



**BROWNFIELDS REDEVELOPMENT:
VOICES FROM THE COMMUNITY ECONOMIC
DEVELOPMENT MOVEMENT**

by

RICHARD MARUCHA OMWENGA

**A DISSERTATION SUBMITTED TO
THE SCHOOL OF COMMUNITY ECONOMIC DEVELOPMENT
OF SOUTHERN NEW HAMPSHIRE UNIVERSITY IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY IN COMMUNITY ECONOMIC DEVELOPMENT**

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

_____	Chair
_____	Reader
_____	Reader
_____	Reader (optional)

Approved by the Doctoral Program, School of Community Economic Development.

_____	Department Chair
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Date: _____



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By

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DEDICATION

To

My loving wife and friend Janet Aoko
For being such a friend that you have been
“A wife of good character who can find?” (Prov. 31:10)
I proudly say that “Many women do noble things,
But you surpass them.” (Prov. 13:29)

My loving parents Henry and Priscilla Omwenga
You have always stood by my side and seen me through school
Thank you mum for bringing me up in the Church

All my brothers and sisters
Thank you for your ever present support
Very special thanks to brother Mairura
For being my academic role model
My cousins Meshack & Sheba Boraya, Kephah Otiso
Jared and Jerusha Arika deserve special mention
Thank you for your encouragement

My nieces and nephews
I pass on the baton to you
I challenge you to have a dream
To pursue the dream till you achieve it
May Christ be at the foundation of that dream
May the words of the wise man ever ring in your mind:
“Remember your Creator in the days of your youth,
before the days of trouble come ... (Ecclesiastes 12:1).

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TABLE OF CONTENTS

DEDICATION	i
ACKNOWLEDGEMENTS	ii
ABSTRACT	vi
1 INTRODUCTION.....	1
2 THE NEED FOR A STUDY OF CED PRACTITIONERS' PERCEPTIONS ON BROWNFIELDS REDEVELOPMENT	7
2.1 Introduction.....	7
2.2 Rationale of the Study.....	7
2.3 The Theory of Collective Action Frame	9
2.4 Statement of Problem.....	13
2.5 Research Questions	16
2.6 Limitations of Study.....	17
2.7 Summary.....	18
3 LITERATURE REVIEW	19
3.1 Introduction.....	19
3.2 Brownfields: An Historical Perspective	19
3.3 Effects of Brownfields on Neighborhoods.....	23
3.4 Factors that have Contributed to Brownfields Problems.....	24
3.5 Responses to Existence of Brownfields	26
3.5.1 Legislative and Policy Responses.....	26
3.5.2 Community Responses	32
3.6 Community Economic Development (CED) Movement	36
3.6.1 Historical Overview.....	36
3.6.2 Values of Community Economic Development	37
3.6.3 Institutional Structures of CED	38
3.6.4 Community Development Corporations (CDCs)	39
3.7 Critique of the Validity of the Literature	40
4 RESEARCH PROCEDURES	43
4.1 Introduction.....	43
4.2 Research Methodology	43
4.3 Research Design.....	45
4.3.1 Develop Theory	46
4.3.2 Study Questions.....	47
4.3.3 Research Proposition	47
4.4 Research Population and Sampling.....	48
4.5 Instrumentation	49

4.6	Data Collection	50
4.7	Treatment of Data	51
4.7.1	Unit of Analysis.....	51
4.7.2	Initial Data Organizing	52
4.7.3	Linking Data to Propositions	53
4.7.4	Criteria for Interpreting the Finding	55
4.7.5	Research Processes	55
4.8	Limitation of Study	59
4.9	Summary	59
5	RESEARCH FINDINGS AND DISCUSSION	61
5.1	Introduction.....	61
5.2	Analysis of Diagnostic Framing Task.....	62
5.2.1	Why are brownfields a problem from a CED perspective?	62
5.2.2	To what or to whom do CED practitioners attribute brownfields problems?	66
5.3	Analysis of Prognostic Framing Task	68
5.3.1	Policy Reform Solutions.....	69
5.3.2	Cooperation and Partnerships	74
5.3.3	Community Organizing, Support & Cooperation.....	76
5.3.4	Insurance Approaches	77
5.3.5	Research & Information Gathering	78
5.4	Analysis of Motivational Framing Task.....	79
5.4.1	Affordable Housing Development Motivation	81
5.4.2	Neighborhood Revitalization Motivation	83
5.4.3	Safety, Crime, and Drugs Concerns	84
5.4.4	Health Concerns	87
5.4.5	An Opportunity for Residential & Commercial Development	90
5.4.6	An Opportunity to Acquire Property Cheaply	94
5.4.7	Opportunity to Building Social Equity	96
5.5	Unanticipated Findings	98
5.6	Summary of Findings.....	99
6	CONCLUSIONS, IMPLICATION AND RECOMMENDATIONS	102
6.1	Introduction.....	102
6.2	Conclusions Based on the Findings	102
6.3	Implications.....	105
6.4	Recommendations.....	108

LIST OF TABLES

UUTable 4.1: Relevant Situations for Different Research Strategies.....	44
Table 4.2: Basic Types of Designs for Case Studies	45
Table 4.3: Data Processing Matrix.....	54
Table 4.4: Codes used in the coding process	57
Table 5.1: Framing Tasks and Associated Research Questions	61
Table 5.2: Major Diagnostic Themes.....	62
Table 5.3: Prognostic Framing Tasks	69

ABSTRACT

BROWNFIELDS REDEVELOPMENT: VOICES FROM THE COMMUNITY ECONOMIC DEVELOPMENT MOVEMENT

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Southern New Hampshire University, 2006

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This research was undertaken to understand the framing of brownfields redevelopment issues from the point of view of community economic development (CED) practitioners. The research specifically interviewed staff of community development corporations (CDCs), which form part of the larger CED movement. The investigation sought to reveal why CDC staff consider brownfields as problematic and to what or to whom they attribute the problem (diagnostic framing), the solutions they offer to the problems (prognostic framing), and the justification they give for calling to action the redevelopment of brownfields (motivational framing).

Essentially the research sought to understand the collective action frame that community development corporations (CDCs) do or do not articulate with respect to the redevelopment of brownfields, by analyzing views expressed by various CDC staff that participated in the interviews. Understanding CED practitioners' perceptions is fundamental to the practice of CED and to the process of influencing policies that will support the CED practice. CED is an important link of social and economic development and one of the ways the practices can begin to effect change in society is through making its values explicit. This research contributes towards this goal.

The major findings of the research are that CDCs as organizations are motivated to redeveloping brownfields so as to achieve the following goals: affordable housing; neighborhood revitalization; to mitigate against safety, crime and drug issues; and to address health concerns. But there was little consistency in patterns to suggest that CED practitioners were actively engaged in recruiting adherents, constituents, bystander publics, or antagonists to get involved in the redevelopment of brownfields.

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For the Doctoral Program, School of Community Economic
Development

1 INTRODUCTION

Community development corporations (CDCs) are non-profit community development organizations that work to improve economic conditions of lower income communities in urban and rural United States America. They sprouted at a time when the inner-city neighborhoods had reached, what Hoffman calls “a nadir of misery” (Hoffman, 2003, p. 14). These organizations seek to alleviate the welfare conditions of their neighborhoods through socioeconomic and political process. The organizations are part of the larger Community Economic Development (CED) movement (Keating and Krumholz, 1999; Halpern, 1995; Grogan and Proscio, 2000; Bullard, 1993).

This study uses William Simon’s (2001) definition of CED. Simon defines CED as: “(1) efforts to develop housing, jobs, or business opportunities for low-income people, (2) in which a leading role is played by nonprofit, nongovernmental organizations, (3) that are accountable to residentially defined communities” (p. 3).

Community economic development (CED) is a social movement (Shragge, 1997). Social movements, according to Porta and Diani (1999) are informal networks, with shared beliefs and solidarity, which mobilize about some form of conflicting issues, using various forms of protests (p.16). Thus social movements exist to rectify some conditions they perceive as problematic. Social movement actors seek to bring about change by

influencing the interpretations of reality of their target populations because they assume that meaning precedes action (Benford, 1997). Thus to be able to take action to remedy the condition, it is imperative to define the nature of the problem, identify the source(s) of causality and attribute blame to some culpable agent. This process of defining the nature of the problem, identifying its source(s) and suggesting possible solutions is referred to as framing (Snow & Benford, 1988; Benford & Snow, 2000). It is a social construction process through which reality or meaning is formulated. The framing process generates collective action frames, defined as “action-oriented sets of beliefs and meanings that inspire and legitimate the activities and campaigns of a social movement organization (SMO)” (Benford & Snow, 2000, p. 614). This study seeks to understand the collective action frame articulated by CED actors in respect to the issue of brownfields.

According to Brewer and Hunter (1989), social researchers employ four principal methods to conduct research: fieldwork, surveys, experimentation, and non-reactive research. In fieldwork research, the researcher gets involved in the research elements (people or events) firsthand in their natural setting. In survey, researchers either conduct interviews or administer questionnaires to respondents. Experimentalists set up experiments to study their subjects under controlled conditions. Finally, non-reactive research entails employing unobtrusive observational techniques to conduct the study. This research utilized in-depth interviewing of the CED practitioners, drawn from members of staff of CDCs, to elicit their perceptions on the issue of brownfield redevelopment.

There are varied definitions of brownfields. In a very general sense, Simons (1998) defines brownfields as land that has been used previously and cannot be redeveloped to its highest and best use due to a combination of factors such as actual or perceived contamination. In a more technical sense the United States Protection Agency (USEPA) uses the definition of the Small Business Liability Relief and Brownfields Revitalization Act enacted on January 11, 2002, which defines the term “brownfield site” as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant” (USEPA, 2004). These brownfields, wherever they occur, pose real and perceived environmental and public health risks (Shutkin, 2000). Many believe if they are redeveloped, neighborhoods would be able to achieve their economic and environmental goals (U.S. Conference of Mayors, 2003; Shutkin, 2000; Byrne and Scattone, 2000).

This research considered CED practitioners (and especially staff of CDCs) to constitute a group of people who interact extensively with each other. Part of this interaction would involve learning from each other on how to carry out their day to day business since they have a lot in common. Thus there are areas of interaction where they (the CED practitioners) perceive issues in a similar manner. These perceptions are what this research refers to as frames in general, but they can also be collective action frames. In essence the research examines how CED practitioners think about brownfields, an undertaking that Addams and Proops (2000) labels as vital in environmental policy.

They argue that, "...until we know the 'discourses' people use about the environment, it will be hard to judge what, and whether environmental policies will be socially accepted and therefore capable of being implemented" (p.2).

In their development efforts, CED practitioners confront the realities of brownfields. What they do or cannot do with these sites is influenced by environmental policies that are formulated by federal agencies, state agencies as well as local authorities. A substantial number of brownfields are found in neighborhoods where CED practitioners operate. It is therefore important to understand their perceptions on brownfields and the implications for brownfields policy.

One of the contributions this research makes to CED research is methodological in nature. The researcher adopted a "framing" research perspective that is primarily used to study social movement organizations (SMOs) and applied it in a CED context. Framing according to Lakoff (2005) is a conceptual structure used in thinking. For example in politics, political parties utilize framing to construct concepts deliberately aimed at evoking certain meanings in the minds of the public to justify the party policies.

According to Snow and Benford (1988), social movements are actively engaged in assigning meaning to and interpreting relevant events and conditions. They characterize movements as having collective action frame with identifiable, three core framing tasks: diagnostic framing, prognostic framing and motivational framing. Diagnostic framing involves identification of a problem and attributing a possible source of the problem or

causality. Prognostic framing involves proposing solutions to the problem that encompasses the identification of strategies, tactics and targets. Motivational framing is the task of calling to action or justifying action intended to bring about corrective action in a follow-up of the prognostic framing.

The focus of this research was to understand the framing of brownfields redevelopment issues from the point of view of CDC staff (Executive Directors and other staff), who are representative of the larger CED movement. The goal of the research was to understand what perceptions the CDC practitioners hold regarding brownfields redevelopment issues. The investigation sought to reveal what definitions CDC staff give brownfields and to whom or to what they attribute causality (diagnostic framing) to the problem, and the prognostic and motivational framing.

The chapters of the dissertation are organized as follows: Chapter two makes a case for the need to study CED practitioners' perceptions on brownfields redevelopment issues. It explains the rationale for the study; the theory of collective action frame; the statement of the problem under study; and the research questions. The chapter explains in detail the theoretical concept of frame analysis, which forms the basis of the study.

Chapter three reviews the literature on brownfields redevelopment, and the effects of brownfields on neighborhoods. The review also looks at the role of the community economic development (CED) movement in the redevelopment of brownfields. The

literature extensively reviews the historic of brownfields and of community development corporations (CDCs).

Chapter four presents the research procedures and methods including details of the overall multiple-case research methodology used in the research; the research design; the research population; the instrumentation aspects; data collection procedure and data analysis. Chapter five presents the findings of the research and a discussion of the findings. Chapter six offers the conclusions, interpretations and recommendations.

2 THE NEED FOR A STUDY OF CED PRACTITIONERS' PERCEPTIONS ON BROWNFIELDS REDEVELOPMENT

2.1 Introduction

This chapter makes a case for the need to study CED practitioners' perceptions on brownfields redevelopment issues. The chapter is organized into five sections. The first section explains the rationale for the study. The second section discusses the theory of collective action frame upon which this study was based. The third section discusses the statement of the problem under study. The fourth section discusses the research questions, and the last section acknowledges the limitations of the study.

2.2 Rationale of the Study

Perceptions of an organization regarding a particular issue essentially influence the position and the actions it will take towards that issue. Brownfields issues in communities are a subject of interest and concern to many stakeholders: the residents of the community, the local authorities, the federal government, and community based organizations. Each of these stakeholders may hold different perceptions depending on what stake they have. For instance an organization may hold the view that brownfields need to be cleaned up for the sake of restoring their aesthetic value to the neighborhood. Another stakeholder may hold the view that brownfields should be redeveloped for the sake of developing housing, attracting business and industries to the neighborhoods. The literature reveals that a good amount of research has been undertaken that focuses on

brownfields and issues of employment creation (Duggan, 1998), housing development (Schopp, 2003), and perceptions of developers, residents, and local business stakeholders (Solitare, 2003). In all these studies the perceptions of CED practitioners are not significantly addressed given the role they play in brownfields redevelopment. It is upon this background that the rationale of this study was anchored. The CED movement is large, and could not be surveyed adequately in its entirety to garner perceptions. Thus, for practical purposes the study focused on CDC staff in Massachusetts.

The selection of Massachusetts was on the basis that there is a large number of CDCs that have grown and developed in the cities in the state, compared to other states. Grogan and Proscio (2000) argue that the CDCs have been most successful in cities where they have been supported by other institutions. They cite of Boston, Massachusetts as an example of a city where CDCs have found a conducive environment for growth and development since the mid 1970s. They attribute the growth and development of CDCs in Boston to the support from a diverse network of institutions - the civil society, the private sector and the government. Grogan and Proscio give the example of the Boston Housing Partnership – a partnership that facilitated both public and private institutions to invest in the work of acquisition and rehabilitation of affordable housing by the CDCs. Such conducive environments would have paved the way for policies that facilitate the operations of CDCs. A good example is the state’s environmental policy.

The environmental policy of Massachusetts recognizes the two goals of brownfields redevelopment in communities where CDCs are engaged. The state of Massachusetts responded to the challenge of brownfields redevelopment by enacting policies aimed at the cleanup and redevelopment of brownfields properties to simultaneously stimulate economic development and achieve environmental goals (Massachusetts Brownfields Act, 1998).

Of relevance to this study is the liability relief provision of the Brownfields Act to redevelopment agencies and authorities. According to the act, redevelopment authorities and community development corporations (CDCs) were exempt from liability as long as they acquired the brownfields property after August 5, 1998 (Massachusetts Brownfields Act, 1998). This act therefore put CDCs at the very heart of brownfields redevelopment in Massachusetts, and provides the necessary rationale for the study of collective action frame of CDCs on the issue of brownfields.

2.3 The Theory of Collective Action Frame

This study adopted the theoretical concept of frame analysis as the basis for understanding the conceptualization of brownfields in Massachusetts by staff of CDCs. According to Benford and Snow (2000), “The concept of frame has considerable currency in the social sciences today” (p. 611). Snow and Benford (1992) found that the usage of the concept of frame in academic discourse is not discipline specific. Its usage finds application in sociology (Goffman, 1974), psychiatry, humanities, and psychology.

In addition the concept has been applied in general policy analysis studies (Schneider and Ingram, 1997).

Goffman (1974) is widely associated with the foundational formulation of this concept of frame, and its introduction to sociology, before it permeated into other disciplines. His definition is widely quoted:

I assume that definitions of a situation are built up in accordance with principles of organization which govern events ...and our subjective involvement in them; frame is the word I use to refer to such of these basic elements as I am able to identify (Goffman, 1974, p. 10 –11).

Despite the diverse application of the concept, Snow and Benford (1992) concluded that usage of the concept is the same in all the disciplines: "... an interpretative schemata that simplifies and condenses the 'world out there' by selectively punctuating and encoding objects, situations, events, experiences, and sequences of actions within one's present or past environment (Snow and Benford, 1992, p. 137).

König (2004) echoes the sentiments of Snow and Benford (1992) by noting that the current application of frame analysis covers a number of disparate approaches. He defined frames as "basic cognitive structures that guide the perception and representation of reality" (König, 2004, p. 2). He concurs with Snow and Benford's (1992) concept of the collective action frame, which they define as the product of framing- the active, process-derived phenomenon that involves agents and contention in constructing reality.

Elliott, Gotham and Milligan (20004) studied perceptions of various stakeholders of St. Thomas public-housing complex, in New Orleans, LA. St. Thomas project received HOPE VI (a.k.a. Housing Opportunity for People Everywhere) federal grants that targeted to demolish distressed public housing complexes. According to U.S. Department of Housing and Urban Development (1999), HOPE VI program aims to end public housing, by encouraging local authorities to demolish these public housing complexes and replace them with more viable communities.

According to the Elliott, Gotham and Milligan (2004), this federal housing policy that came into effect in 1993 when the first grants were awarded to various projects around the country, created political opportunities for collective action that various stakeholders sought to capture. The trio undertook a case study of St. Thomas project, to examine perceptions of stakeholders (a private developer, displaced residents, and civic organizations) regarding the redevelopment of their neighborhood. They specifically investigated how each of the stakeholders adopted New Urbanist language and symbols to articulate their own visions of what HOPE VI redevelopment should mean to their neighborhood. According to the researchers, the HOPE VI policy created a political opportunities for collective action which helped to shape the stakeholders' framing strategies that they used to construct their perceptions, views of what they considered as fair and right. Their research paper discusses how political opportunity for change and

associated framing strategies became entwined following shifts in federal public-housing policy.

Elliot, Gotham and Milligan (2004) is a good example of a research that studies perceptions using the framing strategy. In addition the setting of the case study is in a distressed urban neighborhood, which resonates well with brownfields, the focus of the current study.

Whereas Elliot, Gotham and Milligan explicitly studied perceptions of stakeholders, by examining framing tactics the stakeholders employed; Whooley (2004) implicitly studied perceptions of members of the American Anti-slavery Society (AAS) by examining how two wearing functions within the society used framing tactics to articulate their vision of the future of the society after slavery was abolished in December 1865. Whooley's research entailed tracing the trajectory of the framing process by the abolitionist movement as championed by the AAS. Whooley (2004) defines the process of framing in social movements as the process of employing ideas and symbols in the construction of a definition of a situation so as to call for collective action. Thus a frame can be judged as being effective if it encourages mobilization and achieves widespread support. This can only be possible if the frame resonates with political and cultural contexts.

Framing, according to Snow and Benford (1992), is an active process through which social movement organizations (SMOs) construct reality. The outcome of their framing process is what they call collective action frame. According to Snow and Benford (1992) a collective action frame of a particular social movement has three functional framing tasks – diagnostic, prognostic and motivational framing. The diagnostic framing task plays the role of defining the problem and attributing causality.

On the other hand, prognostic framing is the task of offering solutions to the problems that may involve suggesting a line of action to compact the problem and then assigning an agent to implement the action (Snow and Benford, 1988).

Thirdly, the motivational framing task refers to the alignment of observed events and experiences into a unified and meaningful package. The role of this articulation is important; Snow and Benford (1988) conclude: “Thus, what gives a collective action frame its novelty is not so much its innovative ideational elements as the manner in which activists articulate or tie them together” (p. 138).

2.4 Statement of Problem

Policy research more often than not focuses on the question of how stakeholders can best be involved in policy formulation. However, this study argues that before focusing on

the 'how' of involvement, policy research needs to have an understanding of the subject's perception of the issues. It is the contention of this investigation that voices and perceptions of CED practitioners, affected by brownfields, are not well understood. The cry for the voice of CED practitioners to be heard in environmental policy is best voiced by Ros Everdell, an employee of Dudley Street Neighborhood Initiative (DSNI). She observed that, "Much of DSNI's work over the past seven years has been environmental, but only recently has it been identified that way" (Medoff and Sklar, 1994, p.181). A better understanding of CDC staff perceptions will create greater awareness of CDCs concerns leading to advocacy of policies and legislation that supports community economic development (CED) activities.

Schneider and Ingram (1997), in their articulation of policy designing, discuss the process of framing dynamics as the process of socially constructing issue contexts from societal contexts. It is from issues contexts that policy designs emerge. The process of framing dynamics involves the interpretation of events, groups, knowledge and societal conditions to produce social constructions of these events, groups, knowledge and conditions.

The essence of this research was to understand the collective action frame that community development corporations (CDCs) do or do not articulate with respect to the redevelopment of brownfields. To do this, the research analyzed views articulated by various CDC staff that included the executive director or any relevant members of staff directly involved in brownfields redevelopment.

Understanding CED practitioners' perceptions is fundamental to the practice of CED and to the process of influencing policies that will support the CED practice. Shragge (1997) evaluates CED as a vehicle that links social and economic development through the process of community education and outreach. He makes two conclusions that are of interest. First he concludes that any practice is doomed to fail if it does not work at building a strong local base (p. xv). He also concludes that the way CED practices can begin to effect change in society beyond their localities is by starting to make its values explicit (p. xvii).

Effectively Shragge is saying that thus far, CED has been effective at local (micro) levels, and appeals to the movement to reach out to the larger society at a macro-level. In terms of the framing tasks, it means that the CED movement has been effective in carrying out its diagnostic (identifying problems and attributing causality) and prognostic (providing solutions) framing tasks but has fallen short in its motivational framing task. To effect change in society beyond the local level, the CED movement needs to reach out. This outreach begins at making one's values explicit. According to Addams and Proops (2000):

... a vital issue in environmental policy is the identification of how individuals 'think about' problems. ... because until we know the 'discourses' people use about the environment, it will be very hard to judge what, and whether, environmental policies will be socially accepted, and therefore capable of being implemented. Indeed, finding out how people understand an issue is essential to the whole process of 'problem identification', both normatively and politically (p. 2).

The need for a study of perceptions by CED practitioners is essential in a period such as this when society is confronted by what Schön (1983) calls “a crisis of confidence and legitimacy” (p. 11) of professions. He argues that in the 1960s professionals were highly regarded and the demand for their services was highly sought after. However, events in the mid-1960s and early 1970s (such as the Watergate scandal), eroded society’s esteem of professionals. As a result, in the 1980s, the unquestionable standing position professionals held was challenged. CED practitioners as professionals have a role to play in responding to this challenge. This study makes the argument that the fundamentals of building the local base, and of making CED values explicit is rooted in understanding its core framing tasks of the CED movement, as articulated by the CED practitioners. The research assumes that there are a number of frames within the CED movement, one of them being the brownfields redevelopment frame.

2.5 Research Questions

The research focused on understanding the core framing tasks of community development corporations (CDCs) in Massachusetts regarding brownfields redevelopment. The following are the research questions that were pursued:

To establish the diagnostic framing task answers to the following two questions were sought: Why are brownfields a problem from a CED perspective? To what or to whom do CED practitioners attribute brownfields problems? To establish the prognostic framing task, answers to the following question was pursued: What solutions and strategies do CED practitioners suggest to solve brownfields problems? Finally, the research sought to

establish the motivational framing task by asking the following question: What justification do CED practitioners claim for their “call to action” to develop brownfields?

2.6 Limitations of Study

This study relied on information from staff of CDCs, but CDCs are only a portion of the greater CED movement. Other institutions that constitute the CED movement include a variety of charitable nonprofit corporations, cooperatives, and faith based organizations like churches (Simon, 2001). This was a choice the researcher had to make so as to have a focused study. Furthermore the research selected CDCs, as the target organizations to interview, but this does not mean that CDCs are the only type of CED movement organizations that deal with brownfields. The researcher is aware of organizations such as housing development associations, and neighborhood development associations that deal with brownfields and many others that would provide valuable input into the research.

Research on this topic of investigating perceptions of CED practitioners on issues of brownfields is limited. CDCs in Massachusetts were selected as the basis of the study simply because there are a number of well developed CDCs to provide a sufficient number of cases to examine the topic.

2.7 Summary

A study of the perceptions of CED practitioners is fundamentally important in building the local base of the practice of CED and of making explicit the values of CED as a practice. The chapter discussed the theory of collective action frame upon which this study was based. An explanation is provided of how the framing tasks reveal the collective action frame that is the basis of the CED practitioners' perceptions.

3 LITERATURE REVIEW

3.1 Introduction

In this chapter a review of the literature on brownfields redevelopment is explored. The first section looks at how brownfields came into existence and gives examples of how widespread the problem is across the U.S. The second section addresses the issue of the effects of brownfields on neighborhoods. The third section looks at factors that have contributed to the rise of brownfields. The fourth part will focus on the responses to the existence of brownfields by the government and community. The fifth section explores the role of the community economic development (CED) movement in the redevelopment of brownfields. The sixth section critiques the validity of the literature and the last section discusses the contribution of the study to the literature.

3.2 Brownfields: An Historical Perspective

This section will examine the issue of brownfields and how they have captured national attention. Newsweek Magazine, a national magazine, on August 4th, 2003, reported:

... Jennifer and Patrick Blake moved into their house in the Hickory Woods neighborhood of Buffalo, N.Y. 10 years ago ... Because the working-class neighborhood was part of a much-touted city-revitalization plan, buyers got \$20,000 subsidies. The Blakes soon questioned whether they'd paid a steeper price. They were digging holes for a fence when they noticed strange, jet-black ash and shiny clumps of rock in their yard. The clumps turned out to be coke waste, toxic leftovers from a former steelmaking plant across the street. Four months after their son, Matthew was born in 1995, he began to suffer

developmental delays-and the Blakes wondered whether the black dirt was to blame. Now 8, Matthew is legally blind and cannot speak or even hold his own cup. ... similar scenario unfolded 25 years ago just 25 miles away in the Niagara Falls neighborhood of Love Canal. (Rosenberg, 2003, p. 50).

This is a popular media report on contaminated properties, which is not an isolated case, but a common source of worry to cities and rural residents alike, not only here in the USA, but throughout the industrialized nations. As Bartsch and Collaton (1997) wrote: “Virtually every city in the nation’s older industrial regions, no matter its size, grapples with the challenge of unused manufacturing facilities” (p.1). Problems of contaminated lands are the legacy of years of industrial development in the wealthiest nations in the world. These were former factories, rail yards, shipyards, mines and residential neighborhoods that housed workers of the Industrial Revolution (Mayer, Williams and Yount, 1995).

The story of Lois Gibbs of Love Canal in the 1970s, which depicts the struggles the residents of Niagara Falls to escape the chemicals that were poisoning their homes, awakened the public to what Rahm (1998) frames as a ticking time bomb of hazardous waste. The story of Love Canal can be repeated in many cities and rural locations across the United States. A similar case occurred in the Valley of Drums, in Brooks, Kentucky.

In the case of Love Canal:

Hooker Chemical Company dumped 21,800 tons of industrial wastes in Love Canal in the 1940s and 1950s. Following customary 1950s practice, Hooker covered the Canal containing the waste-filled drums with clay and then sold the land to the Niagara Falls Board of

Education for \$1. Residential housing and a school later were built over the site. By mid-1970s, chemicals began seeping into the basements of the houses constructed on the site, the New York Commissioner of Health declared an emergency, and an evacuation was ordered (Rahm, 1998, p. 719).

In the case of the Valley of Drums, the site was thirteen acres in Brooks, Kentucky, south of Louisville. Prior to being discovered, the site was used as a refuse dump, drum recycling center, and chemical dump from 1967 to 1977. The wastes were mainly from paint chemical industries of Louisville. The dumping of these chemicals contaminated air, surface water, ground water, and soil in the area (Taylor, 1983).

These cases and many others awoke the nation to the legacy that the industrial era had left behind. There are numerous examples of such former industrial sites throughout the United States, Canada, Australia, Europe and the rest of the world. The nature of the issues involved varies from site to site, but the story line is similar. Olsen, Brown & Anderson (2002), studied groundwater contamination by chlorinated solvents due to past industrial activities in the Gilbert-Mosley brownfield site in Wichita, Kansas. It had been found that over 3 billion gallons of groundwater covering an area of about 2,220 acres of land had been contaminated by tetrachloroethene (PCE) and trichloroethene (TCE).

On the other hand Bogdan (2002) researched issues of brownfields in the City of Hopewell, a city he calls “a perfect example of an American “brownfields community.”

Here in 1915, E.I. Dupont de Nemours bought land in the city to build an ammunition (gunpowder) production factory for World War I. Like many other such facilities, once the war was over, it closed down and the facility remained abandoned, idle and underutilized.

From Canada, Johnson, Mattinson & Friesen (2002), illustrate the legacy of industrial development through their research of the remediation of 21.8 hectares of industrial property that was first developed in early the 1960s as a petroleum refinery and later used as a highway maintenance yard.

Sydney Olympic Park, where the 2000 Summer Olympic Games were held in Australia, is a good example of a remediated brownfield. Laginestra (2002) points out that the site was a former 760 hectares of degraded land. Finally, Clark (2002) points out that historical naval, military and air force sites are a special subset of brownfields that are normally absent from civilian maps.

The term brownfields was introduced by the Northeast-Midwest Institute, which is based in Washington, DC. The institute does a lot of research on brownfields in the northeastern United States, where many of these properties are highly concentrated. The term refers to underutilized manufacturing facilities, mining operations, closed timber mills, chemical plants, and machine shops among others (Bartsch, 1997). The U.S.

Environmental Protection Agency (USEPA) defines them as “abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.”

These properties came into existence as a result of former industrial, commercial, military and residential activities that were going on there, but when the economy changed or the war ended, the products that were being produced in the factories were no longer needed so they closed, leaving abandoned, idled and underutilized facilities.

3.3 Effects of Brownfields on Neighborhoods

As these abandoned properties remained in place over the years there was a shift of events. According to Smart Growth Network (1996) one such shift took place in the economy. Economic activities started to shift from urban areas to suburban locations, and people started to migrate from the Northeast and Midwest to the South and West. This started to contribute to the decline of metropolitan areas in the United States. Not only were these sites now abandoned, idle and underutilized, they started becoming a threat to public health and safety. Crime and welfare dependency increased, and public health declined.

According to research by Accordino and Johnson (2000), abandoned properties are increasingly becoming significant barriers to the revitalization of central cities. A survey they conducted in summer and fall of 1997 of the 200 most populous central cities in the United States indicated that these properties are perceived as having a significant affect on property, housing, neighborhoods and commercial vitality, and crime prevention.

The research by Smart Growth Network (1996) showed that if brownfields are redeveloped, economic, social and environmental benefits will accrue to the community. People interviewed in Trenton, NJ, perceived that the following social benefits would accrue to them if local brownfields were developed: higher awareness among residents on individual and community issues; sense of empowerment as a result of being part of the decision making process; reduced crime; a sense of hope and pride.

3.4 Factors that have Contributed to Brownfields Problems

A variety of factors contribute to the problem of abandoned, idle and underutilized properties. According to Accordino and Johnson (2000) much of the blame in the United States can be attributed to federal housing and infrastructure policies that reinforced each other. Accordino and Johnson (2000) state that "... much of the blame can be placed on the well intentioned, but ill conceived federal policies that subsidized outmigration of much of the middle-class ..." (p. 302).

The federal housing policies facilitated the construction of new housing in the suburban locations at the expense of redeveloping inner cities. The development of the houses and industries in the suburbs was less taxed so it was cheap to develop. Living in the newly developed suburban housing was reinforced by the development of interstate highway systems. Grogan and Proscio (2000) call the outmigration “suburban flight.” Although people attribute suburban flight to market preferences, rising incomes, and centrifugal wealth, Grogan and Proscio (2000) strongly agree with Accordino and Johnson that suburban flight was a by-product of government subsidies in favor of the white middle class.

However, Grogan and Proscio do agree that market forces did play a role in the suburban flight but point out that subsidies drastically accelerated the process. In addition to government policies and market forces, race did contribute to the flight of the white middle class and upper income families. Essentially this left behind abandoned, idled and underutilized properties, joblessness and a lack of businesses.

What happened in the 1920s in urban areas, according to Hoffman (2003), was that cities “fanned out from the core” rather than concentrating in a central area. This he explains was due to changing settlement patterns that saw the upper-class residents move to the suburbs that were newly built. This resettlement left behind economically deprived

neighborhoods – “urban blight.” Hoffman adds that technology reinforced this process. In addition to changing resettlement patterns, there was the shift of industrial base. For example the textile industry closed business in New England and relocated to the south. This left behind unemployment, vacant factories and residential homes. These properties are the present day brownfields.

3.5 Responses to Existence of Brownfields

3.5.1 Legislative and Policy Responses

Since the days of Love Canal, and the Valley of Drums (Collins, 2003) when thousands of barrels of toxic waste were found buried illegally, a number of public opinions and reactions have been expressed towards activities that led to these sad situations. Such opinions and reactions play a great role in shaping public policy on brownfields. For instance the immediate response to public outcry led by Lois Gibbs was the declaration of a health emergency by President Jimmy Carter. This was followed by Congress responding legislatively by enacting the Comprehensive Environmental, Response, Compensation and Liability Act (CERCLA) in 1980, popularly known as the Superfund.

Superfund, in a more precise sense is not the Law, a Hazardous Substance Response Trust Fund that was created by CERCLA by a tax imposed on petroleum and certain chemicals. The fund was designated to pay for the cleanup of most urgent sites that threatened public health or the environment. In additions the fund would pay for

litigation cases against polluters to recover the costs the government incurred. The intent of CERCLA was to clean up the nations' worst contaminated sites with potentially responsible parties (PRPs) of the contamination bearing the cleanup costs (Rahm, 1998).

Litigation that followed CERCLA proved to be complex and difficult. One inevitable result was prolonged court cases that impeded cleanup of the sites. Unfortunately even lightly contaminated sites (now referred to as brownfields) got entangled in this litigation. Thus according to Foreman (1998), throughout the 1980s and 1990s CERCLA was a frustration to local economies, because developers, insurers, and lenders tactically avoided being involved in brownfields projects that had potential cleanup liability.

Wernstedt, Heberle, Alberini and Meyer (2004) emphasize that even in the public arena, potential liability risks and cost concerns drove local public officials to especially adopt policy strategies that ignored the cleanup or redevelopment of those brownfields that posed no immediate or obvious health or safety risks. Officials that paid any attention at did so reluctantly under duress from state or federal government.

In response, individual states and local governments initiated brownfields programs that sought to ease the perceived liability of CERCLA. These programs sought to shield developers from CERCLA liability. Public opinion has been divided on the question of who benefits and loses in their implementation. Meyer (1998) argues that CERCLA

legislation did not recognize that contaminated land cleanup should involve both economic and environmental considerations, because “land contamination” is more than on-site pollution. There are non-environmental problems of “contamination” beyond the physical problems caused by pollution on specific sites. A failure to recognize this duality explains the reasons why the implementation of CERCLA has always focused on specific site contamination remediation efforts, rather than area-wide approaches. Meyer’s argument will render support to an approach in which CERCLA’s requirements are modified to reflect an area-based approach rather than a site-specific approach.

This is in contrast to Simons’ (1998a) contribution to the debate. Simon defines the brownfield problem in terms of attainment of “highest and best use” (p. 269), values for individual sites. According to Meyer, this definition promotes redevelopment of individual sites rather than community development. Simon’s approach implies strict enforcement of cleanup standards of CERCLA which would hopefully protect the health of communities living near these sites. Meyer’s approach on the other hand expresses optimism that modified CERCLA regulations will simultaneously address environmental, economic, and perceived social problems and hopefully attract businesses to poor neighborhoods resulting in economic revitalization.

The Environmental Justice Executive Order signed by President Bill Clinton in 1994, came into being following the belief that low-income and minority communities carry a high proportion of environmental problems such as contaminated sites (Executive Order

12898, 1994). The intent of this Order was therefore to protect minority neighborhoods from becoming sites of polluting industries. But after the policy went into effect, controversy arose in the fairness of implementing the policy. According to Foreman (1998) the argument in support of brownfields projects is on the basis that they will bring the much needed jobs to neighborhoods. Thus according to that line of argument, environmental justice and brownfields projects are often discussed as though the two are natural, which they are not. He continues to argue that, whereas employment incentives are the promise of many brownfields projects, many of the jobs may simply not realistically be accessible by the poor people. Thus, “The controversy is centered on Environmental Justice, which refers to the fair treatment and meaningful involvement of all people ... with respect to the development, implementation, and enforcement of environmental laws” (Bass, 1998).

One of the possible outcomes of pursuing environmental justice principles is denial of projects, as was the case of Louisiana Energy Services Corporation. According to Bass, Louisiana Energy Services Corporation applied to the U.S. Nuclear Regulatory Commission for a license to built and manage a nuclear facility in Homer, Louisiana. On evaluating the impacts of the projects following environmental justice concerns, it was concluded that the facility would severely impact low-income communities in the area. National advocates of environmental justice testified against situating the facility in Homer. This resulted in the denial of the license application (U.S. Nuclear Regulatory Commission, 1997).

These actions and others raised questions on the wisdom of these regulations, and started to change the perceptions the public held towards brownfields. For instance, Walzer, Hamm & Sutton (2006) point out that in the 1990s, a paradigm shift started to take place - public officials started recognizing brownfields as potential opportunities for economic development. They started adopting policies that favored the cleanup and reuse to these properties. A report of the National Governors Association (NGA) reflects this paradigm shift. The governors sought to justify expenditure of state funds on the redevelopment of brownfields on grounds that out that a dollar of state spending a return of about 10 times to 100 times more dollars in economic benefits is achieved (National Governors Association, 2000) and used that to pressure for policies that would favor brownfields redevelopment.

Another change in perception towards brownfields that has been documented is the importance of community involvement. According to Gibbons, Atttoh-Okine & Laha (1998), the involvement of the affected populations is essential for the successful redevelopment of brownfields. This has not always been the case, but it is something that has come to be accepted over time after observing that remediation and redevelopment efforts of investors have come to be associated with a strong voice from community advocates, probably due to change in perceptions.

One question that has long been an issue of controversy in the redevelopment of brownfields has been the issue of how and for what ends brownfields should be redeveloped and managed. During the early years, the controversy was reduced to a bipolar conflict between those who favored 'brownfields' and those who favored 'greenfields'. In those early days 'brownfields' were perceived as inferior to their greenfield counterparts as new production facilities, other things being equal (Mayer, Williams and Yount, 1995). This paradigm reduces environmental issues to bipolar issues. Whereas this old paradigm once served an important role in defining the nature of issues over policy of contaminated lands, it may be turning out to be an impediment to comprehending current issues of conflict.

This is important because perceptions towards development change with acquisition of new knowledge. Previous environmental concerns of contamination focused on cleanup of buildings, with little concern for the environment beyond the building. These sites thus faced a growing problem of attracting new development needed to create jobs and sustain their economies, thus engendering social and political problems. Over time new perceptions on contaminated lands developed, and the scope of focus expanded from cleaning up buildings to include the soil and water bodies contaminated by chemical spills. (Mayer, Williams and Yount, 1995).

A brief look at perceptions of the environment will demonstrate that before 1969, the conservation frame dominated what stakeholders believed was right for the environment.

In the 1970s, pollution control was the dominant environmental perception. Michael H. Armacost, in his forward to the book, *The Promise and Peril of Environmental Justice* (Foreman, 1998), points out that during Earth Day in April 1970 issues of equity in environment debates were barely visible in policy agendas. However, by early 1990 equity issues in the name of “environmental justice” had made their way to the top political office. Today environmental justice is depicted in environmental literature as among the most conspicuous issues in environmental politics (Ringquist and Clark, 2002).

3.5.2 Community Responses

One of the ultimate effects of continued existence of brownfields in urban neighborhoods and rural areas is escalating poverty. Low-income communities, which pay the high price of the existence of these brownfields, are responding, too. According to Boyce and Pastor (2001) a number of response trends are emerging from low-income communities. The response of interest to this research is the emerging growth in community organizing and participation in planning projects and formulating public policy.

The emergence of this trend is closely associated with the growth of community based organizations (CBOs), community development corporations (CDCs) (Stoutland, 1999), and community land trusts (CLT) (Ramm, 1997) among others. A good example of this trend is demonstrated by Boston’s Dudley Street Neighborhood Initiative (DSNI).

According to Medoff and Sklar (1994), Dudley, in Boston, Massachusetts beginning in the 1950s, experienced economic decay as manifested in the number of vacant and abandoned properties in the neighborhood at the time. This was as a result of years of redlining by banks, government mortgage programs, and insurance companies. The neighborhood experienced disinvestments, abandonment and arson. It was the dumping ground of waste from around the city. This exposed residents to health hazards and noxious smells (Boyce and Pastor, 2001).

Despite years of decline, not all was destroyed. Some homes remained and some businesses survived. In response to the problems they were facing, the community organized itself under the umbrella of Dudley Street Neighborhood Initiative (DSNI) in 1985. The community in Dudley is diverse – consisting of Cape Verdeans, Latinos, and non-Hispanic whites as the predominant groups. Though poor, with a high rate of unemployment, the community is rich in the diversity of the population. The group galvanized around the dumping problem and succeeded in putting a stop to it and getting the City of Boston to be part of the cleaning process of the worst sites (Medoff and Sklar, 1994). Finally, in 1987 DSNI led a community planning process that designed a master plan for revitalizing the neighborhood. In the years that followed the creation of the master plan, DSNI has engaged in the development of housing, playgrounds, parks and community gardens.

According to Shutkin (2000), brownfields have posed a challenge to the revitalization of efforts of DSNI, as is the case with other developers of these properties. The first challenge is to identify the brownfield sites that can be marketed to developers and users and even more so, to get access to the property. Publicly owned sites are relatively easy to deal with because ownership is in the City of Boston and negotiations can be initiated to gain control of the sites. However, privately owned properties are much more difficult to acquire. Owners are difficult to contact and depending on the tax status of the sites, negotiations can be difficult. Beyond negotiations, the issue of environmental assessment has to be carried out by owners to determine the contamination level of the properties. Owners fear the costs involved in the cleanup that may be discovered on their sites.

To facilitate the process of accessing brownfields the Massachusetts Brownfield Bill passed into law in 1998 provided additional exceptions from liability. In situations where access to owners was difficult, power of eminent domain over abandoned private property was granted, by which organizations such as DSNI would compel owners to sell the properties at a “fair” price (Boyce and Pastor, 2001). According to Shutkin (2000), market forces are more powerful factors than environmental concerns in getting brownfield sites redeveloped so long as the site is perceived or determined to be desirable. Shutkin argues that a brownfield is desirable as long as real estate brokers, developers, and municipal officials do not have concerns about the relative safety, economic viability, and racial composition of neighborhoods hosting brownfield sites.

He believes that brownfields redevelopment is a function of the perceived social and economic conditions in a community (Shutkin, 2000, p. 161).

The solution to these stereotypes, according to Shutkin, is for such neighborhoods to aggressively promote themselves and to defy years of disinvestment, white flight, and racism. In promoting themselves residents will get an opportunity to participate in the democratic process of the revitalization of their neighborhoods. As such, according to Dixon (2000), brownfields redevelopment becomes much more than a strategy to cleanup contaminated land. It becomes a process of community asset building - where community assets are physical, socioeconomic and political in nature.

Asset building is a comprehensive approach to community revitalization. It connects well with the fundamental goal of the community economic development movement and in particular community development corporations (Stoutland, 1999; Ramm, 1997). In the next section, I will examine the literature on CED and make a connection to its relevancy to the redevelopment of brownfields.

3.6 Community Economic Development (CED) Movement

3.6.1 Historical Overview

During the decades of 1980s and 1990s the practice of community economic development (CED) became popular in connection with revitalization of impoverished inner city neighborhoods in the United States and Canada. Elsewhere in the world there was similar upsurge of such activities, although they were called by other names such as sustainable development, participatory learning, participatory action research and community based development, among other names. Activities that constitute the practice of CED in the USA and Canada are varied and include establishment of housing, rehabilitation of housing, the development of small to medium scale industries and business and human development initiatives such as job training skills (Stoutland, 1999; Ramm, 1997).

With the escalation of poverty within cities and rural areas all over the world, the work of CED practitioners and academicians is deemed to play an increasing role in developing policies of neighborhood development. As new incidents of poverty arise, academicians will be expected to offer explanations of such new phenomena. They will also be expected to predict outcomes of poverty alleviation projects undertaken by various agencies like the government.

3.6.2 Values of Community Economic Development

Community economic development (CED) is a movement that aims at improving the welfare of members of a specific community. It can be likened to a system. For a system to operate efficiently there has to be certain underlying values upon which its operations are anchored. The value system determines the desired end product of the system and it is upon the value system that objectives of the system are derived. Once a system's values and desired end product are well defined, it is relatively easy to formulate strategies for attaining the objectives of the system. The literature review sought to identify the pertinent elements that the practice of CED ought to manifest.

According to Simons (2001), functions of CED institutions have a number of characteristics, two of which will be discussed below. First of all, the CED functions are designed to multiply opportunities of members of a community to interact with one another. CED activities link economic activities to the residential places of the people. Thus CED strives to provide community residents control of community assets. Take for instance the community land trust (CLT) concept (Ramm, 1997), in which low-income residents are given an opportunity to own a house but not the land on which the house is constructed. Under such an arrangement, the houses become affordable. The practice of local ownership of business and control of development in the community by the residents emanates from this value.

Secondly, CED economic activities focus on a physical community in a known geographical location. This is contrary to the rhetoric of free marketeers like Friedrich Hayek and Milton Friedman who advocate for systems in which independent agents freely engage in agreed upon conditions of transaction in an open market of buyers and sellers (McMurtry, 1998). But Polanyi (1944) observed: “The road to the free market was opened and kept open by an enormous increase in continuous, centrally and controlled interventionism....the introduction of the markets, far from doing away with the need for control, regulation, and intervention, enormously increased their range” (Polanyi, 1944, p.140). The emergence of the geographically focused economic trend can partly be explained by the dissatisfaction of the mainstream economic system, which has marginalized certain neighborhoods. Mendell and Evoy (1997) observe that community economic development is a new interventionist policy instrument targeted to mobilize untapped or underutilized resources in communities.

3.6.3 Institutional Structures of CED

The government has the mandate to provide infrastructure and a conducive environment for its citizens to fend for themselves. Where the government is not fully able to do so, other institutions come in the name of CED. In the USA and Canada the common institutions through which CED accomplishes its objectives include community development corporations (CDCs), co-operatives and housing development corporations

(HDCs), and community land trusts (Shragge & Fontan, 1997; Ramm, 1997, Stoutland, 1999).

3.6.4 Community Development Corporations (CDCs)

Community development corporations (CDCs) are a part of the larger CED movement. In the USA, affordable housing is a major undertaking in CED, especially by CDCs. Others include establishment of small businesses, and job training (Stoutland, 1999; Mendell and Evoy, 1997).

There are several examples of studies in which CDCs have been involved in the redevelopment of brownfields. Milburn (2002) researched the work of Phalen Corridor Initiative. The study looked into steps and challenges the initiative took to redevelop a brownfield project on the East Side of Saint Paul, Minnesota. The research shows the initiative was the collaborative effort of bankers, business executives, city planners and a community development corporation. The essence of the research shows the importance of partnerships in securing funds that were needed to redevelop the site and reuse the land.

Milburn's research emphasized the nature of the problem that faced the community. Between 1950s and 1980s the East Side was thriving with industries. By the 1980s, due

to changing manufacturing technologies, the economy of the area started declining. This was followed by the closure or relocation of some of the manufacturing plants, leading to loss of thousands of jobs and leaving behind underused buildings. The research shows how in 1994 the partners, who included a local CDC, came together to create the initiative that has led to prosperity. The study concludes that: “Redeveloping brownfield sites has led to a community-wide reinvention of blighted areas and brought pride back to a distressed community” (Milburn, 2002, p. 249).

Further research on the role of CDC on brownfields redevelopment has been done by Brachman (2003). She researched the role of community-based organizations (CBOs) in brownfields and other vacant property redevelopment, using a case study approach. She utilized in-depth interviews with executive directors of three CDCs from Chicago, IL, Philadelphia, PA and Racine, WI and came to the conclusion that “despite variations in CBOs role, organizational structure, and external conditions, common successful redevelopment strategies emerge from the cases” (p.14). The CBOs use these common strategies to overcome common brownfields redevelopment barriers such as obtaining site control, gaining local support, and obtaining funds.

3.7 Critique of the Validity of the Literature

The literature review on brownfields redevelopment demonstrates that brownfields are an issue of concern whenever they exist and that they hold a lot of potential for the revitalization of affected communities. Much of the literature focuses on historical

developments of the legislative approaches that have been enacted to deal with the problem. The literature reveals that the research in the field has focused on understanding the barriers of redeveloping and potential benefits these sites hold. There is little research work that focuses on brownfields from the perspective of practitioners who are out in the field doing the actual redevelopment work.

Research on perceptions of CED practitioners is not well reflected in the literature, yet the role they play in revitalizing brownfields is great. This is the gap this current research seeks to fill. The literature reviewed above is very valid to the current research because it provides the basis for understanding how the problem has been analyzed and provides the basis for the current analysis.

Since the CED movement is entrenched in the redevelopment of brownfields, it is important to seek to understand perspectives these organizations hold on brownfields. According to Simon (2001), “CDCs have a commitment to benefit geographically bounded and disproportionately low-income communities” (p. 119). Historically CDCs have focused on housing development (Simon, 2001), but in recent years these corporations have ventured to extend their work into providing service related programs (such as job training and placement, tax advice and educational enrichment) and commercial real estate development (Simon, 2001; Solitare, 2001). Solitare (2001) further observes that in some places, CDCs are becoming involved in brownfields redevelopment.

The literature reveals that cleanup, reuse and environmental justice issues are concepts that are of interest to developers of brownfields. In this chapter an attempt was made to understand the theory of community economic development (CED) that may serve as the basis of comprehending the perceptions of CED practitioners dealing with redevelopment of brownfields. The research recognizes that the practice of CED is varied, yet despite the variation in the practice of CED, there exists inherent elements (values or principles) that tend to be similar in all of them. These values include co-operation and sharing of community resources.

4 RESEARCH PROCEDURES

4.1 Introduction

This chapter contains six sections. The first section discusses the overall multiple-case research methodology that inspired this research. The second section discusses the research design, giving details of the case study research procedures. The third section discusses the population that was the target of the research. The fourth section discusses the instrumentation of the research. These were the tools that the researcher used to conduct the interviews in the field. Section five of the chapter explains the data collection procedure followed and discusses the research design quality criteria. Finally the last section explains how the data was treated – the way it was handled, organized and analyzed and stored.

4.2 Research Methodology

This research was inspired by the multiple-case study strategy that employed a semi-structured interview data collection method to carry out the investigation. According to Yin (1994), the type of strategy selected to carry out a given research greatly depends on three conditions: (a) the form of research questions under investigation, (b) the amount of control the researcher will have over the research events, and (c) the focus of the research, i.e. whether the research will focus on contemporary or historical events. Table 4.1 below gives a summary of the three conditions that should influence the selection of an appropriate research strategy.

Table 4.1: Relevant Situations for Different Research Strategies

Form of research question	Requires control over behavioral events?	Focus on contemporary events	Strategy
How, why	Yes	Yes	Experiment
Who, what, where, How many, How much	No	Yes	Survey
Who, what, where, How many, How much	No	Yes/no	Archival analysis
How, why	No	No	History
How, why	No	Yes	Case study

(Yin, 1994, p. 6)

Table 4.1 gives a summary of various research strategies at the disposal of a researcher: experimental research, survey research, archival analysis, and historical analysis or case study approach. The table provides guidelines of how to select the appropriate study strategy.

In respect to the current research, it was established that the research question focused “how” CDC staff frame issues of brownfield redevelopment. Since the focus of the research was on both historical and contemporary issues of brownfields redevelopment, the researcher had no control over participants’ behaviors or the events. This therefore eliminated experiment, survey, archival analysis and history, leaving case study as the appropriate strategy.

Having selected case study as the appropriate strategy, the next step was to decide the design of the research by determining the specific type of case study to adopt. According to Yin (1994), there are two principle designs of case studies (single – and multiple) both of which can be analyzed in two ways (holistic and embedded) to result in a total of four module case studies: (1) holistic single-cases, (2) embedded single-cases, (3) holistic multiple-cases, and (4) embedded multiple-cases (p. 39). See Table 4.2 below.

4.3 Research Design

The research design of this study can best be described as an exploratory qualitative design that was inspired by the embedded multiple case study design as described by Yin (1994). The description of the embedded multiple case study is presented below.

Table 4.2: Basic Types of Designs for Case Studies

	Single-case design	Multiple-case design
Holistic (Single unit of analysis)	Holistic single-case design	Holistic multiple-case design
Embedded (Multiple units of analysis)	Embedded single-case design	Embedded multiple-case design

In designing a study, the researcher has to think concurrently on two issues: the nature of the research design and the unit of analysis. The use of the term single and multiple pertains to the nature of the design while the terms holistic and embedded are used in reference to the unit of analysis. In a single design the research investigates one “case” only. Examples of “cases” can be institutions, individuals, programs, and policies. In a multiple-case study one investigates two or more “cases.” The current study investigated

perceptions of thirty one community economic development (CED) practitioners from twenty four community development corporations (CDCs). Therefore the study design was inspired by a multiple-case study approach.

An embedded analysis investigates subunits that make up the “case” or “cases”. On the other hand a holistic analysis investigates the “case” or “cases” from a wider perspective. The analysis of collective action frame of CDCs in this study was embedded. Staff members within CDCs, such as the brownfields project managers were interviewed. In addition, different sources of information were investigated such as websites of the CDCs, project reports, video productions, policy documents, and news reports among others. This justifies the use of an embedded analysis approach. Further more extensive fieldwork was carried out that employed both direct and indirect observations (Lofland and Lofland, 1995) of CDCs involved in brownfields redevelopment.

4.3.1 Develop Theory

According to Yin (1994), “Every type of empirical research has an implicit, if not explicit, research design. “... the design is the logical sequence that connects the empirical data to a study’s initial research questions and, ultimately, to its conclusions (p. 19).” For a case study to be able to accomplish this task of linking the research question to the conclusions, Yin recommends five components of a research design that need to be

clarified and they are as follows: (a) a study's questions; (b) its propositions, if any; (c) its unit of analysis; (d) the logic linking the data to the proposition; and (e) the criteria for interpreting the findings (p. 20).

4.3.2 Study Questions

The fundamental research question in this research was to understand how practitioners in the CED movement and specifically those working in community development corporations (CDCs) perceive the redevelopment of brownfields. Because this is a “how” research question, the appropriate research strategy selected was a case study (Yin, 1994).

4.3.3 Research Proposition

The proposition of this study was based on the premises that community economic development (CED) is a social movement, with community development corporations (CDCs) being one of the movement's primary means of implementing CED principles and practices. On the premise that social movements make sense of reality through the process of framing, the researcher theorized that CDCs involved in neighborhood revitalization in Massachusetts do have a brownfields redevelopment collective action frame that guides the revitalization efforts of these contaminated sites. This theory

follows findings from the literature review that depicts CDCs as social movement organizations (SMOs) of the CED movement. If CDCs are functioning as SMOs, then we should expect them to depict a brownfields redevelopment collective action frame. If they do not reflect this brownfields redevelopment collective action frame, then they may not be described as functioning as traditional SMOs in respect to brownfields redevelopment.

4.4 Research Population and Sampling

The population for the study constituted community development corporations (CDCs) in Massachusetts involved in the redevelopment of brownfields. To obtain the contacts of the CDCs, the researcher initially used the website based search engine, Google.com to make a search. This process resulted in gaining access to the website of Massachusetts Association of Community Development Corporations (MACCDC). From this website an initial list of the CDCs was obtained including their telephone, fax, email contacts and physical addresses and names of possible contact persons.

The study relied on a non-probability sampling of CDCs in Massachusetts that agreed to participate, through interviews of their staff member(s) who were available. There were twenty four CDCs that participated with a total of thirty one respondents taking part in the interviews. The data collection protocol that was used for this research is presented in Appendix A. The interviews lasted about one hour.

Ideally empirical research seeks to obtain results for generalization purposes (Trochim, 2001). This is achieved if random sampling is conducted in selecting the subjects of study. The use of a non-random sample can be justified if the purpose of the study can be understood to be an exploration to understand issues pertaining to brownfields redevelopment from a theoretical perspective. Thus the purpose of identifying a population was not to obtain a representative sample; rather it was to obtain enough CDCs willing to participate in the study. This was necessary because, "...there is no known universe of nonprofit organizations from which samples can be taken reliably" (Walker, 1993).

The original design was intended to interview a 100% sample of nine CDCs that had been thought to be involved in brownfields development. However, when the study got underway, it was learned that there were many other CDCs that are involved in brownfields development. These CDCs were included and the number rose to twenty four.

4.5 Instrumentation

The main instrument used in the study was the research protocol that guided the interview. Other instruments that were used in regard to conducting the interviews and communicating were: consent forms, a V.O.R. microcassette-tape recorder,

microcassette tapes, a film camera, films, a laptop computer (loaded with Microsoft office and Nvivo 2 Software), the internet (the World Wide Web and email capabilities), telephone, cell phone, and the fax.

4.6 Data Collection

To get contacts of possible CDCs that would participate in the study, the researcher visited the World Wide Web (www) and made a search using Google search engine. From the Massachusetts Association of Community Development Corporations (MACDC) website, the researcher obtained basic contact information of member associations. Initial contacts were made using emails, or phone calls during which the researcher explained the purpose of the research and requested for get in touch with the executive director. In cases where it was difficult to contact the executive director, members of staff that have dealt with brownfields were contacted. Once the initial contacts were made the researcher made visits to the CDCs sites to introduce the research and arrange interviews and observations for data collection purposes. In some cases the prospective interviewees were happy with the explanation that the researcher provided by phone or by email; thus they went ahead and organized an interview date, time and venue.

Interviews were recorded then later transcribed into Microsoft word documents. As for the photographs that were taken the researcher processed the films that were created to

obtain the photographs at commercial outlets. This research yielded qualitative data, which was collected through interviewing at least one staff member of each CDC involved in brownfields development projects. During each site visit relevant documents that had information on the CDC in general and brownfields project work were collected. Such documents formed the second source of data.

4.7 Treatment of Data

The basic data the researcher had was tape recorded interviews from the field. In some cases, the researcher did obtain documents such as reports and videotapes from people that were interviewed. The first step that the researcher took once each interview was completed was to listen to the tapes and record the interviews on paper before typing the interviews into Microsoft word documents. For each interview, a file was created and saved and a printout of the interview was made.

4.7.1 Unit of Analysis

To understand the brownfields redevelopment collective action frame of the targeted practitioners, the researcher conducted in-dept interviews of members of staff of CDCs in Massachusetts, to obtain raw data of the perceptions and views of the practitioners. The

“cases” of this study were community development corporations (CDCs) involved in redevelopment of brownfields in Massachusetts.

The researcher interviewed practitioners of twenty-four CDCs. Of the twenty-four CDCs at least one member of the staff directly involved in brownfields projects within the organization was interviewed, except six CDCs in which two practitioners were interviewed. A total of thirty-one practitioners were interviewed. Although the preference was to interview all the executive directors, it was not always possible. The list of all CDCs that participated and the individuals interviewed is in Appendix B.

4.7.2 Initial Data Organizing

Once the raw data from the field (in form of scribbled field notes, direct recordings) was obtained, a write-up of the CDC was prepared. The method used here was adopted from Miles and Huberman (1994). According to Miles and Huberman (1994), a write-up is an intelligible product for anyone, not just for the field-worker (p. 51).” Once the write-ups for each field visitation were prepared contact summary sheets and document summary forms were prepared to process the data further.

- **Contact summary sheets**

The researcher developed a contact summary sheet, which is basically a single sheet in which a summary of questions about a particular field contact were recorded and answered briefly. These questions were derived from the write-up notes prepared earlier.

- **Document summary form**

The document summary form is a form that the researcher developed to explain the significance of each document collected from the field (Miles and Huberman, 1994).

4.7.3 Linking Data to Propositions

The researcher utilized Table 4.4 below to link data to the proposition and research questions.

Table 4.3: Data Processing Matrix

What information/questions were asked?	Why did I need this kind of information?	Theory
What is the goal of your organization in relation to redevelopment of brownfields?	These were opening questions to give the background of the CDC.	CED practitioners were expected to provide general information of their organization.
Why are brownfields a problem from your perspective?	This question focused the interview on brownfields to elicit diagnostic framing task performed by the practitioners' frames.	CED practitioners were expected to discuss problems that the existence of brownfields pose to their efforts of redevelopment in monetary terms as well as the delays encountered to complete projects.
To what or to whom do CED practitioners attribute brownfields problems?	This question served the purpose of eliciting the diagnostic framing task performed by the practitioners' frame.	CED practitioners were expected to pinpoint who or what they believed was the root cause of problems associated to brownfields.
What solutions and strategies do CED practitioners suggest to solve brownfields problems?	This question sought to elicit the prognostic framing task performed by the practitioners' frames.	CED practitioners were expected to describe what they perceive brownfields properties to be like.
What justification do CED practitioners claim for their participation in redeveloping brownfields?	This question sought to reveal the motivational framing task performed by the practitioners' frames.	CED practitioners were expected to reveal a brownfields redevelopment collective action frame that guides the revitalization efforts of contaminated sites.

4.7.4 Criteria for Interpreting the Finding

The research proposition (the theory that guides this study) states: "... CDCs involved in neighborhood revitalization in Massachusetts do have a collective action frame on brownfields that guides the redevelopment of these contaminated sites." (See section 4.3.3 - Research Proposition, above).

Essentially then the rival theory (Yin, 1994, p. 27) is the claim that CDCs involved in neighborhood revitalization in Massachusetts do not have a collective action frame on brownfields redevelopment that guides their site revitalization efforts. The analysis of the data was essentially a search for evidence that either supports the research proposition or the rival theory.

4.7.5 Research Processes

This research entailed coming in contact with human subjects. According Southern New Hampshire regulations, the research had to be authorized by the Institutional Research Board (IRB). The researcher submitted a proposal to the IRB and was granted permission to conduct the study. Once the permission was granted, the study proceeded as follows:

- The researcher contacted potential CDCs by phone/email, and explained to them the purpose of the research. During this period appropriate persons to be interviewed were identified and interview appointments were made where possible.
- On the day of an interview, the researcher traveled to the CDC site. Interviews were conducted one-on-one. Before each interview session, the researcher once again explained to the interviewee the purpose of the interview. The interviewee was requested if he/she was comfortable having the interview tape-recorded. If the interviewee was in agreement with the conditions of the interview, he/she was requested to sign a consent form (Appendix A-1). The researcher then went ahead and carried out the interview with the guide of the research protocol (Appendix A-2), recording it using a tape recorder, taking notes and collecting any materials that the interviewee was willing to provide. At one organization the researcher was given a video the organization had produced to explain one of their projects. In some cases the researcher went out and took photographs of project sites. All tapes were labeled, giving the name of the interviewee, and date of the interview. The labeled tapes and all the documents collected from each site were labeled and placed in one folder for future use.
- Transcribing recorded interviews. The researcher listened to the recorded interviews and transcribed each one of them by hand and then typed them into Microsoft word documents and saved them as word files. Any notes that were taken, and any information that was contained in the documents collected was also typed into word and saved under the same file. This file was labeled as the

raw interview word files (RIWF). This process was repeated for all the CED practitioners such that for each interview, a RIWF was created. Later on the RIWFs were transferred to Nvivo software for analysis. To be able to transfer these RIWFs, they had to be converted into text files and labeled Text Interview Word Files (TIWFs) and saved in Microsoft word.

- Analysis of interviews. Nvivo qualitative research software was used to analyze the interviews. To accomplish this task, the researcher created a project folder and labeled it brownfield project: all the files were then saved under this project folder. Once the Nvivo brownfield project was created, and all the TIWFs were transferred into the Nvivo project. For each TIWF an Nvivo project file (NPF) was created.
- Coding was done using the Nvivo software. To facilitate the process, the researcher collaborated with two other PhD research students – Jolan Rivera and Innocentus Alhamis- to create the codes. The following codes were created:

Table 4.4: Codes used in the coding process

Framing Task	Code	Appendix
Diagnostic Framing Task (Problem identification)	DP	Appendix B
Diagnostic Framing (Problem attribution)	DA	Appendix C
Prognostic Framing (Solutions)	PF	Appendix D
Motivational Framing	MF	Appendix E

With the creation of the codes and with all the NPFs in place, the coding commenced.

The researcher had to read through each NPF, coding sections of the NPF using appropriate codes shown above.

- Generating code files. Once the coding was completed, the next step was to generate code files. Nvivo is programmed to generate and combine into one file all similar codes, for example DP code. This generated a file named diagnostic framing – problem definition code file. Thus for each codes DP, DA, PF, and MF a corresponding code file was generated.

- Tabulation of the Code files

For each code file a table was created in Microsoft word and extracts from the code files were transferred into the table. Four tables were created for each code.

All codes were transferred from the code files and matched to their original interviewees as shown. These tables are presented in Appendix B, Appendix C, Appendix D, and Appendix E.

- The researcher then read through the extracts in each table and searched for emerging trends and patterns in the responses and labeled any similarities in the thoughts of the interviewees. This then formed the basis of writing chapter five.

4.8 Limitation of Study

Limitations due to Sampling - External Validity

The sample used in this study can be described as a purposive/convenience sample because it involved participants selected from Massachusetts Association of CDCs who were willing to participate in the research. The sample was small and limited in depth, in terms of number and duration of interviews. Because of the nature of the sample, external validity (generalization) of the results is limited. Thus the sample cannot be described as being representative of the community economic development field, community economic development programs nor of CDCs in Massachusetts. As a result of this, the results cannot be generalized beyond the CDCs that were studied because of the inherent bias of the data. The data cannot be presumed to be normally distributed. That is why this study can only be described as an exploratory study, whose findings should be treated as exploratory pending future verification.

4.9 Summary

This chapter has detailed the overall methodology and research design that was used to conduct the research. There were a number of obstacles encountered in implementing the study. One of the main obstacles was that of getting an appropriate member of staff of the CDCs to accept to participate in the interview. Ideally the research had been designed

to interview at least two people from each CDC, but this was not possible in most of the cases.

In trying to make contacts, the researcher encountered situations whereby phone calls were not answered and so a message was left in the answering machine with a hope for a call back. In some situations this never took place. When this happened several times, the researcher sent follow up emails to individuals concerned. There were some organizations that never responded to the researcher's calls or emails. Others were not willing to participate either because they were short of staff or they were simply not in a position to participate.

Overall there was a lot of cooperation and assistance provided to the researcher from those organizations that accepted to be interviewed, and this facilitated the interviewing process.

5 RESEARCH FINDINGS AND DISCUSSION

5.1 Introduction

This chapter is organized into seven sections, presenting the findings and discussions of the findings. The first section is the introduction, which gives a brief overview of the whole chapter. The second section presents the findings of the analysis of the core diagnostic framing task. In the first part of the diagnostic framing task, interviewees were asked to explain, from their perspective, why brownfields are a problem. The second part of the diagnostic framing task, presents what interviewees attributed the problem of brownfields to. Section three presents findings of the analysis of the prognostic framing, presenting solutions and strategies of solving brownfields problems they identified. Section four presents the motivational framing – the factors that practitioners use to either justify their involvement or to recruit adherents, constituents, bystander publics and antagonists to be involved in brownfields redevelopment. The fifth section discusses the unexpected findings and the last section gives a summary of the findings. Table 5.1 summarizes the framing tasks and their associated research questions..

Table 5.1: Framing Tasks and Associated Research Questions

Framing Task	Research Question (s)
1. Diagnostic Framing	a) Why are brownfields a problem from a CED perspective?
	b) To what or to whom do CED practitioners attribute brownfields problems?
2. Prognostic Framing	What solutions and strategies do CED practitioners suggest to solve brownfields problems?
3. Motivational Framing	3. What justification do CED practitioners claim for their participation in redeveloping brownfields?

5.2 Analysis of Diagnostic Framing Task

The core diagnostic framing task of a collective action frame has two parts. The first part answers the question of why an issue is a problem from the perspective of the movement. In the case of this research the question being answered is why brownfields are a problem from a CED perspective. The second part of the framing attributes the problem to some cause. It answers the question “who or what causes the problems?”

5.2.1 Why are brownfields a problem from a CED perspective?

Twelve respondents associated brownfields problems to either high costs of development; poor health of residents; drug dealing; safety; loss of jobs or water contamination. Table 5.2 gives a breakdown of the major themes discussed by the respondents. The numbers in the Table 5.1 do not add up to twelve because some respondents mentioned more than one problem.

Table 5.2: Major Diagnostic Themes

Why are Brownfields a problem?	No. of Respondents
They affect development, for example by increasing costs	4
They contribute to poor health of residents	3
They create a haven for drug dealing and crime	3
They compromise the safety of neighborhoods due to fire risks	3
They contribute towards loss of jobs in neighborhoods	3
They contaminate water and soil, making it unsafe for use	3

The association of the presence of brownfields and high cost of neighborhood development dominated the framing. A typical example of how the interviewees perceived that the presence of brownfields in the neighborhoods as contributing to difficulties of redeveloping the neighborhood is explained by a community development director of one large CDC. According to her, a lot of abandoned land that is in the neighborhood has all things dumped on the land that are hazardous, making it difficult to do development on the sites. Making a similar argument, the president and executive director of a neighboring large CDC observed that because of the presence of lead in the soil in the neighborhood, residents were prevented from gardening around their homes. Her CDC had tested the soil and found it to contain high levels of lead.

Framing the issue in similar terms, a project manager with a third CDC in the vicinity of the other two CDCs explained that the presence of brownfields increases costs of redevelopment.

So the challenges are really, ... [brownfields issues] just making the whole process of redevelopment expensive, complicated, and time consuming. It forces us to go out and get additional funding sources to pay for them. You know, currently the funding sources we need to pay for that are different from the ones going to finance or fund a straight real estate deal. So it adds a lot complexity in costs.

He continues to build the high cost argument by adding that the problem is complicated when liability issues are incorporated.

...the problems/some of the challenges in the very early stages when you are trying to acquire a property or when you are trying to get the owner of the property to fix it up or to redevelop is the lack of knowledge or perception of the problem. If there is a property in the neighborhood that is blighting the

neighborhood, holding [it] back, often times the owner of that property won't test it to see what type of contamination there is because they do not want to know. If they know, they will be forced to clean it up. So one of the general problems we have is people or property owners holding on the property and leaving them vacant because they don't want to be held liable if they test it to see what is in that property.

The association of the presence of brownfields and health of neighborhood residents also dominated the diagnostic framing. A project manager with a medium sized CDC in Boston, for example estimated that, over 50% of people in the community his CDC serves, have respiratory problems. He associated the respiratory problems with the presence of brownfields in the community. Making a similar argument, the executive director of a small CDC in a rural town thought that high rates of cancer observed in their community were caused by the presence of contamination associated with a brownfield in the community. This property was a former dumpsite, but is now sealed off from the public. However, he did indicate that there has been no proof to this claim. In his words he said: "Not only did it [the dumpsite] contaminate the soil but the people..."

In explaining the connection between the contamination and the health issues, the interviewees cited natural resources such as water and soil as mediums of environmental concern in people's health. An executive director of another rural CDC made this linkage by saying that environmental problems due to the presence of lead raised concerns on safety of groundwater. Quoting volatile organic compounds (VOCs) as an example, she explained that VOCs were used as cleaning solvents in a former gun factory that is now a brownfield that caused soil and ground water problems.

Brownfields are officially defined in the Brownfield law as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant” (Brownfield Law, 2001). A comparison of the CED practitioners’ definition with the official definition shows that there are points of agreement in the sense that real and perceived contamination is considered by both the practitioners and the law as a primary component of what constitutes brownfields.

A comparison of this picture painted by CED practitioners with that of the public is of interest at this point. The public probably recognizes brownfields as abandoned factories or industrial complexes that exist in most cities and urban centers, although brownfields can also be found in the suburbs. The perception of the public and that of the CED practitioners does not differ greatly based on this comparison.

Former industrial sites such as factories and former commercial sites such as gas stations and dry cleaners are more often mentioned in the literature as brownfields. Hazardous wastes from these facilities are mentioned most often as the main contaminant. On these aspects, the CED practitioners concur with what is known and documented in existing literature. However, residential sites are rarely associated with brownfields in existing literature. This research does establish that CED practitioners who normally get involved with providing affordable housing to distressed neighborhoods recognize former residential sites as brownfields. Properties close to railway tracks are also rarely

mentioned in existing literature as brownfields. Some of the CED practitioners interviewed pointed out that land close to railway tracks can be contaminated and thus can be referred to as brownfields.

5.2.2 To what or to whom do CED practitioners attribute brownfields problems?

Asked what they perceived to be the cause of brownfields problems interviewees responded by describing them. They were essentially responding to the question: “What makes brownfields, brownfields?” A description of what constitutes brownfields is a legitimate response to the attributional diagnostic framing question.

From the interviews at least twenty out of thirty one or about sixty-six percent of the CED practitioners described brownfields as contaminated or polluted, or having some hazardous material. Thus, contamination was the most common description of brownfields. Others terms used included vacant, abandoned, dilapidated, blighted, distressed, old factory buildings, houses, properties or land. Others depicted brownfields as ugly properties, buildings or lots that are underused, overgrown with weeds, and filthy. They largely acknowledged that these properties would have been former industrial sites such as shoe factories, and gun manufacturing facilities, among others. They also acknowledged that some of the sites were former commercial sites such as, gas station facilities, dry cleaners, and auto repair shops. Properties that were formerly dumpsites

also featured in the list mentioned by the interviewees. Interestingly, former schools and residential sites were also mentioned as being brownfields.

Twelve out of the thirty one interviewees specifically mentioned the following as the most likely contaminants in question: lead from lead paint, asbestos, oil spills from leaking underground heating oil tanks in residential homes. A community planner with a large CDC explained that:

This area right here is a project of ours, which is a brownfields redevelopment project. It is an old parochial school. ... The Catholic Church closed down this church, may be 15 - 20 years ago and they destroyed the church. ... And we acquired this property and we have been cleaning it up. And it has been abandoned for such a long time, that it became a brownfield ... it has asbestos, and interestingly enough pigeon guano – [pigeon droppings].

Four of the respondents defined brownfields in a more elaborate manner, but still retained the theme of contamination as the underlying factor. According to the executive director of a small CDC, a brownfield “is land that has some kind of hazard, usually because of something that was there before - a factory or some kind of facility that was there that caused contamination to the land.” An executive director of a large CDC defined a brownfield as “a site that suffers from environmental contamination often as a result of neglectful practices in the past and that has to be dealt with before it can be put back into productive use.” On the other hand an executive director of a small CDC in a rural town thinks of a brownfield as some property that needs some environmental remediation. The above definitions have a lot of resemblance in the sense that they define brownfields in respect to the presence of some kind of contaminant or hazardous material in the

property. The next definition differs slightly, for it defines brownfields in relative terms to conditions in the surrounding environment. One of the project directors defined a brownfield as “any plot that contains pollution above the norm of the neighborhood.”

5.3 Analysis of Prognostic Framing Task

What solutions and strategies do CED practitioners suggest to solve the brownfields problem?

Prognostic framing addresses proposed solutions and strategies to identified problems. A range of solutions to the identified brownfield problems were discussed by the practitioners. A majority of the practitioners preferred to address the brownfields problem using policy instruments such as liability relief legislation, and zoning relief legislation among others. A second approach that the CED practitioners discussed focused on cooperation and partnerships with governments and the private sector. For example, some CDCs depend on cooperation with local municipalities to get clearance of land titles to enhance transfer of ownership. Community organizing, support and cooperation from other organizations was a third solution on which the CED practitioners focused. For instance, CDCs in many cases depend on cooperation of the community in applying for grants from federal agencies such as EPA. Insurance policy was a fourth strategy that respondents discussed as a solution to problems associated with brownfields. Last but not least, the CED practitioners discussed research and information gathering as

a solution to the brownfield problem. Table 5.3 gives a summary of the major prognostic framing tasks and the number of respondents who discussed them.

Table 5.3: Prognostic Framing Tasks

Prognostic Framing Task	Number of Respondents	Percentage
Use of policy instruments	11	35%
Forging cooperation and partnerships	6	19%
Community organizing	5	16%
Insurance	4	13%
Research and education	2	6%

5.3.1 Policy Reform Solutions

a. Liability Relief

One of the biggest brownfield problems discussed by CED practitioners was that of liability. Fear of liability by brownfield owners resulted in owners of the suspected properties being reluctant to redevelop the properties or to sell them in case they found them to be contaminated. Thus, one solution that CED practitioners articulated involved reforming liability laws to provide brownfield owners incentives to redevelop their properties without fear of being sued. An executive director of a CDC in one large city in Massachusetts framed this solution in the following manner:

We have been working with the Attorney General because we have been facing that situation [fear of liability] here, where we have got big institutions like Bank of America. We want them to dispose of their property, or give us the property or give the city the property, then clean it up and then go away. And that is what they want. But in the past, you are never able to get away, because you have this residual liability. The Covenant-Not-To-Sue will at least loosen Bank of America from liability. And for that, Bank of America would be willing to put extra money into the building of the park. So it is like a three party deal: you have the city, you have got us and you got Bank of America, and this instrument, the

Covenant-Not-To-Sue. That helps it all work. ... those kind of things that put a cap or limit liability, create a whole different set of dynamics, and make it more likely to happen.

Other interviewees who discussed this solution of policy reform to relieve owners of the burden of liability included the following: An executive director of a CDC that is involved in consultancy also perceived Covenant-Not-To-Sue as a solution to provide liability relief for companies that have moth-balled their properties in the city. An executive director of another large CDC and senior policy analyst with neighboring CDC actually discussed specific cases where such policy reforms have been used to lift the liability burden off the backs of non-polluters who purchase such brownfields.

b. Zoning Relief

According to a community planner, interviewed in the study, zoning laws pose problems to efforts to redevelop brownfields. He says: “Current zoning laws do not allow for mixed use of land. Thus housing and industrial development are not allowed in the same vicinity.” He frames his solution as a need for “Policy advocacy to change the zoning laws.” The zoning law reform approach is shared by other CED practitioners such as a senior housing director a CDC that participated in the research. She framed the solution in a similar manner:

The city is looking at the zoning along the North River Corridor. This is basically an area in the city that does have most of the brownfields properties. The city is trying to encourage the development of that area. So they are looking at zoning, trying to provide incentives to developers

Another housing director in a medium sized CDC framed his solution in equivalent terms but in addition emphasized the need for a transformation in the way people think about land usage. He argued that people need to go through a transformation process on how they think about traditional industrial land usage. For instance, there are some initiatives in the city of Boston that have tried specifically to maintain or continue the traditional industrial use of certain lands which are targeted for residential use. He believes that the transformation is an ongoing process. The housing director's argument is that over and above zoning policy reforms being advocated, people's perceptions need to change so that they can accept land that was traditionally used for industrial purposes to be used for other purposes such as residential.

C. Grants and Interest-Free Loans

One of the biggest problems that CED practitioners discussed is financing. The practitioners sought policy reforms in the financing of the acquisition, assessment, cleanup and redevelopment of these properties. A typical framing of the solution was a preference for federal, state or local governments providing grants as opposed to loans. This approach of "grants-not-loans" typified by the words of an executive director of one rural CDC:

I would like to see cleanup money available as grants. I am not sure how the mechanism will be, but not much is going to happen until money is available. ... Some of these properties are going to languish. They are just going to sit there.

The framing of the solution of the funding problem around policy reform was elaborated by a director of community development, who provided detailed insights on how CDCs are going about achieving these reforms. She says:

One of the things is we are involved in a coalition of CDCs. The Massachusetts Association of CDCs around legislative issues with the state. Actually one of the issues this year has been around brownfields funding and increasing the amount of funding.

The housing development director frames the solution in a very similar language and gives an example of his own CDC as a beneficiary of a grant rather than a loan from MASS Development. He thinks that even low cost loans are not good enough incentives for some developers to take up certain projects. He narrated how MASS Development Corporation was willing to provide a grant rather than a loan for its affordable housing project. He had this to say of MASS Development:

So it was a very bold and innovative approach that MASS Development took. You know the incentive associated with providing a low cost loan, I do not think is enough for a developer to take that project.

Another executive director of a rural CDC acknowledged that grants are an important instrument for dealing with brownfields problems but thinks that the necessary funds are already available to solve the problem. Here is how he frames the solution.

It is a problem, but it is I think, a problem for which we have resources to fix it - both EPA site assessment funding and cleanup funding

He seems to believe that the problem is already solved, and all that needs to be done is to access the money and carry out the redevelopment. Another CED practitioner that differed in the way he framed his solution was the community planner. He does agree with the rest of the practitioners that funds are needed to assist in the redevelopment of

the brownfields but his framing of the solution differs from the rest. He recommends nontraditional sources of funding as an alternative source of funds.

In a follow-up inquiry on the meaning of “nontraditional” sources of funding here was his response:

... I might have been referring to pockets of land that are not going to be redeveloped in a traditional way. For example, one major brownfield in our neighborhood along the Spicket River is going to be turned into a 3 acre park; we worked with residents and the bank owner for years negotiating a solution where Bank of America itself conducted a complete remediation and is also contributing \$200,000 toward park construction. Then there are the alleyways, which could be considered brownfields: they are sites of illegal dumping, overgrown with weeds, etc. We are working with corporate partners like Timberland to contribute volunteers and funds to transform those spaces. I think that's what I meant. The "traditional" funding is more like the established state and federal brownfields funding programs.

Three practitioners, one of them, a senior policy analyst advocated for interest free loans as a solution to the funding of brownfields.

d. Litigation

A fourth area of policy reform that the practitioners perceived that needs attention is in litigation. One problem with the redevelopment with brownfields is the reluctance of owners to redevelop their plots. When these vacant properties become a safety issue to the neighborhood then they need to find the owners of these properties. According to the executive director of a small urban based CDC, this is made difficult due to existing laws and she frames the solution in this manner:

I think that some sort of new law has to [be passed] to make that process really tangible. That we do not end up with those problems of vacant lands forever; So that we can find the owners. That is what I think. I think that if there was a way to change the law, this process could be faster than what it is now. That is one way we can help.

Thus she frames the solution as policy reform that will speed up the process of finding the owner, and if that fails, then the city can take over the property and be able to initiate a process that will reduce safety concerns.

5.3.2 Cooperation and Partnerships

Another solution talked about by six CED practitioners was framed as cooperation and partnerships strategies with various entities such the local city administration, state officials, federal officials, the private sector and the community.

a) Cooperation and Partnership with the City Administration

A project development manager of a large CDC spoke of how her CDC “was able to work cooperatively with the city administration to clear title in land court and arrange for their transfer.” With this strategy the city administration has legal powers to transfer land titles to CDCs that are able to redevelop them. The cooperation-partnership, is also

reiterated by the executive director of a small CDC, who framed it as a partnership with municipalities. She had this to say:

... if one of the municipalities has a site and they cleaned it up and they contacted us that they wanted affordable housing on it, then we could participate with them. We would partner with them. That is the only way at this point in time that we would consider doing anything with brownfields sites - to partner with the municipality.

b) Partnership with the Private Sector

The cooperation-partnership frame resonates well with project managers such as this particular one who expanded on the strategy by suggesting that the cooperation should be extended to include private entities. Here is what he had to say:

One, we have [more] access to money for remediation than for-profits do. So we can partner with for-profit organizations and bring them tremendous advantage in terms of bringing them available land at minimal cost to them. At the same time, improve the quality of remediation that is done in the community. It is not a role we want to play but it is a role we think we have to play. No, we can't develop every brownfield in [our neighborhood], but we can partner with everyone who is developing a brownfield in [in our neighborhood], and work with them to better manage it for the communities.

The logic of the partnership lies in the fact that CDCs do have more access to resources than the private sectors do. In this particular case, CDCs have access to land at a much cheaper price than private investors. On the other hand CDCs do not have the redevelopment resources such as funds, which the private sector has. A senior housing development of a CDC that participated in the research also had similar view when she said that to handle the start up cost of remediation, somebody to partner with is essential to make it economically feasible. An executive director of one of the large CDCs

attributed the success of a brownfield project his organization completed to partnership.

He said:

If the partnership that worked on those projects didn't have a strong vision, and a lot of support and other financing in place to bring a state of the art health center and a supermarket, there is no way we would have gotten the public support we needed

5.3.3 Community Organizing, Support & Cooperation

The CED practitioners depicted community support as an important solution to resolving brownfields related problems. According to an executive director of a large CDC in Boston, the solution to keeping low income and minority neighborhoods from getting more polluted, is in getting organized. She states that getting such neighborhoods well organized will enable them to protect themselves.

The community planner also framed the solution to brownfields problems as one that needs community organizing. He related how his CDC had been trying to get people bonded to the neighborhood itself by building both family and community assets.

This "community organizing strategy" was emphasized by a housing director:

... we always feel that we have to have community support ... Partly because it is part of our mission to respond to community needs and desires but also we do get concessions from the city. Take for example, for zoning relief, with the new construction of home ownership it did not comply with local zoning. So we needed to have municipal support in what we were doing. And when you get

municipal support you change the zoning, get zoning relief, and in order to have that we had to have neighborhood support. We can never do anything in a vacuum. ... we need neighborhood support.

5.3.4 Insurance Approaches

CED practitioners see insurance programs as a solution to brownfield redevelopment problems. One participant framed the solution in the following words:

We are contemplating getting insurance that will cover us. There is a form of insurance out there for CDCs doing development on marginal properties that will protect us from any kind of liability from environmental problems that may come up. So we were looking into doing that....

The above perception is echoed by another executive director of a small CDC, who saw insurance as a solution to the problem of investors who get turned down by banks that do not want to lend out money for development taking place on brownfields due to fears of liability.

One of the participants gave an example of his own CDC taking advantage of insurance policies available for protection against liability. He explained that his CDC took advantage of existing insurance programs that have been tailored to meet the needs of CDCs dealing with brownfields. The way the insurance works is that it limits the liability of CDCs ... in case they get sued.

5.3.5 Research & Information Gathering

A fifth solution that the CED practitioners discussed involved research and information gathering. One of the participants framed the solution as follows:

...coordinating efforts to determine the extent of environmental contamination within the project area and arrange the necessary clean up. Like many urban brownfields, it is often the fear of the unknown that prevents productive reuse. A critical element of the CDC's pre-development efforts was to quantify the extent of the contamination and to coordinate the most cost efficient development of the site.

This approach is also discussed by another executive director of a large CDC.

We try to get as much information as we can, ... Development is about managing risk and saying: "How do you balance it?" There is no such thing as totally risk free real estate project. ... we do everything we can to look at old maps of the site to know what was there. Was there a factory there before? Is it on an aquifer something beneath there? Trying to understand the history of the site...

A project manager of another CDC also framed the solution in very similar terms .

You can find some basic information about the property. You can go back and look at the history onwhat type of business and industries were there. You can look up in DEP databases, and see if there was a reported release/contamination on the property. You can find out some information, with a little digging, if you know where to look. If there isn't a lot of information then you are stuck. Then hoping there isn't a big problem you got to go out, have it tested and you have to raise some money.

5.4 Analysis of Motivational Framing Task

What justification do CED practitioners give for their participation in the redevelopment of brownfields?

From the social movement literature, the motivational framing task is about convincing people, who are not in the movement at all to participate in or otherwise support the course the movement stands for. Motivational framing is defined as the process in which social movements assign meaning to events in ways that are intended to mobilize potential adherents and constituents, to garner bystander support.

Adherents, constituents, bystander publics, the media, potential allies, antagonists and elite decision makers, are groups of people or organizations that SMOs target in mobilizing collective action. Adherents and constituents are targets that are part of the SMOs alliance system. On the other hand bystander publics, media and potential allies are neutral and are courted by the SMO alliance as well as the conflict sector. Antagonists/counter-movements belong to the conflict sector, while the elite decision makers could belong to either side depending on circumstances.

There are two scenarios that can unfold from the analysis of the motivational framing task. There is a likelihood that the CED is a social movement that conforms to the description above. If so, there will be evidence of CED practitioners actively engaging in mobilizing adherents and constituents to recruit bystanders publics, the media and potential allies to join them in promoting redevelopment of brownfields. On the other hand there will be evidence of them trying to undermine opponents.

The second scenario would be that CED practitioners are motivated to redevelop brownfields but not motivated to recruit others to join them in the redevelopment of brownfields. This section of the analysis seeks to determine the predominant scenario. Table 5.4 below tabulates reasons that motivate the CED practitioners to engage in the redevelopment of brownfields, as obtained from the interviews.

Table 5.2 Motivational Framing Tasks

Motivational Framing Task	No. of Respondents	Percentage (%)
To develop affordable housing	9	29 %
To Revitalize neighborhoods	7	23 %
To address safety, crime and drug issues	7	23 %
To address health concerns	6	19 %

The numbers in the Table 5.4 suggest that there were nine respondents out of thirty one who indicated that they are motivated to redevelop brownfields so as to develop affordable housing. This is only about twenty-nine percent of the respondents.

Revitalization of neighborhoods and safety, crime and drug issues motivated twenty-three percent of the respondents and health concerns motivated nineteen percent of them.

To understand if the respondents were seeking to recruit adherents and constituents to be involved in the redevelopment of brownfields, a close look of individual responses is needed.

5.4.1 Affordable Housing Development Motivation

Developing affordable housing on brownfields is one of the most popular activities in which CED practitioners are involved. The aim of developing affordable housing is to ensure that poor and middle income families can afford to buy or rent housing especially in neighborhoods where market forces have driven housing prices beyond the reach of the poor. To ensure that the poor afford housing, the CDCs engage in affordable housing development. In an attempt to acquire land to put up the affordable houses, the CDCs meet stiff competition for the land from private developers. This forces the CDCs to seek alternative sites and in many cases, former industrial sites are the alternative sites. Take for instance the argument of one CED practitioner of a medium sized CDC in Boston. According to this participant, his CDC is involved in redevelopment of affordable housing in former industrial sites because of what he calls the “housing crunch” in their neighborhood. He states that:

With the housing crunch that has really gripped [our neighborhood] for a long time, we started looking at non-conventional places to put residential properties. One of the logical places is the industrial base - the industrial zone properties that are not being utilized now.

The participant above argues that good economic factors have created attractive conditions for high demand for land. The proximity of the neighborhood to institutions of higher learning has made good land too expensive for this CDC to purchase for the sake of building affordable housing. With such a high demand for land, the poor and middle income families are likely to be left out.

Similar sentiments were expressed by other housing directors that were interviewed, who argued that there has been a dramatic rise in housing prices in their city, which has prompted a public outcry for the city to support affordable housing initiatives.

Brownfields which are perceived as less desirable, and more expensive to develop, create an opportunity for their CDC to develop affordable housing.

What clearly comes out of the discussion above is that it is CDCs that are seeking ways and means to develop affordable housing. There is no indication of them appealing to other entities to do the same. The trend of CDCs seeking ways to develop affordable housing themselves is repeated by executive directors and project managers that were interviewed.

5.4.2 Neighborhood Revitalization Motivation

Twenty three percent (23%) of the respondents were motivated to be involved in brownfields redevelopment for the sake of revitalizing their neighborhoods or downtown area of their cities. The involvement they suggested ranged from cleaning up any vacant brownfields properties to developing them into some form of commercial entity. How that would bring about revitalization is expressed clearly by one of the participants as follows:

As time goes on, if we are successful in bringing revitalization in the down town area and the down town area becomes a striving area, then property values will go up. Then what will happen private property developers will become interested [in investing in the downtown]

It is important to note that even though many of these CDCs are involved in the cleanup of brownfields, they do not do so as an end in itself. The cleanup is done as a means towards achieving some economic development. This issue was clarified by one of the executive directors that was interviewed as follows:

We just don't clean [brownfields] for the sake of cleaning. Because it costs money and you have to do something with it that will make you money. I am sure there is contamination around here that we do not know about, but we are not going to clean it just to make it clean. We will have to be able to get the money to borrow and then we will pay it back to a development financier, or from a CDC [that] we don't have to pay it back.

Others put emphasis on this point of not being involved in the redevelopment of brownfields for the sake of just cleaning the contaminated properties as an end in itself but for the sake of achieving some kind of economic development. This particular

participant said that: “We got involved in brownfield issues because of economic development.”

These sentiments were echoed by another interviewee who said:

Basically that [brownfields redevelopment] is not our primary focus. We got involved in brownfield issues because of economic development.

The economic development frame was reinforced by another participant who said:

Yes, there is definitely a preference. I don’t think we are environmentalists just trying to clean brownfields for the sake of cleaning brownfields. Usually it gets cleaned up in conjunction with a development project. I think that is a double win, if you are cleaning brownfields and if you are building affordable housing
....

Thus, affordable housing development is one of those activities in which CDCs engage in to bring about economic development. Here again we see that CDCs are motivated to be involved themselves and there is no evidence of motivating others to do the same.

5.4.3 Safety, Crime, and Drugs Concerns

Twenty-three percent of the respondents indicated that their CDCs were motivated to redevelop brownfields due to a combination of safety concerns or crime and drug dealing issues that are perpetuated by the presence of brownfields in their neighborhoods. An executive director of a large CDC framed the issue in the following manner:

People were getting hurt going in there [the brownfield site]. There was some bad activity/drug activity and crime that was coming from there. So it was seen as a negative presence in the neighborhood. Even by just leveling down the building and cleaning up the site, was going to make a difference. To go beyond ... there and ... turn that into a resource back into the neighborhood is something that people felt strongly about.

Another executive director expressed similar sentiments regarding the benefits of public safety and crime reduction in neighborhoods. She argues that with increased public safety, and reduced crime, there will be an associated increase in property values which essentially is of economic value to the neighborhood. According to her:

Those benefits are: Increased property values of surrounding properties; stabilized communities around things like reduced crime, or public safety; increased pride of investors to ownership of the neighborhood among the people who live there.

One of the reasons that justified the involvement of his one CDC's in the redevelopment of a brownfield property in the town of Greenfield was the health risk factor. According to him, because the site was an abandoned site, it was potentially hazardous especially to children, who would be hurt by its presence. This was the motivation for the CDC to get involved to redeveloping it, and in so doing get the building into some economic use.

A senior project director dwelt on this theme of crime as an issue that they have had to deal with as they seek to achieve economic development. In explaining how his Urban Edge CDC got to be involved with redevelopment of brownfields, he credited the efforts of a neighborhood organization called Property Task Force that identified these particular sites.

They [Property Task Force] identified the site as being a problem. They got the city to shut down the business, because they knew that they were illegally spray painting cars and there were a lot of illegal activities. So, essentially the community identified this site. As a community development corporation, we serve the community. We took the cue and the community and said well, we will move forward and we try to redevelop the site into an active, vibrant sustainable use.

The director's response above indicates that his CDC was motivated to redevelop the brownfield in question so as to address the crime and drug concerns. Although the Property Task Force was involved in the identification of the problem, there is no evidence of the CDC appealing to them to redevelop the site. In like manner, the city got involved in shutting down the business but again there is no evidence of the CDC motivating the city to redevelop site.

An environmental project director in one CDC adds her voice to the issue of drug dealing to justify the redevelopment of brownfields in one large city. She says that:

Some of these houses just sitting here get broken into by people who are drug users break into some of these houses just sitting here. Then you have a situation where you have drug activity going on and fires can start.

A director of a small CDC in western Massachusetts also associated the presence of brownfields with high crime and drug dealing rates in the city that greatly contribute to poverty affecting his city:

We are talking of neighborhoods that deal with high levels of drugs, violence, poor health, and bad schools in comparison to neighborhoods around us. The vacant lots that sit all around us are part and parcel of the same thing. They are part of the poverty, disinvestments, part of segregation, racism. I think that vacant lots are a part of those issues.

An economic development project that involved the development of a supermarket in the one neighborhood of Boston was cited as an example. It underscores the fact that before this project was undertaken, the brownfield property on the undeveloped site had become a haven for drug dealing. He said:

If you talk to people who remember what the supermarket and how the health center was like, after the old factory burned to the ground - it was basically after 20 years, and there was 15 to 20 foot weeds on the site. It became the cocaine capital. There was a lot of heroin dealing there.

All these sentiments that have been expressed show a pattern to suggest that the CED practitioners are motivated to redevelop brownfields, but there is no pattern to suggest that they are actively recruiting bystanders or antagonists to engage in the same.

5.4.4 Health Concerns

Asked to respond as to what was the focus of his CDC, a brownfield's project of a CDC in the Boston responded that the goal of his CDC is the economic development of his neighborhood, but to achieve that goal the CDC has to deal with brownfields because brownfields affect the health of their people who are the target of their economic development goal. He responded as follows:

... we focus mostly at development. Brownfields are a peripheral issues, but they are a key peripheral issue because nothing can be done unless they are dealt with. Ultimately our goal is a vibrant healthy community. We can't have a healthy community with pockets of toxic contamination throughout our neighborhood. There is no way you can be healthy and have areas where you can't go in your neighborhood.

As with the CDC, which has to address health issues connected with brownfields in order to achieve economic development, a CDC in a nearby neighborhood too has the same approach. The executive director explained that they do not only build affordable housing but they do so with a strategy that will protect future residents of the houses from health related ailments such as asthma.

[In] Our new houses we are not putting even rugs ...because we are [protecting residents against] asthma. ...many children in inner city have asthma.... They are living in older houses with lead paint.

No doubt the CED practitioners do have a sense of the effects brownfields can have on the health of the residents and they cannot ignore that aspect in their broader economic development agenda. The community planner expressed the concern.

We knew we had these three major brownfields sites adjacent to the neighborhood and we knew that the contamination and the cleanup was obviously to be a big issue to the public health in that area and secondly that the redevelopment of those enormous parcels of land, was going to have a tremendous effect on the neighborhood.

On the issue of health another executive director also expressed the health concerns of the neighborhood they serve. She said that people mostly worry about health due to contaminations therefore in one way or the other as a CDC they have to address the issue in their redevelopment plans.

The CDCs in this case are concerned about dealing with brownfields as a means of addressing health issues in their neighborhoods themselves. The only response that was close to an appeal to others to get involved in redeveloping brownfields came from one executive director. This director perceived the redevelopment of brownfields as something “fashionable” to be involved in. She appealed to the investment community to see the market opportunity in brownfields to help solve environmental related problems and urges them to:

“...go towards the brownfields, ... Don’t run from them. Run to them. ... in the end you have got land or building that is cheap, and you are going to help solve an environmental and social problem. So you are improving, not just how the neighborhood looks, you are improving its health.

This is the only time a respondent was close to making an appeal to others – in this case, investors to invest in brownfields. However, there is still no evidence that this is something the CDC has been doing or it was an appeal that was made at the time of the interview.

Although a good number of CED practitioners framed brownfields as “opportunities,” nevertheless they did not use that motivation to recruit adherents, bystanders and contestants to join them in the addressing the issue. An executive director of a rural CDC view on brownfields was typical of CED practitioners.

We see brownfields as an opportunity in which the private market is not interested in. They are in for a quick turn around and quick profit. Brownfields redevelopment is confusing, and complicated that I think nonprofit may deal with in partnership with private or larger CDCs who have experience.

We do not see any evidence of her appealing to the private sector to participate in the redevelopment of brownfields. Other common motivational framing tasks of brownfields redevelopment included: an opportunity to develop residential or commercial properties; an opportunity to cheaply acquire real property; and an opportunity to generate income for their CDCs.

5.4.5 An Opportunity for Residential & Commercial Development

A participant in the study, perceived brownfields as an opportunity for residential development. In his words he said that “... we are looking at those changes [zoning policy changes to allow for former industrial sites to be used for non-industrial uses] as opportunities to develop some residential uses.” One other executive director shares this view but adds that it is an opportunity for commercial development too. She asserted that: “...we have always looked at brownfields as potential opportunity either for affordable housing development or commercial community development. A second executive director who shared this view of brownfields as an opportunity for residential and commercial development is said that they got involved in the development of a brownfield that was a former factory and converted it into a grocery store because their CDC’s goal has been to make the neighborhood attractive enough and provide opportunities for home ownership. The brownfield he talked about, was a former factory, which when it closed down people found it difficult to determine how best to utilize the empty space. Among the proposed uses for the brownfields was a park or a museum, but at the end it was redeveloped into a commercial grocery store.

There were more CDC executive directors that saw this opportunity of residential development in brownfields. One executive director observed that they are a challenging type of properties to deal with. One source of that challenge is to deal with competition from developers seeking the same properties to put up expensive residential houses in the neighborhood limiting the chances of them developing affordable houses. She fears that the opportunity may soon be eroded away by private developers seeking to develop high cost housing to meet market demands from high income people that are moving into their neighborhood. She says:

There is general competition from other non-profits and increasingly from private for-profit developers. Increasingly [our neighborhood] is becoming an area where people think they can make money in. There is going to be more market rate housing selling over \$340 per square foot. Which means it is starting to [become] increasingly expensive to build those buildings. Typically we have built units and subsidized the cost, then sold or rented them to low income families. Now we are seeing more high cost/income people coming into this area willing to buy or rent. That is obviously attracting the attention of other developers who are running out of opportunities in the city. It is an interesting time for [our neighborhood].

In the above discussion, the executive director clearly points out that her neighborhood is increasingly attracting private developers but there is no evidence that it is her organization that is recruiting these developers to invest in the developments.

An executive director of a small CDC in Western Massachusetts, also views brownfields as an opportunity to develop residential and commercial properties, but, he was apprehensive about CDCs that get involved in the clean up of brownfields and then pass

on the cleaned property for the redevelopment by other institutions. His view is that CDCs should be involved in not only the acquisition of brownfields, their clean up and their redevelopment but they should be involved in managing the redeveloped properties as commercial real estate developers would. This way, he argues, the CDCs will generate cash for the CDCs operational costs. That is what he means by saying that CDCs should be involved in the beginning, the middle and end game of brownfields redevelopment. He metaphorically refers to a brownfield they have been redeveloping in the town as their future “cash cow”. This is what he had to say:

So if the CDC can operate in the end game, like a commercial real estate developer, and operate in the opening and the middle game as a community based nonprofit, then you have gotten the best of both sides. ... I am in the opening game and in the middle game because nobody is going to be there. That is why I am there. If you have to shift in the end game, you have to shift to be a commercial real estate developer, because that is going to provide me with income. I think as I said, I look at this site as our cash cow. It is going to allow us to do all the other community based work that we want that do not generate income. But if you are willing to hand over the end game, then I don't see how you can operate.

His comments here reinforce the argument that the motivational framing of the CDCs on the issue of brownfields redevelopment is not typical of social movements. Although there is agreement among practitioners that brownfields do provide an opportunity for residential and commercial development, these practitioners do not seek to motivate adherents, bystanders and opponents to participate in brownfields redevelopment efforts.

In some instances the practitioners differed in terms of where they see the opportunity to exist. For instance an executive director of an equally small CDC in Western

Massachusetts observed that the opportunity was more pronounced around Boston than in the western part of the state in which her town is located. She argued that:

I am aware of CDCs that have done brownfields in and around Boston. Real estate is valuable there. So they are able to acquire property for not so much money. They can go around and invest more into it because in the long run, it will be worth more than what they invested into it. They can rent it, lease it, or sell it and make money off it, at least not lose money. That is not true with some of these projects here. You need to put more money into them than they will be worth. You can't afford to borrow the money.

Her framing can be interpreted to mean that, in the western part of Massachusetts, CDCs are not as motivated to redevelop brownfields as CDCs around Boston because of diminished economic opportunities in the western part of Massachusetts. In other words economic factors around Boston make brownfields around there to be in demand with a promise for a good return on investment. Therefore, that is the motivation that keeps the CDCs in Boston in the business of redeveloping brownfields. She foresees that as the western part of Massachusetts starts to experience the economic pressure from Boston, it would soon have the opportunity to develop residential real estate from the brownfields. She estimated that to take another 5 years to be realized and for a property like the building in a neighboring town in which there is a brownfield her CDC was trying to develop to become feasible.

5.4.6 An Opportunity to Acquire Property Cheaply

Some directors perceive investors, as having seen an opportunity of acquiring brownfield land and property cheaply in their cities. One executive director of a small CDC in a large city argued that:

... they [investors] see, ..., the opportunities too, to coming to some place that is poor, neglected, blighted where the land is cheaper because of those problems. That is why they buy them. That is what attracts them here. But also what I see is that a lot of them want to make money. ... they choose [our city] because of that. It is cheaper to buy houses and vacant lots compared to other cities and towns.

This view had the support of executive directors of large CDCs. According to one executive director of such a CDC, the opportunity in brownfields lies in the cost of acquiring these properties. She perceives brownfields to be cheap properties to acquire and appeals to investors to see these properties from this perspective. She says:

I think the more people know that it is actually an opportunity - we would go after brownfields because we might get them cheaper. Some people bought an old dry cleaner building over here, and we did an environmental site assessment; but they got the whole property 30,000 square feet for \$100,000. Now they have twenty two art studios. They have a beautiful facility there. What we helped them understand what is in the ground. Sometimes in brownfields, the challenge is not so much your liability, or even the money to clean it up, it is just knowing what is in the ground. And you can decide not to clean it up.

According to the project director of this CDC, the essence of acquiring brownfields cheaply resides in being tactful in meeting cleaning standards, which involves getting the

information on the property. He argues that enforcing the clean up of brownfields to high standards discourages remediation. He argues thus:

You can get property really cheaply. One cannot feasibly clean them to high standards. That discourages remediation and it is expensive. If high standards are enforced it will scare developers away.

Thus according to project director, the redevelopment of brownfields can be expensive, looking at it from an individual developer perspective, if high environmental cleanup standards are enforced. The implication of his argument is that policies should be put in place to allow for lower cleanup standards of brownfields to encourage developers to redevelop them.

A senior project director of a neighboring CDC also argues that from an individual investor's financial perspective it may be expensive to redevelop individual brownfields. This is the reason why many investors would rather invest in undeveloped land – greenfields and avoid brownfields altogether. However from a policy perspective it is cheaper to redevelop brownfields rather than greenfields because this prevents sprawl of cities thus saving on costs of new development on agricultural land. According to him:

If you are going to do urban development, you are going to do brownfields. ... I mean all this land is contaminated with something. Especially in Boston where so much is already filled with urban fill, and that urban fill was contaminated when they put in fill. ... redevelopment of land which has been developed over time, for over 200 years, it is inherent in what you [can do]. The only alternative is to go and sprawl in the middle of nowhere, or do it out on agricultural land and build on the edge and forget about land where there is existing infrastructure already. ... If you ... take a step back and take a broader view of costs, it is actually cheaper to deal with contamination on a piece of land where you already have existing infrastructure. You have public transport, you have streets, you have water

service, electrical service, you have sewer service, where all that is already embodying a piece of land, than to actually spend all that money on the fringes of the city. ... If you look at it from a policy perspective, it is generally cheaper to do that. ... So there is local and global environmental impacts that you are dealing with.

Since costs for developing infrastructure such as transport and utility systems are incurred by local municipal councils, he appeals to policy makers to support policies that will encourage investors to invest in brownfields rather than undeveloped greenfield land. There is no evidence that his CDC has sought to persuade policy makers to think along this line and actually recruit them to doing what he is advocating for here.

5.4.7 Opportunity to Building Social Equity

According to a community planner that participated in the research brownfields redevelopment provides a great opportunity to create social equity in addition to creating physical assets. He explains social equity to be networks created among stakeholders of brownfields properties such as among property owners of the brownfields who are responsible for the clean up and redevelopment and property owners that are not in the brownfield sites themselves.

The creation of social equity according to his argument is pegged to the participation of all the stakeholders in unison rather than in isolation to achieve area-wide redevelopment. He argues that:

... if you redevelop, one piece of land, by itself as an island, the value is going to be much less than what you would have if you coordinate the redevelopment of an area. And that is something that is new in this city for the first time that we have been doing. We successfully brought the property owners to the table and said: Look it is too difficult to redevelop your property all by yourself.... We do not want this to remain a poor neighborhood. We do not want to push the poor people somewhere else. We want to make sure the people who live here, get the wealth and the skills they need to improve their own lives. And that is the idea we have, of network building, at Lawrence Community Works. We are trying to create a network [to achieve] social equity and physical equity ...

This idea of building social equity is reflected in the discussion by the executive director of the CDC. He argues that it is only a few people that appreciate the fact that when one brownfield is successfully completed, that acts as a confidence booster for others to redevelop their brownfields. This argument reinforces the community planner's argument of area-wide redevelopment of brownfields, in the sense that not only will social equity be built, but it motivates redevelopment. He argues that:

I think ... a lot of brownfields tend to be notorious properties and pockets of people know that to take a property like that - taking it from being a liability to being an asset is a big confidence booster. It makes it feel that anything is possible. If we can do this with that, imagine what we can do with some of the challenging properties. So that is sort of the socio-psychological stand point.

Another executive director of a CDC operating in the same city also perceives participation in brownfields as an opportunity networking to solve not only brownfields related problems but other community problems. She had this to say:

...because brownfields are such a prevalent part of urban neighborhood that have been struggling for a long time with this issue, [in] any urban neighborhood there is going to be some brownfields issues - vacant lots, or an old industrial site ... that they often present the most ... visible and immediate challenges to neighborhood development. So in the process of addressing them, these other kinds of networking relationships get established. I do not think that kind of a

process is exclusive to brownfields, but I think when it happens well, you have a lot of other benefits.

5.5 Unanticipated Findings

From the literature on brownfields there is a lot of discussion on the relation of brownfields and environmental justice. The researcher anticipated CED practitioners to identify environmental justice as justification for being involved in the redevelopment of brownfields. From the interviews, it was only one participant, a project manager with one of the CDC, who addressed the issues.

Because we have had significant demographic changes, this entire community was redlined by the banks. They couldn't write mortgages for this neighborhood and this was not secret policy. It was written that actually they would not. When you have that sort of disinvestments, the person who delivers oil to your house, will not be nearly as careful whether he spills five or ten gallons of oil to the ground. ... We still have difficulties with people from other neighborhoods bringing significant amounts of oil and things in barrels and dumping them in the river, because they have been able to do it in the past. This is because we didn't have levels of enforcement other better politically connected neighborhoods had. ... Consequently, we have been disconnected from the center of power, as a community. We don't have major investments from the city in the community. We don't have many municipal buildings, ...except a library and police Department. ... So that lack of connection to power for over 100 years has left us on an environmental justice level at the bottom of the dumping heap.

From the above discussion, the project manager identifies contamination as a problem in his neighborhood and frames as a sign of the disconnection the community has been subjected to by sources of power such as the local government. He clearly frames it as an environmental justice issue. Other than that, there was no other respondent that framed the issues in similar ways. This is was unanticipated.

A second unanticipated finding from the research concerned the perception of one executive director that brownfields redevelopment is a means of creating social equity over and above creating physical assets. She defined social equity as networks created among stakeholders of brownfields properties. This was quite revealing because from the literature, issues that are given greater attention are issues such as economic and physical revitalizations of neighborhoods. According to her argument, social equity is created through the process of participation of stakeholders seeking to bring about area wide redevelopment rather than individual redevelopment of isolated brownfield sites. The building of social equity is not only significant in solving brownfields related problems but other community problems. However, this was an issue that was addressed by one respondent, so it may not be critical to the others.

5.6 Summary of Findings

From the analysis of the first question of diagnostic framing task - “Why are brownfields a problem from a CED perspective? The findings can be summarized as follows: CED practitioners interviewed perceive brownfields to be problematic because brownfields affect development; contribute to poor health of residents; create a haven for drug dealing and crime; compromise neighborhood safety; contribute to loss of jobs; and contaminated water and soil.

The analysis of the diagnostic framing task, “To what or to whom do CED practitioners attribute brownfields problems?”, revealed that about sixty-six percent of the respondents described brownfields as contaminated, polluted, or having some hazardous material. .

The analysis of the prognostic framing task revealed that, CED practitioners prefer to use policy instruments (35%); forging partnerships (19%); community organizing (16%); insurance approaches (13%); and research approaches (6%) to solve problems associated with brownfields redevelopment.

Motivational framing task analysis depicted CED practitioners to be motivated as organizations to redeveloping brownfields so as to achieve the following goals: affordable housing; neighborhood revitalization; to mitigate against safety, crime and drug issues; and to address health concerns. There was little consistency in patterns to suggest that CDCs, as organizations, were actively engaged in recruiting adherents, constituents, bystander publics, or antagonists to get involved in the redevelopment of brownfields. This raises the question of whether the CDCs perform the functions of traditional social movement organizations. This question may not be adequately addressed here because the focus of this study was on whether the CDCs are functioning as SMOs with respect to redevelopment of brownfields. As it has turned out, even if the CDCs do not have a brownfields redevelopment collective action frame, they might be as

well be functioning as SMOs with respect to other issues (as revealed by how they frame those issues).

6 CONCLUSIONS, IMPLICATION AND RECOMMENDATIONS

6.1 Introduction

This chapter is organized into four sections. The introduction sections gives the overview of the whole chapter. The second section gives the conclusions drawn from the research findings, while in section three a discussion of the implications of the findings is provided. In the final section, recommendations for further research on the topic of brownfields are discussed.

6.2 Conclusions Based on the Findings

From the analysis of the diagnostic framing task, in which the research sought to understand why brownfields are perceived as problematic from a CED perspective, it was found that: brownfields affect development; contribute to poor health of residents; create a haven for drug dealing and crime; compromise neighborhood safety; contribute to loss of jobs; and contaminate water and soil.

Looking at the number of respondents, there was not one reason that can be said to have been a dominant explanation as to why the respondents perceived brownfields to be problematic. However, the analysis of the second question of the diagnostic framing – “To what or to who do CED practitioners attribute brownfields problems?” - resulted in one dominant theme. Sixty- six percent of the respondents attributed the cause of

brownfields to contamination, pollution, or the presence of some hazardous material. It can be concluded therefore that the CED practitioners are in agreement as far as the cause of brownfields problems to be. This conclusion is consistent with what the literature review revealed. The literature review indicates that the presence of brownfields is a legacy of industrial development, which left behind contaminants when the businesses moved out or got closed down.

From the analysis of the prognostic framing task the following strategies were most frequently discussed as solutions to the brownfields problems: use of policy instruments; forging of partnerships; community organizing. Eleven respondents (about thirty-five percent) saw policy instruments as a solution to the brownfields problems, especially to solving the liability problem that affects redevelopment. Thirty-five percent is less than fifty percent of the respondents so, this cannot be said to have been a dominant perception.

What distinguishes social movement frames from other frames is their motivational framing task. This is what determines if indeed there exists a collective action frame. The proposition of this study was based on the premises that community economic development (CED) is a social movement, and that social movements make sense of reality through the process of framing. The researcher theorized that CDCs involved in neighborhood revitalization in Massachusetts do have a brownfields redevelopment collective action frame. If CDCs function as SMOs in respect to brownfields

redevelopment, we should expect them to have a brownfields redevelopment collective action frame. If they do not have a collective action frame, then they may not be described as functioning like traditional SMOs in respect to brownfields redevelopment. Motivational framing task is about convincing people who are not in the movement at all to participate in or otherwise support the course the movement stands for.

From the analysis of the motivational framing task, it was found that respondents are motivated to redevelop brownfields but there was not a consistent trend from the responses to suggest that they were actively involved in recruiting others to be involved in the redevelopment process. From the interviews there was consistent patterns of CDCs forming partnerships with local city councils to solve problems especially around acquisition of vacant sites whose owners were either not known or were unwilling to redevelop. Respondents also got involved in partnerships with other CDCs in redeveloping certain brownfields. One can argue that the motivation to forge these kinds of partnerships is akin to what traditional SMOs do to recruit non participants into their movement. This is an area that may require more research, but as far as findings from this research are concerned, indications are that CDCs are motivated to redevelop brownfields, with very little pattern of recruiting bystander publics and antagonists to be involved in the process too. The findings therefore suggest that CDCs do not have a collective action frame in respect to the redevelopment of brownfields.

6.3 Implications

One may be tempted to conclude that if CDCs do not have a brownfields redevelopment collective action frame, then they may not be functioning as SMOs. This may not be necessarily the case. It should be remembered that the lack of a collective action frame is in respect to redevelopment of brownfields. Just because the CDCs do not have a brownfields redevelopment collective action frame, should not be interpreted to mean that they do not have other collective action frames with respect to other issues or that they do not function like SMOs with respect to those other issues. From the interviews, respondents asserted that their efforts to redevelop brownfields were only a means towards achieving economic development.

For example one executive director of a large CDC made this very explicit. Asked what motivates her organization to be involved in redevelopment of brownfields, she responded:

We just don't clean [brownfields] for the sake of cleaning. Because it costs money and you have to do something with it that will make you money. I am sure there is contamination around about here that we do not know about, but we are not going to clean it just to make it clean. We will have to be able to get the money to borrow and then we will pay it back to a development financier, or from a CDC [that] we don't have to pay it back.

The redevelopment of brownfields requires time and mobilization of a lot of resources, financial as well as technical and community support. Knowing the technical nature of redeveloping brownfields may explain why CDCs may not be motivated to recruit

bystanders and contenders to be involved in the process. On the other hand, CDCs may have a collective action frame around an issue like community mobilization against a social issue like environmental justice. This is likely to be so because community mobilization does not require financial nor technical skills on the part of those being recruited. It is easy to appeal to both individuals and organizations to rally behind such a cause.

The adoption of the framing concept, to study framing tasks of community economic development (CED) practitioners on issues of brownfields redevelopment has scholarly implications that are worthwhile to consider at this point. As has been explained in chapter two, the framing concept used in this study was adopted from sociological studies of social movement organizations (SMOs). The first implication of this study for the scholarly understanding of the field of CED is the revelation that CED is a discipline that cannot be polarized into either the sciences or arts CED is a multifaceted discipline that will be best understood by adopting methodological approaches from a wide range of disciplines.

The assumption this study made in chapter two was that CED is a movement. The expectations of this assumption were that CED practitioners that participated in the study would exhibit characteristics anticipated by social movement organizations (SMOs), in respect with the redevelopment of brownfields. It has been concluded that CDCs that

participated in the research did not exhibit a brownfields redevelopment collective action frame.

One of the aims of this research was to understand the character and course of community economic development (CED) movement, from the point of view of the practitioners. Framing is one of the dynamics of understanding social movements. According to Benford and Snow (2000), collective action frames are constructed in part, as movement adherents negotiate a shared understanding of some problematic condition, or situation they define as in need of change. In so doing they make attributions regarding who or what is to blame (diagnostic framing) for the problem; they articulate an alternative set of arrangements (prognostic framing) to solve the problem; and motivate others to act in concert to affect change (motivational framing).

Theoretically therefore, diagnostic framing entails the identification of the problem and the attribution of the problem to some causal agent. CED as a social movement that seeks to remedy or alter some problematic situation in neighborhoods where they operate, in this case, real or perceived health, environmental and economic risks that brownfields pose to communities.

This study investigated the perceptions of CED practitioners on issues of brownfields redevelopment. This was a major amalgamation of two major fields – community

economic development and brownfields redevelopment – areas of investigation that have a lot in common but have been least investigated from this perspective. There are a number of studies that have looked at brownfields from a market-driven approach (Leigh, N. G. and S. L. Coffin, 2001); others have focused on brownfields from a public health perspective (Litt, 2002, et al). Indeed these studies do indicate that brownfields redevelopment does pose a challenge to the revitalization of urban areas, but fall short of emphasizing the role being played by the CED movement in this process of transforming these properties into community assets.

As brownfields continue to be recognized as impediments to the revitalization of inner cities and as CED gains credibility as an engine of social change, more research is going to focus on these issues. A good example of research that follows this trajectory was done by Brachman (2003), see section 3.6 of this dissertation. Brachman researched the role of community-based organizations (CBOs) in brownfields and other vacant property redevelopment. For this to happen, policies need to be in place to channel funds to this field. One of the implications of this study is a need for more funding to be made available for research into transforming work? CED practitioners in the fields of brownfields redevelopment.

6.4 Recommendations

The literature and research on brownfields does indeed demonstrate that brownfields affect development, health and safety of neighborhoods. For instance research by

Amstrong (2004) compared the redevelopment of brownfields in Los Angeles and Kuala Lumpur and how they affect small businesses. Her research revealed that brownfields depress communities by causing blight – socio-economic and environmental degradation; thus they are an obstacle to the survival of existing businesses and deter new businesses from coming into the area. The findings of Armstrong are consistent with the current research. As this gets political attention in policies and legislations are being enacted at the federal and state level to deal with the problem. Indeed the passage of the Small Business Liability Relief and Brownfields Revitalization Act of 2002 by President Bush is a demonstration of this.

Some brownfields have been redeveloped and put back into economic use but many more remain to be redeveloped. As was demonstrated in the literature, only a small percentage of the total 400,000 to 600,000 estimated brownfields properties in the USA have been developed (Northeast-Midwest Institute, 2000). This research recommends that policies be enacted to protect the poor from being pushed out of their neighborhoods. This can be done by supporting CED practitioners like CDCs that are committed to developing affordable housing targeted to benefit the poor.

This research looked at the perceptions of the CED practitioners in Massachusetts on issues of brownfields redevelopment. This was a qualitative study, which cannot be generalized to a larger population. Further research can be carried out using quantitative approaches. For example from the current research, the perceived factors that hinder

CED practitioners' efforts to redevelop brownfields were revealed to be funding barriers, owners reluctance to sell their properties; weak markets and difficulties of gaining site control. However, the research did not reveal which among these factors was most problematic. Research to attempt to answer this question will contribute valuable knowledge to the field and this can be done using surveys in which the CED practitioners can be asked to rank the factors in some order that will depict which of the factors is most problematic. It will also be of research interest to investigate if CED practitioners have collective action frames around others issues which are more traditionally associated with CED such as community organizing, small business development and job training issues.

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