created types of community capital. Given their important role in shaping the local-food system, it is worth considering whether these networks tend to encourage bridging or bonding forms of social capital.

In many cases, Kingston's local-food system development appears to have benefitted from bridging forms of social capital, which have enabled the diffusion of information and access to external assets (Putnam, 2000). Several of the initiatives discussed in Section 4.2 were realized through collaborations between diverse stakeholder groups. In its handbook "Sharing Food Down the Road", the NFU Local 316 shared the following sentiment regarding the goals of the one-year project: 'we wanted FDTR to become a permanent, sustainable community movement. We had to make sure we didn't burn any bridges along the way; networks live on trust at all levels' (p.17). Nine of the twelve interviewees specifically discussed projects that had required different stakeholders to sit around the same table and find common ground or acknowledged the importance of involving a broad cross-section of the community in development efforts. Secondary sources reinforced the opinions expressed by interviewees. Appendix K-D captures some of these sentiments.

Bonding forms of social capital encourage solidarity within a group; however, this is sometimes to the exclusion of those outside the group. As discussed in Section 2.4, bonding social capital can be both a positive force and a negative one. On the one hand, it draws people with a commonality together, whether it

is ethnicity, a political view, an occupation or some other means of identifying, and engenders a strong sense of belonging within the group. On the other hand, bonding social capital tends to reinforce existing identities and encourage homogeneity (Putnam, 2000), which may effectively discourage dissemination of information and acceptance of diverse viewpoints and ideas. Findings from interviews, particularly with stakeholders who were not farmers, suggest that bonding forms of social capital exist and are most prevalent amongst a contingent of farmers who share similar views regarding agriculture and food issues. Interviewees expressed mixed opinions regarding the impact of bonding social capital on efforts to develop Kingston's local-food system (see Appendix K-E).

Findings from the interviews and secondary sources suggest that, while there have been some efforts amongst stakeholder groups to collaborate, in many cases stakeholder groups have remained largely isolated from each other and tended to express inward-looking perspectives. When asked to describe what the term 'local-food system' meant to them, many stakeholders discussed the relationship between their role (e.g. retailer, health services, farmer) and consumer. Furthermore, when asked to identify milestones and important events/activities, the majority of interviewees shared details regarding initiatives spearheaded by the stakeholder group to which they belonged. This suggests that there may, in some cases, be a lack of strong identification with the broader network of stakeholders engaged with local-food system issues. Some of the challenges associated with strong bonding social capital are discussed in greater detail in the following section.

4.3.1.4 Social Capital - Challenges and Opportunities

Interviews and secondary sources suggest that of the four forms of community capital, development of the local-food system in Kingston has relied most heavily upon existing social capital and, simultaneously, contributed significantly to the community's stocks of social capital. While local-food initiatives have certainly enhanced social capital, interviewees also highlighted a number of challenges and concerns that they have observed or experienced. It is important, therefore, to consider both the challenges and opportunities with respect to deploying and creating social capital via the development of Kingston's local-food system.

The most significant challenges with respect to maintaining/enhancing social capital for Kingston's local-food system have, to date, been related to sourcing economic and human capital. The vast

majority of initiatives aimed at strengthening networks and providing sites for social interaction have depended on access to external funding. This has presented a two-fold problem. First, organizing groups are typically given short-term funding (e.g. FDTR funding was for one year) and must therefore constantly focus their energies on accessing future funding sources. Second, many organizing groups have limited funds, thus they rely partially or solely on volunteer members to carry out fundraising efforts, as well as the planning and execution of events. This reliance on human capital in the absence of economic capital for reimbursement can lead to burn-out, as a number of interviewees indicated. It is important to note that while opportunities for social interactions to take place have depended upon economic and human capital, ultimately access to funds and labour has relied upon the leadership and action of social networks (e.g. NFU 316, the collaborative of organizations that spearheaded the LFLC project, the community members that established community gardens). This situation highlights the interconnected nature of all forms of capital. Appendix K-F presents some of the views expressed by interviewees and in secondary sources regarding challenges in the development and maintenance of social capital.

Interviewees expressed a wide range of perspectives regarding the social relationships amongst and between local-food stakeholders. The majority of interviewees recounted examples of collaboratives, partnerships, and network expansion that had involved a broad cross-section of stakeholders, suggesting high levels of the bridging form of social capital. Notably, however, most of these interviewees were members of a strongly bonded social network. Responses from stakeholders engaged in other areas of the food system (e.g. retailing, food justice), highlighted some concerns regarding trust, the limited inclusiveness of some social networks, and a lack of communication across networks in some instances. These findings may indicate a limited amount of bridging social capital, particularly between certain stakeholder groups, coupled with strong bonding forms of social capital within certain stakeholder groups.

Development of Kingston's local-food system has provided increased opportunities for the creation of social capital through events/activities and venues where stakeholders, including eaters, can form or strengthen relationships and social networks. Notably, earlier initiatives, such as Feast of Fields, provided important, but temporary and often one-time opportunities for stakeholders to interact, and required external sources of economic and human capital. Later initiatives, such as the Oak Street Community Garden and Farmers Market@Queen's, offered increased opportunities for on-going interaction

and relationship-building. Furthermore, once these venues began operating, they were able to become fully or partially self-sustaining, which is to say that when they required economic capital or human capital, they were able to source it internally (e.g. students ran the Farmers Market and garden members hosted fundraising events). The future success of these endeavors will depend upon continued participation of the members that make up the social networks managing the projects.

4.3.2 Human Capital

As discussed in Section 2.4.2, human capital is commonly defined as the knowledge and skills that contribute to a person's productivity in the workplace. However, given that this study is concerned with community capital, the researcher has adopted Hancock's (1999) definition of human capital as consisting of 'healthy, well-educated, skilled, innovative and creative people who are engaged in their communities and participate in governance' (p.276). This broader conceptualization recognizes that, in addition to skills and knowledge, an individual's level of health, willingness to get involved in community efforts, and political engagement will reflect his/her total human capital 'value'.

An analysis of Kingston's local-food-system evolution indicates that deployment of human capital has been integral to development efforts. Without individuals willing to engage in grassroots action, the initiatives discussed in Section 4.2 could not have been pursued. These individuals contributed a breadth and depth of skills and knowledge in areas such as event planning, marketing, researching, grant writing, and website development. Furthermore, many volunteers demonstrated an enthusiastic willingness to share specific knowledge/skills by hosting workshops, typically on topics related to food production (e.g. cheese-making, cold storage, seed saving). In small and big ways, many individuals displayed their creative and innovative skills in the planning and execution of initiatives such as the LFLC Matchmaking Event and Feast of Fields, as well as the development of their own businesses. Finally, many stakeholders, particularly those involved in production, have applied their knowledge and skills of sustainable farming practices to their own operations, ensuring natural capital stocks remain viable.

Returns on these investments of people's time, energy, and skills have, in turn, enhanced the human capital of many stakeholder groups and, in some cases, the community at large. For example, the human capital required to plan and carry out monthly workshops, such as those hosted through the NFP, has provided opportunities for members of the farming and non-farming community to gain specific

knowledge/skills that they can then utilize to improve their own or their business' capacity to produce food. The NFP's main objective is to increase the farming capacity of Kingston and area by providing new farmers and farmers in transition with the tools and knowledge to successfully pursue a livelihood in sustainable agriculture. Internships are one of the key vehicles for transferring human capital from the experienced to the inexperienced, and represent an important means of sustaining knowledge and skills within the farming community.

Community members of all ages have also benefitted from investments of human capital in many events and projects that have been designed to enhance awareness of local-food issues. One interviewee discussed a number of pilot projects that had been launched in local elementary schools to teach children about gardening, sustainability and related topics. Finally, as eight of the twelve interviewees observed, the human capital invested in developing the local-food system and educating eaters about the importance of choosing local, fresh, and healthy food will pay long-term dividends back in terms of the health and well-being of Kingston's citizens.

The major challenge identified by stakeholders with respect to human capital is that reliance on volunteers can present on-going issues in terms of co-ordination, burn-out, etc. In "Sharing Food Down the Road", the NFU (2008) made the following observation:

For practices to be truly sustainable they have to be sustaining. They have to sustain the people involved every bit as much as they sustain the quality of the food, air, soil, and water... everybody, including you, needs encouragement, nourishment, and reward. Sometimes that comes as pay or profit, other times it is in the form of recognition, learning, personal satisfaction, enhanced community, good food, or just plain fun. (p.11)

Many of Kingston's local-food initiatives have been carried out by volunteers (e.g. establishing community gardens, celebratory events) and, in these cases, stakeholders indicated that sustaining these activities could be difficult. The Feast of Fields, for example, was organized by volunteers for three-years running and was very successful; however, when another project (the FDTR Local Food Summit) demanded the time and energy of these volunteers, the Feast was discontinued. This points to a related problem - the pool of human capital from which to draw on, particularly when special skills/knowledge are necessary, is quite limited in relation to the population size. Interview findings suggest that a small number of individuals have been spearheading most of the local-food-system initiatives in Kingston and area. A large percentage of these leaders have been from the farming community, although interviewees also

indicated that members of the non-farming community, including concerned citizens and students have been integral to development. See Appendix K-G for accounts regarding human capital deployment and enhancement.

The student population was identified by five of the twelve of stakeholders as being a valuable source of human capital, although interviews suggest that, to date, there has been limited collaboration between the City's post-secondary institutions and local-food stakeholder groups. While interviewees provided some accounts of student involvement, it was evident that these were ad hoc cases, rather than the result of on-going communication or partnerships. Notably, one interviewee pointed out that the transitory nature of Kingston's student population creates challenges in terms of retaining a knowledge base over the long term, but also opportunities for continual renewal of a pool of human resources.

It is clear from the findings that development efforts have been directed towards increasing the knowledge and skills of stakeholder groups, with a particular emphasis on raising awareness amongst eaters and equipping new farmers with the necessary abilities to pursue sustainable agriculture. Sustaining human capital requires the continuous deployment of human capital. As noted above, this can be a challenge when stakeholder groups are reliant on volunteers and when partnerships with supporting institutions/groups that can provide a pool of human resources have not been firmly established. Economic capital (in the form of wages/salaries) and social capital, therefore, become important means of ensuring the availability of human- capital resources for development efforts. Notably, accessing economic capital through grants and other funding sources requires human capital (people to write the grant applications, plan the project, etc.), which is often obtained via social networks; again, the deployment of social capital to sustain community capital is highlighted.

4.3.3 Economic Capital

The accumulation of economic capital (i.e. monetary profits) is the central tenet of today's industrial food system. By contrast, an analysis of Kingston's local-food system indicates that enhancement of social and human capital has been a key focus of development; however, the importance of sustaining economic capital cannot be dismissed. Certainly, the majority of development efforts have required access to funding in order to be carried out. On a micro-level, it is also important that stakeholders, particularly producers, retailers, and eaters, are able to sustain their investment/role in the local-food system. Farmers/producers

must be able to earn a living and consumers must be willing to accept the price differential between local foods produced in a sustainable manner and foods that have been produced in distant places using unknown, but likely unsustainable, practices.

Public funds have represented a significant source of economic capital for the local-food events and programs that have been carried out in Kingston and area. Notably, public funding has typically been sourced via provincial agencies (e.g. Ontario Market Investment Fund, Agriculture Management Institute), rather than through local public funds, however, some funding has been sourced through the City of Kingston and local economic development offices. Access to private agency and/or individual funding has been less common, although the NFP represents a significant investment by an international, non-profit organization. This suggests that access to community-based economic capital has been limited or less easy to access than external sources of funding.

To date, few stakeholder groups have been able to achieve the status of being self-sustaining, however, many efforts have been made to reduce the economic capital necessary to carry out activities. For example, recruitment of volunteers for many events has reduced the need for funding to cover wages/salaries. In other cases, stakeholder groups have been able to secure donations of various resources and services, such as land/space, photocopying, food, and advertising, from private and public organizations. Within some stakeholder groups (e.g. NFU and community gardens), sharing resources such as equipment and seeds has reduced the costs of food production and, in turn, enhanced the availability of economic capital individual operations (i.e., farms) and households to invest in other necessities.

Six of twelve interviewees discussed the important role Kingston's local-food system can play in strengthening the local economy through spin-off businesses, increased tourism, increased jobs, the recirculation of money within the community, etc. While economic impact studies regarding Kingston's local-food system have not been conducted, it is evident that development efforts have the potential to contribute to the economic sustainability of the community as a whole, rather than only those stakeholders directly engaged in production of food. For example, one of goals of the Local Food, Local Chef initiative is to develop Kingston's reputation as a culinary tourism destination. This has potential economic benefits for local restaurateurs as well as hoteliers, retailers and other businesses that serve tourists. Venues such as farmers markets across the City also attract shoppers to areas that they might otherwise not visit, thus

enhancing traffic for businesses located near the markets. On the other hand, an analysis of the food system itself also highlighted the lack of active participants in some areas. For example, there are only a few value-added processors operating in the area, which translates to less demand for raw products (i.e. farmers not being contracted to supply processors) and less selection for consumers, thus stymieing opportunities for economic growth. Appendix K-H presents accounts regarding the deployment and creation of economic capital through local-food initiatives.

4.3.4 Natural Capital

The focus of this research study is on human-created forms of capital; however, given the essentiality of natural capital to the establishment of a self-sustaining food system, it is important to consider whether the ecological integrity of the system is being maintained/strengthened. While the onus of responsibility for sustainable practices often tends to fall on the farmers producing the food, every component of a food system, from seed to soil (or farm to table to compost), uses natural capital (e.g., fuel, land, electricity, animals). An analysis of Kingston's local-food system development highlights some of the efforts stakeholders have made to sustain natural capital, as well as some areas where further efforts are necessary.

Certainly, several initiatives led by farmers/gardeners to develop Kingston's local-food system have included environmental components. For example, the NFP website (n.d) states that, in addition to encouraging local-food production, the project 'focus(es) on ecologically-sound farming methods and ... support(s) participating farmers in making farm management decisions that will lead to long-term sustainability of their farms.' Environmental education has been incorporated into many other activities organized by the NFU Local 316 and various community gardens across the City. The boon of community gardens and CSAs that follow organic practices suggests that a growing proportion of farmers and eaters in Kingston and area are recognizing the importance of producing/sourcing food in a manner that is environmentally sound.

While efforts by these groups to encourage sustainable practices have been well received by members of the community, including new and transitioning farmers and eaters of all ages (i.e. parents, schoolchildren), interviews and an analysis of the food system suggest significant challenges with respect to maintaining stocks of natural capital. Interviewees involved in the production and/or sale of local food

highlighted issues regarding the lack of local facilities to handle animal slaughter, which has forced many local farmers to send their livestock away and then have it transported back for sale to their local market, thus increasing the carbon footprint of the product. In other cases, the lack of local processing facilities could act as a deterrent to farmers interested in growing larger quantities of organic produce, because without a way to store perishable goods (i.e., freezing, canning, etc.), they can only rely on immediate demand for fresh produce. Kingston's local-food system currently lacks an adequate number of operators in certain areas of the food cycle (e.g., processing, composting), which presents challenges with respect to transitioning to sustainable methods, reducing energy, managing waste, etc. Another impediment to development echoed by all twelve interviewees is the price differential between conventionally produced foods and organically/locally produced foods, with the former not accounting for the long-term costs of depleting the community's stocks of natural capital.

4.4 Balancing Capital Stocks and Restoring Community Capital

It is evident from the analysis presented above that development of Kingston's local-food system has required debits to all types of community capital in efforts to create an alternative food system. The analysis also reveals that, in many cases, these initiatives have directly or indirectly enhanced the stocks of community capital. In this section, an overview of the interplay between types of community capital is presented.

4.4.1 The Interplay of Community Capital Stocks

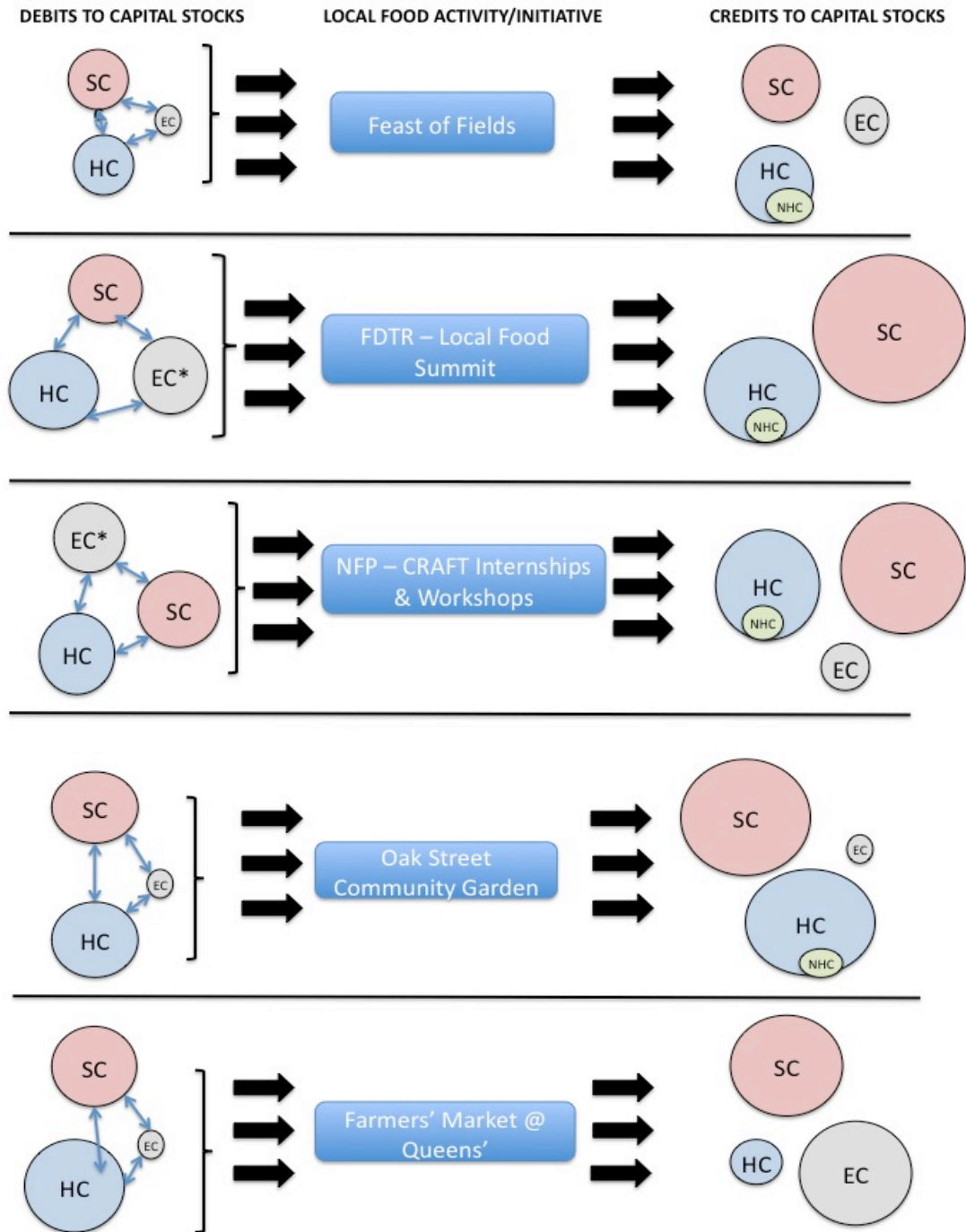
The analysis presented in Section 4.3 highlights the interdependent nature of all forms of capital (social, human, economic and natural) in the development of Kingston's local-food system. Social-capital development, for example, has typically relied on an investment of human and economic capital in order to provide events and venues for social interaction to occur and trust to be built. On the other hand, access to economic capital and human capital for these initiatives has relied heavily upon the resources and value available through social networks. In many cases human-capital development, particularly knowledge and skills regarding sustainable agriculture and local-food issues, has been enhanced through investments of human capital (e.g., experienced farmers sharing knowledge with new farmers). In some instances, this knowledge-sharing has depended on the availability of economic capital (e.g. Funding for CRAFT Kingston internships), while in other cases, strong social networks/social capital has negated the need for a

transaction of economic capital to facilitate the sharing of knowledge/skills (e.g. 'paying it forward' policy of the New Farm Project). A significant number of the events and initiatives carried out in Kingston and area have been organized by local farmers (namely through the NFU Local 316), although a diverse array of concerned community members have also contributed to the human capital, economic capital and social capital available for deployment.

While stakeholder groups that have spearheaded many efforts appear to have a vested interest (economic, philosophical or otherwise) in the local-food movement, the deployment of these groups' human, social and economic capital has, in many cases, enhanced capital stocks for the broader community. For example, while the growth of community gardens and farmers' markets has been led by small community groups and non-profit organizations, these sites have the potential to enhance the economic capital (e.g. profits for farmers, reduced costs for gardeners), human capital (e.g. access to healthy food, enhanced knowledge of growing techniques), social capital (e.g., conversations with fellow gardeners, special on-site events), and natural capital (e.g. use of organic gardening practices, reduced carbon footprint) for all community members. The large majority of local-food initiatives have been designed with the intention of enhancing awareness amongst community members, building community through social networks, and providing all stakeholder groups with increased opportunities for knowledge and economic exchange.

Using the conceptual framework presented in Chapter 2 as a guide, Figure 4.2 traces some of the key debits and credits of human-created community capital related to the development of Kingston's local-food system. It reveals interdependencies, highlights sources of capital deployment and the resulting capital formation, and suggests that many local-food activities have served to strengthen Kingston's stocks of community capital.

Figure 4.2: Debits and Credits of Capital Stocks through Local-Food-System Initiatives in Kingston



In this figure, social capital (SC), human capital (HC), and Economic Capital (EC) are depicted as circles, with the size of the circle reflecting the relative amount of 'stock' deployed and/or created through that local food activity/initiative. The focus is exclusively on human-created forms of capital; natural capital is not considered, although natural human capital is identified. The size of each circle represents the relative amount of capital deployed for an activity, in comparison to the amount created. This figure does not provide for comparisons of capital deployment and creation between the different activities/initiatives (as the black horizontal lines suggest).

* Indicates the capital stock was sourced externally

4.4.2 The Enhancement of Community Capital

Community capital stocks are in constant flux, influenced by the innumerable activities, events and transactions that occur within the community (Callaghan & Colton, 2008). Local-food-system development represents one of many endeavors that have the potential to enhance community capital in a sustainable and balanced manner. Findings from the analysis provided above suggest that Kingston's community capital has been strengthened in some respects through the pursuit of local-food initiatives.

Development of Kingston's local-food system has relied heavily upon existing social capital and human capital, as well as the enhancement of these capital stocks. Key stakeholder groups, including farmers, concerned citizens and community groups, recognized that strengthening the system required enhancing consumer awareness and farmer capacity (i.e. increasing demand and supply through education and skills building), as well as community-building and social networking. Many efforts have been made to enhance social and human capital through events, projects and programs that have enabled social networking, bonding, partnerships, collaborations, skills development, increased consumer awareness and more access to healthy, fresh food. Most of these initiatives have required an output of human and economic capital, which has often been sourced from or by an existing social network (e.g., NFU 316). In other cases, a common interest or cause shared amongst individuals or different stakeholder groups resulted in the creation of new social networks that were able to propel the development of social and human capital. For example, the Local Food Local Chef project was initiated through a new partnership between several local organizations with a common interest in local economic development. In turn, this project provided further opportunities for social networking and knowledge enhancement through events such Farmer-Chef Meet & Greets and chef demonstrations. It is evident that these stocks of community capital have been strengthened by local-food system activities.

It is clear that social and human capital have been strengthened via local-food system development; however, it is less obvious whether economic capital has been enhanced. Certainly, many of the initiatives that have been carried out have been geared towards increasing consumer demand and providing increased opportunities (i.e. events and venues) where local food can be sourced. As several interviewees also observed, when consumers purchase local foods, the money goes to a local farmer and therefore is often re-circulated in the local economy. In many respects, then, the availability and circulation of economic capital

within the community has been enhanced. It must be noted, however, that a significant proportion of the economic capital deployed to carry out local-food development in Kingston has come from external sources (e.g. provincial government, Heifer International). Furthermore, social and human capital have been deployed to access external economic capital. In order to encourage the establishment of a sustainable, self-reinforcing system, economic capital should be sourced from the community's stocks of capital. While this suggests that, to date, the local-food system has yet to become economically self-sustaining, it is worth observing that many initiatives have decreased the need for an outlay of economic capital, particularly for farmers (e.g., equipment sharing), and eaters (e.g. through community gardens). In many cases, the deployment of social capital (e.g. trust, networking) and human capital (e.g. creativity, knowledge-sharing) has therefore mitigated the need for economic capital.

Whether natural capital stocks have been restored via initiatives to develop a local-food system is unclear. One of the driving motivations for stakeholder groups in Kingston and area to establish an alternative food system has been the recognition that the current industrialized system is not environmentally sustainable. Many of the events and projects pursued have emphasized environmental education and encouraged sustainable farming/gardening practices. Community gardens, CSAs and many other farms selling into the local market have demonstrated a commitment to organic practices and reduced transport of foods. Despite these efforts, the production and distribution of local food in Kingston still requires the deployment of natural capital in the form of energy (for production, transportation and preparation), land (utilizing the soil's nutrients), water, animals, etc. While careful management of these resources may decrease required output (in comparison to industrial methods), complete restoration of natural capital stocks remains elusive.

Chapter 5

Case Study – Hardwick, Vermont

5.1 Introduction

Hardwick is a small town located in the northeast region of Vermont. A booming granite-mining town until the 1930's, the rural, agriculture-based community has since endured several decades of economic struggle and developed a reputation for being 'hardscrabble'. At one point, it had the dubious distinction of being known as 'Little Chicago' due to its rowdy bars and porno theatre (Burros, 2008). Today, Hardwick is in the limelight again, but this time it's being lauded for its twenty-first century local-food system and the accompanying revival of an agricultural economy. The case study presented herein offers insights into the many factors and actors that have enabled this new food economy to emerge and considers the pivotal role of community capital in development efforts.

The background information provided herein serves as the basis for the discussion and analysis of community capital deployment and creation that follow in Sections 5.3 and 5.4. Details regarding Hardwick's geography and economy are presented in the first subsection. The second subsection provides a historical perspective of agricultural development in Vermont and the Hardwick area.

For the purposes of this study, analysis of the evolution of Hardwick's local-food system is primarily focused on the time period from 2000 to mid-2010, because interviewees and secondary sources indicate that significant advances have occurred in the past ten years. Some consideration, however, is also given to developments in the last quarter of the 20th century, as research findings suggest that Hardwick's current iteration of a local-food system is strongly rooted in its past. Finally, it should be noted that all appendices cited in this chapter have been grouped in a separate appendix, labeled Hardwick Case-Study Appendices and all appendices begin as follows: Appendix H-X.

5.1.1 Geography, Population and Economy

The town of Hardwick is located in the Northeastern region of Vermont (see map, Figure 5.1). It is approximately 40-km north of the state capital, Montpelier, which boasts a population of 15,000 and 100 km from Burlington, Vermont's largest city, with a population of 38,889. The closest metropolitan cities are Montreal (200 km), Boston (300 km) and New York City (560 km). As of 2000, Hardwick had a population of 3,174 according to US Census data; by July 2008, the estimated population had increased

marginally to 3,207 (City Data, 2010). Located at the intersection of three major driving routes, Hardwick acts as a service centre for the eight rural communities and townships that surround it, thus serving a total population base of 8,000 to 10,000 people.

The economy of Hardwick and the local area has historically been dominated by industry. Over the years, various private enterprises, including a lumber manufacturer, a gristmill, saw mills, and tanneries have provided employment opportunities for settlers in the area. Hardwick's boomtown days were realized following the Civil War, when granite quarries were established in the area and the town became known as the 'Building Granite Centre of the World' (Vermont Towns Website, n.d.). The town prospered during this era; however, the granite industry collapsed prior to World War II and many of the area's employers went out of business. The town has since survived years of economic depression and attained a reputation as 'hardscrabble' (Burros, 2008; Goodman, 2009; Gutnick, 2009).

Figure 5-1: Geographical Location of Hardwick, VT



Source: Tristate Basement Systems, 2010

Hardwick's unemployment rate in 2009 was 8.3%, compared to 6.1% in 2008, while Vermont's unemployment rate was 5.9% in 2009 and 4.8% in 2008 (City-Data, 2010). As of 2000, the median

household income in Hardwick was \$33,636 and 14% of the population lived below the poverty line (it is important to note that these figures apply solely to the town of Hardwick, thus they do not necessarily provide a holistic picture of the economic state of the surrounding areas). Construction, education, health care, and accommodation/food services were the most common arenas of employment.

5.1.2 Agriculture in Vermont

Despite its northerly climate and mountainous terrain, Vermont boasts a strong agricultural heritage. The first European settlers in the area were mainly farmers that engaged in subsistence farming. More permanent settlement and cultivation of land followed the Revolutionary War and Vermont became the 'bread basket' of New England until transportation improvements, settlement, and agricultural development in the mid-west made local grain production uncompetitive (H20). During the 1800's Vermont's agriculture industry, which was dominated by small-scale farms, transitioned from the export of staple products (namely grains and meat) to product specialization, most notably wool from merino sheep. By the second half of the 19th century, the agricultural landscape of Vermont changed again, as the elimination of wool tariffs and railroad expansion to the West threatened the sheep, grain and meat industries of the Green Mountain State. Dairy farming became the next 'cash cow' for Vermont farmers, along with butter and cheese production. Maple-sugar production, local market gardening, and livestock supplemented the dairy industry, which continued to grow as new markets opened up and remains an important component of Vermont's current agricultural profile (H20; National Park Services, 2010). Throughout most of its history, then, Vermont has relied on single-commodity markets, from grains to beef to dairy. One interviewee from a government agency for agriculture observed that 'dairy...(has) been our most recent commodity and you know it's not new that people talk about getting out of the boom-bust cycle of these different commodities that tend to collapse as production is cheaper out West' (H20).

In 2007, 20.9% of Vermont's total acreage was listed as farmland (1,233,313 acres), with an average farm size of 177 acres (compared to a national average of 418 acres). Dairy farming continues to dominate the industry, with dairy products making up 72.6% of the state's total farm receipts in 2008, while cattle, greenhouse/nursery products, maple products and hay filled out the top five agriculture commodities (USDA, 2010). While Vermont has and continues to rely on export markets for fluid milk, there are many signs that the state's dairy industry is in crisis. Between January and November of 2009, the small state lost

over 53 dairies (1,025 remained in operation) and dairy farmers lost an average of \$120 per month per cow (Smallheer, 2009). Farmers are receiving approximately the same real dollar price for milk (i.e. not accounting for inflation) as they did thirty years ago, despite significant increases in the costs of operation (Slayton, 2009).

Notably, while the outlook for Vermont's dairy industry appears dismal, the state has been leading the way in its development of sustainable agriculture and local-food markets. As a result of its pioneering pursuits, Vermont has the highest number of certified organic farms and certified organic acreage per capita in the United States and the highest percentage of people that buy locally grown food (Edelstein, 2009). The number of certified organic farms in 2008 was 537 representing a total of 91,369 acres, an increase of over 36% from 2006 (394 and 66,624 respectively).

Interview findings and secondary sources suggest that, in many respects, Hardwick's agricultural industry has followed a similar trajectory to that of Vermont as a whole. The region has a strong dairy farming presence, with one of the state's largest dairy co-operatives, Cabot Creamery, located just 13 miles from Hardwick in the town of Cabot. Discussing the evolution of agriculture in the area, many interviewees observed that the 1960's and 1970's marked an important time of transition in the region. During this period, the grown children of many long-time farming families left the area to pursue jobs in larger metropolitan area, while at the same time, many young people from urban centers were embracing the appeal of living a simple, rural existence. A number of interviewees noted that Vermont became an epicenter for this nationwide 'back-to-the land movement', given its proximity to Boston and New York. Hardwick and the surrounding areas were especially attractive to students graduating from nearby Sterling College and Goddard College. Several of the area's current organic farmers, including two interviewed for this study, were part of this back-to-the-land movement. Unsurprisingly, then, the majority of interviewees stressed the importance of the area's rich agricultural history and early adoption of organic farming to the present-day successes in development of a local-food system. A number of interviewees also noted that many area residents had, historically, maintained large personal gardens or were self-proclaimed homesteaders (i.e. pursued a self-sufficient agrarian lifestyle).

5.2 Local-Food-System Development

This section highlights motivations and key milestones in the development of Hardwick's local-food

system. Information presented in this section was gathered from interviews with representatives of key stakeholder groups including farmers/producers, retailers/restaurateurs, community organizations, and supporting bodies (e.g. academic institutions, non-profit organizations, and government agencies). Secondary sources including media reports, websites, and non-academic research reports provided additional information and served to validate primary source accounts. Stakeholders, activities, events, projects, networks, challenges, opportunities, and other important elements/components of the system's evolution are discussed; this information underpins the analysis that follows in Sections 5.3 and 5.4.

Describing the evolution of the region, the majority of interviewees agreed that the area's local-food-system development has been gradual over the past four decades, with certain time periods of increased activity and growth. A commitment to co-operation, collaboration and community support have been integral to strengthening the local-food system; key milestones in this regard are discussed in Sections 5.2.2 to 5.2.4. The importance of supporting stakeholders, including non-profit organizations and the media, is discussed in Section 5.2.5. The final subsection considers the integration of Hardwick's food system.

5.2.1 Motivations

In Nickerson's (2008) study of Vermont's local-food landscape, the author identified four main motivations for the pursuit of local-food development by stakeholder groups: strengthening the local economy and supporting farmers; concerns about food health, safety and traceability; desire to reduce food miles and conserve energy; and, a desire to increase food security and nutrition for local residents. These findings agree with the main motivations expressed by interviewees in this research study, although findings also suggest that throughout the past four decades, motivations for involvement in local food/sustainable agriculture have expanded or shifted in response to changing economic, social and environmental issues. For example, interviewees suggested that back-to-the-land ideals were a driving force for sustainable agriculture in the 1970's, while food safety and health concerns have increased consumer demand since the 1990's, and the economic instability of commodity dairy farming has seen increasing numbers of farmers move towards direct sales models as the first decade of the 21st century comes to pass. Throughout time, however, the local-food and sustainable-agriculture movements in Vermont appear to have primarily been driven by stakeholder concerns for ecological sustainability, social justice, community betterment, and economic sovereignty.

5.2.2 Co-operatives and Collaborations

In tandem with the back-to-the-land movement, several interviewees cited the opening of Buffalo Mountain Co-op grocery store in Hardwick in 1975 as an important milestone in the early years of the town's food re-localization. As one interviewee noted, 'the co-op's been buying from local growers since I was a kid. I would say the co-op's been sort of the hub of the last twenty years' (H29). Another interviewee, who became a member soon after it opened and has worked at the co-op for several years shared her perspective of the Co-op and town's evolution, noting that 'we were totally in the minority in terms of the, you know, back-to-the-land kind of coming here and now we're actually, I would say we're part of the tipping point of being... probably close to being the majority'.

Buffalo Mountain Co-op has grown significantly during its 35 years in operation. The co-op, which has a motto of 'Food for people, not for profit' is collectively managed by sixteen members and now acts as an anchor business on Main Street. It has over 1,000 members and boasted an estimated \$1.8 million in sales in 2009 (H28). In its member handbook, the co-op states that its purpose is 'to develop, within its area of influence, a community-owned and operated, health-oriented, thriving enterprise'. The purchasing policies of the co-op include a commitment to buying organically-grown food, locally-produced items, and fair-trade certified products, as well as an exclusion GMO products and bottled water. Furthermore, it acts as a community center and meeting place, hosts local artists' works, and donates food to Hardwick's weekly community lunch.

During the 80's and 90's, back-to-the-landers, and organic/small-scale farmers continued to improve production methods and seek out new local markets for their products. At one point, the town was home to the Vermont Northern Growers' Co-op, which specialized in organic carrots. It was not until the turn of the century, however, that Hardwick and area's local-food system again saw significant activity and change. As one interviewee who had been farming in the area since the 1970's observed 'I feel like the evolution's just a spiral actually, and we've come back around on ourselves on the spiral, you know, we've grown a lot during that time, but you know, the same kind of energy is around again.' (H18)

Over the past ten years and particularly the last five, Hardwick and area's local-food economy has attracted a new wave of entrepreneurs that have developed food enterprises involving both production and value-added components. These include, but are not limited to, an organic seed company, a soy and tofu

business, a community-supported restaurant, an artisan cheese-making outfit, and a 350-share CSA operation. These local-food enterprises appear to be contributing to the development of the agricultural economy and community in a variety of ways. Several interviewees directly involved with these enterprises indicated that collaboration and co-operation amongst local businesses and organizations has been integral to their success.

One business that has benefitted from co-operation and collaboration is the Cellars at Jasper Hill, which is located in the neighboring town of Greensboro. The Cellars offers affinage (cheese-aging) and marketing services to cheesemakers in the area, and produces its own line of award-winning artisan cheeses, which have found markets in New York, Boston and other parts of New England. The enterprise found its beginnings five years ago when two brothers began dairying and cheesemaking. Recognizing that their own success in cheesemaking could be a recipe for the on-going viability of the area's struggling dairy farms, the brothers tried to convince their neighbours to transition from fluid milk production to artisan cheese-making, but soon realized the added challenges and stresses associated with managing and selling a value-added product were a deterrent. At around the same time, a well-established dairy co-operative in the area asked the brothers to age some clothbound cheddar. The brothers obliged and ended up marketing and distributing the cheese through their own contacts. Building on their successful partnership with the co-op and their fast-growing reputation in the cheese world, the brothers were able to secure financing to build a twenty-two thousand square-foot facility with seven underground vaults, and the Cellars at Jasper Hill were born. In addition to providing a new pathway for struggling dairies, the business has also created a number of new employment opportunities and has an ongoing commitment to providing internships. (Cellars at Jasper Hill, 2010; H27).

Recognizing the value of working together, sharing ideas and supporting each other, several food and agriculture enterprises in Hardwick and the surrounding areas formed a Business Owners' Network in 2007 that has remained active over the past three years. The group, which includes over twenty entrepreneurs/business owners, gathers on a monthly basis for an evening of informal socializing and eating (a potluck is the standard meeting fare), followed by a group discussion regarding a relevant business topic agreed upon beforehand (e.g. health-care benefits for employees, accessing new markets, finding investors). Hosting duties rotate each month and the host provides a tour of his/her business operation. In interviews

with two entrepreneurs that belong to the group, both indicated that the network had proven to be valuable in terms of developing relationships, sharing knowledge and ideas, and promoting each others' businesses (Burros, 2008; H15; H17). Primary and secondary sources also highlighted the important role the network has played in providing financial capital; in the first two years members lent over \$300,000 in short-term loans to each other (Burros, 2008; H15)

5.2.3 Community Supported and Supporting Enterprises

Community support has come full circle at Pete's Greens, an organic farm that runs a 350-share CSA operation, and an on-site farm stand. In addition to providing its CSA members with a variety of products from its own fields, the farm includes products from thirty-plus partnering producers and growers, including artisan cheeses, grains, jams, honey, and apples (each partner can expect at least one order per year from the farm). Through operation of the farm, the CSA is simultaneously being supported by a community of eaters who purchase shares and supporting the community by purchasing from local-food producers and providing them with exposure to a customer base they might otherwise not reach. Pete's Greens works with two community-run localvore organizations and Salvation Farms, a gleaning program run by the Vermont Foodbank, to donate excess edible food to local-food shelves. The farm also participates in a program run by NOFA (Northeast Organic Farming Association) to subsidize CSA shares for Vermont residents that could otherwise not afford to participate.

High Mowing Organic Seeds, the oldest of Hardwick's new agri-businesses (est. 1996), sells over 450 varieties of organic seeds to home gardeners and commercial growers across the US and internationally. An interview with High Mowing Organic Seeds' founder revealed that the company is heavily involved in efforts to enhance the area's agricultural economy, provide educational opportunities for community members, and enhance food security for all. For example, the company has played a role in the development of two Vermont non-profit organizations dedicated to economic and agricultural sustainability (the Center for an Agricultural Economy and Slow Money). Each year the seed company offers several free workshops on their farm and throughout the country on a variety of topics. High Mowing Organic Seeds also works closely with a local gleaning organization, schools and community groups to donate produce and/or seeds. The support of local investors has been integral, particularly during periods of rapid growth for the company. In such instances conventional financing through a bank was not

an appropriate option, so the company's founder developed a unique convertible-debt option that was appealing to investors interested in supporting a local business and willing to wait longer for a return on their investment.

In the spring of 2008, a new restaurant named Claire's opened in downtown Hardwick. In obvious and less-obvious ways, the restaurant has and continues to be a community-supported and community-supporting enterprise. In an interview with one of the owners, she described the lengthy and unique process that allowed the restaurant to move from an idea to a reality. The idea blossomed when she and another community member hosted an open meeting about the possibility of bringing a viable restaurant to Hardwick, and fifty-five people attended. A working group was formed and carried out valuable market research. Eventually, four local entrepreneurs pursued the idea and, in collaboration with the Vermont Preservation Trust, developed a unique financing model. Two entities were created - the Hardwick Restaurant Group, which held the deed on the building itself, and Claire's, the restaurant operation that would lease the building. In this way, the longevity of the facility was ensured. The entrepreneurs successfully marketed their concept to approximately twelve local investors who became shareholders of the Hardwick Restaurant Group. To raise capital for Claire's operating budget, the entrepreneurs used a two-pronged approach. Half of the capital was raised using a traditional loan-based model, while the other half of the capital was raised by selling community-supported restaurant coupons/subscriptions to community members, who received monthly coupons redeemable at the restaurant over a four-year period. Now in its day-to-day operations, Claire's seeks to support local producers, purchasing approximately 80% of its food from local sources throughout the year (an ever-changing menu reflects the seasons and availability of food). The restaurant also endeavors to provide a public place for community members to socialize, offers wireless internet to customers, provides information about community events and food issues through its blog, hosts live entertainment weekly, and occasionally donates space for community events.

5.2.4 Enabling Development

In 2004, one of the town's new entrepreneurs founded the Center for a Bio-based Economy in an effort to attract resources and support for the development of Hardwick area's local-food economy. The non-profit organization, which has since been renamed the Center for an Agricultural Economy (CAE),

currently has a staff of six (four of these staff members joined the Center in 2010) and a Board of Directors, comprised of nine members representing agriculture and food-related businesses in Hardwick and surrounding towns. The goals of the CAE for 2009 were threefold: to strengthen the community through community spaces and market expansion; to increase food security by working to enhance access to local food for all; and to expand the Center's role as an information hub. More broadly, the Center's stated vision is

to build upon local tradition and bring together the community resources needed to develop and sustain a food system that is holistic in its approach. We recognize and support a healthy food system that encompasses soils, seeds, farms, transportation, processing & storage, distribution, consumers, enterprise and waste (Center for an Agricultural Economy, 2010).

Several interviewees (13 of 20) discussed the role of the CAE within Hardwick's local-food system. While some identified the opening of the Center as an important development milestone, other interviewees expressed mixed views about the CAE, with some suggesting that the CAE was established primarily to serve the business interests of its board members and other interviewees indicating that the CAE's purpose was unclear. As one stakeholder stated:

Are they helping the local farmers? I don't know. I don't know. I mean, their goal is...I'm not sure what their total goal is right now other than establishing a food system. I don't really know what that really means..... it's like their focus is on the big and not on the smaller...and that's really, really what a lot of people resent is that it's bigger, bigger, better, better economy (H31).

Given that the CAE has only maintained a physical presence (i.e. office) since the spring of 2008, it may be too early to determine whether the Center will prove to be a milestone of Hardwick's local-food-system development. It has, nonetheless, been engaged in various efforts to support sustainable agriculture and food production in the region since the first Board meeting, in February 2005. Appendix H-A provides a summary of the Center's main activities, programs and accomplishments from 2007 through to mid-2010; some of these achievements are also discussed in further detail below.

In 2007, the CAE purchased a 15-acre property, Atkins Field, which is located in Hardwick's town center and houses three granite era buildings. This acquisition was made possible through partnerships the Center developed with public funding agencies and private donors. While development of the property has yet to occur, the Center foresees it as a multi-use site that will enable education, demonstration, and research in areas related to agriculture and food.

In 2008, the CAE signed a Memorandum of Understanding with the University of Vermont (UVM),

a land grant college⁶ located in Burlington. A steering committee comprised of members of the CAE and UVM works to identify opportunities for internships, research and community outreach. This collaboration between a community-based non-profit organization and academic institution has resulted in numerous projects of value to the agricultural economy of Hardwick and area, and enhanced learning opportunities for UVM students and faculty. For example, in the spring of 2009, the CAE hosted a Community Visioning Workshop to explore ideas for future use of Atkins Field. In another partnership, a team of senior engineering students worked with The Cellars at Jasper Hill to identify and problem-solve specific challenges with the business' production facility. In the short period of time since an MOU was signed, the CAE and UVM have collaborated on over 15 projects that have engaged students, faculty, and community members while contributing to valuable knowledge and skills sharing. Appendix H-B provides more details regarding these projects.

In 2009, the Center coordinated Pies for People and Soup for Supper, a program aimed to providing food to local families in need. The program relies on the generosity and collaborative efforts of various businesses, institutions and organizations. Food donations from farmers and local producers, the provision of facilities for processing and cooking from processors and a local college, and a volunteer labor force comprised namely of students and staff from two colleges, ensure that costs are kept to a minimum while access to healthy, local food for all community members is enhanced. Notably, two farmer interviewees not involved in the group suggested that this activity is tight-knit and exclusive.

5.2.5 The Role of Media

As a result of the recent flurry of activity in Hardwick's local-food development and, as some interviewees suggested, the PR skills and enthusiasm of some of its stakeholders, the town has garnered a significant amount of local and national media attention over the past two years. A large majority of interviewees indicated that this media frenzy had impacted the town and its local-food-system development, although stakeholders were divided on whether the impacts were positive or negative. Most agreed,

⁶ A land grant college or university is an institution that has been designated by its state legislature or Congress to receive the benefits of the Morrill Acts of 1862 and 189. The original mission of these institutions was to teach agriculture, military tactics, and the mechanic arts as well as classical studies. A key component of the land-grant system is the agricultural experiment state program, which authorized direct payment of federal grant funds to each state to establish an agricultural experiment station. Passage of the First Morrill Act (1862) reflected a growing demand for agricultural and technical education in the United States. It was intended to provide a broad segment of the population with a practical education that had direct relevance to their daily lives. (NASULGC, 2008, p.3)

however, that the story the media has told of Hardwick has been one of inspiration and hope, a ‘good news’ story in times of economic despair and a global-food crisis.

From 2005 to 2009, Hardwick’s local-food movement has been featured in over forty newspaper articles, two films, and at least two television shows. In the fall of 2008, the New York Times published an article about Hardwick, entitled ‘Uniting Around Food to Save an Ailing Town’. This national news coverage appears to have set off a firestorm of media since then, with Gourmet magazine, USA Today, PARADE magazine, Rutland Business Journal, the CBC, and several other news outlets reporting on the town’s forays into local food. In the fall of 2009, Hardwick welcomed celebrity chef Emeril Lagasse to town, where he filmed an episode for his Planet Green television show. “The Dan Rathers Report”, a nationally televised show, also presented a 20-minute segment on Hardwick’s local-food movement in November 2009, and Gourmet magazine followed up on its article about Hardwick with a 30-minute film in its “Diary of a Foodie” web series. Media reports of Hardwick’s local-food system have, in large part, portrayed it as a ‘hardscrabble’ town that’s rejuvenating itself through the development of a local-food economy.

As some interviewees observed, and a scan of news reports and television segments confirms, the majority of journalists have chosen to tell the story of Hardwick’s newest agricultural enterprises, whilst neglecting to feature long-time farmers, community organizations, and other stakeholders involved in the local food and sustainable-agriculture movement. In an effort to tell all sides of the story, author and local resident, Ben Hewitt (2009), published a book entitled *The Town that Food Saved*. The book provides a narrative account of the town’s history and current forays into local-food production. The author also exposes some of the dissent within the community regarding the town’s new crop of food enterprises. A vocal minority of citizens share their reservations and criticisms, with some suggesting that the business-savvy entrepreneurs running these enterprises want to develop an empire and are less interested in what is best for the community. These sentiments were also voiced by some of the individuals interviewed and observed for this research study.

Based on interview findings, there appear to be mixed opinions about the media attention that Hardwick has received. Interviewees that have been engaged in the town’s recent local-food-development efforts generally expressed positive sentiments about the media’s role in raising Hardwick’s profile. Some,

however, also recognized that the media attention had the potential to distract from the significant amount of work that still needs to be done and to create unhealthy dynamics within the community if quotes were taken out of context or some stakeholders felt they'd been ignored (H15; H17; H26). Other interviewees, particularly those from the farmer stakeholder group, expressed some discontent with the media and associated wave of entrepreneurial activity that has taken place in Hardwick in recent years, echoing sentiments expressed in Hewitt's book. An interview with an academic researcher carrying out a study on civic engagement in the Hardwick area and the role of rural journalism, offered further insight regarding the role of media:

it's been really interesting to see how the media attention has played out in Hardwick ... you know they're doing wonderful things there and it's a really ... new way of putting all these different enterprises together, but at the same time there are other organizations who have been doing that very quietly for a long time and there's a lot of, not so much animosity, but I think there's a little bit of jealousy among these different groups, you know, why are they getting the attention from the New York Times?, and that raises some sensitivities (H22).

The interviewee also shared observations regarding why Hardwick in particular has received more media attention than other towns or regions of Vermont:

I think it's a combination of things. I think you have people who are very PR savvy, and also there's a domino effect too, once there is one big name article and it gets picked up...because the news media can be kind of lazy and they are, they're exciting and they're marketable ...but I really do worry about the Center, with the amount of attention that they get and all the calls that they get from people to do interviews, and people visit, it doesn't leave them a lot of time or energy to actually do their work (H22).

5.2.6 System Integration

Perhaps the greatest appeal of Hardwick's local-food story is that, at least by some measures, the community appears to be in the process of establishing an integrated food-system, with active stakeholders in each area of the food system. Participant observation and interview findings suggest that the clustering of farm and food enterprises in the area, along with a shared commitment amongst stakeholders to pursue community betterment and collaboration, have strengthened the system as a whole.

Farmers and food processors in Hardwick and area have taken advantage of the geographical proximity of commercial customers (for the farmer) and suppliers (for food processors seeking raw materials). Interviews revealed a number of partnerships that have proven to be mutually beneficial. For example, High Mowing Organic Seeds grows approximately one-third of the seeds it sells and buys the rest from other growers, including many local farmers. Vermont Soy, which produces value-added soy

products such as tofu and soy milk, has been working with local dairy farmers that are struggling in the commodity market to encourage them to transition to soybean production. One interviewee also relayed his thoughts regarding the unique mix of producers and processors in the area, and its impact on the development of the food system:

The other thing that's around here that's quite unique is that it is the agricultural entities are not just farms producing raw materials, there are processors with infrastructure and with some serious volume. Um you take us as an example. For years we grew...we only sold the (product) that we grew. We developed the infrastructure to get that going. Then we realized we had a pretty good marketing channel and we had some skills and experience in the marketing, so we began to get (product) from other growers in the area and then expanded that out to the world. But we still have growers nearby that produce... for us and we still have our feet in production (H15).

As discussed above, Claire's restaurant and Buffalo Mountain Co-op act as important outlets for farmers and food producers in the area. The farmers' market in Hardwick, along with markets in nearby towns also serve as key sites of distribution, while regional/state initiatives such as the Farm-to-School program have enabled farmers in the region to establish relationships with institutional buyers.

Food waste is also minimized in Hardwick's local-food system, due in large part to the presence of two non-profit organizations, and the willingness of community members, farmers and businesses to participate in the programs run by these organizations. In 2004, a woman working at Pete's Greens founded Salvation Farms, a gleaning project that involved 'harvesting after the harvest' to stock local-food shelves. Relying on cooler space loaned by Pete's Greens and a volunteer labour force, the organization gleaned over 88,000 pounds of produce from farms in Hardwick and the surrounding area (Lamoille Valley) between 2005 and 2008. In 2008, Salvation Farms joined the Vermont Foodbank, a move that has provided the program with more stability and opportunities for growth. As noted on the Foodbank's website 'the gleaning program is designed to be a model that can be implemented and maintained by any community. When successfully replicated, these systems will remedy the lack of fresh produce available at food sites serving the nutritionally- and food-insecure in Vermont.' (Vermont Foodbank, 2010).

Another non-profit organization based in Hardwick is Highfields Center for Composting. The Center's mission statement is 'to Close the Loop on community-based, sustainable food and agricultural systems, thus addressing soil health, water quality, solid waste, farm viability, and climate change' (Highfields Center for Composting, 2010). To fulfill its mission, the organization carries out research; provides demonstrations, workshops and other educational resources; designs and implements food

composting programs; and delivers technical services to the farming community and other stakeholder groups. For example, through its Close the Loop program, the Center works with composters, schools, businesses, and municipalities to establish sustainable composting programs that divert food waste from landfills and return nutrients to the soil. Since the Center was founded 11 years ago (by a dairy farmer from the area that was interested in manure management), it has expanded to a staff of seven and carries out work across the state. In an interview with the director of the Center, he explained how the Center works to build out capacity and create self-sustaining satellite systems, rather than create a hierarchical power structure: 'so each program, the whole idea is to develop a centralized system in terms of like quality control and all those things, but a decentralized infrastructure.' (H26)

Food has also become central to many activities and events in the community. Each Thursday, a community lunch is held in downtown Hardwick. The lunch was originally the brainchild of one of the Co-op collective and a local church provides the facilities. The Co-op, local-food shelf and other entities donate food, and volunteers prepare a hot lunch. Some of these volunteers come from Heartbeet Lifesharing, a 160-acre farm in Hardwick that 'is a vibrant lifesharing community that includes adults with developmental disabilities and interweaves the social and agricultural realms for the healing and renewing of ... society and the Earth.' (Heartbeet Lifesharing, 2010). The lunch draws in upwards of a hundred people each week and, based on participant observation, appears to attract a wide cross-section of the community. Several food and farm-based initiatives have also begun at schools in Hardwick and the surrounding areas, mirroring a state-wide movement to integrate local food into the education system, through classroom visits from farmers, school gardens, farm visits, after school programs, and the provision of local-food options in the cafeteria.

A number of interviewees also indicated that Hardwick's annual Springfest, which takes place on Memorial Day weekend, has become an important site of cross-pollination in the community. In 2009, Springfest celebrations included a Sustainable Living and Agricultural Fair that was organized by community members and groups in an effort to educate attendees about issues such as energy use and local food. One interviewee who was closely involved with the fair shared her observations about the success of the event:

I do know there are people who went through our tents that NEVER would have gone to anything like that if it was a stand alone event, but because it was all on the same field and there were animals,

they went through and we had local-food vendors... we had forty different exhibitors and it was all about LOCAL, local food, local land, local power, local everything and I had people go through and go 'why do you have farmers here?' and 'how does that all fit in?' and a couple of them came back up to me at the end after they had finished and they said 'I get it now, I understand, I had a really long talk with that farmer' you know and it was like 'whoa OK' great, great (H25).

In 2009, a group of concerned citizens came together to form Hardwick and Area Transition Towns⁷ (HATTS), an initiative intended to help the community move from oil dependency to energy resiliency. In a brainstorming party held in November 2009, over fifty community members gathered for an afternoon to discuss specific areas of concern for the community's future (e.g. energy production, waste management, healthcare). One group, of which the researcher was a participant, considered issues concerning food, identifying the current food landscape, what would be desirable for the future, and how to move towards this ideal. The group observed many strengths in Hardwick's current food system, such as a large knowledge base, local-food processing and composting infrastructure, large land-base, and many community-based food projects, however they also noted that the community is heavily dependent on food imports and the subsidized industrial-food system presents significant challenges in this regard for both farmers and eaters. Information sharing amongst all community members, food education, increased land access, and more community celebrations/activities involving food were identified as key to developing a more resilient and less-energy-intensive food system.

The initiatives discussed above, along with numerous other food-related enterprises, organizations, groups, and activities, have served to strengthen Hardwick's local-food system. Information sharing amongst stakeholder groups, coupled with a collaborative and co-operative spirit has allowed many innovative ideas to be realized within the community. System integration has decreased food waste at various stages of the life cycle, encouraged community involvement, enhanced community food security, and provided educational opportunities for all community members.

5.3 Community Capital - Deployment and Creation

An analysis of how community capital has been deployed and created through the development of

⁷ **Transition Towns** (also known as Transition network or Transition Movement) is a movement that originated from a student project overseen by permaculture teacher Rob Hopkins at the Kinsale Further Education College in Ireland. The aim of this community project is to equip communities for the dual challenges of climate change and peak oil. The Transition Towns movement is an example of socioeconomic localization. (Wikipedia, 2010)

Hardwick's local-food system is presented in this section. The conceptual framework introduced in Section 2.5 guided the analysis, which is drawn from data collected via interviews, observations and secondary sources. Each subsection provides insight into how local-food system development efforts have deployed and/or created different forms of community capital. Sections 5.1 and 5.2 provide important background information and set the context for this analysis. Additional details pertinent to the analysis are provided herein. The ordering of this analysis does not flow from the conceptual framework, but rather follows the same natural sequencing as the case study of Kingston (see Section 4.3 for further explanation).

5.3.1 Social Capital

The development of Hardwick's local-food system provides a lens through which to consider the role of social capital in the community's local-food-system development. An analysis of secondary sources and interviews conducted with a diverse range of stakeholders offers insight into some of the opportunities and challenges encountered as individuals, groups, organizations, and institutions worked to build social networks, engage stakeholders, and work towards creating a stronger, more resilient community. Ultimately, the analysis indicates that social capital is a lynch-pin of local-food-system development, serving both as a necessary ingredient for the formation of social networks and trust amongst stakeholders, and as an outcome of the activities that take place and relationships that form.

5.3.1.1 Social Networks

Hardwick's local-food system has and continues to depend heavily on the existence of strong, informal social networks imbued with trust. Networks identified as integral to development are discussed in further detail below.

Findings from interviews with a broad cross-section of stakeholders suggest that friendships, camaraderie, and a sense of community have been integral to the development of Hardwick's local-food system. Many interviewees indicated that they chose to move to the region because they held strong friendships with people living in the area and/or because they wanted to be part of a community of people that look after each other. As one interviewee explained: 'I think the reason those folks wanted to do what they're doing HERE is that they love this place and they're connected to this community and their families are here'(H15). Another interviewee noted that:

the whole food thing here... has so many layers and it's not just on the economic realm, it's not just on the production realm, you know, it's people are FED in this community. You know, you have a

baby, you will not cook a dinner for yourself for at least six weeks, two months. (H26)

Media reports and interview findings indicate that many of the town's newest agri-entrepreneurs had forged friendships prior to launching their respective businesses. This existing social capital allowed the entrepreneurs to develop trust-based business partnerships and share information and resources. In an article for the New York Times, journalist Marian Burros (2008) highlights how some of these friendships have led to business collaborations:

Vermont Soy stores and cleans its beans at High Mowing, which also lends tractors to Highfields, a local compositing company. Byproducts of High Mowing's operation — pumpkins and squash that have been smashed to extract seeds — are now being purchased by Pete's Greens and turned into soup. Along with 40,000 pounds of squash and pumpkin, Pete's bought 2,000 pounds of High Mowing's cucumbers this year and turned them into pickles.

One interviewee involved in these partnerships offered further insight: 'the friendship kind of collaboration, the economic collaboration, and the fact that we're so close and nearby to each other means that it's easy to do it' (H15). As Falk and Kilpatrick (2000) suggest, both the quality and quantity of social interactions determines whether social capital is created. Geographical proximity amongst stakeholders may therefore contribute to increased stocks of social capital, as it lends itself to regular face-to-face meetings and more opportunities to informal social activities.

The social capital fostered through trust-based networks in the community has served as an important means of accessing economic capital in many instances. For example, Claire's restaurant was able to attract angel investors and develop a community-supported model to source its operating capital. Several other businesses have also leveraged existing stocks of social capital to source financing from local investors or reduce the need for financial outlay by, for example, sharing farm equipment or piggybacking on another business' transportation. One interviewee, discussing the CAE, made the following comment:

they're still a really small organization, you know, just two people ...with not a huge amount of money, so I'm hoping all ... the social capital that they're building and all the press attention can translate into some real capital so they can make good on what they really want to do. (H22)

It is important to note that, in some cases, the stakeholder fostered the social capital necessary to carry out activities, while in other cases the business or organization was able to capitalize on stocks of trust and reciprocity deeply embedded in the fabric of the community.

Interview findings also highlighted the evolving nature of social networks in development and instances where the formation of new social networks depended on existing stocks of social capital. For

example, the Business Owners' Network represented a newly created social network that enabled the development of social, human, and economic capital, with members forming new friendships, sharing knowledge, and lending each other capital. The network first formed when a core group of entrepreneurs who'd already developed friendships decided to meet on a regular basis to discuss business issues and invited other like-minded food entrepreneurs to join. The CAE also represents an organization that is primarily dedicated to fostering social, human, and economic capital through a variety of projects, events, and services such as the Hardwick Community Garden, workshops for farmers, and grant-writing assistance/advice.

Many social networks, formal and informal, contribute to the mosaic of Hardwick's local-food system and have, in many cases, enabled the development/enhancement of social, human, and economic capital. Over time, these networks have evolved, transforming in terms of composition, direction, amount of influence, and degree of formality. These findings echo those of Magnani and Struffi (2009), who suggest that social capital is not static in nature, but rather, that social dynamics within networks are complex and ever-changing. In addition to social-capital theory, then, the sociology of translation may provide another useful theoretical lens through which to consider the development of community capital in the context of sustainable food systems.

5.3.1.2 Bonding and Bridging Social Capital

Many informal and formal networks have deployed social capital to pursue development of Hardwick's local-food system over the past four decades. In a small community such as Hardwick, close consideration must be given to the bonding versus bridging nature of social networks, as their influence may be magnified in such an environment.

An analysis of interview findings and several media reports, suggests that strongly bonded social networks have influenced Hardwick's local-food system. From the 1970's through to the present, social networks comprised of like-minded, homogenous members have flourished. Interviewees shared many insights regarding the social networks in the town throughout this period of time (see Appendix H-C), identifying distinct groups and revealing ways in which these networks have changed over time.

An analysis of the evolution of Hardwick's local-food system suggests that, in many ways, bonding forms of social capital have been integral to development efforts. Back-to-the-landers with similar

ideals and values formed co-operative enterprises and worked together to pioneer a new way of farming in the industrial landscape of America. Many of the area's local-food initiatives in recent years have been led by a strongly-bonded group of new entrepreneurs who appear to share similar views regarding social justice, environmental sustainability, and economic betterment for their community. Bonding social capital has been key to the development of trust-based relationships in the community, which have enabled and encouraged members to invest time and energy into activities that have enhanced the local-food system. As one interviewee explained 'the relationship-building between the business owners and (agriculture)-based entrepreneurs in the area that has allowed them to build trust.... a rapport with each other and to get to know each other's operations'(H15).

While bonding social capital has provided for the enhancement of community capital stocks in a variety of ways, including the development of business partnerships, community groups, and food-related activities/events, there is also evidence that the town's tightly-knit social networks may be impeding broad community involvement. As one interviewee observed 'we need to become more skilled at true community building, you know ... the Transition Towns meeting, CAE meetings, you know, we still have sort of the usual suspects at most of these meetings' (H26). A small minority of interviewees expressed the opinion that the town's new agri-entrepreneurs were acting in economic self-interest, rather than for the betterment of the community. One interviewee offered insight into some of the division in the community:

there's this assumption that there's people who come from away and have these crazy, far out ideas to make certain things happen um without respecting the traditions of the past. I think that often comes into play and can often be a roadblock. (H14)

Another interviewee who is involved with the Buffalo Mountain Co-op, noted that:

some people are more comfortable to go to the Farmers' Market than to come into the co-op or maybe they still don't realize that they can come in here, ...I've ceased to try and figure it out some people say oh we're too cliquish or whatever and I don't really know...we try not to be that way. (H18)

Other long-time residents, however, were enthusiastic about the changes taking place in Hardwick and the efforts being pursued by older and newer groups in the community.

An analysis of findings also revealed that, in many cases, these tightly-knit social networks have been the impetus for development of bridging forms of social capital (see Appendix H-D for accounts regarding social capital). For example, while the CAE was founded by a group of close friends holding similar ideals, the non-profit organization has made concerted efforts to engage with the broader

community. It has hosted Taste of Place sessions for local dairy farmers, revitalized the town's community gardens, developed partnerships with various other groups, and continuously seeks to educate and engage community members. Other initiatives such as the Community Lunch, Sustainability Fair, and Farmers' Market were initiated by members of tightly-bonded social networks, but have become important sites of, as one interviewee termed it 'cross-pollination' that attract a broad cross-section of the community. In many cases, these strongly-bonded social networks have actively worked to be inclusive and outward-looking in their activities, whilst still maintaining a bonded core group.

In addition to developing bridging forms of social capital within Hardwick, several (15 of 20) interviewees noted the importance of establishing connections with stakeholders across Vermont to advance development in a variety of ways. In 2008 and 2009, the Vermont Agency of Agriculture, in partnership with several other organizations, hosted a state-wide 'Matchmaker' event, designed to introduce food producers to businesses interested in sourcing locally using a speed-dating style format. Bridging social capital is also key to sharing knowledge and reducing double-work, which can occur when bonded social networks remain isolated. An interviewee involved in coordinating a statewide Food System Research Collaborative, made the following observation:

there's a big disconnect, a lot of people are working in food systems now and they're not all talking to each other and there's a lot of duplication of efforts and we're realizing that we could probably build to a greater good if more people were talking together and working together. (H22)

In 2009, eight organizations across the state (including the CAE) that are committed to supporting local agriculture and food development came together to form the Vermont Regional Food Centers Collaborative, intended to establish a network of food hubs that can share resources, including information, infrastructure and funding. These research and food hubs networks retain some bonding characteristics (i.e. similar goals), but also 'bridge' geographies and other important differences.

5.3.1.3 Social Capital - Opportunities and Challenges

An analysis of primary and secondary sources suggests that development of Hardwick's local-food system has historically depended heavily on existing stocks of social capital, while concurrently contributing to the enhancement of the community's social, human, and economic capital. Interviewees identified a number of opportunities and challenges with respect to deploying and creating social capital. These findings offer valuable insight regarding the sustainability of the community's capital and its local

food system.

Interestingly, as inferred in the previous section, the prevalence of bonding social networks in Hardwick's local-food system appears to present the greatest opportunities and greatest challenges. Pre-existing friendships, geographical proximity and shared ideals/values have enabled the development of strongly-bonded trust-based social networks. On the other hand, a number of interviewees acknowledged that some community members perceived the networks negatively and claimed they were engaging in activities for their own economic gain, rather than the betterment of the community. Whether such charges are true may be irrelevant, for as long as this perception exists, it will be challenging to achieve solidarity and broad community involvement. As one interviewee observed:

there has been a (certain) perception, because of some things (that have been said) to the press that have come off wrong and it really, it really impacted some of the conversation, because it, it felt like for some of the older generation that they were being written off, but that's really the furthest thing from what's happening (H26).

As discussed above, the media's role in Hardwick's local-food-system development appears to be a double-edged sword. Findings highlight the vulnerable nature of social capital to external forces, and the importance of addressing concerns and perceptions that threaten to destroy/weaken stocks of social capital. Several interviewees indicated that efforts were being made by many of the social networks to become more inclusive and dispel negative opinions.

None of the stakeholders interviewed identified lack of time or energy as a major challenge to being engaged in social networks and community building. While the vast majority of interviewees indicated that they were actively involved in social networks and associated activities, there appeared to be a consensus amongst stakeholders that volunteering time and energy to community-building initiatives was part and parcel of being a community member. This attitude was reinforced through the researcher's participant observations. Given that burnout of individuals can often result in the weakening or disbandment of social networks, these findings highlight a significant strength in the community's ability to maintain social capital stocks over the long-term. Over many years, old and new community members have remained committed to civic engagement, social networking, and volunteering. This has allowed for continuous rejuvenation of social capital stocks, which, in turn, enables development of human and economic capital.

5.3.2 Human Capital

As in Chapter 4, for the purposes of this study, the researcher adopted Hancock's (1999) definition of human capital as consisting of 'healthy, well-educated, skilled, innovative and creative people who are engaged in their communities and participate in governance' (p.276). This conceptualization lends itself to a broader consideration of the value individuals can contribute to their community, recognizing that skills and formal knowledge represent only part of the total equation. An analysis of Hardwick's local-food system suggests that human capital has been an integral input and output of development since the 1970's through to the present. All twenty interviewees discussed the importance of human capital as a vehicle for change and evolution.

In the 1970's back-to-the-landers settling in the area began pioneering organic farming methods, learning how to farm sustainably through trial and error, from each other, and through agricultural college courses. In addition to learning how to grow food, they also developed the skills/knowledge necessary to market and distribute their products, effectively establishing new sites of distribution such as co-operatives and farmer's markets that continue to remain viable in the twenty-first century. Several younger interviewees discussed the important role these pioneering farmers have played in shaping the community's current food system by establishing some of the country's first organic farms and mentoring new farmers.

Producers and other stakeholders currently engaged in Hardwick's local-food system continue to demonstrate a strong commitment to enhancing human capital through education, skills development, knowledge-sharing, and establishment of a healthy, vibrant community. For example, Buffalo Mountain Co-op publishes a quarterly newsletter with articles about food politics, health issues, social justice activities and other pertinent topics, and hosts an informal learning network, the Greater Hardwick Community Learning Exchange. Several farms and food enterprises in the area also offer internships, host school groups, deliver hands-on workshops, and give talks at schools, conferences, community events and other venues. Certainly, the supply/availability of these educational opportunities is key to the development of human capital, however, demand/participation is equally necessary for these initiatives to have an impact. Interview findings suggest that there are generally high levels of participation, which encourages those offering their skills, knowledge and time to continue.

Findings also revealed that the efforts of businesses and organizations in Hardwick and area to

enhance human capital have had spill-over effects, with other communities in Vermont benefitting from some of these initiatives. For example, Highfields Center for Composting works with a number of towns across the state to assist in the development of high-caliber composting programs. The director explained the Center's driving philosophy:

our whole sort of concept is to transfer knowledge, not to retain expertise internally but to build out expertise in local communities, so now we're starting to work with more and more communities and looking at effectively developing expertise there so that they're not dependent on us (H26).

In other cases, the deployment and creation of human capital has mutually benefitted stakeholders in Hardwick and other regions. For example, the partnership between the CAE and UVM has contributed to the pool of human capital available to stakeholders of Hardwick's local-food system, while these projects have provided students and researchers with opportunities to enhance their knowledge and skills, ensuring that both parties benefit from the partnership. An interviewee closely involved with administering the partnership shared his perspective on one of these projects:

so these students who have had ... some education and experience will probably end up going in there and solving a problem for Jasper Hill that if they (Jasper Hill) went out and contracted for an outside consultant to do it would cost ... ten times as much ... so I think it's a good example of how everyone wins in this case – the students get a great project , Jasper Hill gets a solution to a problem (H16).

An analysis of Hardwick's local-food system reveals the interconnectedness of human capital and other forms of capital; in many cases human and social capital were deployed in tandem, with each building off the availability of the other. Formal and informal social networks have pursued activities intended to enhance awareness, skills, and knowledge of amongst different stakeholder groups, whilst also relying on the continued availability of human capital within the group to envision and execute these activities. For example, social capital formed the basis for a partnership between High Mowing Seeds, CAE and the New England Culinary Institute (NECI), who co-host an annual event, the Kingdom Farm & Food Days. This free event includes many opportunities for attendees to participate in workshops and go on guided tours of farms. Furthermore, it offers NECI students the opportunity to hone their skills in creating a locally-sourced dinner for a large number of people. In other cases, the deployment of human capital has strengthened stocks of social, economic and/or natural capital. For example, long-time farmers in the area who have developed deep knowledge regarding organic-and-sustainable agriculture practices offer internships to new and transitioning farmers.

Finally, thirteen of twenty interviewees discussed the important role of local-food initiatives in the development of healthy people and communities. Putnam's (2000) study of social capital in American communities reveals the positive correlation between high levels of social capital and the health enjoyed by community members. Notably, Putnam's findings (on a state-level basis) reveal that Vermont boasts one of the highest levels of social capital in the US, while 2009 statistics indicate it is the healthiest state in America (USA Today, 2009). The interconnected nature of social capital and health is particularly relevant in the context of local-food-system development and the enhancement of human capital. As Hancock (1999) suggests, an individual's level of health is one factor that will determine his/her total human capital 'value'. Local-food development, therefore, has the potential to act as a self-reinforcing system, where social and human capital are deployed in order to increase access to healthy foods, which in turn increases the health and human capital 'value' of community members. A number of initiatives in Hardwick and area are aimed at enhancing access to healthy, nutritious foods for all community members, including the Foodbank's gleaning program and community lunch. Sites of distribution in the region, including the Hardwick Farmer's Market, Buffalo Mountain Co-op, local CSA operations, and subsidized Farm-to-School programs, also provide ample opportunities to purchase fresh, healthy food. See Appendix H-E for accounts regarding human capital.

5.3.3 Economic Capital

Much of the growth of Hardwick's local-food system in recent years has depended upon the ability of various stakeholders to source economic capital to finance business growth, projects/programs, events, and other initiatives in the community. Key findings are discussed in more detail below.

Stakeholders in Hardwick's local-food system have been, by and large, very successful at accessing economic capital to carry out initiatives and build enterprises. Interviews and secondary sources highlight the essential roles that social capital and human capital have played in efforts to raise economic capital. Strong social networks and high levels of trust, both within these groups and more generally within the community, appear to have enabled many businesses to access necessary financing.

Claire's restaurant and Pete's Green are two local businesses that have successfully employed a community-supported model to raise operating capital. This financing model asks the consumer/eater to take on some of the risks of the business, by purchasing a 'share' or 'coupon' for food to be provided over a

period of time. Secondary sources suggest that the concept of a community-supported restaurant is quite unique. Given the town's history of flash-in-the-pan restaurants, the ability of Claire's to sell 50 shares at \$1,000 each in the small town of Hardwick is impressive. Interview findings suggest that many 'investors' were taking a leap of faith in the entrepreneurs because they knew and trusted them. Other businesses in Hardwick and area also developed creative financing packages to attract local 'angels' that were interested in making socially responsible investments in local businesses. Again, a combination of creativity (human capital) and social capital (trust and access to social networks) resulted in successful financing campaigns. In many cases, farmers and entrepreneurs in Hardwick and area have not even had to venture beyond their own closely-knit social networks because they've been able to secure loans from trusted colleagues/friends.

Stakeholders have also used social and human capital to attract the funding necessary to enhance infrastructure. For example, the CAE developed close partnerships with organizations such as the Vermont Housing and Conservation Board (VHCB) and Vermont Food Venture Center (VFVC). Funding from the VHCB allowed the CAE to purchase Atkins Field. The VFVC is a shared-use kitchen incubator for value-added and specialty food producers, which recently relocated to Hardwick. A number of interviewees suggested that the decision to relocate to Hardwick was, in part, due to the efforts of local entrepreneurs and the CAE, thus social and human capital (e.g. relationship-building and effective marketing) were deployed.

At a micro-level, a number of businesses in the area have used their social networks and social capital in the community to access the financing necessary to grow their infrastructure. In many cases, these businesses have then been able to provide services and infrastructure to budding entrepreneurs that would otherwise be unable to develop their products. The majority of interviewees and many secondary sources indicated that a lack of infrastructure has been an on-going challenge for local-food-system stakeholders across the state, thus efforts to enhance Hardwick and area's food infrastructure may prove to be pivotal to the long-term economic sustainability of the local-food system.

Interviewees from different stakeholder groups expressed unanimous agreement that an important key to economic sustainability of local-food initiatives has been reducing the need for economic capital in the first place. Working together to reduce the costs of doing business and developing partnerships such as the one between the CAE and UVM provided the agricultural community and food-based enterprises with access to valuable human capital at reduced or no cost. Further to reducing costs, several interviewees

expressed the desire to live a simpler, less-materialistic life, with some conveying anti-capitalism sentiments. For some, particularly those from the farmer stakeholder group, these values and ideals appear to have shaped the way they farm and their disinterest in the mainstream agriculture ‘get big, or get out’ mentality.

A final, distinguishing feature of Hardwick’s local-food system, is the degree to which localization of the economy has occurred. Stakeholders have demonstrated a strong commitment to supporting the endeavors of others in their stakeholder group (e.g. farmer to farmer), as well as other stakeholder groups (e.g. retailer to farmer) by purchasing and promoting each others’ products. The community’s many agriculture and food-based entities have also provided employment opportunities. While it would be difficult to determine the total number of jobs created through the area’s extensive agricultural economy, secondary sources and interviewees estimate that the latest wave of food-based enterprises and organizations have created over one-hundred jobs. Overall, an analysis of Hardwick’s local-food system suggests that, in many ways, the community is moving towards a more localized economy. It is worth noting, however, that the town still relies heavily on imported foods and many of the area’s food producers, particularly those creating value-added products, are reliant on markets in New York, Boston and other metropolitan areas. Appendix H-F offers accounts regarding economic capital.

5.3.4 Natural Capital

Preservation of natural capital stocks is essential to the sustainability of all human-created forms of capital and human-centric systems, such as agriculture. An analysis of Hardwick and area’s local-food-system development reveals some of the initiatives being taken by different stakeholder groups to address the on-going challenges associated with deploying natural capital in sustainable manner. Interviewees also highlighted the values and ideals that appear to be driving efforts to preserve and restore the community’s natural capital stocks.

Interview findings and secondary sources suggest that concerns regarding the ecological integrity of industrialized agriculture have been a driving force for the sustainable agriculture movement throughout Vermont. Many interviewees directly engaged in food production expressed discontent with the dominant food system, suggesting that it is not working and/or is not sustainable. One interviewee made the following observation:

Back then we couldn't help but be connected to nature, that was normal and then we've had this big descent into you know um materialism, basically, that has severed this... divorced us from nature and from our sources of sustenance and all of that and along the way we created this food system that's totally broken and not working well. So we can't go back to another way of doing it, we need to go forward still ...this is the first time we're actually consciously choosing a food system, consciously designing it, consciously thinking it through (H15).

The onus of responsibility for preserving natural capital stocks can often fall on the farmer stakeholder group, given that intensive agricultural practices are typically viewed as the main means by which food production causes environmental destruction. Notably, interviews and secondary sources revealed a broadly expressed sentiment that food processors, retailers, restaurateurs, and eaters should actively support small-scale, sustainable producers by making conscientious food purchases and/or investments. Throughout Vermont, there appeared to be a strong 'localvore' movement, growing demand for farmers' markets and CSAs, an abundance of retailers and restaurants dedicated to providing local food, and many examples of institutions committed to transitioning to local sources (e.g. hospitals, universities/colleges, schools).

A clear strength of Hardwick's local-food system is the degree to which its integration has enabled sustainable practices and waste reduction. Collaborations between stakeholders, along with the presence of a composting center that provides technical assistance and emphasizes education, has seen food waste reduction occurring at various stages of food production and consumption. Co-operation and a willingness to share knowledge and resources have also been key to creating natural human capital (NHC) and reducing the deployment of natural capital stocks. Despite the in-roads that have been made by various stakeholders to pursue sustainable practices and reduce waste, some interviewees directly engaged in the system still expressed discontent with the current state of affairs:

Meanwhile we're throwing away over 130,000 tonnes of food every year in Vermont and that's about 30% plus of the entire waste that we generate and if we were to capture those materials, compost them and put them back into food production it would provide the nutrient equivalent to grow about seventeen to nineteen thousand acres of mixed vegetables, which is about three times what we do now and a little less than half of what we would need to feed the entire state (H26).

I think it's you know it's nice that another 1 or 2 % or maybe even 5 or 8% of the people, of the population is, like, realizing it, it's too bad they didn't realize it for the right reasons of health reasons, of health of the soil and for ecosystem reasons and you know, and planet reasons, you know, instead of oil and dollar reasons (H28).

Certainly, there remains much work to be done to ensure the long-term sustainability of natural capital stocks in Hardwick and surrounding region. Perhaps most notably, the majority of community

members still purchase imported foods from the local chain grocery store and many of the town's farmers and food entrepreneurs still rely on export markets. On the other hand, the state of Vermont appears to benefit from the presence of a diversity of stakeholder groups that are dedicated to preserving the rural landscape and way of life, including farmers/producers, government agencies, non-profit organizations, private foundations/funders, community groups and consumers/eaters. Through various activities and initiatives, these stakeholder groups are working to preserve land, water, soil, energy and other natural resources vital to a sustainable food economy

5.4 Balancing Capital Stocks and Restoring Community Capital

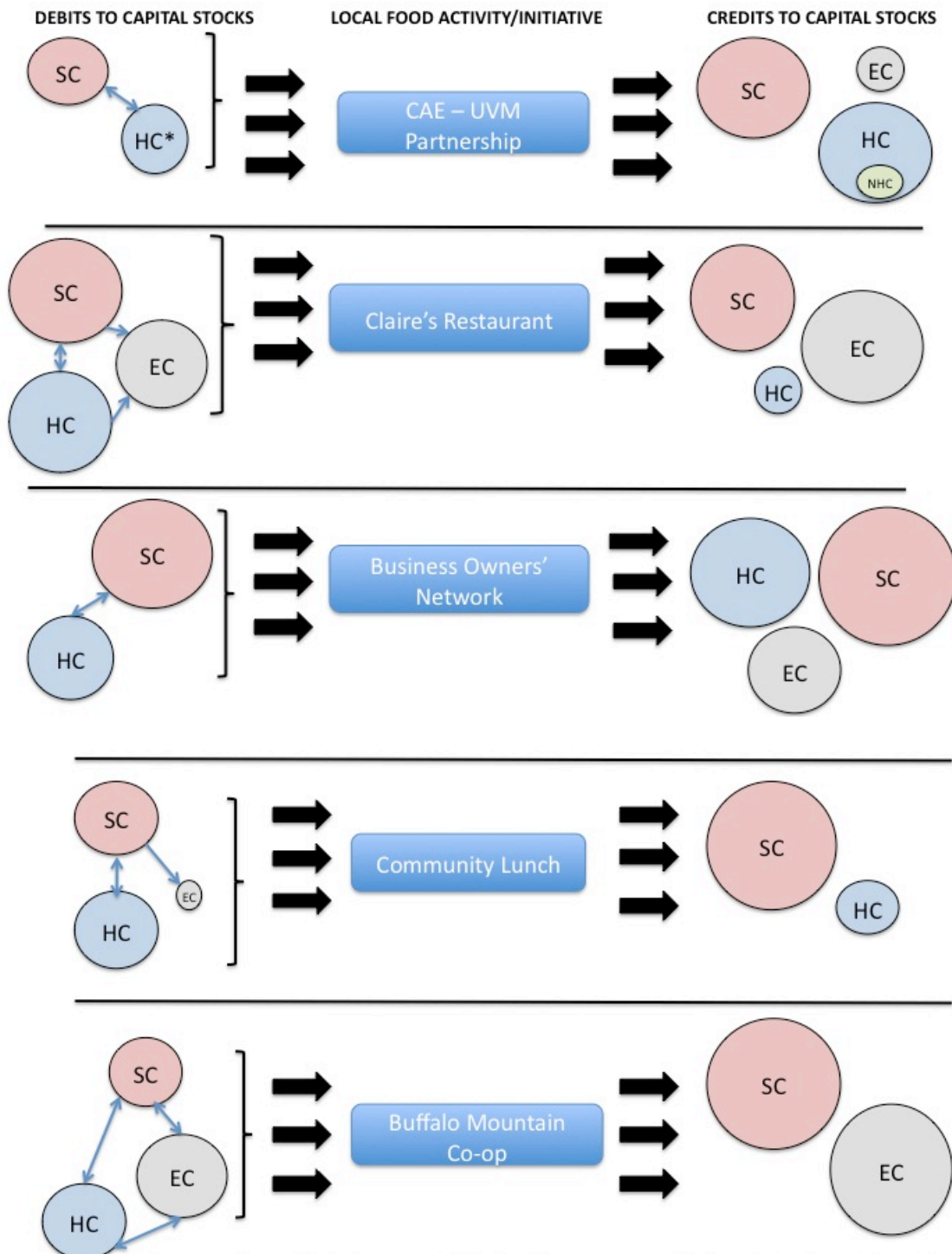
An analysis of Hardwick's local-food system reveals that its development has depended on the 'debiting' of all types of community capital. Findings also indicate that, in many cases, these initiatives have directly or indirectly enhanced stocks of community capital. In this section, an overview of the interplay between types of community capital is presented. Following this, consideration is given to whether Hardwick's local-food system has enhanced community capital.

5.4.1 The Interplay of Community Capitals

The analysis provided in Section 5.3 reveals the interdependent nature of all forms of capital (social, human, economic, and natural) in the development of Hardwick's local-food system. Using the conceptual framework presented in Chapter 2 as a guide, Figure 5.2 traces some of the major debits and credits of community capital related to the development of Hardwick's local-food system. It reveals interdependencies, highlights sources of capital deployment and the resulting capital formation, and provides insight into whether local-food system development has served to strengthen Hardwick's human-created stocks of community capital. Key findings are discussed below.

Findings from interviews, participant observations and secondary sources indicate that access to social capital has been particularly important to stakeholders pursuing local-food initiatives. Strong social networks, along with trust and general reciprocity amongst stakeholders have enabled access to human capital and economic capital. In turn, the human and economic capital accessed/created, has strengthened the local-food system and reinforced the social-capital stocks available to the community.

Figure 5-2: Debits and Credits to Capital Stocks Through Local-Food-System Initiatives in Hardwick



In this figure, social capital (SC), human capital (HC), and Economic Capital (EC) are depicted as circles, with the size of the circle reflecting the relative amount of ‘stock’ deployed and/or created through that local food activity/initiative. The focus is exclusively on human-created forms of capital; natural capital is not considered, although natural human capital is identified. The size of each circle represents the relative amount of capital deployed for an activity, in comparison to the amount created. This figure does not provide for comparisons of capital deployment and creation between the different activities/initiatives (as the black horizontal lines suggest).

* Indicates the capital stock was sourced externally

As the analysis presented in the previous section suggests, there are many instances whereby social capital has been deployed in order to access or create economic and human capital. In *Bowling Alone*, Putnam (2000) suggests that the state of Vermont benefits from high levels of social capital deeply embedded into the fabric of everyday life. Stakeholders in Hardwick and area appear to be harnessing this social capital in order to enhance local-food systems. Many of the initiatives they have pursued have, in turn, served to strengthen social networks and community capital stocks.

While the availability of social capital has been essential to development of other forms of capital, the deployment of human capital throughout the past four decades has also been integral and often served to strengthen social, economic, and human capital stocks. Indeed, it is worth considering whether social networks can form and be maintained in the absence of creative, skilled, healthy, and civically engaged people. Certainly, knowledgeable individuals that have recognized the value of co-operation and collaboration have driven Hardwick's local-food system. The skills and knowledge developed by back-to-the-landers and new farmers, along with efforts by other organizations to preserve farmland and reduce waste, have also served to reduce the rate at which natural capital is being depleted. Educational initiatives being pursued by organizations such as the CAE and Highfields Center for Composting, have also enhanced the community's stocks of natural human capital. An analysis of Hardwick's local-food-system development suggests, then, that human capital is as pivotal as social capital to long-term sustainability.

Notably, many local-food initiatives in the area have harnessed social and human capital in order to reduce the need for economic capital or to access economic capital. It is, however, difficult to ignore the importance of economic capital, particularly to the community's more recent food and agriculture endeavors. Access to financial capital has allowed several food-based businesses to begin operating and/or expand, while funding from various sources has provided non-profit organizations with the ability to hire staff and carry out local-food projects, programs, and events. Economic capital has thus enabled many activities and events that have served to foster social capital (through networking), human capital (through education and awareness) and economic capital (through the establishment of sites of distribution and marketing).

Natural capital is the foundation upon which all forms of human-created capital are built. Findings suggest that most stakeholder groups recognize the importance of accounting for the full costs of producing

food in a sustainable manner. A myriad of activities have been pursued by farmers, processors, retailers, government agencies, non-profits, community groups, and concerned citizens in order to maintain stocks of natural capital. A strong focus on developing knowledge and awareness about the ecological impact of human activities captures the interdependent nature of human capital and natural capital.

An analysis of Hardwick's local-food system provides a valuable lens through which to consider the interdependent nature of social, human, economic and natural capital. It also highlights the restorative potential of community capital; development efforts are aided by the availability of existing capital stocks, whilst these activities also have the potential to enhance community capital stocks

5.4.2 The Enhancement of Community Capital

An analysis of Hardwick's local-food system reveals that stakeholders have benefitted from high levels of social capital, the availability of creative, skilled and engaged individuals (human capital), access to financing and funding through a various state-level agencies, private foundations and local 'angel' investors, and relatively abundant natural resources suited to small-scale farming. It is important, however, to consider if and how local-food development has strengthened/restored these stocks of community capital.

Findings suggest that Hardwick's local-food system has relied heavily upon existing social capital, while also contributing significantly to its enhancement. Trust-based collaborations and community-based activities have required a deployment of social capital, however they have also provided the opportunity for stronger social networks to emerge.

Development of Hardwick's local-food system has also required deployment of human capital stocks, however, an analysis of the system's evolution suggests that, overall, the community's human capital stocks have been strengthened. Most obviously, community groups and non-profit organizations have recognized the importance of educating members of the community about local-food issues - from practical advice (e.g. how to plant your own garden) to discussions about more complex issues (e.g. peak oil and energy descent). Seventeen of twenty interviewees highlighted the importance of education as a driver of change.

In some cases, the deployment and enhancement of human capital has extended beyond the local community. The establishment of two-way, mutually beneficial partnerships with academic institutions offers the potential for sustainable, long-term access to, and development of, human capital, especially given the constant turn-over of students and on-going opportunities for new projects in an ever-evolving

food system.

Secondary sources, particularly media reports, and interview findings almost unanimously agree that local-food-system development in Hardwick has enhanced the community's economic capital stocks. Newspaper articles with titles such as "The Town that Food Saved", "Revitalizing the Rural Economy" and "Uniting Around Food to Save an Ailing Town" all highlight the role that local agriculture and food-based enterprises have played in improving Hardwick's economic outlook, particularly through job creation. 'People power' has usurped financial capital, as stakeholders have devoted time and energy to various initiatives, with many also donating produce/products in order to enhance community food security.

The sustainability of the community's economic capital stocks will depend upon many factors; however, the localization of Hardwick's food system emphasizes the importance of economic sovereignty to long-term success. By creating financial models that community members are willing to invest in and maintaining high levels of social and human capital, many farmers and food entrepreneurs have been able to move away from a dependency on traditional bank financing and/or public funding. Other stakeholders, including non-profit organizations, have typically acquired funding through private Vermont-based foundations and state-level government agencies. Interviewees acknowledged the importance of developing long-term relationships with private funders and reducing dependency on public funding sources. There was, nevertheless, a consensus amongst these stakeholders that external funding remains essential to local-food development efforts across the state of Vermont.

The impact of local-food initiatives on the community's stocks of natural capital is difficult to ascertain. Certainly, interview findings and participant observations indicated that many stakeholder groups have been motivated to pursue local-food development due to beliefs that the dominant food system is ecologically unsustainable. While the vast majority of stakeholders appear to be committed to environmental sustainability, natural capital deployment is still required in order to produce and distribute food. The local-food system being established in Hardwick has the potential to be less environmentally destructive than the commodity-driven dairy industry that currently defines Vermont's agricultural landscape, however, complete restoration of natural capital stocks remains an ideal to strive toward.

Chapter 6

Comparative Analysis and Lessons Learned

6.1 Introduction

In this chapter, a comparative analysis of the Kingston and Hardwick case studies is presented. Consideration is given to each system’s evolution, stakeholder involvement, challenges, and successes. Furthermore, a cross-analysis of community capital deployment and creation is provided and examines the role each of these local-food movements has played with respect to strengthening social, human and economic capital. Patterns, similarities, and dissimilarities are examined, and relationships to the original research questions are identified. Lessons learned from the case studies and comparative analyses are also presented. The analyses and discussion offer a broader understanding of how local-food systems might rely upon and contribute to community capital stocks and, ultimately, serve as an important vehicle for community betterment and resiliency. Table 6.1 provides a summary of the comparative analysis conducted for this study. Key findings are discussed in the subsections that follow.

Table 6-1: Comparative Analysis of Local-food System Development in Kingston and Hardwick

Feature	Kingston	Hardwick
Community Characteristics	Medium-sized city (pop’n 117,000), located in urbanized area of Ontario and in close proximity to Canada’s two largest cities and the nation’s capital. Population tends to be more transitory due to inflow and outflow of students and military personnel, as well as access to large employment markets in nearby cities.	Small town (3,200) located in northern region of the rural state of Vermont Population tends to be more stable. Many multi-generational families remain in the area, as well as back-to-the-landers from 1970’s and individuals/families that have made a conscious decision to settle in the area.
Economic Conditions	Strong knowledge economy and highly institutionalized	High unemployment rate, depressed economy, many community members travel to other areas to work
Motivations	Farming crisis, economic sustainability, environmental stewardship	Farming crisis, economic sustainability, environmental stewardship, community sovereignty and betterment, counter-culture values expressed by some stakeholders
Evolution and Development	Rapid, intentional development, primarily over past six years (2004-2010)	Organic, slow development from 1970’s to early 2000s; rapid, intentional development from mid 2000’s to present
Stakeholders	Primarily driven by farmers and concerned community	Early growth driven by farmers and community members.

	<p>members/organizations.</p> <p>Few stakeholder groups heavily engaged in development efforts</p>	<p>Recent growth driven by entrepreneurs and community members/organizations with strong support from a diverse range of stakeholders including public agencies, private funders/foundations, academic institutions, and non-profit organizations</p>
Focus of Development (past 5 years)	<p>Increasing consumer demand and ensuring adequate supply to meet demand (building farmer capacity)</p>	<p>Infrastructure development, enhancement of distribution channels, education</p>
Social Capital	<p>Social capital stocks available in community, however, levels of trust and general reciprocity within broader community may be lower and present challenges with regards to establishing and maintaining social networks</p> <p>Strongly bonded, formalized social networks spearheading initiatives; NFU Local 316 integral to development efforts</p> <p>Social networks with bridging characteristics also present, but less common. Challenges with respect to engaging broader community and diverse range of stakeholder groups. Small group of individuals leading most development efforts</p>	<p>High stocks of social capital available for deployment. High levels of trust and general reciprocity within community</p> <p>Strongly bonded social networks (informal and formal) spearheading initiatives; pre-existing friendships have been important to development of networks</p> <p>Social networks with bridging characteristics present. Bonded networks have retained core group, while partnering with other stakeholder groups. Major success with engagement of stakeholder groups outside of local area (e.g. UVM)</p>
Human Capital	<p>Strong focus on human capital development, particularly of eaters/consumers and farmers (new and current)</p> <p>Existing stocks of human capital deployed – namely the knowledge/skills of farmer group and concerned community members/organizations, but also from academic institutions and public agencies</p>	<p>Strong focus on human capital development – within community and beyond. Focus on consumer awareness, transitioning farmers, and schoolchildren locally. Also working with other communities, academic institutions, etc. to share knowledge/skills.</p> <p>High levels of human capital available in community, particularly with respect to organic/sustainable farming practices. Evidence of strong commitment to civil engagement and community involvement.</p>
Economic Capital	<p>Development efforts primarily funded via public agencies or on a shoestring budget.</p> <p>Lack of economic self-sufficiency continues to present challenges; however, there is evidence of progress towards economic independence. Many initiatives aimed at enhancing economic sustainability of stakeholders and system in general</p>	<p>Development efforts funded by diverse sources including public agencies, private foundations, community members, and ‘angel’ investors.</p> <p>Despite complete economic self-sufficiency, local-food stakeholder groups have made significant progress towards economic sovereignty and are pursuing initiatives aimed at further localization of the economy.</p>
Natural Capital	<p>Efforts to sustain natural capital, namely through sustainable/organic farming practices. Strong focus on development of natural human capital</p>	<p>Efforts to sustain natural capital through sustainable/organic farming practices, as well as minimization of waste through integration of operations (e.g. gleaning) and</p>

	Lack of local infrastructure resulting in added 'food miles' as foods are transported out of community for processing then shipped back.	composting. Strong focus on development of natural human capital. Dependence on exporting produce and products to larger markets throughout Vermont, as well as Boston, NYC, etc., increasing food miles and energy use.
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6.2 Community Characteristics and Economic Conditions

Findings reveal that the communities of Kingston and Hardwick share a number of common characteristics as well as distinct differences, which appear to have influenced the development of each local-food system. A notable similarity is that neither region is considered to be prime agricultural land. While Vermont has developed a strong reputation as a dairy producing state, its small size, mountainous terrain, and northerly climate have served to deter the scale of industrial agriculture that typifies Midwest America. Similarly, Kingston's rocky terrain and northerly climate have limited large-scale agricultural development, with southern Ontario and the Prairies offering the attraction of warmer climates and/or greater swaths of arable land. The absence of large tracts of agricultural land in these regions appears to have provided both the opportunity and incentive for local producers to pursue alternative, small-scale agriculture.

Perhaps the most obvious difference between these two communities concerns their size and constitution. Kingston is a medium-sized city, situated between Canada's two largest cities and the nation's capital. By contrast, Hardwick is a very small town located in the northern region of the small and mainly rural state of Vermont. Furthermore, a segment of Kingston's population appears to be transitory in nature due to the inflow and outflow of students, military personnel and individuals seeking jobs in nearby metropolitan areas, while Hardwick and the surrounding areas represent a mix of multi-generational families with strong ties to the area and newcomers who've been attracted to the area and intend to settle for the long-term. These factors have had some impact on the levels of human capital and social capital available in each community. For example, Kingston's local-food stakeholders have benefitted from access to a large student population, however, the constant turnover of these students and other transitory

stakeholders results in social networks and relationships that are changing on a regular basis. This may hamper development of social capital that, as Grootaert (2001) argues, can take many years to build and a continued investment of resources. By contrast, the community of Hardwick benefits from very high levels of social capital, as trust and general reciprocity amongst community members has been fostered over many years, however, the small population of the community translates into limited access to human capital. Notably, Hardwick's local-food stakeholders have overcome this challenge by leveraging their social capital to access external sources of human capital (e.g. partnership with UVM).

An analysis of both communities highlights the crucial role that necessity and economic conditions may play in the development of local-food systems. The growth of Hardwick's local-food system and the community's rich stocks of social capital appear to have been borne out of recognition amongst community members that they need to work together and support each other in order to survive in a rural economy. In Kingston, these sentiments, although expressed by some farmers, were much more muted overall. It is worth considering whether the relative economic stability enjoyed by Kingstonians has, in fact, impeded the local-food movement. Perhaps with a comparably better economy and alternative employment opportunities in nearby urban areas, there has been less incentive to pursue rural development.

6.3 Evolution and Development

Stakeholders in Kingston and Hardwick shared similar motivations for developing a local-food system. In both communities, interviewees and secondary sources indicated that a growing farming crisis has been a key driver of the local-food movement. Interviewees from north and south of the border also shared concerns regarding the environmental sustainability of this system, with some highlighting the social inequities it often relies upon or produces. Community food security, access to fresh and healthy food, and overall community betterment were also cited by stakeholders from both communities as important motivations for the development of a local-food system. Notably, there were some subtle indications that the underlying beliefs and values driving some stakeholders differed between communities. For example, in Hardwick, interviews with some stakeholders highlighted counterculture attitudes and a desire to be independent of mainstream society, while Kingston stakeholders did not as overtly express these views.

Findings suggest that the degree to which development of a local-food system has been an

intentional versus organic process differs across these two communities. Interviews with Hardwick stakeholders indicate that, during the latter part of the twentieth century, development of a local-food system occurred slowly and organically, as members of the community experimented with new methods of production and distribution. More recently, a number of stakeholders in the small community have been actively pursuing development of an agricultural economy. Their efforts have attracted a significant amount of media attention, economic capital to fund various efforts, and valuable support from a diverse range of stakeholders. The foci of these more recent initiatives appear to be infrastructure development, enhancement of distribution channels, and increasing knowledge/awareness. By comparison, Kingston stakeholders indicated that the pursuit of local-food initiatives has been intentional from the outset, primarily driven by a growing crisis in conventional agriculture and rising food safety/security concerns. Many of the initial efforts carried out by Kingston stakeholders (namely from the farmer stakeholder group) focused on awareness raising and creating demand for local foods. More recently, a shift towards enhancing supply/production has occurred in order to meet growing demand. It appears that supply and demand for local food in Hardwick has grown slowly over the past four decades, whilst in Kingston concentrated efforts have been taken to increase consumer demand and ensure there are enough producers.

As inferred above, the development of the local-food system in each community has differed in terms of the speed of evolution and its current state. A cross-analysis of the systems suggests that Hardwick is, in many ways, further ahead with respect to the establishment of a local-food system. The community benefits from the presence of active stakeholders in every area of the food production, which has allowed system integration and valuable collaborations to occur. Vermont, in general, is also recognized as a leader in the sustainable agriculture movement and has established a robust production system that is supported by government, private foundations, academic institutions, and non-profit organizations. Strong consumer demand for local foods has also allowed for development of new distribution channels and partnerships between stakeholder groups (e.g. farmers and schools). While there continue to be efforts to enhance production capacity and increase consumer demand, stakeholder groups have also been able to focus their energy on infrastructure development, public relations, and attracting investors. Comparatively, the local-food system in Kingston appears to be less mature. Interviewees used terms such as 'full of potential' and 'under construction' to describe its current state, with one interviewee

observing that ‘a system implies mass... we don’t have a system yet’ (K12). To date, development efforts have been spearheaded by small groups of stakeholders, predominantly farmers and concerned citizens, and initiatives have focused on enhancing demand and supply. There appears to be little emphasis on development of infrastructure to support processing and value-added food production, public relations, and or attracting investors.

There are a myriad of possible reasons for the current state of each system. Certainly, as discussed above, Hardwick’s rich agricultural history and Vermont’s pioneering efforts in sustainable agriculture have provided an important foundation upon which to build a local-food system. Other factors such as the number and diversity of engaged stakeholder groups, community characteristics, economic conditions, and geo-political conditions also appear to have influenced development. Some of these are discussed in further detail below.

6.4 Stakeholder Involvement

As noted in the previous section, the local-food system in Hardwick benefits from the active participation of stakeholders in every aspect of the food system (e.g. farmers, processors, distributors, retailers, composters) as well as supporting stakeholders from the private sector, public sector, academic institutions, government agencies and community. Over time, different stakeholder groups appear to have been central to development efforts. During the 1970’s and 1980’s, back-to-the-landers and new farmers pioneered new ways to farm sustainably and sell through co-operatives. Most recently, the area’s new entrepreneurs and concerned community members have led many of the local-food initiatives, although the success of these activities has depended upon the involvement and support of many stakeholder groups.

Comparatively, farmers and concerned community members appear to be the main players in the local-food system in Kingston. While representatives from other stakeholder groups have certainly been involved in local-food initiatives in Kingston, these two stakeholder groups have typically spearheaded development efforts. This has given rise to challenges, as the workload involved with carrying out local-food activities has been borne by a small number of individuals, volunteering their time and energy to these efforts.

In both communities it is evident that, to a certain degree, the initiatives pursued by stakeholder groups have reflected their own needs/interests (e.g. farmers interested in increasing demand/market reach). This could have implications for the development of a local-food system, particularly if only a small number of stakeholder groups are pushing forward an agenda that is not aligned with the needs/desires of the larger community. On the other hand, findings from both communities suggest that, for the most part, the activities being pursued by stakeholder groups have aimed to contribute to community betterment whilst simultaneously advancing the interests of the stakeholder groups.

6.5 Community Capital Deployment and Creation

Chapters 4 and 5 offer valuable insights into how the development of local-food systems in Kingston and Hardwick has both relied upon and contributed to community capital stocks. In this section, a comparative analysis of the case studies highlights similarities and differences across the two communities with respect to the deployment and creation of social, human, economic and natural capital. Key challenges and opportunities are also discussed.

6.5.1 Social Capital

Findings from interviews and secondary sources reveal that in both communities, the deployment of social capital has been essential to local-food development. Existing social networks in Kingston and Hardwick have invested time and energy into various activities aimed at enhancing the local-food system. Notably, in both Kingston and Hardwick, the most active social networks were comprised primarily of individuals from the same stakeholder group (i.e. bonding forms of SC) and, in many cases, pre-existing friendships/relationships had served an important role in network formation and expansion.

Pretty and Ward's (2001) argument that social capital is regenerative and self-reinforcing in nature was highlighted in both case studies. Existing social networks have worked together to carry out activities and events intended to enhance the local-food movement. As network members invested their time and energy to these pursuits, they interacted with other network members, thus creating opportunities for trust and relationships to strengthen. Often the initiatives pursued by these social networks also served to increase the reach of an existing social network or establish new and valuable relationships. For example,

in both communities, the establishment of farmers' markets provided community members with a unique opportunity to interact directly with farmers and other food producers and develop on-going relationships.

A comparative analysis of the communities suggests that, historically, stocks of social capital available to local-food stakeholders may have been higher in Hardwick than Kingston. As a small, tightly-knit community with a rich tradition of neighbour-helping-neighbour, the community appears to have fostered high levels of trust and general reciprocity, enabling local-food stakeholders to collaborate, form co-operatives, and further enhance all stocks of human-created capital. Kingston's local-food stakeholders, on the other hand, have not necessarily had access to such deeply embedded stocks of social capital. The advancement of Hardwick's local-food system may be partly attributable to the relatively abundant stocks of social capital that stakeholders have been able to access and maintain.

6.5.1.2 Bonding and Bridging Forms of Social Capital

Perhaps some of the most significant findings from this research study concern the impacts bonding and bridging forms of social capital have had on local-food system development. Bonding forms of social capital were key to development efforts in Kingston and Hardwick and, in both cases, appear to have contributed positively and also presented challenges. In both communities, the most active social networks appear to be strongly bonded in nature. In Kingston, the National Farmer's Union Local 316 spearheaded many projects and events. An informal network of local business owners who appeared to share similar ethos and values actively engaged in various initiatives to enhance Hardwick's local-food system. These strongly bonded social networks have both relied upon and engendered high levels of trust amongst members, enabling them to carry out initiatives effectively. Interview findings revealed that members considered these networks valuable to local-food-system development in general and, in many cases, to the viability of their own operation/organization. This finding supports, to a certain degree, Bourdieu's claim that social capital is a resource individuals pursue for personal gain (as cited in Portes, 1998, p.3).

Notably, while Kingston has a strongly bonded farmers' group, there appear to have been more challenges in establishing strongly bonded networks of community members. By contrast, several community groups have formed in Hardwick and the surrounding areas to address local food and agriculture issues and, in many cases, members of these networks have resided in the area for several years.

It is worth considering whether the presence of a number of strongly bonded networks populated by different stakeholders has encouraged the development of a local-food system that responds to a broader segment of the community. Certainly, many of the initiatives in Hardwick aimed at enhancing community food security, such as Community Lunch and Salvation Farms gleaning program, have been spearheaded by bonded community groups, while many of the efforts aimed at enhancing the economic sustainability of the system have been led by bonded networks with vested interests in these initiatives (e.g. farmer groups establishing farmers' markets).

While strongly bonded social networks in Kingston and Hardwick have clearly played a significant role in efforts to develop a local-food system thus far, they have not been without some issues and challenges. In both communities, some interviewees external to these networks expressed views that they were 'cliquish' or 'tight', while other interviewees indicated that they were pleased with the efforts of these social networks. Members of these strongly-bonded networks acknowledged the importance of belonging to a group with shared values and perspectives; however, most also indicated that broad involvement of the community was essential to development efforts and cited many initiatives geared towards engaging with a diversity of stakeholders. In both communities, it appears that some of these strongly-bonded networks were attempting to preserve the bonded nature of their core group, while simultaneously working to develop partnerships with other stakeholder groups and engage a broader cross section of the community, although the success of their efforts was not clear.

Bridging forms of social capital have also played an important role in the local-food movements of both communities. Diverse stakeholder groups have formed partnerships to pursue many local-food activities. As stated above, bridging social capital has, in many instances, been created through the concentrated efforts of strongly bonded social networks. Many events and activities organized by these networks have been designed to enable new social relationships to emerge. Bridging social networks have proven to be a particularly important means of accessing human and economic capital, as stakeholders from different groups have pooled their knowledge, skills, and other resources to pursue local-food initiatives. Findings suggest that Hardwick has, to date, been particularly successful at building social networks that include external and support stakeholders (e.g. UVM, NEKI, Vermont Foodbank).

It is important to note that while social networks with bridging characteristics were observed in Kingston and Hardwick, they were not necessarily representative of the heterogeneity of the communities at large. Bridging networks tended to include a diversity of stakeholders representing various interests and perspectives from within the sustainable agriculture and local-food movement. Findings suggest that in the majority of cases, however, networks did not include members with more conventional/mainstream views. For example, representatives of supermarket chains, large distributors, and conventional farmers were entirely absent from the networks observed. While the absence of these players is unsurprising, it is nevertheless important to recognize the local-food systems in these communities are being shaped by a small number of community members that, to a certain degree, have vested interests in how the system develops. Just as it is arguable that the conventional food system has been developed to serve the needs of a minority of stakeholders, it is possible that a local-food system might also be shaped to serve the needs of a minority of community members. Findings from this research suggest that while stakeholders in both communities are pursuing development that will serve their own needs (e.g. building up demand for local food, working to attract investors and infrastructure), they are also investing time and energy into building a system that serves the broader community's needs (e.g. working with foodbanks, establishing community gardens, providing educational opportunities). Overall, it appears that development efforts pursued by social networks have enhanced the stocks of social capital in each community.

6.5.2 Human Capital

The availability of human capital has been integral to local-food-system development in Kingston and Hardwick, with stakeholders deploying their knowledge and skills in order to further develop human capital, enhance economic capital, maintain natural capital and strengthen social networks. Overall, analyses suggests that both communities have depended upon farmer and community stakeholder groups for human-capital inputs and focused their efforts on the enhancement of farmers' knowledge/skills, as well as general public awareness.

While both communities have had access to human capital via farmer and community stakeholder groups, Hardwick's local-food system has been able to capitalize on the availability of human capital from other active stakeholder groups, particularly the town's food-based entrepreneurs and the CAE. It appears

that having access to the knowledge and energy of these business-oriented and socially-minded stakeholders has been especially important to the enhancement of Hardwick's capital stocks and the strengthening of the local-food system.

A comparative analysis of Hardwick and Kingston suggests that the former has benefitted from being embedded within a broader community (i.e. the state of Vermont) that has demonstrated a strong commitment to increasing consumer awareness about agriculture/local-food and enhancing knowledge/skills with respect to sustainable agriculture, environmental issues, and local economies. Stakeholders pursuing development of a local-food system in Hardwick have successfully worked with external academic institutions, non-profit organizations, government agencies, and other stakeholder groups to harness existing human capital resources and foster new human capital. By contrast, interview findings and secondary sources suggest that Kingston's local-food stakeholders have had limited access to external sources of human capital.

6.5.3 Economic Capital

A comparative analysis of economic capital deployment and creation in Hardwick and Kingston's local-food system development highlighted different approaches taken by each community. Overall, it appears that Hardwick has been more successful in sourcing economic capital within the community, while both communities have had success accessing external funds and finding innovative ways to reduce dependence on economic capital.

The case study of Kingston revealed that many of the initiatives pursued by stakeholders have been done on a shoestring budget. More substantial projects and events have typically depended upon public funding sources, namely through provincial and federal government agencies. In many instances, local-food stakeholders in Hardwick have also depended upon external sources of funding, with private foundations from across the state of Vermont typically being the biggest supporters. Based on interview findings and secondary sources, it appears that the varied availability of public versus private funding in these two communities reflects, to a certain degree, the different geo-political landscapes in which they exist. Across the United States, private foundations and funders serve as a significant source of funding for non-profit organizations and community groups, while in Canada stakeholders depend more heavily upon government

funding. An on-going dependency on external funding from public and private sources represents a significant threat to the sustainability of the system, as projects, events and other activities may be cancelled if funding is not renewed.

Stakeholders in both communities also identified various ways to decrease the need for an outlay of economic capital. In many cases, access to volunteer human resources was particularly important. Hosting events at farms or public spaces, and seeking donations of food and other required materials has also reduced costs. Co-operatives and partnerships in both case studies also enabled stakeholders to effectively decrease economic costs. The importance of social capital in reducing the need for economic capital was evident in both case studies.

An analysis of the case studies revealed that Hardwick's local-food stakeholders have been successful in sourcing significant amounts of economic capital from within the local community, while there was little evidence of local investment occurring in Kingston. Interview findings as well as secondary sources concerning Hardwick's local-food system suggest that stakeholders in this community tend to be more entrepreneurially-minded. Despite its reputation as a down and out community, findings also suggest that there are deep-pocketed individuals in the local area and across the state that have supported some of the area's newer food enterprises and local-food activities. By contrast, interviewees from Kingston's key stakeholder groups, comprised primarily of farmers and community members, did not highlight any efforts to source local funds for enterprise development or local-food initiatives, aside from the pursuit of the traditional CSA model. While Kingston has a much larger population base and is more affluent than Hardwick, it appears that lower levels of social capital and a lack of entrepreneurially-minded stakeholders have stymied acquisition of locally-sourced economic capital.

The comparative analysis reveals that both communities have been actively pursuing initiatives aimed at enhancing the economic sustainability of the system. In both Kingston and Hardwick, stakeholders have focused their efforts on raising consumer awareness/demand, establishing distribution channels, and hosting events/activities aimed at fostering buyer-seller relationships. Hardwick's stakeholders have made in-roads in the development of infrastructure (e.g. Atkins Field, Vermont Food Venture Centre) that is important in the establishment of a viable system. The majority of interviewees in Kingston acknowledged

the need for development of infrastructure to support local-food producers, citing abattoirs, storage facilities, and processing facilities as particularly important. However, limited progress has been made in this regard as efforts in Kingston have focused more on episodic activities.

Overall, the analysis revealed that neither community has established an economically self-sustaining system yet. However, findings suggest that both communities are moving towards self-sufficiency through the establishment of distribution channels, innovative financing models, local processing facilities, etc. Finally, regardless of whether stakeholder groups have sourced economic capital externally or locally, they have, without exception, depended upon social and/or human capital stocks to access necessary funds. It can be concluded, then, that the economic sustainability of these local-food systems is dependent upon the sustainability of social and human capital stock.

6.5.4 Natural Capital

Findings indicate that stakeholders in Kingston and Hardwick have pursued similar strategies in their efforts to sustain stocks of natural capital. Enhancing the natural human capital of community members through educational initiatives has been a popular approach, as has providing training opportunities to new and transitioning farmers interested in learning sustainable farming practices.

The maintenance of natural capital stocks appears to be an on-going priority for stakeholders in Kingston and Hardwick; however, findings also highlight the delicate balancing act that exists between economic and environmental sustainability. While all stakeholders acknowledged that a local-food system cannot be sustained over the long term without rich natural-capital stocks, the majority also indicated that a local-food system must be economically viable in the short- and long term. This has posed some challenges with respect to production, distribution, and sales as noted in Chapters 4 and 5.

6.6 Conclusions and Lessons Learned

Case studies of the local-food systems emerging in Kingston, ON, and Hardwick, VT, highlight the important role that development efforts can play in enhancing capital stocks and moving towards community sustainability. This is a key finding, as it provides justification for the pursuit of a local-food system and emphasizes the importance of balancing all forms of community capital rather than focusing

solely on economic gains as a measure of progress. It appears that a local-food system can only be sustained when community capital stocks are appropriately deployed and stakeholders ensure that the activities they engage in strengthen the system and restore all forms of capital to the community.

Kingston and Hardwick serve as examples of communities that have successfully deployed existing stocks of social, human and economic capital in order to enhance supply of, and access to, local foods and food products. Findings reveal many commonalities across the two communities with respect to initiatives/activities pursued, successes realized and challenges encountered. Stakeholder interviews, coupled with analyses of each food system's development, reveal that many of the lessons learned relate to the concepts and theories concerning community capital, particularly social and human capital. Practical implications and lessons shared by both communities are as follows:

- Social networks are essential to development efforts. Identify existing networks (formal and informal) and seek to strengthen them by building membership and ensuring regular, valuable interactions (i.e. enhance quantity and quality). The creation of new social networks is also an important means of building trust and strengthening relationships within and between stakeholder groups. Notably, pre-existing friendships have proven to be integral to the development of new networks and/or the expansion of existing networks.
- Inclusivity from the outset of development is important. The consensus amongst stakeholders in Kingston and Hardwick was that true community building should seek to include the broadest and greatest number of stakeholders possible. Social networks that have bridging elements will encourage knowledge sharing and constructive debates, and, ultimately, development will better reflect the values and goals of the broader community, rather than a minority with vested interests.
- While inclusivity and bridging social networks are essential, bonded social networks are also integral. In both case studies, strongly bonded social networks led many key initiatives. High levels of trust, common values/goals, and vested interests in pursuing development enabled networks to effectively envision, plan, and implement projects that required access to human and/or economic capital. These networks were effective at sourcing capital needs from within the network and externally. In some cases, these bonded networks developed partnerships with other

stakeholder groups, suggesting that bridging networks can (and often do) originate from bonded networks.

- Social capital can be difficult to build; it will take time and energy to forge trusting relationships.

On the other hand, as Grootaert (2001) notes, these relationships can be destroyed easily. Ongoing two-way communication and transparency are essential to the maintenance/strengthening of social capital.

- Threats to social capital stocks may come from internal or external sources, or a combination thereof. As evidenced in Hardwick, the media flurry that descended upon the town had some negative and potentially long-lasting impacts on relationships amongst community stakeholders. In Kingston, some interviewees related experiences where trust between stakeholders or stakeholder groups had eroded due to actions, assumptions or other issues of contention. Again, open and honest communication, and early identification of common ground between stakeholders can serve to mitigate internal threats.

- Human capital is fundamental to development efforts. The availability of knowledgeable, skilled, innovative, creative, healthy, and engaged individuals is critical to the execution of initiatives aimed at enhancing availability, awareness, and accessibility of local foods. Ideally, leadership/co-ordination positions would be monetarily compensated to ensure on-going commitment and stability of the projects, programs, and activities being carried out.

- Access to economic capital will likely present significant challenges to local-food stakeholders. Building social and human capital can serve to reduce the need for economic capital, however, funding sources will be required to implement and sustain many local-food activities. A dependency on external grants and other funding has the potential to curtail development efforts as funding tends to be cyclical and renewal is dependent on a myriad of external factors. Resources must also be allocated to grant writing and related tasks. Innovative financing models, including community-supported ventures, and self-sustaining projects/programs appear to offer the most promise for economic sustainability.

- Everything is a work-in-progress. In both Kingston and Hardwick, stakeholders observed that their work is never done; there will always be ways to enhance the local-food system. While

interviewees acknowledged that this reality could be overwhelming at times, there was generally widespread enthusiasm regarding the endless opportunities that lay ahead.

In addition to the lessons shared by both communities, findings revealed implications and lessons learned that were unique to each case study region. Differing implications/lessons may reflect unique geo-political or economic characteristics, the stage of the food system's evolution, stakeholder goals/values, etc. Lessons learned from the Kingston case study are as follows:

- Development that addresses both demand and supply issues is key to long-term success. Raising consumer awareness and building farming capacity must go hand in hand.
- If external funding must be procured, attempt to secure funding that is longer term and consider non-traditional sources that may provide more flexibility and encourage that development of economic self-sustainability (e.g. Heifer International's 'passing on the gift' criteria).
- Local-food stakeholders in larger metropolitan areas may face challenges with regards to connecting with other interest groups and developing strong social networks. Isolated groups of stakeholders may end up working on similar initiatives, effectively doing double-work and potentially decreasing the impact of their individual projects (e.g. by reaching a smaller audience, working with fewer resources, etc.).
- Celebrations are key to strengthening social capital, engaging the broader community and sustaining energy amongst stakeholders, particularly those volunteering their time to efforts. While traditional meetings are also important to forwarding initiatives, a table full of home-cooked foods and a 'time-out' to mingle or sing a song can go a long way to encouraging continued attendance and renewing enthusiasm.
- Valuing the contributions of volunteers and establishing ways to minimize volunteer burnout are critical. Creating a large base of volunteers with a diverse range of skills will also ensure that the onus to carry out projects does not rest on the shoulders of a few.
- In regions where the urban-rural divide is pronounced and interests/priorities across the citizenry may be different, it is important to gain the support of non-farmers.

Lessons unique to the Hardwick case study are as follows:

- Entrepreneurship can play a pivotal role in advancing a local-food system. In Hardwick, entrepreneurially-minded and socially-conscious individuals had established food-based businesses that typically served as another client for primary producers (i.e. farmers selling raw materials to these food processors), whilst simultaneously increasing the diversity of local-food product options available to consumers (e.g. tofu, artisan cheese).
- Entrepreneurship and co-operation are not mutually exclusive concepts. Traditionally, business is viewed as a ‘dog eat dog world’, where competition reigns. However, the food-based businesses in Hardwick defied this approach. Instead they built successful businesses through co-operation and collaboration and, in many cases, concurrently reduced waste from the system.
- Necessity can breed unity. Notably, while the community seemed to be comprised of a number of self-identifying groups with distinctly different values and worldviews, there also appeared to be a widespread sentiment that the only way to survive the shared hardships of life in rural Vermont was through unity and acceptance of fellow community members.
- A community need not have all the answers in order to assist other communities in their local-food efforts. Since its story was shared in a New York Times article, Hardwick has attracted the attention of media, students, community planners/organizers, foodies, and many others from across the US and internationally. While interviewees generally indicated that they are still learning and growing as a local-food community, there was a recognition that Hardwick can serve as a source of inspiration to other communities interested in developing a local food system.
- Identifying innovative ways to secure financing locally will enhance the economic sovereignty and sustainability of the local-food system.
- Geography may be important. Hardwick’s small size, isolation and position as the commercial center for the surrounding townships appeared to engender a strong sense of community and thus high levels of social capital had developed. As one interviewee also noted, the close physical proximity of all stakeholders made it easy to meet regularly, attend celebratory/community events, and remain accountable to one’s neighbours. Being surrounded by farmland may also encourage a strong awareness and appreciation of farm and food issues amongst non-farmers.

Ultimately, the case studies of Kingston and Hardwick serve to illuminate the ways in which local-food-system development can contribute to community betterment and serve to enhance all human-created stocks of capital, while minimizing depletion of natural capital. An analysis of capital stock deployment and creation indicates that, in addition to economic capital, social, human and natural capital are essential to the development of a just and sustainable food system. The conceptual framework developed for this research study, and presented at the end of Chapter 2, appears to offer a better means of measuring the total value of a local-food system than the conventional accounting approach, which only considers economic gains or losses.

The cross-case analysis reveals both similarities and distinct differences with respect to the development of local-food systems in these two communities. It is arguable that Kingston better reflects a typical case study of a community pursuing local-food system. Certainly, the media attention that Hardwick has attracted suggests that this small town is taking a unique approach in its development efforts. Regardless, both case studies offer valuable insights into the important inter-dependencies amongst capital stocks. Research findings can serve to inform stakeholders in Kingston and Hardwick of key strengths, weaknesses, threats and opportunities related to local-food initiatives. Furthermore, implications and lessons learned can provide these communities and others with valuable and applicable insights.

Chapter 7

Discussion, Implications and Future Directions

7.1 Introduction

This chapter presents a high-level discussion of the research findings, based on the literature review and case study analyses. Strengths and limitations of the research study are considered, along with future directions for research. Finally, implications for practice and conclusions are presented.

7.2 Discussion of Research Findings

Findings from this research study are discussed in relation to the original objectives presented in Chapter 1, which sought to:

- *Examine how the availability of different forms of capital impacts the development of a local-food system and identify which forms of capital are essential to development efforts.*
- *Explore the interplay of capital stocks and the interdependent relationships that emerge during the evolution of a local-food system.*
- *Consider if and how the development of a local-food system can contribute to the enhancement of a community's 'stocks' of capital, with particular focus on human-created forms of capital.*
- *Conduct a comparative analysis of two regions pursuing local-food system initiatives in order to identify common experiences, unique challenges and successes, and lessons learned.*

The conceptual framework developed for this research study and applied to the case studies is also revisited. Consideration is given to its appropriateness for this study and its potential application in other studies.

7.2.1 Community Capital in the Development of a Local-Food System

Findings from both case studies suggest that, in addition to economic capital, the availability of social capital, human capital and natural capital is essential for the development of a sustainable local-food system. While current accounting principles do not place value on these forms of capital, it is evident that the communities pursuing local-food system efforts rely upon existing stocks of these capitals to plan and implement various local-food activities and initiatives. Furthermore, stakeholder groups deploying these stocks of capital typically recognize that the value and essentiality of these capital stocks with respect to both the development of a local-food system and, more broadly, community betterment. Throughout the evolution of both local-food systems studied, stakeholder groups were strongly committed to acknowledging and nurturing these ‘unsung’ types of capital.

7.2.2 Interplay and Interdependencies

The case studies revealed that all forms of capital were essential for the development of local food; however, the level of social capital in each community played a pivotal role in efforts to enhance awareness and availability of local food. In many cases, social networks were integral to procuring the human and economic capital required for activities and events to occur. In both case studies strongly bonded social networks appeared to contribute significantly to development efforts, whilst simultaneously evoking some negative sentiments amongst individuals and stakeholder groups that felt excluded or viewed these networks as acting out of self-interest, rather than the broader interests of the community. Furthermore, in most cases, bridging social networks were established through the efforts of strongly bonded networks.

While social capital appeared to be integral to local-food development, the case studies also highlighted the interdependent nature of the types of capital examined in this research study. Social networks were formed through the efforts of individuals who shared a common vision/goal and were willing to commit their time, energy, and skills towards advancing that vision or goals. Thus, the formation of social networks depended upon the availability of human capital. In many instances, opportunities to strengthen the bonds of trust amongst existing social networks and allow for the formation of new social relationships was directly or indirectly reliant upon the availability of economic capital to carry out

activities and events where interactions could occur. There were, however, many instances where stakeholders were able to establish low-cost events and activities, often relying upon donations and volunteers, again highlighting the importance of social and human capital.

Ultimately, findings from both case studies strongly suggested that, in the context of local-food-system development, all human-created forms of capital are highly dependent upon each other and cannot exist in isolation. This suggests that the long-term sustainability of these capital stocks is integral to the sustainability of a local-food system; without access to any one of these capitals (i.e. social, human, or economic), efforts to develop and maintain the system through, for example, the establishment of distribution channels, the creation of new collaborations and increased consumer awareness, are likely to be stymied.

7.2.3 The Enhancement of Community Capital

In Kingston and Hardwick there was strong evidence that local-food system development efforts served to enhance the stocks of social capital available to the community. Local-food stakeholders sought to establish events and venues where a broad cross-section of the community could interact (e.g. Farmers' markets) and strengthen/form trusting relationships. Stakeholders also actively worked to strengthen and enhance social networks that, in turn, often pursued activities aimed at strengthening the social fabric of the community.

Education and awareness, as well as knowledge and skills development, were high priorities for all stakeholder groups studied in Kingston and Hardwick, suggesting that the stocks of human capital in these communities have been enhanced through local-food development efforts. Notably, the enhancement of human capital stocks relied upon existing stocks of human capital that could be deployed (e.g. farmers trained new farmers, knowledgeable community members led discussions). In most cases, however, educational initiatives were designed to maximize the transfer of knowledge/skills (e.g. one individual leading a workshop with twelve attendees). Of particular note were stakeholder efforts to strengthen natural human capital stocks.

Whether local-food-system development contributed to increased economic capital stocks in the

communities of Kingston and Hardwick remains inconclusive. Certainly, many of the initiatives pursued were geared at strengthening the economic sustainability of key stakeholder groups. On the other hand, many stakeholders highlighted significant challenges with respect to becoming economically self-sustaining and many local-food activities have and continue to remain dependent on external funding, suggesting that economic capital stocks have not yet been strengthened significantly through local-food system development.

7.2.4 Comparative Analysis of Kingston and Hardwick

The comparative analysis presented in Chapter 6 suggests that, despite their many unique characteristics, the communities of Kingston and Hardwick shared many commonalities with respect to their local-food-system development efforts. As discussed above, stakeholders in both communities appeared to focus many of their efforts on the development of social networks and enhancement of human capital stocks. Access to and creation of economic capital was an on-going challenge in both communities, although perhaps to a lesser degree in Hardwick. In both communities, it appeared that most development efforts in the past decade had been initiated by one or two stakeholder groups with a strongly-bonded network.

In some respects, analyses revealed differences across the two case study regions. The stage of each system's evolution, the size of each community, and the overall degree of economic stability in each community appeared to contribute to these differences. Levels of social capital appeared to be higher in Hardwick; this may be attributed to the small size of the community as well as the 'rootedness' of its community members. Hardwick also benefitted from a more diverse range of stakeholder groups actively engaged in local-food-system development (e.g. value-added producers, entrepreneurs, many supporting institutions), while Kingston's local-food system has primarily been populated by farmers, eaters, and concerned community members. Necessity, or lack thereof, may also have played a role in shaping the local-food systems of Hardwick and Kingston, with the former being much more dependent on the development of a viable agricultural economy to counter high unemployment and address the challenges of rural living.

Overall, it appears that Hardwick's local-food system is further evolved than Kingston's, however, both communities had successfully leveraged community capital stocks to advance local-food development while also contributing to the enhancement of community capital stocks, particularly social and human capital. While the analysis of natural capital stocks was limited, it was evident that stakeholders in both communities have been engaged in efforts to reduce depletion of natural capital stocks, with a strong emphasis on utilizing sustainable production methods and reducing waste throughout the system. Overall, community capital stocks in Kingston and Hardwick have been strengthened as a result of local-food development efforts.

7.2.5 Revisiting the Conceptual Framework

The conceptual framework developed and presented in Chapter 2 proved useful for this research study. Using the debit/credit concept, the design highlighted the importance of existing capital stocks to local-food activities, while also capturing the restoration/strengthening of capital stocks through these same activities. It allowed for exploration of the linkages between local-food-system initiatives and community betterment, capital creation, and sustainability. The framework was used primarily during the analysis stage of the research study, although it also informed the methodology, including identification of potential participant observation opportunities and key interviewees, and the decision to pursue a multiple case-study approach that would allow for a deeper understanding of community capital deployment and creation.

The pyramid illustration of capital stocks adapted from Callaghan and Colton (2008), revealed the interdependent nature of capitals. Further refinement of this element of the conceptual framework may offer a better illustration of the relationships between capital stocks and specific activities that debit and credit these stocks. The pyramid may also give the impression that relationships only exist between capital stocks that are directly adjacent to each other (e.g. between economic and social capital, but not between economic and human capital). Results from the case studies suggest, however, that the relationships between capital stocks are much more dynamic and that, perhaps, a hierarchical depiction of capital stocks is not the most appropriate means of illustrating the interdependencies that exist. Finally, the conceptual framework does not distinguish some important characteristics of the capital stocks, namely bonding versus bridging social capital, and externally-sourced versus internally-sourced capital stocks.

Overall, the conceptual framework was well-suited to the stated objectives of the research study and offers other researchers the opportunity to consider how a diverse range of community activities might rely upon and contribute to community capital. Certainly, scholars or practitioners interested in tracing the debits and credits of capital stocks in relation to local-food development could employ the conceptual framework; however, the framework could also be easily applied to understand how other community activities such as, for example, sports and recreation, contribute to community capital. Alternatively, minor refinements to the conceptual framework would allow for tracing the ways in which, for example, a centralized food system, might deplete community capital stocks.

7.3 Implications for Theory and Practice

Findings from the case studies of Kingston and Hardwick are unique to these communities; however, some general implications for theory and practice can be drawn from them. Key implications are discussed below.

7.3.1 Social Capital

The case study findings contribute to a growing body of literature regarding the value of social capital and its role in community betterment. Social capital proved integral to local-food development efforts in both communities, both as a necessary input of initiatives and an outcome of them. In both case studies, the regenerative nature of social capital was highlighted, supporting Pretty and Ward's (2001) claim that social capital tends to have a strong, positive feedback loop. Findings from both case studies also proved to be in line with Putnam's (2000) argument that bonding forms of social capital can engender positive and negative outcomes. The analyses also suggested that social capital does, indeed, have a private and public face. In many cases, individual members of the social networks pursuing development derived value from their membership and the activities that were carried out. However, these initiatives also benefitted the broader community, reinforcing the argument that all the value of social capital does not accrue to the actors engaged in social relations (Coleman, 1988; Magnani & Struffi, 2009; Putnam, 2000). Finally, findings from the case studies suggest that social capital can take a long time to build (Grootaert, 2001) and that it may be easier to build in a small, tightly knit community as proposed by Coleman (1988)

and Onyx and Bullen (2000).

With respect to practice, the findings of these case studies highlight the importance of accessing existing stocks of social capital and regularly engaging in efforts to nurture, strengthen, and establish new social networks and relationships. Communities engaged in local-food system development may wish to consider the ‘lessons learned’ from Chapter 6 when working to establish and maintain social networks. The importance of developing social networks with bonding characteristics, as well as bridging networks should also be considered.

7.3.2 Human Capital

Access to human capital, as well as the enhancement of human capital is necessary for successful local-food system development. Findings from both case studies reinforced Callaghan and Colton’s (2008) proposition that human capital is essential for the development of social capital. Communities interested in developing a local-food system should remain cognizant of the valuable contributions made by individuals and identify ways to recognize and reward them. Furthermore, efforts to establish a large pool of dedicated volunteers and paid co-ordinator positions will reduce the likelihood of burn-out.

Education, increased awareness, and skills training were high priorities for stakeholder groups in Kingston and Hardwick. Stakeholders recognized the importance of raising awareness amongst eaters regarding food and farming issues as key means of driving consumer demand for locally-produced foods. Training was also identified as an important means of ensuring the long-term viability of the farming community, with internships and workshops being particularly popular ways of enhancing knowledge and skills.

7.3.3 Economic Capital

Findings from the research study offer insight into many of the innovative means by which local-food system stakeholders have accessed economic capital for entrepreneurial endeavours, as well as activities and events, and can serve as a reference point for stakeholder groups in other communities. While external grant funding allowed stakeholder groups in both communities to carry out important development

activities, the importance of reducing reliance on external funds and becoming economically self-sustaining was highlighted in both case studies. Seeking funding from community sources, developing ‘pay it forward models’, and reducing the need for economic outlay were some of the key ways in which Kingston and Hardwick stakeholders had moved towards economic sustainability.

7.4 Limitations of the Research Methodology

Chapter 3 provides the rationale for the research methodology employed in this study, highlighting the strengths of the multiple-case study approach and providing justification for the selection of the case study regions and employment of semi-structured interviews and participant observation as the main data collection methods. This provided valuable insights regarding the development of the two local-food; however, there were also limitations with employing a multiple case-study approach. The main limitations concerned stakeholder interviews, participant observations, and the ‘locked in time’ nature of the case study.

The number, breadth, and scope of stakeholder groups represented in each case study reflected the availability of willing interviewees during the period of time the researcher chose to collect data. While the researcher attempted to contact individuals from each of the identified stakeholder groups, some, such as government and media representatives, were not responsive and thus are not represented in one or both of the case studies. Where possible, the researcher referred to secondary sources such as newspaper articles and government websites, to fill in the missing perspectives. Furthermore, the representation of stakeholder groups across the two case studies was not consistent. For example, while producers and retailers are represented in each case study, only the Kingston case study had an institutional representative. Although the researcher conducted more interviews in Hardwick than in Kingston, this does not necessarily reflect a limitation of the case study. In fact, it may serve to illustrate different levels of social capital in each community, and correspondingly different stages of local-food system evolution. Finally, the researcher’s interviews did not extend to those members of the community that might be complacent about, or oppose local-food initiatives, such as conventional food eaters or farmers entrenched in the global system. The omission of such stakeholder groups from the interviews limited the researcher’s opportunities to identify

mainstream and potentially negative perspectives. Such insights would be particularly valuable in an analysis of a community's bonding versus bridging forms of social capital. This decision was based on the limited resources available to the researcher, particularly with respect to time, as well as the researcher's desire to frame the case studies with respect to the relationships between local-food stakeholders, rather than with local-food opponents. Given the revision of research questions following the data collection, the researcher recognized the untapped value of interviewing such individuals and groups. On the other hand, her participant observations, as well as some interview data and grey literature, offer valuable insights regarding these adversarial or apathetic stakeholders.

To a certain degree, the lines of inquiry the researcher pursued also limited the interview data. As noted in Chapter 3, the researcher's original intent was to examine the role of financial capital in local-food system development, thus some of her questions specifically addressed this element; however, the majority of each interview focused on more general subjects, such as the evolution of the local-food system, best practices, and challenges encountered. If her original research objectives had concerned the 'other' capitals (i.e. social, human and natural), the researcher would have been better prepared to explore these specific concepts with interviewees. A second round of interviews could also have provided further insights regarding how local-food systems relied upon and contributed to the development of social networks and relationships, as well as human capital and natural capital; however, time and other resources did not allow for this. While this inductive approach resulted in some limitations with respect to the interviews, it is also worth noting that because the responses provided by interviewees regarding social, human and natural capital were not the result of probing by the researcher, they may represent a more authentic portrayal of the community's capital stocks.

Similar limitations persisted with the participant observations. The researcher's ability to engage in participant observations was limited by the opportunities that were available during her data collection. As a result, the number and type of participant observations carried out in each case region differ. While this may appear to limit the researcher's ability to conduct a comparative analysis, it is also arguable that the variability of opportunities (local-food meetings, events, etc.) is representative of each case study region's dedication to the development of a local-food system and associated investments of capital.

The case studies represent ever-evolving local-food systems, while the primary data collected for this research study represents information gathered during a narrow band of time during this evolution. Opinions and information provided by stakeholder interviewees are bound to reflect the ‘topic of the day’ and historical accounts may be skewed by poor or selective memory recall. Furthermore, given that the local-food systems in these communities have continued to evolve since data collection and are bound to do so into the foreseeable future, the case studies might be viewed as locked in time. These challenges are common to case studies, and the researcher has attempted to address these limitations by triangulating interview data with secondary literature and continuing to access secondary sources (e.g., media reports, newsletters) during the writing phase of this study.

Case study research is often viewed as limited because findings from one or a small number of cases cannot form the basis for generalizations about the phenomenon, in the same way that sample surveys or experimental research might be able to (Simons, 2009). This, however, is only a limitation in so far as the assumed objective is formation of a generalization. Indeed, as Simons (2009) notes, this is not the aim of case-study research, rather ‘the aim is particularization - to present a rich portrayal of a single setting to inform practice, establish the value of the case and/or add to the knowledge of a specific topic’ (p. 24). There is, nevertheless, value in developing a case-study methodology that is robust and which provides the reader with a tacit and situational understanding of the findings and how these link to other cases and settings (Simons, 2009). The development of a conceptual framework and the multiple case study approach both enhanced the rigor and applicability of this research study. This approach is especially valuable, as it allows for a comparative analysis and offers insights into two communities that are at different stages in the evolution of their local-food systems.

7.5 Future Research Directions

This research study was primarily concerned with understanding the relationships between community capital and local-food-system development. The breadth of this study offers many opportunities for more in-depth research concerning particular elements. A key area for future research concerns the role of social capital, particularly that of social networks, in local-food-system development. Further study of

social networks through the lens of, for example, actor-network theory, value-web analysis, and/or the sociology of translation (see Chapter 2 for a further discussion of the latter two concepts) could provide insights not captured in this study. A more in-depth analysis of social capital in Kingston, Hardwick, and/or other communities pursuing local food development would shed greater light on the general and specific factors contributing to the overall level of social capital in the community. It is suggested that the empirical approach taken by Onyx and Bullen (2000) could be employed to carry out a statistical analysis of social capital. Finally, a more in-depth study of how strongly-bonded social networks engaged in local-food efforts contribute to and/or create challenges would provide valuable insights for practitioners and further inform the growing body of knowledge regarding social capital.

Opportunities also abound for further research regarding economic sustainability in relation to local-food-system development. While this research study offered some preliminary findings regarding the efforts of stakeholder groups in two communities in this respect, a more in-depth examination of monetary flows occurring within the system may offer deeper insights into the challenges and opportunities related to sourcing and creating economic capital. Researchers could also consider whether a local-food system ‘captures’ and retains more dollars for re-circulation in the community than a centralized food system.

The focus of this study was on human-created forms of capital, however, natural capital stocks are, as Callaghan and Colton’s (2008) pyramid suggests, the foundation upon which all human-created capital relies. Research regarding the debits and credits to natural capital stocks in the establishment of a local-food system, particularly in comparison to the industrial food system’s debits and credits, would shed light on whether a local-food system is, indeed, a more environmentally sustainable method of producing and distributing food. The role of natural human capital could also be considered.

Finally, the conceptual framework developed for this research study offers opportunities for further research into how capital stocks are deployed and created through local-food-system activities. Notably, the framework’s design also allows for application to other community development efforts. While this research study considered the role of local-food system development in community betterment, there are a myriad of other activities that could contribute to the enhancement of community capital stocks and effectively reinforce the importance of valuing all forms of capital.

7.6 Concluding Remarks

The intent of this research study was to consider how different types of community capital are deployed to advance local-food-system development and whether development efforts serve to restore/strengthen these capital stocks. The findings of this research highlight the interdependent nature of capital stocks and the importance of placing value on all forms of capital, rather than attaching value solely to economic forms of capital when considering the contributions of an activity to community betterment and sustainability. It is the hope of the researcher that the findings of this study will contribute to the growing body of literature that argues in favor of a revaluation of capital stocks and recognizes the importance of accounting for and strengthening social, human and natural capital.

Food holds the potential to be a powerful and universal agent of change. It is, arguably, the main vehicle through which economic and social progress can be realized in a community. Indeed, how a community chooses to feed itself may, ultimately, determine whether it thrives, merely survives or, potentially, dies. It is the hope of the researcher that this thesis will encourage communities, big and small, to take control of their destiny by re-localizing their food systems and pursuing activities that seek to enhance all community capital stocks.

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Appendix A

Contact Summary Form

Contact type: Direct Observation / Face to Face Interview / Phone Interview/ Other

Description:

Stakeholder:

Location:

Contact Date:

Today's Date:

Written By:

1. What were the main issues or themes that struck you in this contact?

2. Summarize the key information you got or failed to get from this contact.

3. Anything that struck you as salient, interesting, illuminating or important?

4. What new (or remaining) questions do you have considering your next contact with this site?

Appendix B

Ethics Approval and Interview Consent

June 4, 2009

Shannon A. Courtney
Master's Student
School of Environmental Studies
Queen's University



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GREB Ref # GENSC-030-09

Title: "Lessons from the Ground: Case Study Analysis of the Development and Sustainability of Local Food"

Dear Ms. Courtney:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "**Lessons from the Ground: Case Study Analysis of the Development and Sustainability of Local Food**" for ethical compliance with the Tri-Council Guidelines (TCPS) and Queen's ethics policies. In accordance with the Tri-Council Guidelines (article D.1.6) and Senate Terms of Reference (article G), your project has been cleared for one year. At the end of each year, the GREB will ask if your project has been completed and if not, what changes have occurred or will occur in the next year.

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this one year period (details at www.queensu.ca/vpr/greb/addforms.htm#Adverse). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that any adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example you must report changes in study procedures or implementations of new aspects into the study procedures on the Ethics Change Form that can be found at www.queensu.ca/vpr/greb/addforms.htm#Change. These changes must be sent to Linda Frid at the Office of Research Services or FRIDL@queensu.ca prior to implementation. Ms. Frid will forward your request for protocol changes to the appropriate GREB reviewers and / or the GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Yours sincerely,

A handwritten signature in black ink that reads "Joan Stevenson".

Joan Stevenson, PhD
Professor and Chair
General Research Ethics Board

JS/lf

Copy: Faculty Supervisor: Brian Cumming

October __, 2009

Dear Participant:

Thank you for your interest in my research project, which is concerned with gaining insight into how local food systems develop, with an emphasis on understanding how economic viability for the system as a whole, as well as its stakeholders, is being addressed.

I am conducting my research in two distinct, but related parts. First, I will review existing academic literature and other secondary sources of information to gain a greater understanding of local food systems in general, which will provide me with direction for the focused part of my research. In the second part, I will conduct research on two case study regions with active local food systems that are continuing to evolve: Kingston, Ontario and Hardwick, Vermont. This study will result in a research report that I intend to submit for publication and an executive summary of findings that I will make available to all participants. A copy of the executive summary may be requested by sending an email to me at the address below.

To conduct this research, I hope to meet with you to discuss the development of the local food system in Kingston/Hardwick, with a view to gaining an understanding of how the network has been constructed, who has been involved, what successes/challenges have been encountered, and what future growth/change is anticipated. I will be interviewing persons from all the stakeholder groups that I have identified as being directly or indirectly involved in each local food network. As a representative of one or more stakeholder groups, I also look forward to discussing your involvement and/or that of the stakeholder group you represent with respect to local food initiatives. I will ask you such questions as "What have been the primary motivations for you (or the organization/institution you represent) to become part of the local food network?" and "In your opinion, what projects/programs/events/activities have been most successful in enhancing the economic viability of the local food system?"

The interview will be semi-structured to allow for a rich and flexible discussion to emerge. This interview will take about 1 hour, be audio-recorded (with your consent), and I will take written notes as necessary. Your identity will be protected through the use of a pseudonym, which I will assign to you and maintain in a secure location. There are no known physical, psychological, economic, or social risks associated with this study. You may, however, be asked to discuss your personal experiences and opinions on the subject of local food systems. You should know that your participation is completely voluntary. You will not be required to respond to any question you find objectionable or to any question that makes you feel uncomfortable. No personal information will be associated with your responses. Your identity will be known only to the members of the research team (myself and

my supervisors, Jane Webster and Brian Cumming) during the interview, but all data will be stored using only your pseudonym. Further, at any point in time, including after the completion of the interview, you may choose to withdraw any or all information that you have provided and that information will be removed from the study and destroyed.

In exceptional cases, if I believe there is value in identifying a participant (e.g. if you are one of the key founders of the local food system) I may request your consent to be identified in my research. In these cases I will explain how the process would differ and the potential ramifications of allowing your identity to be revealed. You are under no obligation to consent to the use of your identity and if you prefer to remain anonymous, the interview will be carried out in line with the procedures described herein to protect your identity and ensure confidentiality.

As noted, participation in this study is voluntary and there is no remuneration provided for your participation.

As described above, I will write a report on the findings of my study with respect to how local food networks in Kingston and Hardwick have and continue to develop, and discuss issues concerning the economic sustainability of local food systems. As this is a research project, I hope to publish the findings of the research in academic and practitioner journals. If quotes are included in these publications, pseudonyms for individuals will be used. Raw data will be kept in a secure Queen's office and all data will be destroyed within seven years of publication of any reports or papers.

I would be very pleased to answer any questions you have about this project before you agree to participate. If you have any questions about this project at any other time, please feel free to contact me (see my contact information below). If you have any additional questions or concerns, please contact any of the following individuals: Dr. Jane Webster, Queen's School of Business, jwebster@business.queensu.ca, Dr. Brian Cumming, Director of Queen's School of Environmental Studies, cummingb@post.queensu.ca, or Joan Stevenson, Queen's Chair of the General Research Ethics Board, 613-533-6081, chair.GREB@queensu.ca.

Thank you for considering participating in this research project.

Yours truly,

Shannon Courtney
MES Candidate 2010
Queen's School of Environmental Studies
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Email: 7sac4@queensu.ca

Consent Form for Development and Sustainability of Local Food Systems Study

Researcher: Shannon Courtney (7sac4@queensu.ca)

Procedure: Today's interview will concern the establishment and development of Kingston/Hardwick's local food system, including a discussion of the actors and factors involved, directly or indirectly, in the evolution of the local food network.

There are no known risks to participation in this study. I understand that I will not be required to respond to any question I find objectionable or to any question that makes me feel uncomfortable. I understand that my participation in this study is completely voluntary and that I can withdraw from participation at any time during the interview. This interview will take about one hour, be audio-recorded, and notes may be taken for further analysis.

A copy of the executive summary of the findings may be requested by sending an email to the researcher at 7sac4@queensu.ca.

Consent: I have read the Letter of Information and have had all questions answered to my satisfaction.

I am aware that I can contact the researcher, Shannon Courtney (7sac4@queensu.ca) or the department head Dr. Brian Cumming (cummingb@post.queensu.ca) or the Chair of the General Research Ethics Board at Queen's University, Joan Stevenson, 613-533-6081, chair.GREB@queensu.ca, regarding any complaints or queries with respect to the research.

I am assured that the researcher shall protect the confidentiality of my identity by not using my name or any other identifying information in the research.

I am assured that if I give explicit consent to the researcher to use my identity in this research I will have an opportunity to review the relevant portions of the final research report and approve/not approve all passages and direct quotes that identify me.

Please initial to indicate consent.

_____ I hereby give explicit consent to the researcher to use my identity in this research.

OR

_____ I hereby prohibit the researcher from using my identity in this research.

_____ I hereby consent to the use of an audio-recorder to record my interview.

By signing below, I confirm that I have read and understood the Letter of Information "Development and Sustainability of Local Food Systems", have had any questions answered to my satisfaction and have kept a copy for my records

Name: _____ Date: _____

Signature: _____

Appendix C

Kingston Interviewees

Pseudonym	Type of Data	Date	Stakeholder Group(s)
K1	Transcription, Notes	September 10, 2009	Public Official
K2*	Transcription, Notes	September 15, 2009	Farmer
K3*	Transcription, Notes	September 15, 2009	Farmer, Activist
K4	Transcription, Notes	September 15, 2009	Community Organizer, Activist
K5	Transcription, Notes	September 16, 2009	Representative of Government Agency
K6	Transcription, Notes	September 18, 2009	Farmer/Producer, Retailer
K7	Transcription, Notes	September 22, 2009	Institutional Buyer, Farmer
K8	Transcription, Notes	September 22, 2009	Retailer
K9	Transcription, Notes	September 23, 2009	Farmer
K10*	Transcription, Notes	September 28, 2009	Representative of Economic Development Organization
K11*	Transcription, Notes	September 28, 2009	Representative of Economic Development Organization

* Indicates instances where researcher conducted interview with two stakeholders

Appendix D

Hardwick Interviewees

Interviewee #	Type of Data	Date	Stakeholder Group(s)
H13*	Transcription, Notes	October 28, 2009	Representative of Non-Profit
H14*	Transcription, Notes	October 28, 2009	Representative of Non-Profit
H15	Transcription, Notes	October 29, 2009	Entrepreneur
H16	Transcription, Notes	October 29, 2009	Staff Member of Academic Institution
H17	Transcription, Notes	November 3, 2009	Entrepreneur, Community Organizer
H18	Transcription, Notes	November 5, 2009	Farmer, Community Organizer, Retailer
H19	Transcription, Notes	November 6, 2009	Representative of Non-Profit Organization, Farmer
H20	Transcription, Notes	November 6, and 16, 2009	Representative of Government Agency
H21	Transcription, Notes	November 10, 2009	Representative of Non-Profit
H22	Transcription, Notes	November 11, 2009	Researcher and Staff Member of Academic Institution
H23	Transcription, Notes	November 11, 2009	Instructor with Academic Institution
H24	Notes	November 12, 2009	Staff Member of Local Food Enterprise
H25	Transcription, Notes	November 16, 2009	Farmer, Community Organizer
H26	Transcription, Notes	November 17, 2009	Representative of Non-Profit
H27	Transcription, Notes	November 17, 2009	Staff Member of Local Food Enterprise
H28	Transcription, Notes	November 17, 2009	Farmer
H29*	Transcription, Notes	November 18, 2009	Farmer
H30*	Transcription, Notes	November 18, 2009	Farmer
H31	Transcription, Notes	November 20, 2009	Farmer
H32	Transcription, Notes	November 25, 2009	Representative of Public Funding Agency

* Indicates instances where researcher conducted interview with two stakeholders

Appendix E

Participant Observations in Kingston and Hardwick

Activity	Type of Data	Date	Location	Stakeholder Group(s) Present
Fare in the Square	Observation	September 5, 2009	Kingston, ON	Eaters, Farmers, Restaurateurs/Chefs, et al
CSA Harvesting	Observation (full participation)	Multiple dates, August & Sept 2009	Kingston, ON	Farmers, CSA workshare members
Matchmaking Event	Observation, Notes	October 28, 2009	Windsor, VT	Producers/Suppliers, Buyers (incl. institutions, restaurants, etc.), Distributors, Supporting Stakeholders (e.g. gov't agencies)
Gleaning with VT Foodbank	Observation (full participation)	November 4, 2009	Essex, VT	Foodbank Organizer and Volunteers
CAE Meeting with VHCB	Observation, Notes	November 5, 2009	Hardwick, VT	CAE Board Members, VHCB Members
VCDA Conference	Observation, Notes	November 10, 2009	White River Junction, VT	Diversity of stakeholders from government, public and private sectors
Local Food Summit	Observation, Notes	November 10, 2009	White River Junction, VT	Eaters, Producers, Government Agencies, Retailers, Restaurateurs, Supporting Stakeholders, et al
Hardwick and Area Transition Town Meeting	Observation (full participation), Notes	November 15, 2009	Hardwick, VT	Community Members
Pies for People	Observation (full participation)	November 17, 2009	Greensboro, VT	College/University Volunteers (students & staff)
Farmer-Chef Meet & Greet	Observation, Notes	December 2, 2009	Kingston, ON	Farmers/Producers, Restaurateurs/Chefs, Supporting Stakeholders

Kingston Case Study Appendices

Appendix K-A

Food Down the Road Activities and Achievements

Food Down the Road Quick Stats:

- Organized four Spring Series events and a 3-day Local Food Summit (Total attendance at Spring Speakers Series and Local Food Summit topped 1200).
- Mobilized 80-plus volunteers, 12 consultants, 10 FDTR Community Council members with support from 36 participating and partner organizations.
- Coordinated by consultants.
- Launched a FDTR website and developed a database.
- Wrote and published the 70-page *From the Ground Up: A Primer for Community Action on Kingston and Countryside's Food System*.
- Published the second edition of *The Local Harvest*.
- Updated and distributed the *Eating Close to Home* directory.
- Delivered 78 NFU/FDTR presentations, displays, courses and workshops.
- 79 media stories about FDTR.
- Created an inventory of the local food system.
- Wrote reports on the Eat From Kingston's Countryside brand, FDTR itself, and on food charters and food councils across Canada.
- Created a Local Food Summit Declaration that will lead us towards a food charter for our region.
- Brought, for the first time, a presence for local food to Taste of Kingston 2007. This year had several restaurants featuring "local food" through collaboration with FDTR.
- Chilifest 2007 had its first "local chilli" made by Liaison College featuring local ingredients.
- FDTR was the subject of a feature item on CBC's Fresh Air, with food columnist Anita Stewart.

Appendix K-B

Accounts Regarding Sites of Social Interaction and the Development of Social Capital

Source/Stakeholder	Quote
K3	I think that often the CSA model is helpful because it involves a lot of participation by the members so it really increases awareness. You know we have a lot of events out here through the year to try to get members to actually come out, give people a better idea of what actually goes on, how much work is involved. And I also think it increases demand through word of mouth.
K9	(Food Down the Road) was the project that the National Farmer's Union ran here to do that outreach with building education among members of the community, partners in the community and building networks with the other stakeholders in the system so the conference that we had, called the Local Food Summit, was, I think, extremely successful.
K7	Now that we're weekly I do actually see people from the community ... attending the farmer's market (at Queen's), so from our perspective it's a wonderful outreach into the community so that people can mingle with students and see how lovely they really are
K4	Feast of Fields ... was great and I think that there was a whole bunch of layers of things we were doing there and a big part of it was really connecting farmers with eaters and having that direct connection and I think that's been very powerful for our movement here in Kingston
K4	that (engagement of community) led to things like the development of another farmers' market
K1	I think (the Oak Street Garden is) drawing people in from the community in the way the FRILL Garden does too I think

Appendix K-C

Social Capital Enhancement Through Local Food Events and Venues

SC Deployment	Event/Venue	SC Enhancement
<p>SC inhered in NFU network enables organization and hosting of event</p>	<p>Feast of Fields</p>	<p>Event provides opportunities for NFU network members to work together in lead-up to event, encouraging further development of SC.</p> <p>Event designed to attract broad cross-section of community members and encourages formation of new relationships and networks.</p> <p>Potential for bonding and bridging forms of SC to be strengthened.</p>
<p>SC inhered in NFU network and other local food networks enables access to human and economic capital necessary to carry out projects and events</p>	<p>Food Down the Road</p>	<p>SC within NFU network enhanced as members meet regularly to organize events and activities for FDTR</p> <p>Several FDTR events/activities encouraged social interactions between and amongst farmers, eaters, and other stakeholder groups.</p> <p>Potential for bonding and bridging forms of SC to be strengthened.</p>
<p>SC inhered in NFU network deployed (e.g. via volunteer efforts) to attain economic capital for project</p>	<p>New Farm Project</p>	<p>SC within NFU network enhanced as members meet regularly to organize and host events/activities</p> <p>Internships and workshops encourage growth and bonding SC within farmer stakeholder group, as new and existing farmers forge relationships and build trust</p> <p>Events open to the public (e.g. Food Film Fridays, Farm Tours, monthly workshops), encourage formation of new relationships between farmers and other stakeholder groups, particularly eaters/community members</p>
<p>In some cases, SC deployed to attract human capital (i.e. volunteers) and economic capital necessary to establish and run market (e.g. farmers' market @ Queen's)</p>	<p>Farmers' Markets</p>	<p>Markets inherently enable social interactions to occur between farmers and eaters, farmers and farmers, eaters and eaters, etc. Community capital stocks of bonding and bridging SC enhanced.</p>
<p>Most of Kingston's community gardens have been established by community-based groups with shared interests in gardening, community development, food security, etc. SC imbued in network deployed to access human capital (volunteers)</p>	<p>Community Gardens</p>	<p>Open to the public, community gardens enable the formation of new social relationships between gardening members. Many of Kingston's gardening groups have also formed relationships with other community organizations and educational institutions to deliver programming, thus enhancing the community's stocks of social and human capital.</p>

necessary to establish and operate gardens		
Initiative led by Downtown Kingston BIA!, SC not necessarily essential to access economic and human capital for project	Local Food, Local Chefs	Events such as Farmer-Chef Meet and Greets enable the development of new social and business relationships between these stakeholder groups. They also serve to reinforce existing bonds, as attendees reconnect with friends and colleagues.

Appendix K-D

Accounts of Bridging Social Capital

Source/Stakeholder	Quote
K7	I really think that the opportunity that was created with Food Down the Road is a very good model to follow and it basically gathered a small group of people for disparate parts of the stakeholder groupings and had them work through what challenges were there in their particular community, what ideas might work for their particular community and then develop um something to put forward to the entire community in a cohesive way that allowed expressions of interest to flourish. So that's, I like the model very much.
NFU Local 316	'The one and only way that large numbers of widely diverse people and groups with very different experiences, needs and situations can come together and form an effective network, a community capable of unified action, is if they share at least one defining principle, a value against which all ideas and positions can be measured.' (p. 10, National Farmers Union Local 316, 2008)
NFU Local 316	'all need to see a place for themselves in the discussion. Some efforts need to be broadly inclusive, while others need to be specifically targeted.' (p. 22, National Farmers Union Local 316, 2008)
K4	The other purpose of a local-food system is kind of collaboration and coordination, it's not just farmers doing their own thing and entrepreneurs doing their own thing and eaters doing their own thing. It's like how do we link all these groups together in a way that something bigger happens? You know, and when that happens, and I think there's been times in our community where that's happened really, really amazingly, I mean I think community gardens is an example... urban agriculture's really taken off in our community and that's been really positive.
K2	something that hasn't come out that I think is REALLY important to the success of what we've been doing in the Kingston area is the alliance between uh urban and rural people – the support of the urban and the involvement of urban people, non-farm people uh has been really critical in this area and there's a good critical mass of people who are interested in food issues and want to devote their time and their money to it. Like when we first started Feast of Fields and the Food Summit and all that so much energy and talent and creativity came from, say Queen's students and St Lawrence students and uh just other people from Kingston who weren't farmers but who were really committed to good food.
K9	Discussing FDTR: 'a second goal along with that was building kind of network capacity among all the stakeholders so we've explicitly said we want to bring all those stakeholders that we named before into proximity with each other, where they can dialogue and exchange ideas.'
K11	For me I think it just having the ability to have everybody working together. So with our application to the government, as I indicated, there's five or six partners that we probably hadn't worked (with)... I mean we certainly worked with the city, and with KEDCO on different things, but not on something with all of these people together on. So I think that that's been huge thing.
National Farmers Union Local 316	We aren't alone. Other regions have embarked on local-food initiatives and we have consulted with them and learned from their experiences. We are developing relationships with some as part of a network or in collaboration on specific projects. (p.5, National Farmers Union Local 316, 2008)

Appendix K-E

Accounts of Bonding Social Capital

Source/Stakeholder	Quote
K5	<p>you've got this body of the farm movement through the NFU funding and these NFU farmers, they're pretty tight and they have their own philosophy and ... they have their own clique and their own way</p> <p>I distinguish that the people that are often engaged in local food are often more farm focused than they are food system or food insecurity focused</p>
K10	<p>They have been very active, when you look at different areas. They actually do a really, really good job, but it hasn't maybe been inclusive enough</p>
K 7	<p>Referring to NFU Local 316: 'the energy that's created in those groups of people is VERY unique, extremely different than anything you're going to find elsewhere and just magical'</p>
K 9	<p>They have a good analysis of what needs to be done in agriculture to help farmers thrive in agriculture. It draws a lot of really good people into it in general and in this Local here – Lennox, Addington or sorry Frontenac, Lennox & Addington Local, we call it Local 316, we have got a really good group of people here. So because we have a core, a number of people who are really committed and willing to spend energy on this task, you know, this goal um and they're capable, it's just been a good group of champions.</p>

Appendix K-F

Challenges in the Development and Maintenance of Social Capital

Source/Stakeholder	Quote
National Farmers Union Local 316	Getting involved in this sort of community network building means going to A LOT of meetings (National Farmers Union Local 316, 2008, p.13)
National Farmers Union Local 316	<p>engaging project leaders can mean raising and dealing with subtle but important issues of ownership, perspective, and control. Having clearly defined shared core values and principles makes staying united much easier (National Farmers Union Local 316, 2008, p.33)</p> <p>you're going to need a person or people who will enhance your team, and that may well mean constructively challenging you to reconsider some of you own opinions and perspectives (National Farmers Union Local 316, 2008, p.33)</p>
K5	you know they're advocating so they're somewhat militant, but you have to really watch that in this town particularly because that offends some of the players and they don't ... so advocates have to tone it down when they come to play with some of the political leaders who will help them. So there's been an alienation like so he's ... it's not damage that can't be repaired, but...So we just have to be very careful and be very considerate and very polite amongst each other and considerate of all of our limitations
K4	one of the things that was a disappointment with Food Down the Road in terms of its continuation was we had formed a community council and the community council was from various groups, from Public Health, from St Lawrence College, from Queen's, from...Brown's Fine Foods, like you know we had a variety of people and that that didn't continue I think was huge.... it was volunteer but somebody had to coordinate it (and our funding for that co-ordination position didn't get renewed) you know, so that didn't pan out and that was a real, that was so disappointing because the people that were involved were so keen but all, but nobody was keen enough to spearhead it themselves
K12	Regarding the biggest challenges in development of local-food system: 'lack of leadership, lack of ... community leadership and lack of political leadership'

Appendix K-G

Human Capital Deployment and Enhancement

HC Deployment	Activity/Initiative	HC Enhancement
Organizers used creativity and specialized skills/knowledge to plan and execute day-long event. Farmers, chefs and other exhibitors shared knowledge with attendees	Feast of Fields	Event included educational displays, cooking demonstrations, and opportunities for different stakeholders (e.g. farmers and eaters) to interact and gain valuable knowledge from each other
Organizers (volunteers and co-ordinators) deployed creativity and skills/knowledge to plan and execute event. Academics (e.g. keynote speaker Dr. Homer-Dixon), farmers, community organizers, and many other stakeholders shared their knowledge/skills by leading discussions, hosting workshops, participating in plenary panels, etc.	FDTR Local Food Summit	Attendees gained knowledge regarding various issues related to food, farming and related topics. During the summit, organizers administered questionnaires. The data gathered from these was used to inform the development of a Local Food Summit Declaration.
The document “From the Ground Up – A Primer for Community Action” was produced with the assistance of a research network that included volunteers from Kingstons’ universities and community college. Other FDTR publications and the development of the FDTR website depended upon the time, energy, knowledge and skills of many individuals, particularly volunteers from within the NFU network.	FDTR Publications & Website	FDTR publications and website provide access to practical information (e.g. where to buy local food) and valuable insights (e.g. lessons learned from organizers of FDTR project) for a diverse range of stakeholders including eaters, farmers, researchers, and community organizers (within Kingston as well as other communities). The ‘shelf-life’ and transferrable nature of these resources (i.e. they can be accessed by anyone with an Internet connection) allows for HC enhancement within the local community and beyond.
Stakeholders shared specialized skills/knowledge regarding food and farming issues; they deployed their natural human capital in the process	NFU/FDTR presentations, workshops, discussions	Attendees from various stakeholder groups gained knowledge about food and farming and/or developed practical skills.
Stakeholders shared specialized skills/knowledge regarding food and farming issues; they deployed their natural human capital in the process	NFP workshops, public events	Attendees from various stakeholder groups gained knowledge about food and farming and/or developed practical skills.
Farmers/producers share their knowledge regarding sustainable farming practices, direct marketing, and other farm/food related topics/skills with interns.	CRAFT Internships	New/transitioning farmers (i.e. interns) have opportunity to enhance their knowledge/skills through hands-on experience and interaction with established local farmers.
Volunteers dedicate their time, energy and skills to establishing community gardens and, in many cases, partner with local	Community Gardening	Programs tailored to young parents, children, seniors, students and other community members provide a diverse

<p>schools, community organizations, etc. to provide educational programs and opportunities</p>		<p>range of learning opportunities – from how to start seed to preserving harvested food to cooking harvested food.</p> <p>Less formally, gardening members often learn growing techniques (e.g. using compost) from each other.</p>
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Appendix K-H

Accounts Regarding the Deployment and Creation of Economic Capital

Source	Quote
K3	it's tough to get a loan I think for a small business. I don't know how much you'd have with a CSA coming in because they can give money to someone whose going to develop some kind of collateral that they can confiscate if the loan falls through. It's not like they can repossess your labour and your carrots.
K4	So when we focus on local food, you know the money that you're spending if it's been produced locally, and process locally and distributed locally you know, you see the benefit every stage. You know, it's benefitting the farmer, it's benefitting the distributor like Wendy's Mobile Market whose buying wholesale, selling retail, you know it benefits those people that are making cheese from the milk, or making fresh bread from the grain or, you know, just..all steps along the way you see how it..and whoever's selling it at the very end or if a restaurant is taking that, those fresh meat and vegetables and turning them into something it's benefitting them so it's the kind of when you look at the whole system..and then afterwards, where does the waste go? And you know, it's employing people to get rid of the waste and..anyways, so I think from all those perspectives it's so much, it makes so much more sense in terms of supporting a local economy than buying food from Argentina
K7	I mean a tractor costs forty, forty-five thousand dollars for a small one and you know if you want to have any sort of um of equipment the capital cost is very high so I would say that's really, that's the big barrier.
K11	we kind of see it as Kingston specific, but incorporating producers and whatnot from outlying areas to become part of it. So it's basically to increase sales at the farmers' market, to make the market more effective, to make it more of an emphasis on the local component, realizing that that will change throughout the season. And then to get more of our restaurants buying from the producers and promoting, so doing a branding campaign and whatnot promoting the use of local food at our restaurants
NFU Local 316	From the NF Local 316's application for government funding to support FDTR: 'The unique feature and key to long-term success, of this projects is the promotion of market development in the context of systemic development. This requires the engagement of a diversity of stakeholders in the collaborative process of building market intelligence, vision, and concrete development strategies' (p.16, National Farmer's Union Local 316, 2008)

Hardwick Case Study Appendices

Appendix H-A

Milestones and Projects, Center for an Agricultural Economy (2007 - 2010)

Project/Milestone	Overview
Community Garden Revitalization	New England Grassroots Environmental Fund awards the CAE financial support for the Hardwick Community Garden revitalization
Atkins Field Management Strategy and Acquisition	Vermont Community Foundation/Sustainable Futures Grant Program awards grant to develop management strategy for 15-acre Atkins Field in Hardwick (September, 2006). VHCB and Vermont Land Trust awards the Center grants for acquisition of Atkins Field. (March, 2007)
Strategic Plan and Office Opening	Board Strategic Planning process initiated along with office opening in August 2008
Academic Collaborations	A joint Memorandum of Understanding with University of Vermont is established for research and education; several projects and activities are carried out in 2008 and subsequent years. Partnerships are also developed with Sterling College, Hardwick Elementary and New England Culinary Institute
Food Access Fund	Made possible by an anonymous donor, this project represents a partnership with the local-food pantry. Funds are used to cover costs of buying local products to stock the food shelf. Local farmers get fair value for their product and the food pantry offers an increased variety of fresh local-food products
Pies for People and Soup for Supper	Program launched in 2008 represents a collaborative effort between partner organizations and businesses to transform food donated by local farmers/producers into nutritional pies and soup to be distributed by area farmers and producers
REACH After-School Program	The REACH (Rural Education, Academics, Community, Healthy lifestyle) program focuses on connecting children to the process of growing food and caring for the animals that provide them with food.
Atkins Field Visioning Process	In collaboration with UVM, a community visioning process was carried out to identify ideas for future use of the 15 acre piece of land that will best serve the community.
Vermont Food Venture Center	Working with the Vermont Food Venture Center to assist with establishment of the new facility, which will be located in Hardwick. The Center will offer consulting services and technical assistance to farmers and agriculture-related businesses, as well as providing on-site infrastructure for food processing. The site will also feature cheese making and meat processing.
Eco-industrial Park	Feasibility study completed for agricultural Eco-Industrial Park concept

Sources: Center for an Agricultural Economy, 2010; Center for an Agricultural Economy, 2009.

Appendix H-B

Projects Resulting from Partnership Between UVM and CAE (2008 – 2010)

Activity	Overview
Collaborative Management Institute (CMI)	Students from various disciplines learned about the collaborative model in Hardwick and explored solutions to measuring success and defining the scope of collaboration
Atkins Field Sustainable Agriculture Center	UVM lecturer held community visioning meeting in Hardwick to discuss future plans for Atkins Field; students from a summer class participated in the charette
Geography Training Institute	Professor from Department of Geography led a week-long residential training institute for teachers. Class conducted a field study of historical geography in Hardwick and agricultural renaissance
Capstone Design Course Partnership with the Jasper Hill Cheese Cave	A team of four senior engineering students worked with Jasper Hill to identify the facilities ventilation problems and conceptualize a design for improvements.
GIS Mapping of Agricultural Resources	Professor at UVM facilitated the measurement and mapping of agricultural resources
Beginning Farmer Focus Group	UVM Extension facilitated a focus group which was attended by more than 30 new/potential farmers
Systems Thinking for Sustainability Class	Instructor led a class to analyze and propose recommendations to overcome local agricultural land retention barriers and suggest policies and regulations that are currently working to promote sustainable agriculture
Annual Hardwick Area Report Card	Student began working on ten metrics indicative of a sustainable agricultural system and a plan for measuring where the community stands on each measure
Vermont Taste of Place Project	Through collaboration with a government agency and the CAE, UVM's Center of Rural Studies held a series of three technical sessions for food producers. The Center also carried out a preliminary market study regarding consumer's attitudes towards place-based products.
Travel Data	Members of UVM's Travel Research Center met with CAE to discuss ways in they might be able. One project already complete by the Center involved using existing data to model general travel in the region and provide some travel analysis results to the CAE.
Strategic Communications for CAE	<p>The instructor of Strategic Writing for Public Communication (CDAE 120) led thirty students through a semester-long project in which they analyzed the Center's strategic message and then produced a number of outreach and promotional materials for The Center including feature articles and brochures. Several students also worked together to draft the Center's annual report.</p> <p>Students in a web development course assisted with improving the usability and content of the site and implementing Google Analytics to optimize the site.</p>

Source: University of Vermont, 2010.

Appendix H-C

Accounts Regarding Bonding Forms of Social Capital

Source	Quote
H18	‘there’s still some aspect of the ..what I call the parallel universe of Hardwick...but definitely you know...we were totally in the minority in terms of the ...back -to-the-land(ers).. coming here and now I would say we’re part of the tipping point of being, you know, and probably close to being the majority.’
H29	‘that was a big milestone, you know, that group of people, essentially they were back -to-the-landers, who grew up here in the late 60’s, early 70s, and there’s quite a few and a lot of them have stuck around, raised their families here, you know, become a big part of the community.’ ‘I feel like there has been just a core group of people that have wanted a local-food system so they have sort of quietly just (been doing it)’
H28	‘so we had the Grower’s Co-op here..I knew a lot of people here from NOFA... it was a small world of people in the organic farming community 25 years ago.’
H22	‘there are really distinct groups in town, there are the co-op people, there are the old guard, there are the new, young (folks) with the (CAE), and there’s definitely overlap between these groups, but the core of those groups are still very strong.
Gutnick, 2009	Excerpt from CBC report: ‘With her sensible boots and grey hair in a ponytail, Martha Zweig has come for supper. Martha is a long-time Hardwick resident who, she allows, is a little put off by the ambiance. "There is real Vermont, which is very poor and very rough, then there is the nicey-nice people who come from away and spruce things up. It is a class divide and it's getting further apart. When I came in 1974, the co-op was all about having low prices so that poor people can shop there. Now the prices are very high, everything is organic. A working class person would starve at the co-op and it is a shame. I wish that real people, working-class people had power or would take power, but I don't know how to do it as a practical matter. So I stay home and write poetry.”

Appendix H-D

Accounts of Bridging Forms of Social Capital

Source/Stakeholder	Quote
H26	and realizing, look not everybody has this sort of, this world view and this social critique of, like, free trade and GMOs and you know, these are not the things that worry them during the day, but they do affect them, and so we need to effectively like sort of transform the conversation into terms that feel relevant to people.....it's about effectively engaging people, you know, most people do not wake up in the morning and feel like the destiny of their community is in their hands.
H22	there's a lot of duplication of efforts and we're realizing that we could probably build to a greater good if more people were talking together and working together so we started, we started this collaborative as a way to bring people together a little bit and it's a fledgling collaborative, it's only as strong as its members and member participation, um we have a listserv and we're working on an on-line platform.
H21	it's middle to upper middle class, which is a problem of the Localvores and they recognize that as a problem...so (they've) come to (our state-wide non-profit) and (are saying:)food access is a big part of our mission, how do we work on it, how do we represent the whole community? I think movements that have really made direct connections between farmers and consumers has been really pivotal. So we've done a lot of work on community supported agriculture and farmers' markets
H16	Regarding the Atkins Field visioning process: 'according to the folks that were involved it was really helpful to uh get all those ideas out there not only because you might have new ideas that no one thought about but also because you're getting uh engagement and uh sort of buy-in from the community which I think is a really important part of this instead of uh someone from UVM doing a study and coming in and saying 'this is what you should do'. The process was such that I think people felt that they were included and part of the process and hopefully will continue to see a role for themselves in Hardwick in this project and other projects as well.
H17	I think that something that happened this year that was really successful is the Sustainability Fair that the Center for an Agricultural Economy was part of was, like, on the Atkins Field along with, you know, the Chicken BBQ and the ferris wheel and the pony rides, you know it was all just mixed together so I think the extent to which um people aren't in there, you know, silos, it all mixes together are the times when it's, I think, I would say that would be the most successful.
H13	again because we're focused on this particular, on these particular communities, um and you know so in speaking to that, that is part of it in that we don't, again this is this idea of we're not looking to shut the door on anyone because of... if they have conventional practices versus organic practices um there's room for all of those uh those things in an agricultural economy
H14	The really neat story behind that is not necessarily that he is here uh but that he, with the help of other community leaders, was able himself and the person who essentially sold him the land, coming from two very different places, both I guess

	<p>maybe politically and socio-economic difference it's, to me, it's a fine example of what can happen here in spite of the differences that exist in any kind of population, but again it's a, it's a coming together of the community to build something and continue to build it...I like to think in the future people will look back and go 'OK that was the first time that happened' and we can continue to build off of ... those types of connections, of people connecting with people</p> <p>there's still the uh the hurdle to cross of those in the community that are very enthusiastic about what we're doing because they're involved or they see the value potential and then there are those that basically are sitting like this saying 'convince me', 'convince me', that's all it is 'convince me' and so there is, and it's no particular age group or socio-economic status or whatever, it's just sprinkled throughout. And so our job is to be around long enough to prove our worth if you will and to engage as many people at the appropriate time... We let our actions speak as much as our words do, more so than our words do</p>
H19	<p>the gleaning program in particular is really intermeshed because we are working with farmers and ... using volunteers from the community, so they're getting some education about where the food comes from, and then it's going to sites that um(allow low-income individuals to) have access to great... free, local, organic food, which is a huge step up from nothing</p>

Appendix H-E

Accounts Regarding Economic Capital

Source/Stakeholder	Quote
H32	there's a lot of money in the Farm Bill now to subsidize local you know, dedicate some food stamps to local-food products, yeah there's lots of ..all the non-profits are sort of doing that to some degree by having programs where they getting local food to certain segments of the population, into schools, institutions, low-income uh you know the Food Bank and food shelves, so um you know those are all ways to essentially subsidize
H21	Discussing the challenges of a statewide non-profit: what has happened, which is a very natural phenomenon, is all of a sudden you know a lot of organizations are like 'oh my god local-food movement, this is so exciting, I want to be a part of that' and so they're fundraising to do program development, so we are, on a financial basis, competing for funds.
H20	One is working with a pool of funding so we have right now especially Crop Block Grant, which is a uh each state is allocated a certain percentage of the Block grant and we're actually also probably will be working with the health sector which also has these Block grants, which..you have to apply for the funds and meet certain criteria, but it's a non-competitive application process. So we receive that funding and then we can re-distribute it to organizations around the state um there's also uh ear-marked from Senator Leahy, that's new that we have um \$469,000 this year ..it's going up to \$1,000,000 next year, so again those are federal funds that we have at our disposal to redistribute and then we also do get involved in applying for federal grants. We have things like the Rural Business Enterprise Grant or the RBEGs that are through USD, federal-state marketing grants and those are competitive grant process. We work with our chapter of USDA that's local to put in applications and we have business partners on the ground or organization partners on the ground that we then work with to implement the grants. So it's a mix of having funding that people will come to us to access and we distribute or partnering with people outside of state government to apply for these federal funds
H17	I think access to capital is a challenge uh which means, which kind of means access to resources so that it feels like uh you know there are . . . a lot of people are working really hard and working hard to get, like, coordinated about the whole thing but that you know, at the end of the day it's just a lot of people working their butts off to make a living and um and there is there certainly is strategic thinking going and strategic you know, sort of, strategic coordination but that sometimes some of that gets you know some sort of logical things get missed because everybody's just, you know, working like you know with their ho in the ground sort of literally.
H14	I think that one of the uh great uh events has been the incredible partnership that was pulled together to bring the Vermont Food Venture Centre to Hardwick. Vermont Food Venture Centre is an incubator space for aspiring um value-added farming interests, agricultural interests who may have a small product that they cook on their kitchen stove like uh salsa. And they want to go to the next step but they don't have the money to buy a place or to uh go into it full-time, but they want to try it out because they think it might work. SO they do a business plan or they think about a business plan, but they're able to lease for some period of hours a week, a state-certified kitchen that allows them to take their produce or produce from friends and neighbours, turn it into a product and then are able to sell it on the shelves at the co-op or at the Hall's Market, or at the Grand Union or at the Quik Stop because it is state-approved and therefore it meets all the health standards.

	<p>That's a big milestone because that facility, when constructed, with public and private monies and with lots of people supporting it is going to be available to the community for decades to come and will allow for many agricultural activities to occur here which may not have occurred because the people had no way to do it. It was part of the continuum.</p>
H18	<p>What I've never seen in the organic movement is people doing it for greed. They farm because they like to farm, they want to be outside, they have this idealism into it that, you know, and they're not in it to make money. I mean, yes, to make a living, yes, but not the, you know, numbers are not the only thing that counts at the cost of everything else and uh I think that's a huge difference and it's one that's often not talked about.</p>
H28	<p>Claire's just opened last year, we had a restaurant, I think the restaurant's a bit top..over the top and high-end for our neck of the woods, but they seem to have a following, you know. I think a lot of the products that a lot of the other people who sell in town or outside of town, you know, like Pete's Greens and the cheese stuff is a little bit too expensive, but, you know it's got a following, it's finding a niche amongst the people. I, myself, don't have that income bracket to spend on that sort of high end food you know, but we tend to make our own cheese</p>
H27	<p>it's sort of a drop in the hat for Cabot with millions of pounds of their own inventory to hold off on that collection there, so um that helps us be able to finance the inventory for smaller volume producers, so because we don't have to finance the inventory for our largest value product um we're able to carry that burden for smaller producers so uh we hope to be able to I think the model we're working on right now is that we can pay um the farmer 50% straight up you know within 7 days of them dropping off the cheese, and then the other half on sale, so if everything goes well - the cheese was made well and ages as planned and we sell it and they collect on the sale.</p>
H32	<p>I think a lot of people are...are utilizing, are utilizing their sort of local community, or their customers as a place to try and be creative with raising capital. SO you know..and I think that there's a lot of room for using this tool more and encouraging people to do it but sort of a Tom Stearns methods..yeah I'd love to see him sort of consult on developing uh community capital in that way. Um yeah...I don't know...there's a lot of programs developing to offer more creative capital to farmers so it's from the other direction</p>
H15	<p>in the last five years there's been a general...a definite trend toward people, farmers, um that normally sell direct to folks, um being able to sell a lot more nearby so people are still sending trucks to Boston and New York but increasingly like Pete's is a great example where I think it's flipped in his case - used to be 70% of his stuff went out of the region, 30% stayed within and now it's the opposite and that's been in the last five years and he's the biggest produce grower around here so it's a lot of volume that's staying locally you know</p>