

University of Louisville

ThinkIR: The University of Louisville's Institutional Repository

Electronic Theses and Dissertations

5-2018

State-reinforced self-governance of community-managed open spaces in Chicago, IL and Louisville, KY.

Willow Sequoia Dietsch
University of Louisville

Follow this and additional works at: <https://ir.library.louisville.edu/etd>



Part of the [Public Affairs, Public Policy and Public Administration Commons](#)

Recommended Citation

Dietsch, Willow Sequoia, "State-reinforced self-governance of community-managed open spaces in Chicago, IL and Louisville, KY." (2018). *Electronic Theses and Dissertations*. Paper 2955.
<https://doi.org/10.18297/etd/2955>

This Master's Thesis is brought to you for free and open access by ThinkIR: The University of Louisville's Institutional Repository. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of ThinkIR: The University of Louisville's Institutional Repository. This title appears here courtesy of the author, who has retained all other copyrights. For more information, please contact thinkir@louisville.edu.

STATE-REINFORCED SELF-GOVERNANCE OF COMMUNITY-MANAGED
OPEN SPACES IN CHICAGO, IL AND LOUISVILLE, KY

By

Willow Sequoia Dietsch

B.S., University of Louisville, 2010

A Thesis

Submitted to the Faculty of the

School of Interdisciplinary and Graduate Studies

Of the University of Louisville

In Partial Fulfillment of the Requirements

For the Degree of

Master of Science in Interdisciplinary Studies: Sustainability

School of Interdisciplinary and Graduate Studies

University of Louisville

Louisville, Kentucky

May, 2018

Copyright 2018 by Willow Sequoia Dietsch

All rights reserved

STATE-REINFORCED SELF-GOVERNANCE OF COMMUNITY-MANAGED
OPEN SPACES IN CHICAGO, IL AND LOUISVILLE, KY

By

Willow Sequoia Dietsch

B.S., University of Louisville, 2010

A Thesis Approved on

April 23, 2018

By the Following Thesis Committee:

Daniel A DeCaro

Lauren Heberle

Kelly Kinahan

DEDICATION

This thesis is dedicated to my son Balin. He was born just three months before I began pursuing my degree in Sustainability. He has been my rock and has kept me focused and determined to see this through. I hope that the work I have done through my degree, and with this thesis, provides a better community and a better city in which he can grow up. I also dedicate this thesis in memory of my amazing cat, Noah. It may be unconventional, but he was always right by my side through all my long days and late nights as I completed this thesis.

Unfortunately, he passed away just before I could finish.

ACKNOWLEDGEMENTS

I would like to thank my thesis mentor, Dr. Daniel DeCaro, for his guidance, support, and unwavering belief that I was capable of completing this thesis and this degree. It is also because of Dr. Daniel DeCaro's vast knowledge and previous work on this subject that I have the privilege of completing this thesis and furthering his work on State-Reinforced Self-Governance. I would also like to thank my other committee members, Dr. Lauren Heberle, and Dr. Kelly Kinahan, for supporting me and working with me as I stumbled across the finish line for this thesis. Dr. DeCaro, Dr. Heberle and Dr. Kinahan were also very influential professors of mine, whose classes taught me to think about the world from a different perspective. Lastly, I would like to thank my husband, Patrick Costelo, my mother, Juliet Dietsch, my mother-in-law, Jocelyn Costelo, and my great-aunt, Lynn Delaney, for all their support and the time they took to help me through completion of this thesis and this degree. I am so grateful to them all.

ABSTRACT

STATE-REINFORCED SELF-GOVERNANCE OF COMMUNITY-MANAGED OPEN SPACES IN CHICAGO, IL AND LOUISVILLE, KY

Willow Sequoia Dietsch

April 27, 2018

As urban populations rise, small greenspaces, like gardens, are increasingly important to well-being of communities, and urban sustainability as a whole. However, past development, and current political and economic challenges encumber many cities in providing adequate greenspace. Cities like Chicago, IL and Louisville, KY have turned to the communities to manage greenspaces with help from partner organizations. This thesis examines these arrangements, and compares them in terms of several potential factors, (i.e. legal authority, responsibility, and support). Semi-structured interviews of important community greenspace stakeholders, and archival sources including original documents, news articles, and government reports, were used to understand the context of these cases. Results indicate that Chicago's NeighborSpace program, a government-supported non-profit land trust, strongly exhibits the hypothesized factors. Whereas, Louisville's reliance on the Jefferson County Cooperative Service, with insufficient authority or support, is less effective and does not empower communities. NeighborSpace may serve as a model for Louisville.

TABLE OF CONTENTS

CHAPTER	PAGE
ACKNOWLEDGEMENTS.....	iv
ABSTRACT.....	v
LIST OF TABLES.....	viii
OPENING.....	1
INTRODUCTION.....	6
Community Managed Open Spaces and Vacant Lots.....	6
Sustainability of Urban Open Space.....	13
Governance and the Role of Citizens.....	19
CURRENT STUDY.....	27
METHODS.....	30
Comparative Case Study.....	30
Framework: Legal and Institutional Design Principles.....	33
Data Collection.....	36
RESULTS.....	41
Case Study Analysis – Chicago and Louisville.....	41
Legal and Institutional Design Principles.....	54
Summary.....	77
Overall Analysis of Results.....	80

DISCUSSION AND CONCLUSION.....	91
Findings.....	92
Limitations and Moving Forward.....	101
Recommendations.....	102
Conclusion.....	106
REFERENCES.....	111
APPENDIX A.....	121
APPENDIX B.....	124
CURRICULUM VITA.....	138

LIST OF TABLES

TABLE	PAGE
1. Legally Binding Authority.....	88
2. Legally Binding Responsibility.....	89
3. Tangible Support.....	90

OPENING

As of 2014, 54 percent of the world's population is living in urban areas and over 80 percent of the North American population live in urbanized regions (*World Urbanization Prospects*, 2014). Over the next century, these numbers are expected to continue to rise (*World Urbanization Prospects*, 2014), making cities ever more the centers of life and economic activity. This trend not only puts more pressure on regional and global resource systems (Grimm et al., 2008), but also further separates people from the natural environment that enriches life and community, and promotes health and prosperity (Groenewegen, van den Berg, de Vries, & Verheij, 2006; Maas, Verheij, Groenewegen, de Vries, & Spreeuwenberg, 2006). Almost every major urban landscape in the United States can be characterized by high concentrations of concrete and pavement, where greenspaces such as community gardens and nature parks are often lacking (Grimm et al., 2008). These features pose significant concerns for both the livability and sustainability of major cities, raising the question: How can sufficient green open space be provided in the city, ensuring that environmental, social, and economic aspects of sustainable development are in balance now and into the future (Grimm et al., 2008; Wheeler, 2000)?

Concerns for the livability and sustainability of metropolitan development have been raised in many cities across the United States. In efforts to provide

residents with green, open space and improve sustainability, many cities have embraced the importance of parks, community gardens, and other open spaces (Teig et al., 2009; Draper & Freedman, 2010; Barthel, Folke, & Colding, 2010; Litt et al., 2011). However, many cities fall short of providing sufficient and adequate green space for their citizens and methods for improvement are not always clear.

This has led to the voluntary – and in some cases, surreptitious – creation of community gardens and other green open spaces, often on vacant lots, by numerous communities, neighborhood groups, and non-profit organizations in almost every major city (Been, & Voicu, 2008; Draper & Freedman, 2010, Barthel, Parker, & Ernstson, 2013). While these gardens provide many important benefits to communities they are often established under unstable terms and are typically viewed by city governments only as temporary uses for vacant land. This puts many community open spaces continually under threat of removal and redevelopment (Cahn, & Segal, 2016) and puts city governments in an instrumental position to potentially support the creation and long-term viability of these community spaces.

Some cities (e.g., Chicago, Seattle) have made notable efforts to encourage and preserve community open spaces (Erickson, Griggs, Maria, & Serebrin, n.d.; Helphand, 2015). The factors that influence some city governments to adopt supportive measures for community gardens, while others remain less supportive, is not well understood (Barthel et al., 2013; Ela, 2016). Furthermore, the laws and governmental processes governing the creation and long-term viability of community green, open spaces are complex. Hence, it is

also unclear what legal processes and other governmental steps can be taken not just to make open spaces attainable for communities, but to also protect and sustain them (Ela, 2016). This thesis addresses these questions, as well as investigates the broader subject of metropolitan sustainability with respect to community open space, by examining two cities that have put legal provisions in place to encourage and protect community gardens, Chicago, IL, and Louisville, KY.

Briefly, Chicago was chosen because of the organization NeighborSpace, which is a government-supported non-profit land trust created with the purpose to preserve community green, open space in perpetuity, and Louisville because of a seeming lack of such an organization. However, in Louisville, the Jefferson County Cooperative Extension Service has been given the responsibility to manage community gardens on behalf of the city. This thesis will then provide a comparative case study of these two organizations in regards to their different approaches, and government given abilities to manage community green, open space on behalf of their respective cities.

This study will inform public policy, and the broader discussion on sustainability of cities, by helping city governments, researchers, and other community garden stakeholders (e.g., neighborhood residents) in the United States understand how green open spaces are created (specifically in Chicago and Louisville), and how their creation and durability are influenced by significant laws and governmental elements (e.g., policies, incentives). By examining the relationship between city government and community-based organizations and

actors (e.g., NeighborSpace), the findings of this project will additionally inform theory regarding governance of cities, provision of public goods and services, and management of complex social-environmental problems (DeCaro, Chaffin, Schlager, Garmestani, & Ruhl, 2017). Finally, this project will result in recommendations to encourage effective support of community-based, green open space and improve metropolitan sustainability, especially in Louisville, KY where there is presumably greater need and opportunity for government support of community green open space.

The first chapter provides substantial background information in order to set the stage for the remainder of this study. First, I provide a brief history of community gardening, highlighting the importance of community gardens and open space in neighborhoods and cities, and including the history of urban renewal, redlining, and other discriminatory practices that have resulted in the accumulation of vacant properties in cities. Next, I discuss the impacts of vacant land and community gardens on the sustainability of urban cities. And lastly, I outline and discuss the roles of government and their responsibility of cooperation in dealing with societal problem solving such as community gardening.

The second chapter outlines the theoretical dimensions of this study and the goals of this research before providing in depth descriptions of the methods that I use in this study. This study uses qualitative methods in the form of interviews and archival data analysis. In the third chapter I will analyze the

results, and draw conclusions, and in the last chapter analyze the potential outcomes that come from this thesis.

CHAPTER 1: INTRODUCTION

1a. COMMUNITY MANAGED OPEN SPACES AND VACANT LOTS

Urban populations are expected to reach 66 percent of the world's population by 2050, increasing at a more rapid rate than the world's rural populations. In 2014, 54 percent of the world's population are living in urban areas, and over 80 percent of the North American population lived in urbanized regions (*World Urbanization Prospects*, 2014). This trend ultimately puts significant pressures on regional and global resource systems as the process of urbanization is responsible for major changes in biogeochemical cycles and is a leading contributing factor to climate change, deforestation, and resource consumption worldwide (Grimm et al., 2008). Rising urban populations also increase the separation of humans from the natural environment which contributes to "Nature Deficit Disorder" a phrase coined by Richard Louv in his 2005 book, *Last Child in the Woods*, indicating a decline in human welfare as a result of insufficient interactions with nature. Many studies have shown how important it is for humans to have interactions with nature, from increased physical activity to improved mental health (Chiesura, 2004; Maas et al., 2006; Wakefield, Yeudall, Taron, Reynolds, & Skinner 2007; Draper & Freedman,

2010; Wang, Swallow, & Qiu 2014). Nature provides many restorative effects for humans and yet most cities lack sufficient amounts of green space for their residents (Ferris, Norman, & Sempik, 2001; Chiesura, 2004; Maas et al., 2006; Grimm et al. 2008). In efforts to improve the green, open space in their neighborhoods, citizens in almost every major city have embraced the importance of community-managed open space (Teig et al., 2009; Draper & Freedman, 2010; Barthel et al., 2010; Litt et al., 2011; Ela, 2016).

Community-managed open space

Community-managed open space comes in many forms. Open Space is defined by the United States Department of Agriculture Forest Service as “land that is valued for natural processes and wildlife, agricultural and forest production, aesthetic beauty, active and passive recreation, and public benefits” (*Open Space Conservation Strategy*, 2007; 3) and includes natural lands such as forests, grasslands, parks and farms within “rural, suburban, and urban areas” (*Open Space Conservation Strategy*, 2007; 4). While this definition of open space is very broad, urban open space managed by communities are typically various iterations of community gardens and pocket parks (Ferris et al., 2001; *Preserving Community-Managed Open Spaces*, 2010).

Community gardens take many forms and include but are not limited to allotment vegetable gardens, educational gardens for youth, training gardens for adults, therapy gardens, rain gardens, and market gardens (Ferris et al., 2001; Draper & Freedman, 2010). Pocket Parks are small areas of outdoor space,

typically located on a lot the size of a few houses or smaller, and provide some functions of larger parks such as a play area for children, a small event space, and maybe a few tables and benches for eating and relaxing (*Creating Mini-Parks for Increased Physical Activity, n.d.*). Pocket parks are sometimes considered community gardens when they are managed solely by community groups and organizations (Ferris et al., 2001).

History of community gardens

Community-managed open spaces, such as community gardens and pocket parks are typically created, managed, and sustained by community groups with very little involvement by city, state, or federal government (*Preserving Community-Managed Open Spaces, 2010*). However, historically, government has played an important role in spurring community gardening efforts, especially of urban vegetable gardening, and continues to play an important role in supporting their long-term maintenance. The first documentation of community vegetable gardens comes from Detroit, Michigan in the late 1890's where the gardens were developed by local government to help families cope with the economic crisis of the time (Kurtz 2001; Lawson, 2005).

Since then, community vegetable gardens started cropping up all across America in times of need and economic strife. Communities during World War I and the Great Depression saw "relief gardens" spring up by citizens and encouraged by local city governments. World War II again saw community gardens emerge but this time the Federal Government began a program to

bolster backyard and vacant lot vegetable gardening known as Victory Gardens (Brown, & Jameton, 2000; Lawson, 2005; Endres & Endres, 2009). The program was so successful that in 1943, nearly 125 pounds of food were grown for every American citizen from Victory Gardens alone (Endres & Endres, 2009). After the war, the number of and support for community gardens waned. In the late 1960's and early 1970's, community gardening efforts began again, but although food security played a significant role, there was also a new motivation behind these gardens - they stood as an act of rebellion against the current urban landscapes, and offered an escape from concrete and asphalt into an oasis of green (Lawson, 2005; Birky, 2009).

It was also during the 1970's that the modern environmental movement began, which continues into this century and with it the idea of community gardening. Community gardens saw a reprisal once again around the economic crisis of 2008. Michelle Obama began gardening at the White House in 2009 for the first time since WWII (Endres & Endres, 2009; Draper & Freedman, 2010), and from 2007 to 2011, "90% of 445 surveyed community gardening support organizations in North America established new gardens... and existing gardens increased their size and membership" (Gregory, Leslie, & Drinkwater, 2016; 764-765). These gardens were started for many of the same reasons that the gardens in the 70's were – to increase urbanites' access to green space, and to improve food access. The resulting benefits of community-managed open spaces are many.

Benefits of community gardens and community-managed open space

In a comprehensive review of community garden studies and surveys, Draper & Freedman (2010) found that community gardens improved physical, as well as mental health, increased collective efficacy, increased social interactions regardless of race, class or ethnicity, and enhanced positive dietary habits. Other studies have found that the benefits of community gardens go beyond the garden itself and improve the entire community; community gardens beautify neighborhoods, improve economic development, strengthen communities, and even reduce and prevent crime (Armstrong, 2000; Maller, Townsend, Pryor, Brown, St. Leger, 2006; Wakefield et al., 2007; Draper & Freedman, 2010; Wang et al., 2014; Gregory et al., 2016). Urban green space, such as community gardens, are also increasingly important to sustaining and improving the urban environment in ways such as reducing and filtering run-off into streams and rivers, reducing the urban heat island effect, and providing habitats for and increasing biodiversity of many plant and animal species (Bolund, & Hunhammar, 1999; Chiesura, 2004; Goddard et al., 2010; Colding, & Barthel, 2013).

Historical disparities of open space and community disinvestment

The social and environmental benefits of community gardens are especially important in neighborhoods where residents lack access to fresh, healthy, affordable food, and where opportunities for outdoor leisure and recreation are rare (Gregory et al., 2016). In the United States, these neighborhoods are typically underserved and disinvested on a number of levels,

are often populated by minority groups, and have higher concentrations of vacant and abandoned properties (Metzger, 2000; Nier III, 1999). Disinvestment and segregation like this has many layers of historical roots, one particular factor is the practice known as “redlining”. As a method to increase home-ownership during the 1930’s, the Home Owners Loan Corporation (HOLC) created Residential Security Maps in almost every major U.S. city with the intent of identifying neighborhoods that posed the least risk to private lenders (Marshall, 2017). As a result, predominantly black neighborhoods almost always received the lowest grade and were outlined and shaded red (hence the term *redlining*) prompting banks to refuse mortgage lending, making homeownership increasingly difficult, and resulting in the disinvestment of these neighborhoods (Frumkin, Frank, & Jackson, 2004; Marshall, 2007). Many other factors have continued to perpetuate the cycle of disinvestment and segregation.

In 1949, the federal policy of urban redevelopment gave cities the power and financial means to effectively raze low income neighborhoods and turn the land over to cheap, private developers. The Housing Act of 1954 called this process “urban renewal” but the idea was the same; clear low-income neighborhoods to make way for higher-end housing, shopping centers, and hotels. In 1956, the Highway Act followed suit, clearing neighborhoods for the construction of urban highway systems (Thomas, 1997). At the same time that the inner-city neighborhoods were experiencing disinvestment and displacement of residents, suburban neighborhoods were being quickly developed. Suburban living was ideal; homes were new with large yards and garages, the average

resident was middle-income and white, schools were good and nearby, and the neighborhoods were safe. In efforts to protect this way of life, zoning codes were used as economic discrimination preventing lower income families from moving out of the city. Zoning codes prevented multi-family units like apartments and townhomes from being located in areas with single family homes, and the separation of residential districts from commercial, retail, and business districts made it difficult for anyone to live without a car in suburban neighborhoods (Downs, 2005).

The result of the suburban lifestyle meant even more that inner city, low-income, and minority neighborhoods were both destroyed and forgotten. Those who had the ability to move out, quickly did and left these neighborhoods an abundance of vacant properties. Of 60 U.S. cities with populations over 100,000, there are approximately 2 vacant structures per 1,000 residents, and an average of nearly 15% vacant land to total city area (*Vacant Properties*, 2005). These vacant lots and structures have many negative impacts on local communities and contribute to in disinvestment of these communities, causing significant negative effects on health, crime, and risk of injury (*Vacant Properties*, 2005; Garvin, Branas, Keddem, Sellman, & Cannuscio 2012).

Benefits of community-managed open spaces

For all of these reasons, communities nation-wide are reclaiming these vacant lots and turning them into community-managed open spaces. These spaces bring communities together for a common good. Connected communities

are more likely to come together and take action towards a common cause (Teig et al., 2009), they make neighborhoods safer, more beautiful, and more livable (Chiesura, 2004). People living in greener environments have better perceived general health (Maas et al., 2006), and community food gardens can increase access to fresh and healthy foods (Wang et al., 2014). Community-managed open spaces also provide children with places to play safely, connect people with nature and to each other, improve urban biodiversity, and can even improve local economy (Maller et al., 2006; Teig et al., 2009; Goddard, Dougill, & Benton, 2010; Draper & Freedman, 2010; *The Economic Benefits of Open Space*, 2010; Colding & Barthel, 2013; *Creating Mini-Parks for Increased Physical Activity*, n.d.). The social, economic, and environmental benefits of community-managed open spaces are integral components towards more sustainable cities.

1b. SUSTAINABILITY OF URBAN OPEN SPACE

What is sustainability?

The social, economic, and environmental aspects of sustainability are often called the Three Pillars. Balancing these three pillars are at the core of having a sustainable society, one that works to meet the needs of humans currently and will continue to do so into the future without diminishing the quality of life for future generations. Each pillar contains within it the principles of conservation and development; conserving and developing economic, social, and

environmental aspects of human systems. Sustainability applies to all human systems, but is most often used in the term “sustainable development” which emphasizes continuing to develop cities and countries in sustainable ways and is central to concerns of rising urbanization (Kates, Parris, & Leiserowitz, 2005; Wheeler, 2000).

The term “sustainable” was first used by a number of environmental studies in the 1970’s, but did not enter the mainstream terminology until the late 1980’s during the Brundtland Commission and subsequent publication of the World Commission on Environment and Development in 1987, and again during the United Nations “Earth Summit” in 1991 (Wheeler, 2000). Though widely used, the definition of the term “sustainable development” is often contested. The Brundtland Commission’s definition of sustainable development is vague stating that it “meets the needs of the present without compromising the ability of future generations to meet their own needs” (Kates et al., 2005). Scholars have continuously tried to narrow the scope of this definition, defining what is to be sustained, what is to be developed, and for how long (Kates et al., 2005). In 2002, the World Summit on Sustainable Development coined the Three Pillars of sustainable development as interdependent and mutually reinforcing economic development, social development, and environmental protection at all scales local, national, regional, and global (Kates et al., 2005).

Wheeler (2000) describes six specific principles related to the Three Pillars that are necessary in municipal planning for sustainable development. These are: Environmental Planning, Land Use, Transportation, Housing,

Economic Development, and Social Justice. Wheeler (2000) explains that often sustainability plans are stand-alone and not incorporated in other city plans or municipal departments and emphasizes that these principles need to be addressed at all levels of municipal planning. For example, Environmental Planning strategies can be coordinated among watershed plans, stream restoration, green spaces planning, recycling facilities, plastic bag and plastic bottle policies, and sustainable and alternative fuel initiatives. Land Use incorporates actions like increasing open space, reducing impervious surfaces in cities, encouraging composting facilities, and promoting infill development and mixed-use developments.

Wheeler (2000) also describes strategies for Transportation including creating greater choices in modes of travel and changing patterns of land use. Housing policies can also address mixed-use developments to encourage more choices in modes of travel, and affordable, and energy-efficient housing. Economic Development requires promoting small, local businesses, while also remaining open to the globalized economy. Social Justice is, as Wheeler (2000) states, often the least emphasized practice in sustainable planning. Social justice addresses inequities in housing, food access, job access, education access, and also addresses environmental justice in air and water quality. In addition to these six principles, Wheeler (2000) stresses the importance of decision-making and public participation and acknowledges that this is a difficult, and long-term task, but necessary and rewarding.

Municipal Sustainability Plans

With this in mind, many U.S cities and states have begun adopting their own sustainability plans and policies. For example, in 2012, Chicago created the Sustainable Chicago 2015 Action Plan which set 7 sustainability goals for the city to accomplish by 2015. These included: Economic Development and Job Creation, Energy Efficiency and Clean Energy, Transportation Options, Water and Wastewater, Parks Open Space and Healthy Food, Waste and Recycling, and Climate Change. At the end of the three years, the Sustainable Chicago 2015 Highlights and Look Ahead document claimed that Chicago had either begun the process of, or completed all sustainability goals it set to accomplish and pledged to continue working on a more sustainable Chicago “24/7”

(Sustainable Chicago 2012-2015 Highlights and Look Ahead, 2015; 18).

Currently, Chicago has a Comprehensive Regional Plan called GO TO 2040 created by the Chicago Metropolitan Agency for Planning (CMAP). This plan recognizes that the Chicago metropolitan region cannot continue to prosper in the years to come with a “business as usual” frame of mind and thus sets multiple goals and initiatives to address “sustainable prosperity” (*Go To 2040 Comprehensive Regional Plan, 2010*).

In comparison, Louisville released their Sustain Louisville plan in 2013, with 6 main implementation goals: Energy, Environment, Transportation, Economy, Community, and Engagement. In 2017, the City of Louisville published their progress report on Sustain Louisville that showed some projects had been completed in the first few years, though most projects were still in progress or still

in planning stages. The Sustain Louisville plan is also an informing document to Louisville's next Comprehensive Plan. Louisville's first comprehensive plan from 2000, titled Cornerstone 2020, did not address sustainability nor use the term directly. Thus, Cornerstone 2040 plans to integrate the information gathered and projects still to come from the Sustain Louisville plan into a sustainability component in Louisville's next comprehensive planning document, which is currently being developed.

Consequences of unsustainable practices

Sustainability initiatives like these are important for cities to plan accordingly for a future of rapid population increase and climate change. All across the world, urban development is causing significant strain on ecosystems and natural resources (Grimm et al., 2008). From 1970 to 2010, the world's vertebrate species declined by 52 percent. Human activities are currently using Earth's resources at a rate of 1.5 Earths—meaning that we are using more than our share of natural resources, making it increasingly difficult for future generations to utilize the resources we now take for granted (*Living Planet Report*, 2014). It is estimated that over 50 percent of Earth's land area not covered by ice has been directly modified by human action; urban development is a main contributor (Hooke, Martin-Dunque, & Pedraza, 2012).

Urban development has caused significant impact on the natural environment, causing decreases in biodiversity by habitat loss and fragmentation, and water and air pollution (Heimlich & Anderson, 2001; Goddard

et al. 2010; Litman, 2015). Unsustainable urban development also negatively impacts human welfare by decreasing social capital (Bhatta, 2010), and jeopardizing physical and mental health (Bollund & Hunhammar, 1999; Groenewegen et al., 2006; Barthel et al., 2013; Litman, 2015). Furthermore, sprawling urban development contributes to a significant decline in agricultural production, especially of small, “traditional” farms (Heimlich & Anderson, 2001).

A further consequence of urban disinvestment and sprawling development is that many cities are left with thousands of vacant properties which contribute negatively to all three pillars of sustainability (Downs, 2005; *Vacant Properties*, 2005; Badger, 2016). Vacant properties decrease social capital by causing mental stress and are harmful to the environment as they are often sites of illegal dumping. Dilapidated structures can deposit chemicals and heavy metals into the soil and ground water, and the *broken window effect* further contributes negatively to economic prosperity (*Brownfields Technology Primer*, 2001; *Vacant Properties*, 2005; Stauffer, 2014). Vacant properties also tend to be concentrated in poor and underserved neighborhoods, exacerbating social inequities (Westphal & Isebrands, 2001). Reclaiming these vacant lands into community-managed open spaces has the potential to significantly improve the well-being of many underserved communities in cities across the nation and improve the long-term sustainability of cities themselves.

Sustainability of community gardens

Community gardens have several positive environmental impacts, including but not limited to increasing urban biodiversity, remediating polluted soils, capturing water and preventing run-off, and decreasing the urban heat island effect (*Brownfields Technology Primer*, 2001; Goddard et al., 2010;). Gardens and parks create spaces for physical activity for people of all ages, bring communities together regardless of race or cultural background, and provide places for recreation and connection with nature where green space is otherwise lacking (Teig et al., 2009; Draper & Freedman, 2010). In addition, vegetable gardening may provide a source of income for community members, while training gardens can give individuals the skills to run and manage a garden or small farm on their own (Lelekacs, O'Sullivan, Morris, & Creamer, 2014; Ela, 2016). Green spaces of all shapes and sizes have been shown to increase property values and can encourage businesses to relocate to these communities (Been, & Voicu, 2008).

For these and many other reasons, many cities are recognizing the somewhat small, but significant way to improve urban sustainability through community gardens. However, some cities still fail to see the full potential of community-managed open spaces.

1c. GOVERNANCE AND THE ROLE OF CITIZENS

Governance is described by the UN-HABITAT (2002) as, “The mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences” (pg. 8). This thesis examines the relationship between various stakeholders (i.e., citizens, non-profit organizations) and city government, thus the role of government as an important resource in social-ecological dilemmas is an integral part to this study. This question about the roles of governance is a fundamental question that has been examined throughout ancient and contemporary societies (Grube & Reeve 1992; Ostrom, 2010). Through this research, the question of whom may govern and how is addressed in examining what governance processes are being conducted in the cities of Chicago and Louisville, and what role various central actors play in the process of governing green community open space. By examining these cases, this research can also speak to fundamental concepts of democracy and governance, and the potential advantages and disadvantages associated with different ways cities govern resources and societal dilemmas, also referred to as “social-ecological dilemmas”.

History of American City Governance

In early, colonial America, circa 1700, municipalities were generally run by a king-appointed governor. Residents had little power in deciding who managed their cities, and those in power were generally concerned with managing markets and trade rather than providing services to residents. After independence,

however, trends in democracy expanded and city residents had more power in directly electing mayors, and mayors in turn, provided more services for citizens (Frisby, n.d.; Noster, 2017).

As urban populations grew during the industrial era, there was a growing need for stronger municipal regulations and public services. It was during this era that the “political machine” arose with the power of the city boss. Bosses were upper-class business-men who had a heavy hand in determining the outcome of elections through bribes in the form of money, alcohol, and other gifts. Though many bosses implemented and encouraged substantial reforms to improve the health and function of their cities - such as providing money to the poor and expanding parks systems – the political machine was notably un-democratic as most citizens played a relatively passive, indirect role in their governance (Judd, 1988; Judd & Swanstrom, 1998).

Progressivism marked the new era of reform whereby the government took a stronger role in managing and addressing the needs of the public and limiting the power of city bosses. In 1900 in Galveston, TX after a devastating hurricane, the city formed a commission of elected officials who each managed one particular branch of municipal governance such as finance, transportation, and public safety. Over the next decade, many cities adopted this form of governance. However, it soon became apparent that elected commissioners often lacked the expertise to manage effectively, and in 1914 the commission plan gave way to city manager rule. In this plan, the city manager plan was to run the city government like a business, reporting to the mayor and city council.

Other cities adopted a mayor-council form of governance which gave more power to the mayor (Frisby, n.d.; Baker, 1971; Pelissero, 2003).

These forms of governance gave citizens more power in elections and in determining who was to run and manage their cities, however *how* the city was run, and *what* services were provided was largely out of the hands of residents.

Types of citizen participation in governance

In the late 19th century most urban planning took a scientific approach in determining what needed to be built and where; the planner was the scientist and the city the experiment. This type of planning is sometimes called blueprint planning, and continued to be the dominant form of planning until about halfway through the 20th century. While blueprint planning involved little to no citizen participation, it wasn't until the late 1950's that planners even began to routinely acknowledge public participation (Lane, 2005). That participation, however, could be described, at best, as Tokenism according to Arnstein (1969). Tokenism participation includes citizens being involved in the discussion, but the ultimate decision is still left to the power holders. Arnstein (1969) describes the highest forms of public participation as "partnership", "delegated power", and "citizen control". All of these forms of participation require some level of self-organization by citizens.

More recently, some scholars suggest that city governance tends to be regarded (ideally) as a collaboration, a working relationship between government, non-profit and community organizations, individuals, and private

businesses that coordinate to provide services to the city. For example, Martin (2004) describes urban governance as “reliance by governments on community organizations as a way to fulfill demands for citizen participation and input into community planning and economic development.” While the idea of a democracy in the United States was founded on the concept of complex governance, where all actors at all scales contribute in important decisions affecting society (Ostrom, 1994), this concept has rarely been realized in perfect form. Indeed, the history of city governance in the U.S. is full of examples, where top-down control of city planning and decision making excludes various citizen stakeholders (Arnstein, 1969).

Self-Governance

Where city planning and government officials have excluded citizens in conversation and in practice, citizens will sometimes form themselves into groups to manage aspects of the social dilemma that the authorities fail to address effectively. In some cases, these organizations or groups become self-governing, that is, they develop their own rules for management of these services without government enforcement (Ostrom, 1994, Ela, 2016; Mattijssen, Buijs, Elands, & Arts, 2017). In 2009, Elinor Ostrom summarized the eight design principles she first illustrated in her 1990 book *Governing the Commons*. Ostrom found that these principles were present in several cases of successful, long-term resource management by self-organized communities throughout the world. These principles are: Clearly Defined Socio-Political and Biophysical Boundaries (the

socio-environmental problem, geographic/biophysical footprint, and jurisdiction are clear), Proportional Equivalence Between Benefits and Cost (equitable sharing of costs and benefits), Collective Choice Arrangements (shared decision making), Monitoring, Graduated Sanctions, Conflict Resolution Mechanisms, Minimal Recognition of Rights to Organize, and Nested Enterprises (for larger systems).

As described in greater detail later, these eight principles, when applied to a self-governed resource, establish a set of rules that determine who is included in the use of the resource and their obligations to maintaining that resource, who is involved in making those decisions, and how the decisions and ultimate rules are monitored and enforced, and adapted over time. Thus, Ostrom (1990) observed that there is an important role for regular citizens in the governance of society. Moreover, these citizens could potentially govern smaller-scale social-ecological dilemmas themselves under favorable circumstances, even in the absence of governmental support.

State-Reinforced Self-Governance

In many cases, however, it is unlikely that these self-governing groups operate outside of any local, regional, national, and international laws and institutions. Moreover, most social-ecological dilemmas require some form of collaborative governance, involving multiple actors and scales (Dietz, Ostrom, & Stern, 2003). Hence, governments can support and reinforce self-governance in a process called State-Reinforced Self-Governance (SrSG) (Sarker, 2013).

As described by Sarker et al. (2014), State-Reinforced Self-Governance is a system where “The government authorities provide information and modern technology and necessary financial assistance either to support the existing self-governance system or to assist the user to create a new form of self-governance system” (pg. 248). The “state” here is not necessarily just the state government, but federal, local, and regional governments that provide the authority for individuals and groups to self-govern without being directly involved in decision-making though still providing assistance through “substantial financial, technological, statutory and political support” (Sarker, 2013; 2).

The concept of State-Reinforced Self-Governance is also similar in concept to that of polycentric governance in which there are multiple decision-making centers, independent of one another, but that work together to solve an issue of common interest (Ostrom, 1994; Sarker et al., 2014). The benefits to polycentric governance is that the self-organizing, self-governing groups have the autonomy of decision-making while still working together.

Building on Sarker’s (2013) initial formulation, and Ostrom’s (1990) design principles for small-scale self-governance, DeCaro et al. (2017) devised design principles for State-Reinforced Self-Governance (SrSG), by identifying core characteristics that are found in successful cases of government-supported adaptation and self-governance in complex governance situations. DeCaro et al. (2017) separates the design principles into two major categories: Legal Design Principles and Institutional Design Principles. Legal Design Principles refer legislative actions (e.g., laws) and broader governance processes (e.g.,

governmental programs, regulations) that government actors can use to facilitate and enable self-governance by various actors in society. These include Legally Binding Authority, Legally Binding Responsibility, Tangible Support, Legal Sunsets, and Reflexive policies. In short, legal design principles grant key stakeholders sufficient legal authority, responsibility, and tangible (e.g. financial, informational) resources to effectively govern an important aspect of a focal socio-environmental problem alone or in partnership with other actors.

The Institutional Design Principles referred to by DeCaro et al. (2017) are derived directly from Ostrom's Design Principles of small-scale self-governance. These institutional principles reflect the ways that the self-governing group can work together cooperatively, with equitable rules and enforcement of those rules that create an environment of trust and respect among users.

DeCaro et al.'s (2017) legal principles of State-Reinforced Self-Governance essentially bridge the gap between Ostrom's (1990) smaller-scale systems and more complex, contemporary systems seen in larger-scale systems. Taken together, these legal and institutional design principles outline testable hypotheses for the study of government-supported programs, such as the facilitation and support of community managed green open space. More of this will be explained further in the study.

CHAPTER 2: CURRENT STUDY

The majority of large, metropolitan cities in the United States contain hundreds, sometimes thousands of vacant properties, many of which are vacant lots, where previous structures have been torn down and the land remains undeveloped. Vacant properties, both lots and buildings, have numerous detrimental effects on communities and contribute to poor mental and physical health (*Vacant Properties*, 2005). Many cities have recognized these issues, but remain unclear on solutions or unmotivated to take action. Some cities however, have taken significant steps towards developing vacant lots, and have found that vacant lots can remain open space when management is addressed through empowerment of communities and more direct partnership (Mendes, Balmer, Kaethler, & Rhoads, 2008; *Preserving Community-Managed Open Spaces*, 2010; Poulsen et al., 2014; Ela, 2016).

Cities like Chicago, IL, Seattle, WA, Portland, OR, and Baltimore, MD have integrated policies that encourage citizens to use vacant lots for community gardens (Mendes et al., 2008; *Preserving Community-Managed Open Spaces*, 2010; Poulsen et al., 2014; Ela, 2016). In essence, this support for community gardening is the city acknowledging that its residents have an important role to play in managing these spaces, which should be facilitated by actionable governmental support. The current research investigates this process through

the lens of DeCaro et al.'s (2017) Legal and Institutional Design Principles of State-Reinforced Self-Governance, by providing a case study analysis of NeighborSpace and Chicago, IL and the Jefferson County Cooperative Extension Service in Louisville, KY. In particular, if the proposed Legal and Institutional Design Principles are important to effective community-management of green, open space, then these factors should emerge as centrally involved in the legal reinforcements given to these organizations for their role in managing community gardens.

In Chicago, NeighborSpace provides a relatively progressive example of a government-supported community-managed open space program, which was intentionally designed to enable community level management of green open spaces. No study, to my knowledge, has looked at how the influence of legal institutions affects the way that community gardens form and are sustained long-term. Thus, this thesis uses the Legal and Institutional Design Principles established by DeCaro et al. (2017) not only to examine the extent of SrSG within community managed open spaces, but also to inform and advance these principles so that they can be better adopted to varying social dilemmas and resource management situations.

Chicago's NeighborSpace will be examined in relation to Louisville's own designated community garden management organization, the Jefferson County Cooperative Extension Service. In particular, the Jefferson County Cooperative Extension Service has been tasked with management of community green open spaces, by the City. By comparing the two cities, and their core programs for

community-managed green, open space, the current project will use potentially important frameworks (i.e. Legal and Institutional Design Principles, DeCaro et al., 2017) to examine how these programs differ, and how the presence, or absence, of these factors, may contribute to self-governance within these organizations. This project also aims to provide a much-needed description of how these systems emerge and are potentially sustained, contributing to sustainable cities. To this end, I also hope to discover ways in which Louisville can improve its management of community gardens.

CHAPTER 3: METHODS

3a. COMPARATIVE CASE STUDY

In this thesis, I examine two community open space organizations that were either created (NeighborSpace) or assigned (Extension Service) by cities to provide citizens with a secure space in which to garden and preserve open space as a productive use. The success of these organizations will be evaluated in terms of their ability to accomplish their stated or assigned mission, as well as their capacity to support community-based governance of greenspace. In this Thesis, capacity is defined in general terms as the ability to make decisions and implement those decisions effectively. Each organization will be evaluated in terms of the relative presence or absence of DeCaro et al.'s (2017) Legal and Institutional Design Principles (i.e. Legal Authority, Legal Responsibility, Tangible Support). I hypothesize that these principles constitute essential elements of effective governmental support for self-governing organizations, and should therefore contribute to the potential success of these organizations.

NeighborSpace – Chicago, IL

There are several cities across the United States with Land Trust organizations that support and protect community gardens and other types of community managed open spaces (Allen & Ela, 2015), and in some cases, cities have even created special administrative offices or commissions within local government to manage and oversee community gardening (Mendes et al., 2008; Erickson et al., n.d.). What makes NeighborSpace potentially unique among these other Land Trusts however, is that it is a Land Trust created for the specific purpose of preserving community open space. It was created by three city departments as a result of an Intergovernmental Agreement but remains an independent non-profit capable of making its own decisions and delegating management authority of open space to community members. This puts NeighborSpace in a position to be a potentially good example of State-Reinforced Self-Governance, as described by DeCaro et al. (2017).

Because NeighborSpace was created, and continues to be supported, by the government as a third-party entity to acquire city land for community use, this suggests that the factors of State-Reinforced Self-Governance may be present in the creation and sustainability of NeighborSpace. Thus, this thesis seeks to examine how the proposed factors (Legal and Institutional Design Principles) present themselves in the case of NeighborSpace, and if their presence may potentially contribute to effective self-governance and goal attainment. To my knowledge no prior research has studied the creation of such an organization in terms of State-Reinforced Self-Governance. Therefore, it is informative to investigate the role of the proposed design principles in the creation and

operation of NeighborSpace. It is also informative to investigate, descriptively, the nature of the design principles in this context: To understand whether the principles manifest themselves and operate as originally hypothesized, or if the concept of State-Reinforced Self-Governance and the design principles need to be further refined.

The Jefferson County Cooperative Extension Service – Louisville, KY

I chose to examine Louisville, KY because it is a city where I believe the factors of SrSG may not be present in community-managed open space organizations, based on initial observation. Also, initial observations indicate that Louisville could potentially benefit from an effective community-based greenspace program. The framework of State-Reinforced Self-Governance, and DeCaro et al.'s (2017) design principles, could potentially inform the design of such a program. Thus, by comparing Chicago to Louisville, I hope to gain insight on which factors seem to present themselves in a case where I suspect SrSG to be present (Chicago), and a case where I suspect SrSG is not present (Louisville) and how Louisville, could improve these factors and thus improve self-governance of community open spaces.

Louisville has several community garden organizations operating throughout the city. However, it was the Jefferson County Cooperative Extension Service that Louisville chose to give direct responsibility to for management of several community gardens within the city. While Extension Services are mostly Federal and State programs, the Jefferson County Cooperative Extension

Service operates closely with Metro Louisville after the City-County merger of 2003. While this already sets the Extension Service apart from NeighborSpace, the Extension Service is the organization that most closely resembles the city-given responsibility of open space management that Chicago gave to NeighborSpace. One of the questions of this research is the relative costs and benefits of taking these different approaches to community greenspace management. Thus, I will compare the two cases, determine the presence of the proposed factors, and determine the potential implications of the two approaches using DeCaro et al.'s (2017) framework of SrSG.

3b. FRAMEWORK: LEGAL AND INSTITUTIONAL DESIGN PRINCIPLES

DeCaro et al. (2017) proposed several Legal and Institutional Design Principles that were found in cases of successful State-Reinforced Self-Governance. Legal Design Principles refer to the laws and policies that create the conditions for self-governance, while the Institutional Design Principles are derived from Ostrom's Design Principles (1990) for successful and sustainable self-governance. Together, these principles include laws and other institutionalized rules that may be influential in enabling State-Reinforced Self-Governance. Each case system (NeighborSpace, Chicago, IL; Jefferson County Cooperative Extension Service, Louisville, KY) will be analyzed and compared in terms of these principles. Appendix A gives a brief summary of each principle.

Legal Design Principles

The Legal Design Principles described by DeCaro et al. (2017) are: Legally Binding Authority, Legally Binding Responsibility, Tangible Support, Reflexive Law, and Legal Sunsets. These design principles pertain to how federal, state, local, and regional governments can create enabling conditions for citizens to self-organize and self-govern social-ecological dilemmas by giving them authority, support, and responsibility and by creating systems of adaptability.

Complex social-ecological systems are dynamic and change over time, thus having laws in place that allow adaptability in a changing environment are key to sustainability of their practice, and thus to sustainable self-governance. Reflexive Laws demonstrate recognition of this fact by providing dynamic definitions of a role or responsibility, or by setting minimum and maximum requirements rather than ones that are static and inflexible. Legal Sunsets also provide for adaptability by allowing policies to be carried out incrementally or to be reviewed and revised after a set period of time. Legal Sunsets that are too short however can cause instability and inhibit adequate function.

In many cases, governments provide citizen groups and organizations with the responsibility to manage a social-ecological dilemma but do not give them legal authority or sufficient support (DeCaro et al., 2017). Thus, giving citizen groups/organizations Legal Responsibility shows recognition of management abilities, Legal Authority provides the groups/organizations with

avenues to legally organize, manage, and make decisions, while Tangible Support provides these groups with sufficient financial and other support such as technological, administrative, and material supports.

For these reasons, it appears that these three legal design principles, Legally Binding Authority, Legally Binding Responsibility, and Tangible Support form a sort of foundation for SrSG that the other Legal and Institutional Design Principles reinforce. Thus, this thesis project explores these principles in more detail than the other Legal and Institutional Design Principles. However, this is not to suggest that they are more important, only that they seem the most robust in function and influence on SrSG.

Institutional Design Principles

The four Institutional Design Principles by DeCaro et al. (2017) are derived from the Eight Design Principles of sustainable Self-Governance described by Elinor Ostrom (Governing the Commons, 1990). Ostrom (1990) explains that these Principles were found in several cases of successful Self-Governance where groups worked collectively to manage a social-ecological dilemma and to reduce the prevalence of free-riders and those who would make decisions to personal benefit rather than benefit of the whole. DeCaro et al. (2017) has found that at least four of Ostrom's Design Principles (1990) are relevant to and necessary for successful State-Reinforced Self-Governance as well.

Where Ostrom (1990) describes Clearly Defined Boundaries, DeCaro et al. (2017) describes Well-Defined Boundaries though the idea of each is very similar. In self-governance of social-ecological systems, it is important that not just the physical boundaries of the system be clearly defined, but also the social, and political boundaries as well. This means having well-defined roles of individuals involved in usage and management, and of the responsibilities of government in providing support and in influencing decision-making.

Both Ostrom (1990) and DeCaro et al. (2017) describe the importance of Participatory Decision-Making where all stakeholders are involved in creating the rules of the system and roles of the users. Additionally, DeCaro et al. (2017) explain that successful State-Reinforced Self-Governance requires that government stakeholders are not directly involved in decision-making, thus giving the self-governing group the authority to determine proper management.

Monitoring and Enforcement, and Conflict Resolution are also necessary for successful self-governance (Ostrom, 1990), and for State-Reinforced Self-Governance these are described by DeCaro et al. (2017) as Internal Enforcement and Internal Conflict Resolution. This means that enforcement and conflict resolution are carried out by the self-governing group without state involvement, until significant, intractable problems arise (or formal laws are broken).

3c. DATA COLLECTION

Interviews

Interviews were semi-structured and followed an outline that asked questions related to the Legal and Institutional Design Principles. There were seven interviews in total, and each interview took approximately one to two hours and was recorded with permission. In Louisville, prior to the decisions to compare NeighborSpace to the Jefferson County Cooperative Extension Service, I interviewed six community garden stakeholders, representing different organizations, to try and understand the roles that various organizations played in community greenspace management in Louisville. Through these interviews it became apparent that many organizations are involved in greenspace in Louisville. Some such organizations have previously tried to play a role similar to NeighborSpace, but without government support. From these interviews, I selected the Extension Service, because it was revealed that Metro Louisville has given it direct responsibility to for managing community gardens. Future research will examine government support, or lack thereof, for other organizations active in Louisville. NeighborSpace is widely documented, and is a potentially good example of srSG; therefore, it was necessary to only interview the Executive Director of NeighborSpace, in order to gather sufficient information about the organization and its governmental support.

Interview recordings were transcribed by a trained research assistant in Dr. DeCaro's Social Decision Making and Sustainability Lab. I adapted each interview to be relevant to the particular organization whose director or

programmer was interviewed. Additionally, the questions asked of Louisville Metro Government employees were adapted to be more general for Louisville rather than specific to an organization. In Louisville, I interviewed the Senior Policy Advisor and the Brownfields Program Director at the Louisville Metro office of Louisville Forward, the Owner and Operator of Lots of Food, the Program Director of Common Earth Gardens, the Executive Director at Louisville Grows, and the County Coordinator at the Jefferson County Cooperative Extension Office. In Chicago, I interviewed the Executive Director of NeighborSpace.

The interview questions first ask about the history of the organization. Here I wanted to know what catalysts were present in the formation of the community garden organization, and who was instrumental in helping its formation (both private individuals, and government agents). I then asked what Tangible Support, both financial and non-financial (in-kind support), the organization had received to assist its startup, and what support it currently receives from both government and non-government individuals/parties. After these questions, I requested the organizations bylaws and financial summaries if they would be willing to share them. Where applicable, most participants sent me their organization's bylaws in an email following the interview, though only one participant was willing and able to send a financial summary.

The remaining questions asked participants whether they knew of any laws or policies at the federal, state, local or regional levels that influenced the State-Reinforced Self-Governance of community gardens, or their organization, in their City. For example, I asked if they were aware of any laws or policies that

provided community garden organizations with flexibility in decision-making or management (Reflexive Law), or if they were aware of any laws or policies that gave their organization, or other community garden groups, any responsibility in community garden management (Legally Binding Responsibility). I then asked questions related to the institutional design principles asking, for example, how well defined the physical, social, and political boundaries were for their organization's management of community gardens (Well-Defined boundaries), and what Internal Enforcement and Conflict Resolutions measures were in place.

See Appendix B for an example interview protocol, with the list of questions used during the interviews.

Archival Data Collection

With permission from the organization's director or programmer, I was given the NeighborSpace Bylaws and the Amendments to the Intergovernmental Agreement, and the Jefferson County Cooperative Extension Service Memorandum of Agreement and Gardener Agreement documents. Along with these, I searched both Chicago and Louisville Codes and Ordinances for information related to community garden and open space management; I searched through numerous City and Regional planning documents for language surrounding community gardens and open space; I gathered information on State and Federal laws and policies that influenced the ability of the City's to make decisions around community open space and community gardens; and gathered

previous literature reviews related to community gardening in both Louisville and Chicago.

Data Analysis and Interpretation

In this thesis, I compile all the data collected from interviews, archival research, and other collected documents to create a case study analysis of both NeighborSpace and the Jefferson County Cooperative Extension Service and their role as community garden stewards within their respective cities. I also examine this data with respect to the Legal and Institutional Design Principles Framework by DeCaro et al. (2017). I examine the laws, policies, and other institutions in place by centers of government, and government authorities that provide self-governing groups (NeighborSpace and the Jefferson County Cooperative Extension Service) with the state-reinforcement to form, make-decisions, and carry out their mission. I will examine in significant detail the Three Foundational Design Principles (Legally Binding Authority, Legally Binding Responsibility, and Tangible Support) though also including discussion on the other principles as well.

I arranged tables for Legally Binding Authority, Legally Binding Responsibility, and Tangible Support for both NeighborSpace and the Jefferson County Cooperative Extension Service to provide a visual summary of these principles and their effect on the key organizations. Because these three principles serve as a foundation on which the remaining principles can be strengthened or weakened, the presence of these principles provided to

NeighborSpace and the Jefferson County Cooperative Extension Service determine the presence of State-Reinforced Self-Governance of community-managed open space in Chicago and Louisville.

I also use this information to determine the relative sustainability of these two cases in respect to the Social, Economic, and Environmental framework of sustainability, the Three Pillars. I determine how the presence or absence of State-Reinforced Self-Governance of community-managed open spaces in each city reflects these Pillars, and also how the organizations featured here influence the Three Pillars of sustainability.

CHAPTER 4: RESULTS

Through interviews and archival data collection, I was able to form a brief case study analysis of both Chicago and Louisville, and how these cities interact with local community gardening initiatives and their designated community garden organizations, NeighborSpace and the Jefferson County Cooperative Extension Service, respectively. I then examined what legal and administrative support these cities have given their designated community garden organizations in relation to the Legal and Institutional Design Principles by DeCaro et al. (2017). The presence of these design principles will inform whether or not State-Reinforced Self-Governance is functioning in the creation and sustainability of these organizations.

4a. CASE STUDY ANALYSIS – CHICAGO AND LOUISVILLE

Chicago & NeighborSpace

Vacant land and land acquisition

Chicago has a population of around 2.7 million (US Census Bureau), and approximately 12,986 vacant properties owned by the City of Chicago

Department of Planning and Development (City Owned Land Inventory). It is unclear how many of those properties are open spaces, there is not a list of city-owned vacant lots that would provide a number. However, the city has recognized the importance of selling city-owned vacant properties and has instituted several property acquisition programs such as the Large Lots program which sells vacant lots for \$1, and the Adjacent Neighbors Land Acquisition Program (ANLAP) which allows homeowners to purchase neighboring vacant lots for a reduced price (“Large Lots”, largelots.org; “Adjacent Neighbors Land Acquisition Program” cityofchicago.org).

City recognition of community garden/open space importance

The city has also recognized the beneficial value of community gardens and encourages community gardens on vacant properties. The benefits of community gardens to beautify vacant properties was specifically mentioned in the 1998 city planning document CitySpace. This comprehensive open space plan was created, in part, due to allegations by the U.S. Justice Department that the city was racially discriminating by failing to provide equal opportunity to recreational resources. In 1982, the U.S. Justice Department sued the Chicago Park District for such allegations. As a result, several Chicago parks and open space planning documents were created to determine the communities that were most underserved, and to set open space and recreation goals throughout the City (Daley, Rogers, & Stroger, 1998).

Planning for CitySpace (1998) began in 1993, the same year that a *Parkland Needs Analysis* was released by the Chicago Park District claiming that recreational parkland will be provided in all residential areas. CitySpace (1998) evaluated the open space needs of Chicago, and found that one study ranked Chicago 18th out of 20 similar-sized Cities in a ratio of acres of open space to population. Thus, CitySpace set “ambitious but realistic” goals to improve the ratio of open space to residents by increasing total open space acres by developing and preserving local and regional areas. A total of 21 Action Plans were proposed to tackle these goals and each Action named specific programs, agencies, or departments that could assist in achieving these goals. It was also a result of this open-space plan that NeighborSpace was created out of the stated need to provide long-term support for community-managed open spaces.

NeighborSpace was created in 1996 by an Intergovernmental Agreement between the City of Chicago (“The City”), the Chicago Park District (“The Park District”), and the Forest Preserve District of Cook County (“The Forest Preserve District”). It was created as a land trust and 501(c)(3) nonprofit organization to acquire and preserve community open space permanently. Currently, NeighborSpace manages 112 community gardens, as documented by the Chicago Urban Agriculture Mapping Project (CUAMP) which also indicates that there are over 800 community gardens in Chicago. The Trust for Public Lands’s 2016 City Park Facts states that 92% of Chicago residents live within walking distance of a park. This distance is defined as a half-mile, unobstructed walk on a road network by the 2016 City Park Facts (Trust for Public Lands, 2016). Thus,

one can surmise that there are numerous small neighborhood parks all over the City of Chicago. This statistic comes very close to fulfilling the vision for Neighborhood Spaces stated in the CitySpace plan (1998) that envisions every Chicago resident living within walking distance of a recreational open space (Daley, Rogers, & Stroger, 1998), pg. 39). NeighborSpace has helped fulfill that vision.

NeighborSpace

NeighborSpace's self-proclaimed successes are in its strong partnerships between four garden entities. These entities are stated in the NeighborSpace document, Roles and Responsibilities, as NeighborSpace itself, the Garden Leadership Team, Community Organization Partners, and Garden Stakeholders. NeighborSpace manages all the bureaucratic and legal requirements of the garden including land ownership, and assuming liability and insurance. NeighborSpace also offers support during leadership transitions, provides material and technical resources, and communicates with the garden leadership team. This team is at least three garden members who are involved in managing and organizing garden users and visitors, engages neighbors and other stakeholders in the garden, and communicates with NeighborSpace. This delineation of responsibility ensures that NeighborSpace is engaged with the garden, but ultimately provides is gardens with fairly autonomous community-based leadership.

The Community Organization Partner is a supporting neighborhood organization that develops and supports that garden leadership team, and provides the gardens with resources including bathroom access, space for events, fundraising, and garden tools. NeighborSpace Garden Stakeholders include the gardeners themselves, visitors, neighbors, volunteers, local businesses, schools, or anyone else potentially involved in the garden. Garden Stakeholders are expected to support the garden positively, and to participate by visiting often, volunteering, hosting events, or other ways of involving the garden into their everyday lives. NeighborSpace claims that “multiple stakeholders create healthy and resilient gardens over the long term”. All NeighborSpace gardens are permanent and have remained in communities under the NeighborSpace Land Trust.

NeighborSpace, as property owner and insurer, provides gardens with several resources such as free water, free water infrastructure installation (if needed), and emergency support for things such as downed trees or vandalism. NeighborSpace also applies for city permits where needed, such as the composting permit to allow gardens to bring food scraps in from off-site. NeighborSpace also provides their gardens with support through partnerships with local business which provide free or reduced materials such as seeds, soil, and mulch, and also helps connect gardens with local volunteers (Resources, neighbor-space.org). While NeighborSpace provides a list of Site Guidelines and Roles and Responsibilities (Partnership Agreement Documents, neighbor-space.org), it is recognized that these rules and guidelines may not be applicable

at all garden sites and therefore does not hold gardens to any requirements but allows them to manage in a way that works for the specific needs of a garden and community.

Other organizational support for community gardens

NeighborSpace is not the only organization in Chicago that supports community gardens. The Advocates for Urban Agriculture coalition provides ample resources for individuals looking for information on topics from How to Start a Community Garden, to Backyard Bee Keeping (“Resources and Information”, AUA). The Chicago Food Policy Action Council is active in promoting sustainable food policies which includes urban agriculture and community gardens (“Who we are”, CFPAC). Growing Home is an urban farm organization that trains individuals about farming as well as financial management and other life-skills (“Mission and Vision”, Growinghomeinc.org). OpenLands, a conservation organization, protects 55,000 acres of land in Chicago, some of which are community gardens (“About”, openlands.org). The Chicago Botanic Garden hosts several agricultural training programs including a Sustainable Urban Agriculture Apprenticeship (“Urban Agriculture”, chicagobotanic.org). And the University of Illinois Extension in Chicago also provides resources and information on horticulture, economics, local food systems, and other topics related to urban agriculture and community gardening (“Our programs”, Illinois Extension).

Thus, NeighborSpace is one of many important organizations in the city, which supports and facilitates community-managed open space. NeighborSpace fulfills a unique role by acting as a bridging organization among other organizations, and by acknowledging and supporting community governance of green open spaces.

Summary

The City of Chicago has a long recognized the need for community-managed open spaces and to reduce vacant lot proliferation. To that end it has provided several opportunities to make the purchase of vacant properties more accessible to residents, and to ensure that improved vacant properties remain in use by preserving them under NeighborSpace forever. NeighborSpace has taken on that responsibility by ensuring that these gardens and community-managed open spaces are well taken care of and that there is strong community support in sustaining them.

Louisville & The Jefferson County Cooperative Extension Service

Vacant land and land acquisition

Louisville has a population of about 616,000 (US Census Bureau) and approximately 6,000 to 7,000 vacant properties, 500 of which are owned by Metro departments including Louisville Metro Government, Landbank Authority, and Urban Renewal (“FAQ” – Vacant & Public Properties Administration). The

Landbank Authority owns the majority of Metro-owned vacant properties, roughly 400 of them (“Purchase Vacant Property from Metro” – VPPA), and the Vacant Land Sales Inventory, most recently updated in March 2018, lists 344 vacant lots, all owned by the Landbank Authority.

The Vacant Land Sales Inventory list is provided by the Vacant & Public Properties Administration (VPPA) as part of efforts to facilitate purchase of city-owned vacant lots. The VPPA website on louisvillyky.gov also provides a step by step process for prospective buyers which includes four programs through which they may acquire that land: The Adjacent Side Yard program allows property owners to purchase neighboring vacant lots for \$1; The Cut It, Keep It program offers homeowners the opportunity to buy lots on their block for \$500; and The Budget Rate and Flex Rate Programs are further programs allowing individuals to purchase vacant lots for a reduced price (“Vacant Lot Sales Program”, VPPA).

In addition to the application to purchase vacant land, there is a separate application (permitting process) for community garden purposes. While these programs indicate that the city is encouraged to sell vacant land for open space and community garden use, there is not significant mention of open space preservation or the importance of community gardening in city documents.

City recognition of open space/community garden importance

In 1995, the Parks and Open Space Master Plan (POSMP) was released as an informing document for the City’s 20-year comprehensive plan titled Cornerstone 2020. Both documents mentioned that community open spaces

should be improved, but did not provide much detail on how that should be implemented. Cornerstone 2020 also did not mention community gardening in any capacity while the POSMP briefly mentioned community gardens as a potential use of open space, but did not include it in any goals, objectives, or policies. More recently, Sustain Louisville (2013), and Healthy Louisville 2020 (2014) address community gardens as a way to improve the local food economy, but there still remains little discussion around increasing open space access for residents.

In 1997, the Louisville and Jefferson County Environmental Trust was established to help the city meet the goals stated in the Parks and Open Space Master Plan, and subsequently, Cornerstone 2020. The mission of this Trust is to meet the “park and land preservation needs of current and future Louisville residents” and according to the Land Trust Alliance (through which this Trust is accredited) currently preserves just over 1,000 acres in Louisville/Jefferson County. Yet while NeighborSpace was a Land Trust created to preserve community open space, the Louisville and Jefferson County Environmental Trust was created to preserve mostly natural areas and agricultural land.

The 2016 City Park Facts (Trust for Public Lands) shows that Louisville has 23.1 acres of parkland per 1000 residents. This is partly the result of Louisville’s large park systems such as the Jefferson Memorial Forest and the Parklands of Floyds Fork, with over 6,000 acres of preserved woodland, and over 4,000 acres of preserved watershed, respectively (Forest Master Plan, Louisvilleky.gov; 21st Century Parks, theparklands.org). However, only 33% of

parks in Louisville are within walking distance of residents (Trust for Public Lands, 2016). Thus, Louisville's open space planning weighs heavily on improving the large parks and natural areas and focuses little on the importance of community open space and community gardens.

The Jefferson County Cooperative Extension Service Community Garden Program

The Jefferson County Cooperative Extension Service has been given, by the city of Louisville, the responsibility of managing several community gardens on city-owned property around the city. Many of these gardens were previously managed by another Louisville organization called Brightside. Brightside was created by the Mayor of Louisville in 1986 to engage communities in clean-up and greening projects ("About Brightside", louisvilleky.gov). A program by Brightside called Brightsites was established in 1987 to create beautification gardens around Metro Louisville. These sites are supported by partnerships with local businesses which help start and sustain these areas ("Brightsites", louisvilleky.gov). The Brightsites program once also operated community gardens around the city. However, there is no documentation of why this program ceased, and interviews with key community garden stakeholders in Louisville could not determine the ultimate cause. Though the underlying cause is unknown, it was around the time of the Louisville/Jefferson County Merger of 2003 that the Jefferson County Cooperative Extension Service gained management control of Brightsides community gardens. Many of the gardens

that were once managed by Brightside are now managed by the Extension Service.

Cooperative Extension Services are programs implemented by Land Grant Universities and are present in all counties in every state as a result of the Morrill Act of 1862 and the Smith-Lever Act of 1914. In Kentucky, the University of Kentucky and Kentucky State University are the two Land Grant Universities. KRS 164.610 states that the purpose of a Kentucky Cooperative Extension Service is to disseminate “among the people of Kentucky useful and practical information on subjects relating to agriculture, home economics, and rural and community life.” In Louisville, a Memorandum of Agreement between the University of Kentucky and the Louisville/Jefferson County Metro Government states that the Extension Service is to operate programs in “Agriculture and Natural Resources, Family and Consumer Sciences, 4-H Youth Development, Community and Economic Development and subjects related thereto.”

Though neither the Kentucky Revised Statutes nor the Memorandum of Agreement mention Extension Service’s duties in managing community gardens, the Extension Service currently manages 10 community gardens for the City of Louisville. The majority of these gardens are on Metro-owned properties. The Extension Service provides managerial services to the gardens such as mowing and repairs, provides tools and fencing, and is exempt from water charges (in most cases). For large gardens, the Extension Service maintains a paid garden manager for onsite management of daily operations. Few if any gardens are wholly or even partially managed by the community garden users themselves;

instead, these individuals purchase plots for gardening. Each garden contains several plots which the Extension Service leases to gardeners for a small fee. Individuals garden in their respective plots, and a garden manager oversees day-to-day activities.

Other organizational support for community gardens

While the Extension Service manages 10 community gardens and provides technical and educational assistance to several others, depending on the source, the total number of community gardens in Louisville ranges from between 36 (“Local Food in Louisville Story Map”, louisvillefoodblog.org), to over 70 (*Sustain Louisville*, 2013). The variation in these numbers may depend on whether school gardens and other types of private collective gardens are considered. There are several other organizations in Louisville that support and manage community gardens. Moreover, no comprehensive (validated) count of gardens has been conducted in Louisville to date.

Louisville Grows, for example began a Community Garden Grant program in 2017 which awarded 7 gardens with \$1,000 in materials such as seeds, soil, and tools (“Community Garden Grant”, louisvillegrows.org). Catholic Charities runs the Common Earth Gardens program which has established and partnered with many gardens for refugees and their families (“Common earth gardens”, cclou.org). The Food in Neighborhoods (FIN) Community Coalition advocates for urban agriculture, food security, and food policies, and was involved in the creation of the Community Garden ordinance. Additionally, Lots of Food is a

market garden that was one of the first properties bought from the Landbank Authority for agricultural purposes. The owner has been involved in streamlining this process and the Lots of Food website provides several resources for individuals who wish to follow in her footsteps (“You can do it!”, louisvillelotsoffood.com).

Summary

Louisville is rightly proud of its large parks system, several of which were designed by Frederick Law Olmstead, but the city fails to recognize the importance of community open space in improving and beautifying the city. The City of Louisville also views community gardens as mostly vegetables gardens for personal uses. This narrow definition of a community garden may be part of the reason that there is a lack of emphasis on their sustainability and permanence. All gardens managed by the Jefferson County Extension Service are leased from the city, and a presentation about the program indicated that the program is currently underfunded (*UofL Sustainability Roundtable, Presentation, 2018*). While the city has made efforts to increase the purchase of vacant lots for community gardens (i.e. Cut it Keep It and Side Yard programs), it remains unclear whether any individual or group has yet to do so. Finally, of the gardens generated by Metro Government and the Extension Service, most are managed by paid Extension Service staff (garden managers), not community members.

4b. LEGAL AND INSTITUTIONAL DESIGN PRINCIPLES

Data compiled about Chicago and NeighborSpace, and Louisville and the Extension Service, from the interviews and research that was explained in the last chapter, was organized and summarized into three tables, each focusing on one of the foundational design principles of SrSG: Legally Binding Authority (Table 1), Legally Binding Responsibility (Table 2), and Tangible Support (Table 3). Here, I explain the tables, and provide a brief summary of each, comparing the extent to which these principles apply in each city and their designated community garden organization.

Legally Binding Authority

Legally Binding Authority (Table 1) refers to the ways in which legislation, and other government activities (e.g., programs, permitting, regulation), give legal authority for self-governing groups to organize and make-decisions, and provides legitimate avenues for these groups to implement their decisions.

NeighborSpace

NeighborSpace was created via a 1996 Intergovernmental Agreement between the City of Chicago, the Chicago Park District, and the Forest Preserve District of Cook County. As a result of this Agreement, NeighborSpace is recognized as a Non-Profit Land Trust organization. A Land Trust is an organization that secures land by purchase, and then leases it to, in this case a

community group, for a secure period of time, typically close to 100 years (“Community Land Trusts”, Community-wealth.org). NeighborSpace is also a 501(c)(3) non-profit organization, a designation authorized by Federal government through US Code Title 26 (26 U.S.C §501(c)3), and recognized at the state and local levels by the Illinois General Not for Profit Corporation Act of 1986 (IL Admin. Code tit. 86 §130.120). In Illinois, 501(c)(3) nonprofits are also exempt from Sales and Property taxes and have the authority to ask for and receive tax-deductible donations (POI-37, Illinois Department of Revenue). In 1999, the Intergovernmental Agreement was amended and extended for 20 years to expire on December 31st, 2018.

The Agreement outlined several powers of NeighborSpace to facilitate its role in acquiring and managing community-managed open spaces. These powers gave NeighborSpace the authority to “own, lease, manage, or hold easements to typically small, open spaces” through buying, leasing, or accepting donations of real property (Intergovernmental Agreement, 1996; 3). NeighborSpace was also given the authority to acquire tax delinquent vacant lots through the City’s Tax Reactivation Program (1996-2005). The Agreement additionally gave NeighborSpace the authority to delegate day to day management responsibilities to local community groups by stipulating that NeighborSpace would “enter into agreements with local groups for the use and maintenance of open spaces” (Intergovernmental Agreement, 1996; 3). This Agreement is made possible in part by the Doctrine of Home-Rule Units (IL Const. art. VII § 6 1971) which gives municipalities the right to govern their affairs

as they see fit, and the Local Government Property Transfer Act (IL ST CH 50 §605/2-3.1 2016) which permits municipalities to transfer real estate within government departments.

NeighborSpace corporate Bylaws were released to me upon request by the Executive Director of NeighborSpace. In these Bylaws, the powers of NeighborSpace are further explained and Article 1, Section 1 specifies that NeighborSpace sites are “to be maintained and managed by a local block club, organization, business or other group” (Amended and restated Bylaws of NeighborSpace, 2006; 1). This directly gives NeighborSpace the authority to allow community groups to self-govern these sites, a strong indicator of State-Reinforced Self-Governance.

NeighborSpace’s Bylaws also explain the powers of its Board of Directors which is made up of 7 government directors and at least 4 non-governmental directors (Article 3, Section 2). All Officers of NeighborSpace are also members of the Board of Directors, except the Executive Director. To prevent Government Directors from influencing the activities of NeighborSpace on behalf of their department, the Article V, Section 1 states that “Any officer who is an employee of the Chicago Park District, the Forest Preserve District of Cook County, Cook County, or the City of Chicago, shall take no actions on behalf of NeighborSpace in respect of any transactions between NeighborSpace and that officer’s employer, but shall instead assign responsibility for such transaction to such other officer as designated by the Board of Directors” (Amended and restated

Bylaws of NeighborSpace, 2006; 7). Thus, NeighborSpace is given the authority to make its decisions without government involvement.

There are a few factors that I believe influenced City government to grant NeighborSpace such Authority. First, the Illinois Constitution, for example, Article XI, Section 2, references the Rights of Individuals to a “healthful environment” (IL Const. art XI § 2). And the Green Governments Illinois Act (2007) states that every local government should promote an environmentally sustainable future as part of the State’s commitment to preserve natural resources and reduce negative environmental impacts (20 ILCS 3954). These State Acts and Constitutional Rights encourage Chicago to make decisions that improve the environment of the City as it sees right and fit.

Second, several City planning documents and ordinances encourage the use of community gardens as open space management, thus providing citizens with indirect authority to self-organize in the creation, management, and decision-making processes of community gardening. In 1998, the CitySpace plan set forward recommendations for improving several open space areas and created multiple Action Plans to meet those ends. In addition to being the catalyst that spurred the creation of NeighborSpace, the CitySpace plan emphasized the importance of community gardens to improve vacant lots. Other planning documents that promote sustainability and community open space include Sustainable Chicago 2015 (2012), the Green and Healthy Neighborhoods Plan (2014), and Recipe for Healthy Places (2013).

The City has also provided favorable ordinances and programs in support of community gardens. In 2011, the city passed an Urban Agriculture Ordinance which permitted community gardens in multiple zoning districts, indicating that community gardens are not to exceed 25,000 ft² (except in the parks and open space districts (POS1 & POS2) where there is no regulation on size), and outlining several requirements of a community garden including size, number and type of accessory building, and sales. The ordinance also gave a definition of community gardens, being “A neighborhood-based development with the primary purpose of providing space for members of the community to grow plants for beautification, education, recreation, community distribution or personal use” (Chicago Municipal Code 17-17-0103-F (1)). This definition encourages the idea that community gardens are more than allotment vegetable gardens and can be used by communities to improve open space.

In 2015, the City passed a favorable composting ordinance that allows food scraps to be included and brought from off-site to a community gardening compost pile/container, as long as the gardens register with the City and keep records of the amount off-site food scraps. Only 10% of garden compost material is permitted to be food scraps, the rest must be landscape waste. The City of Chicago’s Department of Water Management also supports community gardens by allowing them to use city hydrants for a specified fee based on the area to be watered. Fees are also applied for a hydrant key and other technical equipment to adapt the hydrant to garden hoses.

Jefferson County Cooperative Extension Service

The Jefferson County Cooperative Extension Service is authorized in Louisville via a Memorandum of Agreement (MOA) between the University of Kentucky and Louisville/Jefferson County Metro Government, and a 2002 Louisville Metro Code Ordinance (Louisville Metro Code 32 § 331) that provides a District Board made up of the Mayor and 6 Louisville residents. The MOA is renewed annually and states that the purpose of the Extension Service is to operate programs in “Agriculture and Natural Resources, Family and Consumer Sciences, 4-H Youth Development, Community and Economic Development, and subjects related thereto” (MOA, 2017). It is through verbal agreements with the City that the Extension Service is given the authority to lease and manage community gardens, the majority of which are on City property. The Extension Service leases land for 10 community gardens from various Metro Louisville Departments, including the Metropolitan Sewer District (MSD), without any monetary obligations and the leases are renewed, on average, every three to five years.

Cooperative Extension Services are authorized in every state in partnership with the State’s Land Grant Universities as a result of the Smith-Lever Act of 1914, and the Metro Louisville is granted the authority to have an Extension Service and to enter into agreements with the Extension Service as a result of several State Statutes. The Doctrine of Home-Rule Units (KY ST 156b) permits municipalities in Kentucky to provide laws and exercise powers that are in pursuit of public purposes, and the Kentucky Revised Statute (KRS) 164.620

authorizes extension districts in all counties. KRS 164.610-164.675 state the purpose of a Cooperative Extension Service in Kentucky and provide a means for creation and give powers to an Extension District Director, District Board, and Extension Council.

KRS 164.630 authorizes the creation of an Extension Board, and KRS 164.660 explicitly states that no member of the extension board (except for the county judge/executive, who, in Louisville, is the Mayor) shall hold public office while serving as a member of the board. Thus, the decision-making powers of the District Board are separated from government influence to a degree and decision-making power is hierarchical. For example, county agents report to the District Extension Council which is directed by the District Extension Director, who reports to the District Extension Board. This hierarchical decision-making authority may make it difficult to request changes to, or assistance with, county programmatic activity.

At the local level, Louisville Metro Government has made some efforts to encourage self-organization of community gardens. For example, in 2013 the City created a Land Development Code ordinance (Chapter 4.3.17) that outlined the zoning districts in which community gardens are now permitted, as well as describing specific regulations on community garden management such as the type and size of accessory structures, types of lighting, number of parking spaces, landscape buffering, watering for dust abatement, signage, sales, and composting. However, though the ordinance mentions that water should be provided on site for community gardens, there is little to no support from the

Louisville Water Company to provide water to community gardens (Except through the Extension Service). Additionally, though a definition is not included in chapter 4.3.17, the Land Development Code chapter 1.2.2 defines community gardens as “an area of land less than 5 continuous acres in size managed and maintained by a group of individuals to grow and harvest food and/or non-food crops for personal or group use, consumption, donation, or off-site sales” (Land Development Code pg. 1.2-11).

There are also only few city planning documents that mention community gardens, and those that do reference them in terms of improving food access and improving the local food economy (*Sustain Louisville*, 2013; Harris, M., & Saad, F., n.d.). Furthermore, there is little emphasis on the importance of increasing and improving community open space in many city documents. Typically, open space is used mainly in reference to all parks and natural areas throughout Louisville (for example, the Parks and Open Space Master Plan, 1995) and where mentioned, such as in the Cornerstone 2020 comprehensive plan, community green open space is only touched on as something to be improved without much detail. There also seems to be a lack of connection between community open space and community gardening. Since community gardens are viewed mainly as ways to increase food access, they are overlooked as solutions to improving community open space.

Summary

Legally Binding Authority is necessary for state-reinforcement of self-governance as it provides the self-governing groups with the Authority to not only form and make-decisions, but to carry out the decisions critical to its mission. NeighborSpace is given these Authorities through incorporation as a 501(c)(3) nonprofit and designation as a land trust, and through the Intergovernmental Agreements and the organizations corporate Bylaws. NeighborSpace is supported in these Authorities by City Planning documents and policies, and the Illinois Constitution and State Statutes which provides the City with the Legal Authorities and support to create of NeighborSpace.

In contrast, the Jefferson County Cooperative Extension Service is given the Authority to operate as a Cooperative Extension Service by law, but it is not written into any legally binding document its role to manage community gardens in Louisville. The Extension Service is not provided with substantial Authority to follow through on its given role and the only legally binding documents are the leases for the land on which the garden operates. Louisville city planning documents do not substantively support community open space, and while the Kentucky Constitution and State Statutes provide support for Cooperative Extension Services, they do not substantially support sustainability or environmental rights of citizens.

Legally Binding Responsibility

Legal responsibility (Table 2) refers to formal actions that official government entities take to assign and acknowledge the responsibility of a self-

governing group, to manage some aspect of a societal system or problem (in this case, green open space). Recognition of responsibilities that are legally binding may provide self-governing groups with motivation to adhere to their responsibilities, and therefore make decisions for the best possible outcomes.

NeighborSpace

Many of the same conditions that gave NeighborSpace the authority to acquire land via the 1996 Intergovernmental Agreement also gave NeighborSpace the responsibility as land broker. In giving NeighborSpace, the “powers to buy, accept donations of, own, lease, hold easements to, and sell real property” (Intergovernmental Agreement, 2006; 5), the Agreement makes NeighborSpace responsible for acquiring land and preserving it permanently for the purposes of community-managed open space. As a result, NeighborSpace serves as an intermediary between Chicago residents and the City in acquiring vacant and tax-delinquent city-owned land and giving access to community groups to organize and manage it as green open space. As a Land Trust, NeighborSpace preserves these lands permanently thus ensuring their long-term use as a public benefit.

As land owner, NeighborSpace assumes all risks and liabilities associated with property ownership, providing gardens with basic liability insurance, as well as covering financial responsibilities such as property taxes (though it is exempt from cost in the majority of cases as a result of incorporation as a 501(c)(3) nonprofit), and water bills (for which it is also exempt to an extent). This

effectively relieves government entities, communities, and other organizations from the liability of holding and managing the properties.

In general, NeighborSpace is also responsible for abiding by its mission as stated in its Articles of Incorporation and Corporate Bylaws, as well as adhering to the roles and responsibilities given to it as a result of the Intergovernmental Agreement. In adhering to its mission, Article 1 Section 1 of the NeighborSpace Corporate Bylaws bestows communities with the ability to self-organize and self-govern community green open spaces by explicitly stating that NeighborSpace give management and maintenance responsibilities to the community groups/organizations. In giving communities access to land, and access to management responsibilities, NeighborSpace is designed in a way that promotes self-governance.

Furthermore, in ensuring the long-term preservation of community-managed open spaces, NeighborSpace voluntarily assumes responsibility for providing technical, educational, financial, and administrative support for gardens under its care. NeighborSpace takes on responsibility for covering costs such as water and hydrant installation fees, and emergency services such as repairs from natural (i.e. storms) or human (i.e. vandalism) damage. NeighborSpace also applies for permits and registers gardens with the city where needed, offers volunteer matching services, professional development and financial training workshops, connections to other local organizations, and partnerships with local businesses for free and reduced materials such as soil and mulch.

Jefferson County Cooperative Extension Service

The Extension Service is charged with the responsibility of disseminating information and providing programmatic activities as a result of the Smith-Lever Act of 1914, KRS 164.605-164.675, and the Memorandum of Agreement between the University of Kentucky and Louisville/Jefferson County Metro Government. The Extension Service is given responsibility to manage community gardens through an informal agreement with the City. The Extension Service is also responsible for abiding by its mission and purpose as per the Smith-Lever Act (1914) and KRS 164.605-164.675, as well as abiding by general rules of conduct provided by the University of Kentucky.

In Louisville, the Extension Service procures the land for community gardens through lease agreements with the land-owning city department, and requirements of the Extension Service may differ from garden to garden via the lease agreements. According to the US Code for Agricultural Extension Work Appropriation (Title 7, Chapter 13, Subchapter IV, Section 345) Extension Services are not allowed to own land for the purpose of small-scale community gardening or agriculture. Thus, the Extension Service takes on the liability and management of the property (assumes responsibility), but does not determine the long-term fate of the property.

For example, in the creation of one particular garden, the lease agreement with the Metro land-owner, Urban Renewal, prevented Extension from giving a community group full management when requested by that group. Lease agreements also differ in length depending on which city department owns the

land, and on location of the garden. Lease lengths are typically three to five years, and the Extension Service is required to take on the majority of managerial and maintenance responsibilities. The short-term lease agreements, and the short-term nature of the MOA do not promote long-term use and stability of the Extension Service nor of its community gardens.

Additionally, in retaining the majority of managerial and maintenance decision-making, the Extension Service seems not provide a secure avenue for community groups to self-govern. Hence, responsibility to manage the gardens is not transferred to community members in practice, though initially the Extension Service had hoped to do so. Instead, community members are responsible for using their garden plots according to rules established by the Service. Indeed, the County Coordinator expressed to me that he wished there was more community cohesion in the gardens. Currently, all Extension Gardens are allotment gardens where individuals come to garden their assigned plot for personal use. There is a garden manager who over sees the day-to-day interactions among gardeners, but there is little decision-making that is done without Extension Involvement.

However, the Extension Service does provide substantial technical, educational, material, and administrative support to these gardens, and to all urban gardens in Louisville. The Extension Service offers several urban agriculture training workshops throughout the seasons, as well as the Master Gardener workshop, and provides gardens with soil testing, or partners with the Jefferson County Soil and Water Conservation District for such purposes.

Specific to gardens managed by the Extension Service, gardeners are exempt from water fees and cost of facility installation, and Extension provides tools, fencing, signage and other materials necessary for the day-to day operations of its community gardens.

Summary

One of the main Responsibilities of NeighborSpace is to assume ownership of community-managed open space properties, thus relieving the communities, and government entities, from liabilities and other responsibilities associated with property ownership. Written into the intergovernmental agreement and the corporate Bylaws, NeighborSpace is given Legal Responsibilities to uphold this. In contrast, the Extension Service's main responsibility is to provide information and education to communities, as given by the Smith-Lever Act of 1914 and KRS 164.605-164.675, and the Extension Service is prohibited from assuming ownership of properties. These Responsibilities reflect the ways in which each organization is able to manage and sustain community gardens. Similar to the Legal Authorities given to each, NeighborSpace's Responsibilities are written into several legally binding documents, whereas the Extension Service's Responsibilities are only legally documented in lease agreements.

Tangible Support

In addition to providing self-governing organizations with the authority and responsibility to make decisions, substantial, tangible support must also be provided (Table 3). This allows the self-governing groups the ability to follow through with their commitments and adhere to their responsibilities.

NeighborSpace

Originally, the Intergovernmental Agreement required each participating department (City of Chicago, Parks Department, and Forest Preserve of Cook Co.) to appropriate \$93,750 for NeighborSpace each year for the first three years (until 1998). A 1999 Amendment to the Intergovernmental Agreement increased that amount to \$100,000 from each department, a total of \$300,000 annually, for the next 20 years (to expire December 31st, 2018). NeighborSpace acquires additional funds by donations and grants and secures approximately \$200,000 - \$400,000 annually by such means. Annually, NeighborSpace operates on approximately \$500,000 - \$700,000 by both City funds and public donations.

The City also helps fund NeighborSpace activities through grants, financial programs, and discretionary Aldermanic funds on a case-by-case basis. These funds are provided in situations where agreements can be formed for particular sites, to mutually benefit multiple parties (for example, a neighborhood that wishes to protect an existing space or create a new one). Open Space Impact Fees are also appropriated on occasion to support funding for gardens in a Neighborhood where the fees have been collected. Open Space Impact Fees were put in place following a 1998 ordinance (Chapter 16-18-101 – 16-18-110)

whereby the City requires a minimum amount of open space in all new residential developments, and such developments incur a fee when the minimum open space requirements are not met. Other economic development incentives include the tax reactivation program (1998-2005) that permitted developers and organizations to acquire tax delinquent parcels for a reduced fee.

The City also gives NeighborSpace non-financial support by providing discounted purchasing of vacant lots or donating lots to NeighborSpace through interdepartmental land transfers. NeighborSpace is also provided with discounted office space by the City. Other non-financial support to NeighborSpace is due in part through its partnerships with several other open space and community garden organizations and programs throughout the city. It also relies heavily on the work of volunteers to both assist NeighborSpace gardens and administrative work where needed. Local agricultural-related businesses also support NeighborSpace by providing materials such as tools and equipment, building materials, and soil and mulch for free or for a reduced price (“resources” neighborspace.org).

Facilitative programs for public acquisition of vacant lots are also offered by the City. These include the Large Lots program and the Adjacent Neighbors Land Acquisition Program (ANLAP). The Large Lots program offers lots for \$1 to individuals or organizations who own property on the same block as the vacant, city-owned lot. Applications are only accepted during a specified application period and since 2014, the program has sold 1,255 vacant city-owned lots (largelots.org). The Adjacent Neighbors Land Acquisition Program permits

property owners to purchase a vacant lot neighboring their property for a reduced price.

The Jefferson County Cooperative Extension Service

As stated in the Memorandum of Agreement between the University of Kentucky and Louisville/Jefferson County Metro Government, \$145,903 is allocated to Extension program costs and equipment. Of that, \$50,000 is expected to go towards the community garden program through a verbal agreement with the City. The Extension Service also collects approximately \$10,000 annually in plot fees from gardeners. Extension Service is currently operating on a \$10,000 deficit in the 2017-2018 fiscal year (*UofL Sustainability Roundtable, Presentation, 2018*). Each garden managed by Extension has several plots rented to individuals for a fee, typically \$10-\$20, to grow their plants and vegetables for personal use. The funds collected from one garden are not used specifically for that garden but go into a larger pool of funds for management of the community garden program in general. The Extension Service is also permitted to receive financial donations by individuals or organizations for specific gardens or projects on a case-by-case basis. In total, the Extension Service manages 10 community gardens on an annual budget of approximately \$60,000.

Additionally, the City provides grants or other assistance to the Extension Service for community garden management on a case-by-case basis, and donations from Metro Councilperson discretionary funds have been made, on

occasion, in support of individual gardens. The Extension Service also receives non-financial support from individuals, and organizations by way of volunteers and materials, and partnerships with other entities (such as the Jefferson County Soil and Water Conservation District, Louisville Grows, the Vacant and Public Properties Administration and the University of Kentucky) offer technical and educational support to Extension Service and its gardens.

The City also provides several facilitative programs to the public to encourage the purchase of vacant lots by individuals and organizations. For example, the Adjacent Side Yard program allows property owners to purchase a neighboring vacant lot for \$1, and the Cut It, Keep It program offers property owners the opportunity to buy property on their block for \$500. These programs are available to the Louisville public, but are not available to the Extension Service as it is prohibited from owning property.

Summary

Both NeighborSpace and the Extension Service are provided discounted land as a result of City agreements. In the case of NeighborSpace, this land is provided for purchase at a discount (i.e. \$1 or donated), and in Louisville, the Extension Service enters into lease agreements with the City with no monetary exchange. Where NeighborSpace's financial appropriations are written into legally binding documents, financial appropriations for the Extension Service are written into the Memorandum of Agreement for all of its programs but there is no legal document stating the amount given to the Extension Service specifically for

its community garden program. The funds given to NeighborSpace further reinforces the previous design principles in that NeighborSpace is legally awarded money to perform its Authorities and Responsibilities. In contrast the funds for the Extension Service's Authorities and Responsibilities of community garden management are not sufficient.

Additional Design Principles

The three design principles discussed in detail above are what I believe to be the foundational design principles for State-Reinforced Self-Governance. These three factors alone however, do not give the entire picture of how legal systems can protect self-governance for the long term and adapt to changes in environment and society over time, nor do they explain the dynamic interactions of the users themselves in self-governing these spaces. For the purposes of this study however, I found it prudent to only analyze the three foundational principles in such an intricate way and therefore I will only summarize the remaining principles in their relation to SrSG. The remaining principles are: Reflexivity, Legal Sunsets, Well-Defined Boundaries, Participatory Decision Making, Internal Enforcement, and Internal Conflict Resolution.

NeighborSpace

Reflexive Law and Legal Sunsets are important aspects of SrSG that can potentially encourage adaptability in dynamic social-ecological systems. In Chicago, a possible example of legal flexibility is the dynamic definition of

community gardens in the municipal code. By defining a community garden with multiple purposes, this allows for interpretation and differing levels of involvement related to self-governance of community-managed open space. In other words, many different kinds of green open space, and community space, are recognized as legitimate uses.

A possible example of a Legal Sunset may be the 3-year rule that a local alderman instituted which required gardens to show success for three years before they could apply for permanence as a NeighborSpace garden. Other Legal Sunsets involve individual garden lease lengths between NeighborSpace and the city land owner which tend to be around 5 to 10 years, and the 20-year Intergovernmental Agreement to be renewed at the end of this year.

Furthermore, in the case of a land trust, the absence of Legal Sunsets by an almost permanent lease between NeighborSpace and the community group is essential to the sustainability of these community-managed open spaces.

Well-Defined Boundaries, both physical and social/political are necessary so that all users and stakeholders understand their roles and responsibilities. NeighborSpace gardens are generally well defined physically, typically because of the small parcel nature of community-managed open spaces there is little room for misunderstandings. Furthermore, a NeighborSpace document outlines all roles and responsibilities of NeighborSpace and of the Garden Leadership Team, Community Organization Partner, and other Garden Stakeholders which include garden members, volunteers, visitors, neighbors, and others. Community members renew their agreement with NeighborSpace each year, ensuring that

these roles remain accurate and known. Furthermore, NeighborSpace maintains an active working relationship with its partner organizations in the city, with each partner's roles clearly described in the Agreement. The interview with the Executive Director of NeighborSpace also confirmed that roles are well known and typically followed.

NeighborSpace is not involved in significant decision-making processes made by the Garden Leadership Team, unless specifically requested to do so. Participatory decision making involves little to no involvement by NeighborSpace, thus giving its gardens the means to self-govern and make decisions in ways that they see fit. NeighborSpace also is involved in decision making with the city on a consultative basis, especially for projects that are important to the city-wide mission for community-based green open space. Each year, NeighborSpace requires gardens to fill out an Online Partnership Agreement to inform NeighborSpace that everything is still working fine, or, if it is not. Other than this annual form, NeighborSpace does not monitor its gardens, and enforcements would only be made by City Government if city laws or policies were broken by gardeners. The Executive Director indicated that this relationship is productive and mutually satisfactory to a large extent. Lastly, NeighborSpace does provide gardeners with a Conflict Resolution Plan, though generally, gardeners will opt to leave gardens rather than try to work things out.

The Jefferson County Cooperative Extension Service

Where Chicago has provided a multi-use definition of a community garden, Louisville's definition of a community garden is less flexible, describing them as mainly vegetable gardens for personal use. In addition, Louisville strongly emphasizes urban agriculture (small and moderate-scale market gardens) over community green open space uses. This more rigid definition may hamper users flexibility in their self-governance of open spaces. Moreover, along with the gardens managed by the Extension Service, the majority of community gardens in Louisville are on short-term leases with the city, and in some cases leases are renewed annually, and are always subject to change or cancellation at a moment's notice, if the land owner wishes to sell the property for development or lease to another entity. In addition, the Memorandum of Agreement, which outlines the use of monetary appropriations to the Extension Service, is also renewed annually. Legal Sunsets, while important for adaptability, can be harmful to self-governance when applied in a context such as this. Permanence of land security and funding seems to be an essential factor of SrSG and insecurities such as short-term leases and agreements may not provide a stable environment for self-governance. Hence, the effects of Legal Sunsets are context dependent.

Gardens managed by the Extension Service are generally well defined physically, the majority of which are on small urban plots and/or surrounded by fencing. The Extension Service also provides gardeners with a Gardeners Agreement which outlines the Rights of gardeners and the responsibilities of the gardeners and the Extension Service in user and managerial roles, respectively.

All gardens also have a Garden Manager who is responsible for reporting to the Extension Service. Most Extension-managed gardens do not have significant participatory decision-making authority as the majority of managerial decisions are made by the Extension Service. The majority of roles and responsibilities of gardeners are already outlined in the Gardener Agreement, making it difficult for garden users to participate in decision-making if the rules are already made for them. In some cases, as a result of lease agreements, the Extension Service is bound to the managerial position and is prohibited from allowing gardeners to self-govern.

The Extension Service's horticulturist is generally very involved in day-to-day garden activities, assisting gardeners and providing education where necessary. As a result of this involvement, the horticulturist also carries out monitoring and enforcement activities. The Extension Service is also involved in conversations with Louisville Metro Government about its community gardens. One particular garden involved significant partnerships in decision-making between the Extension Service and Metro, as it was a Metro councilperson who approached the Extension Service to help create and secure this garden and the Metro Office of Louisville Forward was also heavily involved in the creation of this garden. Lastly, the Extension Service does follow a conflict resolution guideline provided to them by the University of Kentucky, but does not provide gardeners with a conflict resolution plan.

4c. SUMMARY

Based on the information provided in this chapter, there are obvious differences in the role and function of NeighborSpace and of the Jefferson County Cooperative Extension Service, and in the ways Chicago and Louisville view types of open space and the importance of community gardens. Chicago recognizes the importance of community space, and defines a community garden as a community-managed open space used collectively for beautification, education, and vegetable production, among other things. In Louisville, there is a lack of emphasis on community open space and a narrow definition of community gardens which realizes them as individual plots for vegetable growth rather than ways to improve vacant spaces as community-managed open space.

This distinction seems to have carried over into the ways that Chicago and Louisville have designated organizations to oversee and preserve these spaces, and the roles they have given citizens in doing so. In 1996, Chicago agreed to create an organization that gave self-governing power to its citizens to manage and preserve open space for their communities, NeighborSpace. NeighborSpace, was given the authority and the responsibility, and was provided with significant support by the City ensure that communities have the educational, administrative, financial and technical support to continue to use and improve these spaces for generations to come.

In contrast, Louisville has not created such an entity, but designated the Jefferson County Cooperative Extension Service, an organization with limited

funds, to manage a select few community gardens on city-land, for the city. The Extension Service has been given the responsibility to manage these gardens, but has limited legal authority and support to do so. Furthermore, the citizens' ability to self-govern these spaces is limited by the individual nature of assigned plots, the impermanence of the gardens themselves due to short-term leases with the city, and the concentration of managerial decision-making power with the Extension Service.

Louisville has focused much of its planning and policy efforts towards improving and increasing its large parks, open space and natural areas, with less emphasis on community and neighborhood parks and open space. These extensive parks and natural areas have culminated in over 17,000 acres of parks and open space in Louisville, at approximately 23.1 acres of parkland per 1,000 residents (Trust for Public Lands, 2016). However, only 33% of Louisville residents live within walking distance of one of these parks. In contrast, while Chicago has encouraged planning and policymaking to increase and improve large natural areas and open space, Chicago has also emphasized the importance of small neighborhood and community parks mainly as a result of the 1998 CitySpace plan. While Chicago has fewer total acres of parkland than Louisville (12,588 acres), and fewer acres of parkland per 1,000 residents (4.3 acres), 92% of Chicago residents live within walking distance of one of its parks.

Urban green space is increasingly important to sustainability. Numerous studies have shown how urban green areas are not only important to preserving ecosystems and biodiversity (Bollund & Hunhammar, 1999; Goddard et al., 2010;

Pickett et al., 2011), but also to improving human mental and physical health (Giles-Corti et al., 2005; Maller et al., 2005; Maas et al., 2006; Groenewegen et al., 2006). The ability of citizens to walk to open spaces not only increases the use of that open space, but is a benefit to the residents when going to the park is nothing more than a quick jaunt, and also cuts down on inequalities in park access (Giles-Corti et al., 2005). For these and other reasons, CitySpace (1998) emphasized the importance of increasing community open space areas, and more recently, Sustainable Chicago (2012) set a goal to that “every Chicagoan lives within a 10 minute walk of a park, recreation area or open space”. And in 1996, NeighborSpace was created to secure open space for communities to use as community gardens, and other types of community-managed open space.

In contrast, Louisville has not emphasized community open space, or neighborhood parks and recreation areas in many of its planning documents and policies, though this language is slowly changing. The Vacant and Abandoned Properties Neighborhood Revitalization Study (2013) recommended neighborhood greening projects and urban agriculture as potential uses of vacant lots, and this language is also seen in the drafts of Louisville’s future comprehensive plan encouraging “the use of vacant lots as small parks and community gardens” (Community Facilities Draft Sept. 2017, Goal 2, Policy 13 pg. 3). However, Sustain Louisville (2013) does not include recommendations or goals for increasing community and neighborhood parks. Louisville does not recognize the importance of walkability to its large parks system and thus the importance to sustainability that community open spaces provide.

The differences in the ways that Chicago and Louisville view community open space seem to play an important role in the presence of State-Reinforced Self-Governance factors of community-managed open spaces. Chicago has recognized the importance of community open space and not only sets ambitious goals to improve and increase them, but also recognizes the ability of communities to manage these spaces and gave them the authority and support to do so through creating NeighborSpace. Louisville on the other hand, has recognized the importance of getting vacant lots back into productive use, but has not provided its citizens with a significant avenue, to do so.

4d. OVERALL ANALYSIS OF RESULTS

In this thesis, I used information gathered from interviews, city and state laws and policies, planning documents, and other archival data to create a brief case study of both NeighborSpace and Chicago, and the Jefferson County Cooperative Extension Service and Louisville. I analyzed this information using the Legal and Institutional Design Principles framework by DeCaro et al. (2017) to determine the presence of these factors, and thus the potential State-Reinforced Self-Governance in each city and organization, and how that SrSG relates to the overall sustainability of each city and their designated community garden organizations (i.e. NeighborSpace and the Jefferson County Cooperative Extension Service).

Case Studies

In 1982, the U.S. Justice Department sued the Chicago Parks District for not providing equal access to recreational spaces and claimed this was a result of racial discrimination as the majority of communities lacking recreational spaces were high minority neighborhoods (Daley, R. M., Rogers, J. & Stroger, J. H., 1998). These charges sparked the Chicago Parks District to create a *Consent Decree Task Force* that analyzed Chicago communities and determined which areas were the most underserved, making those priority neighborhoods for recreational development. Thus, it is significant that only after a judicial decree, did the Chicago Parks District amplify efforts to improve and increase community parkland and open space. Several park and open space planning documents were developed as a result of this, including the CitySpace comprehensive open space plan.

In contrast, Louisville has substantial parks, open space, and natural areas throughout the city, several of which are located in high minority neighborhoods. However, these minority areas of Louisville also have the highest concentrations of vacant lots and all across the city, neighborhoods lack walkable recreation areas. Louisville's planning focuses significantly on improving city parks and open space while not giving significant attention to neighborhood open space. DeCaro et al. (2017) suggest that it is often the case that the catalyst for cities to improve some social or ecological resource is some form of disaster or lawsuit, or both. The catalyst for Chicago to expand neighborhood open space was significantly influenced by a U.S. Justice Department mandate, and while it

is unlikely Louisville would face a similar mandate, it seems likely that no significant action may be taken unless the city is in some way forced to provide more community open space.

Louisville's current stance on community open space is marginal and limited, not providing significant goals for improvement in planning and policy. It also seems that Louisville supports community gardens in name only and while it has provided several avenues to encourage communities to purchase property for community gardens, it seems not to recognize that land ownership is a significant hindrance on community gardens and does not offer a substantial alternative. This is something that Chicago recognized in the CitySpace (1998) open space plan, and was a significant factor in the creation of NeighborSpace. Currently, Louisville provides communities with the opportunity to have the Jefferson County Cooperative Extension Service take property responsibilities through leases for community gardens, however Louisville does not provide the Extension Service with enough support for it to manage any more gardens than the 10 it currently operates.

The Extension Service leases gardens through the City and then provides space for community members to garden by assigning a plot and providing a Gardeners Agreement. In contrast, NeighborSpace acquires ownership of the properties, then leases the property to a community group. This group can then encourage individual participation and provide their own gardeners agreements. This distinction is explicit to the function of NeighborSpace as land broker, and of the Extension Service as an educational and information provider. The Extension

Service provides communities with temporary land and the education to garden, whereas NeighborSpace provides communities with permanent land and the space to use the land as any type of open space that fits the community's needs.

Legal and Institutional Design Principles

As a result of the Intergovernmental Agreement and NeighborSpace's corporate bylaws, NeighborSpace is given several Legal Authorities and Responsibilities to acquire land, assume ownership responsibilities, enter into agreement with community groups/organizations, and to provide communities with permanent land which they are allowed manage as open space. Through these documents and several other city policies, NeighborSpace is also given Tangible Support to fulfill these Responsibilities and Authorities by financial appropriations, low cost or donated land, and discounted office space. These three factors (Legal Authority, Legal Responsibility, Tangible Support) are proposed by this study to form a foundation of State-Reinforced Self-Governance, and therefore their presence in the formation and sustainability of NeighborSpace indicates that the creation and sustainability of NeighborSpace was influenced by State-Reinforced Self-Governance. Furthermore, the state-reinforcement of NeighborSpace to provide land and delineate management responsibilities to communities indicates that the city, through NeighborSpace, may provide self-governance to the communities themselves in managing open space.

In contrast, the Jefferson County Cooperative Extension Service is a state and federal program provided to Jefferson County. This distinction in and of itself puts significant strain on the ability of Louisville to provide State-Reinforced Self-Governance to the Extension Service, and thus to its community gardens. The Extension Service is provided with the Authority and Responsibility by Kentucky Statutes, and U.S. Acts and Codes to provide informational and educational assistance to the County for agricultural and home economics purposes. It is in accordance with these State and Federal Authorities and Responsibilities that Louisville has charged the Extension Service with the task of managing several community gardens within the city. However, several limitations of the Extension Service, including its financial appropriations, and its inability to purchase land, potentially inhibits the Extension Service from providing adequate self-governance to the gardens it manages.

Louisville has the opportunity to expand the Extension Service's funding to improve its ability to manage more gardens, and to manage them more successfully, but ultimately the ability of the city to provide more substantial Legal Authorities and Responsibilities to the Extension Service is limited. Thus, Louisville currently seems not to provide State-Reinforced Self-Governance of community gardens within the city, nor offer state-reinforcement of self-governance to community garden organizations that could better manage community gardens for the city and its residents.

Further inhibiting the Extension Service are the short-term lease lengths, and the annual nature of financial appropriations for its programs. These are

examples of Legal Sunsets that do not encourage self-governance. In contrast, as a Land Trust, NeighborSpace preserves land for community open space permanently, and the long-term Intergovernmental Agreement (20-years) for funding of programmatic activity are examples of Legal Sunsets that are supportive of self-governance. Furthermore, NeighborSpace provides its gardens with clear roles of each Stakeholder and includes neighbors and volunteers in these roles, clearly defining Social Boundaries. Such Boundaries are not defined by the Extension Service, and the Extension Service maintains the majority of Decision-Making authority while NeighborSpace delineates the majority of Decision-Making to its gardening groups. Thus, it appears that the presence, or lack of state-reinforcement of these organizations by their respective cities influences the organization's ability to then enable community groups with self-governance.

Sustainability Assessment

The preservation of open space, and community-managed open space, is directly relevant to the Three Pillars sustainability, thus the commitment to improving and increasing community-managed open spaces in Chicago and Louisville is also directly related to the sustainability of these two cities. Green open space has numerous benefits for communities, and cities as a whole, but small, community open spaces and recreational areas are often overlooked in the grand scheme of open space planning. Community green spaces impact Economic Sustainability in that parks and managed green spaces improve

property values, and encourage businesses to establish or relocate to these communities (Robert Wood Johnson Foundation, 2010). Recreational and green open spaces increase walkability (Chiesura, A. 2004; Giles-Corti, 2005), improve safety (Chiesura, A. 2004), and the presence of nature can improve mental health (Maas et al., 2006; Groenewegen et al., 2006), all aspects important to Social Sustainability.

Improvements in community health and wellbeing can also have feedback effects on improving the community as a whole, thus a more prosperous and economically stable community can emerge. Community-managed open spaces also influence the Environmental Sustainability of cities as well by increasing urban biodiversity by including diverse vegetation, more diverse animal and insect species can prosper as well (Goddard et al., 2010). Rain gardens and other remediation gardens have the ability to both prevent soil and water pollution, and to improve the quality of the soil and thus the water (*Brownfields Technology Primer*, 2001). Green spaces can also reduce the urban heat island effect improve air quality (Goddard et al. 2010). Thus, community-managed green open space can improve Environmental Sustainability. Environmental Sustainability promotes a healthy environment which improves the Social Sustainability of communities, which in turn improves Economic Sustainability.

Community-open space and recreational areas are just as important to urban sustainability as large, natural open spaces and recreational areas. Chicago has recognized this and has provided several planning documents to support community open space creation and sustainability, as well as creating a

novel program, NeighborSpace, to fulfill a portion of this mission. Louisville however, has not recognized the importance of community open space to the sustainability of the city and instead continues to focus sustainability initiatives around large recreational natural areas and open space within the city.

Table 1: Legally Binding Authority

<u>City</u>	<u>NeighborSpace (Chicago IL)</u>	<u>Jefferson County Cooperative Extension (Louisville, KY)</u>
	1996 Ordinance (Intergovernmental Agreement). 2006 Bylaws.	2002 Ordinance (Jeff. Ord. 36-2002/Lou. Metro Am. Ord. No. 119-2007). 2017-2018 Memorandum of Agreement. KRS 164.605-164.675
	<ol style="list-style-type: none"> 1. Authority to Form (Incorporate): <ol style="list-style-type: none"> A. Land Trust <ul style="list-style-type: none"> ▪ Can acquire land/easements to set aside for public benefit. ▪ 20-year agreement (expires December 31, 2018). B. 501(c)3 Non-Profit Organization <ul style="list-style-type: none"> ▪ Exempt from property tax (other taxes). ▪ Can solicit and accept tax-deductible contributions. 2. Authority to Acquire Property for Neighborhood Open Space: <ul style="list-style-type: none"> ▪ Own, lease, manage (e.g., insure), hold easements to typically small open spaces in the city and planned riverfront developments. ▪ Acquire tax delinquent/foreclosed/vacant lots (e.g., Tax Reactivation Program 1996-2005). 3. Authority to Collaborate with Local Groups: <ul style="list-style-type: none"> ▪ Enter agreements with local groups to use/maintain open spaces. ▪ Transfer decision-making authority, management, responsibilities to neighborhood groups (Bylaws art. I §1). 4. Authority to Make Decisions: <ul style="list-style-type: none"> ▪ Self-directed (decisions made independently, internally) (Bylaws art. V. §1). ▪ Board of Directors (7 government, at least 4 non-government). 	<ol style="list-style-type: none"> 1. Authority to Operate in Jefferson County: <ul style="list-style-type: none"> ▪ Can establish Extension Service in Jefferson County. ▪ Documented role: educate, assist in rural agriculture. ▪ Verbal role: manage urban agriculture and community gardens on behalf of the City of Louisville. ▪ 1-year agreement (renewed annually). 2. Authority to Supervise Property for Urban Agriculture and Community Gardens Specifically (Not Open Space): <ul style="list-style-type: none"> ▪ Informal agreement (not written into Memorandum) ▪ Cannot enter financial exchange to own or rent property (enters lease agreement to become supervisor/manager). ▪ Property owners (e.g., Metro Louisville, Metropolitan Sewer District) retain ownership. 3. Authority to Make Decisions: <ul style="list-style-type: none"> ▪ Self-directed (decisions made independently, internally) ▪ District Board (Mayor, 6 city residents). ▪ Hierarchic: final decisions made by District Board and County Extension Council, with guidance from State Advisory Council; county agents report directly to Board.
	<p><i>City Planning:</i></p> <ul style="list-style-type: none"> ▪ City plan(s) substantively recognize, integrate, and prioritize community open space/gardens/agriculture (e.g., City Space 1998, Healthy Places 2013). ▪ Favorable zoning, water, and composting ordinances and programs. 	<p><i>City Planning:</i></p> <ul style="list-style-type: none"> ▪ Narrow definition of green open space, focused primarily on urban agriculture (e.g., market gardens). City plan(s) do not substantively integrate or prioritize community green open space, gardens, or agriculture (e.g., Sustain Louisville 2013, Cornerstone 2020 Plan). ▪ Favorable zoning ordinances for urban agriculture (unfavorable water).
	<u>State</u>	<u>State</u>
	<ol style="list-style-type: none"> 1. Doctrine of Home-Rule Units: <ul style="list-style-type: none"> ▪ City has authority to create NeighborSpace and enter the 1996 Agreement (IL Const. art. VII. § 6 1971); can transfer land to municipal departments (and NeighborSpace) (IL ST CH 50 § 605/2-3.1 2016). 2. 501(c)3 Non-Profit Organizations: <ul style="list-style-type: none"> ▪ Recognized by Illinois State Secretary and Attorney General (IL Admin. Code tit. 86, §130.120; Illinois General Not Profit Corp. Act 1986); authority granted by 501(c)3 of U.S. Internal Revenue Code (Federal) (26 U.S.C § 501(c)3). 3. Illinois Constitution: Environmental Article "Rights of Individuals" (IL Const. art. XI. § 2). 4. Sustainability Policy: Green Governments Illinois Act, with Coordinating Green Governments Council 2007 (20 ILCS 3954). 	<ol style="list-style-type: none"> 1. Doctrine of Home-Rule Units: <ul style="list-style-type: none"> ▪ City has authority to govern; enter agreement with Cooperative Extension (KRS 82.082 1980; KY ST CH 2 § 156a-b 1994). 2. Cooperative Extension Service: <ul style="list-style-type: none"> ▪ Created by 1914 Smith-Lever Act (federal), KRS 164.110 and 164.605-164.675 District Cooperative Extension Service Law. 3. Kentucky Constitution (environmental rights, etc. absent). 4. Sustainability Policy: No coherent policy; narrow definition of environmental conservation focusing on minimal environmental protections; does not acknowledge concept of sustainability.

Table 2: Legally Binding Responsibility

City	NeighborSpace (Chicago, IL)	Jefferson County Cooperative Extension (Louisville, KY)
	1996 Ordinance (Intergovernmental Agreement). 2006 Bylaws.	2002 Ordinance (Jeff. Ord. 36-2002/Lou. Metro Am. Ord. No. 119-2007). 2017-2018 Memorandum of Agreement (MOA).
	<p>5. Broker Neighborhood Green Open Space:</p> <ul style="list-style-type: none"> ▪ Acquire (buy, lease) small parcels of land or easements for green open space. ▪ Serve as go-between for multiple municipal departments/units and general public, to give community members access to land for green open space. ▪ Convert vacant, tax delinquent, foreclosed land to productive neighborhood use. <p>6. Secure Land (Green Open Space):</p> <ul style="list-style-type: none"> ▪ Preserve existing community green open space, and set aside new land as green open space for long-term public benefit (Land Trust). <p>7. Assume Risks and Liability:</p> <ul style="list-style-type: none"> ▪ Assume risks and legal responsibility (e.g., liability, insurance). ▪ Assume financial responsibility (diminished costs as NPO/Land Trust). 	<p>4. Supervise Property for Community Gardens:</p> <ul style="list-style-type: none"> ▪ Primary Responsibility: Public education, research, general support of rural agriculture (Smith-Lever Act 1914; KRS 164.110, 164.605-164.675 District Cooperative Extension Service Law). ▪ Secondary Responsibility: Manage and oversee community-based gardens and urban agriculture in Louisville Metro (informal agreement associated with MOA). <ul style="list-style-type: none"> ▪ Responsibility for specific sites acquired by lease agreement (e.g., between City/Department/District). <p>5. Secure Land (Community Gardens, Market Gardens)</p> <ul style="list-style-type: none"> ▪ Take over land stewardship responsibility on behalf of City for general public (e.g., community, individual).
	<p><i>General:</i></p> <ul style="list-style-type: none"> ▪ Abide by its mission, as stated in its Bylaws, Articles of Incorporation (e.g., Illinois General Not Profit Corp. Act 1986; 26 U.S.C § 501(c)3), and the 1996 Intergovernmental Agreement). 	<p><i>General:</i></p> <ul style="list-style-type: none"> ▪ Abide by its mission, as stated in Smith-Lever Act 1914, District Cooperative Extension Service Law (KRS 164.110, 164.605-164.675), and organization's personal code of conduct (UK Orientation).
	Public	Public
	<p>1. Establish Community Self-Governance:</p> <ul style="list-style-type: none"> ▪ Provide access to land for community green open space. ▪ Must transfer management and decision making of community-open space sites to neighborhood leaders/groups for self-governance (Bylaws art. 1 § 1). <ul style="list-style-type: none"> - Communities autonomously manage more than 100 open spaces. <p>2. Offer Administrative, Technical, and Financial Support to Community Groups:</p> <ul style="list-style-type: none"> ▪ NeighborSpace voluntarily assumes responsibility to provide support (e.g., emergency assistance, leadership/team transition, volunteer matching, professional development, financial training). ▪ Water: covers cost of water, permits, and installation of facilities (i.e., hydrants, meters, taps). (Roles and Responsibilities: Neighbor-Space.org) 	<p>1. Establish Community Self-Governance:</p> <ul style="list-style-type: none"> ▪ Give access to land for community gardens. ▪ Expectation that day to day decision making be transferred to community leaders or groups. <ul style="list-style-type: none"> - Cooperative Extension manages most of the approximately 10 gardens itself, or remains heavily involved in daily management. <p>2. Offer Administrative and Technical Support to Community Groups:</p> <ul style="list-style-type: none"> ▪ Offers technical, research-based education, training, and information on urban agriculture/gardening. ▪ Generally pays for soil testing fees. ▪ Water: Generally covers cost of water (fees waived by water district); pays for facilities installation.

Table 3: Tangible Support

<u>City</u>	<u>NeighborSpace (Chicago, IL)</u>	<u>Jefferson County Cooperative Extension (Louisville, KY)</u>
Financial:	8. Contributions by City Partners (\$300K annually) (1996 - Present): <ul style="list-style-type: none"> ▪ \$100K is provided each year by each partner: City of Chicago, Chicago Park District, and Forest Preserve District of Cook County. ▪ 20-year agreement (expires December 31, 2018) 9. Other City Sources: <ul style="list-style-type: none"> ▪ Open Space Impact Fees (17 M.C. CHI 16-18 § 010-110 (1998)). ▪ Economic Development Incentives (e.g., Tax Reactivation Program 1998-2005). ▪ Discretionary Aldermanic funds (on a case-by-case basis). ▪ Coordination of city and state/federal grants, financial programs. 	Financial: 6. Contributions by City of Louisville (\$50K annually) (2006-Present): <ul style="list-style-type: none"> ▪ \$50K is provided each year by Louisville/Jefferson County Metro Government, specifically for the community garden program through verbal agreement. ▪ Given by Memorandum of Agreement renewed annually 7. Other City Sources: <ul style="list-style-type: none"> ▪ Discretionary Councilperson funds (on a case-by-case basis). ▪ Coordination of city and state/federal grants, financial programs.
	<i>Total Annual Budget = \$500K - \$700K¹</i>	<i>Total Annual Budget = \$60K²</i>
	In-Kind Support (Non-Cash): <ol style="list-style-type: none"> 1. Discounted purchasing of vacant lots (e.g., \$1); coordinated land transfer from city departments/municipal organizations (e.g., Cook County Land Bank Authority). 2. Discounted office space. 	In-Kind Support (Non-Cash): <ol style="list-style-type: none"> 1. Access to land/parcels at no cost (Extension Service does not own land). 2. Some personnel sharing for case-by-case partnership on projects.
	Complimentary Facilitative Programs: <ol style="list-style-type: none"> 1. Large Lot Program 2014 (\$1 lots). (2 M.C. CHI 157 § 010-070 (2014)) 2. Adjacent Neighbors Land Acquisition Program (discounted lots). (2 M.C. CHI 159 § 010-070 (2014)) 	Complimentary Facilitative Programs: <ol style="list-style-type: none"> 1. Side Yard and Cut It, Keep It 2014 programs (\$1 lots, budget pricing),
	Public	Public
	Financial: <ol style="list-style-type: none"> 3. Tax-deductible private donations (individuals, corporate); foundation grants; fundraising (stewardship fund and on case-by-case basis). 4. Does not collect garden fees (e.g., plot fees) from gardeners (gardens are financially independent). 	Financial: <ol style="list-style-type: none"> 1. Financial donations (individuals, corporate) to specific projects on a case-by-case basis; foundation grants. 2. Collects approximately \$10K in garden fess (e.g., plot fees) from gardeners (gardens are generally not financially independent).
	In-Kind Support (Non-Cash): <ol style="list-style-type: none"> 1. Land donations. 2. Garden equipment and supplies. 3. Volunteer labor, skills; including pro-bono legal work. 4. Partnership with other entities and non-profit organizations: e.g., Open Land, Trust for Public Land, Park Conservatory Alliance, Head Start Catholic Charities. 	In-Kind Support (Non-Cash): <ol style="list-style-type: none"> 1. Garden equipment and supplies. 2. Volunteer labor, skills. 3. Partnership with other entities and non-profit organizations: e.g., Vacant and Public Properties Administration, Metropolitan Sewer District, Louisville and Jefferson County Environmental Trust, University of Kentucky, 21st Century Parks. 4. University of Kentucky provides essential training, insurance, etc. to Extension Agents.

¹ Governmental (\$300K) and non-governmental funds (\$200K-\$400K) combined.

² Governmental funds (\$50K) plus garden plot fees (\$10K).

CHAPTER 5. DISCUSSION AND CONCLUSION

Many urban areas are lacking significant green, open space for recreational purposes and nature preservation (Grimm et al., 2008; Goddard et al., 2010) and thus efforts to increase green space and improve their sustainability have been emphasized in cities across the country (Daley, Rogers, & Stroger, 1998; Chiesura, 2004). Some cities have also recognized the importance of small, community open spaces as well as large parks and natural areas in improving urban sustainability (Daley, Rogers, & Stroger, 1998; Giles-Corti et al., 2005). For this thesis I analyzed Chicago, IL and Louisville, KY for two cities that have differing views on the importance community-managed open space, and examined their contrasting solutions to providing such spaces for communities. I investigated what factors were present that led Chicago to create NeighborSpace, an organization that preserves community gardens permanently, and what factors influenced Louisville to prescribe the Jefferson County Cooperative Extension Service with community garden management responsibility.

I then examined whether the presence of these factors indicate that State-Reinforced Self-Governance may have played a role in the creation and sustainability of both NeighborSpace and the Jefferson County Cooperative Extension Service. I did this by compiling all archival data and information

summarized from interviews with key community garden stakeholders in each city, and evaluated several programs, policies, and institutions with respect to the Legal and Institutional Design Principles of SrSG by DeCaro et al. (2017). Lastly, I synthesized this information and proposed several recommendations for Louisville to improve its sustainability of community-managed open space and thus the sustainability of the city as a whole.

5a. FINDINGS

After examining both NeighborSpace and the Jefferson County Cooperative Extension Service in relation to the Legal and Institutional Design Principles of State-Reinforced Self-Governance by DeCaro et al. (2017), it became clear that the presence of Legal Authorities, Legal Responsibilities, and Tangible Support given to NeighborSpace by Chicago indicate that State-Reinforced Self-Governance of community-managed open space is robustly present in Chicago. Subsequently, weak Legal Authority, Legal Responsibility and Tangible Support by Louisville to the Jefferson County Cooperative Extension Service indicates that Louisville does not provide sufficient governmental support in important ways.

The Three Foundational Design Principles

In the course of this thesis, I found that Legally Binding Authority, Legally Binding Responsibility, and Tangible Support are important aspects of government support. Organizations must be held responsible for important social-ecological dilemmas, or opportunities, or else they will tend to focus on other important obligations. In both Chicago and Louisville, particular organizations were held responsible for community greenspace. However, these Responsibilities must also be complemented by Legal Authority to manage, to make-decisions, and to adhere to an organizations goals. Otherwise, central organizations like NeighborSpace or the Extension Service will not have the necessary freedom, or permission, to fulfill their responsibilities.

Such organizations must also be given sufficient Tangible Support to uphold both the given Legal Authorities and Legal Responsibilities; this means financial appropriations that are significant enough to facilitate the organizations programs and management duties, and other supports that further the organization's mission such as donations of property, discounted materials, or access to critical technology

Thus, these three legal design principles may not only reinforce self-governance, but also reinforce each other. These principles must be present together, reinforcing their purpose and ultimately self-governance. Furthermore, governments may need to create Authority, Responsibility, and Tangible Support for key organizations in multiple ways. In examination of these principles, it became clear that NeighborSpace was provided with multiple types of complementary Authorities (i.e. powers), Responsibilities, and types of Support

(i.e. financial, technical, material) by the city to adhere to its mission and its purpose. For example, with regard to Authority, NeighborSpace was given the powers to form, to make-decisions independent of government influence, manage greenspaces and transfer management to neighborhoods, and several other Authorities, derived from IL state law, which allowed it to become a Land Trust designation (and obtain 501(c)(3) nonprofit status) with the ability to purchase land from the city, tax free, in perpetuity as a public good.

NeighborSpace was also given several related Responsibilities including the responsibility to broker community open space between city departments and neighborhood groups, to secure these lands for productive open space uses, and to assume the risks and liabilities associated with property ownership.

NeighborSpace is also given Tangible Support by annual financial allocations from the three founding city departments, along with access to other sources of revenue used for specific gardens (i.e. Open Space Impact Fees, aldermanic funds, grants), and other supports such as donated land and discounted office space. According to the Executive Director of NeighborSpace, and our background research on the organization's accomplishments, the varying types, and complimentary nature, of these Legal Authorities, Legal Responsibilities, and Tangible Support awarded to NeighborSpace strongly influence its ability to fulfill its mission, self-governance, and thus transfer governance of greenspaces to communities. The large majority of these community greenspaces have thrived and have, indeed, remained self-governing.

In contrast, while the Jefferson County Cooperative Extension Service's main mission is to disseminate agricultural information and education, it is also given significant Responsibility by Louisville Metro Government for managing several community gardens. It has the Responsibility to oversee agricultural practices and to secure the land for these gardens, but is only given one related Authority – to supervise these properties. Hence, there is a mismatch of the original mission of the Extension Service, which was not originally created to oversee community greenspace. There is also a mismatch of responsibility and authority, with responsibility being higher than the organization's authority to manage community greenspace effectively. Furthermore, its Tangible Support from the city is lacking as it is currently underfunded by about \$10,000 in the 2017-2018 fiscal year (*UofL Sustainability Roundtable Presentation, 2018*). Thus, the Extension Service's Legal Authorities, Responsibilities, and Support, while related, are not extensive, indicating weak state-reinforcements, potentially impacting the organizations ability to provide substantial self-governance.

The interviews and background research find that many of the gardens overseen by the Extensive Service are, in fact, not managed by community members. Moreover, their existence seems to be untenable as the spaces are under continual development pressure. Discussion with stakeholders close to these operations have indicated that they do not believe the current arrangement is working and are actively looking for alternative solutions. Hence, the effectiveness and sustainability of this organization seems in doubt.

Conditional Legal Sunsets

DeCaro et al. (2017) mentions that Legal Sunsets can encourage adaptability but can also hinder progress, depending on the situation and type and length of the Sunset. Thus, there is a fine balance that must be set, in terms of level of authority and length of that authority.

The conditional nature of Legal Sunsets was observed in this study as the nature of Sunset length for both NeighborSpace and the Jefferson County Cooperative Extension Service appear to have an impact on the viability of the organization itself, and the self-governing activities of community gardens under management by each organization. The short-term nature of the lease agreements between the Extension Service and the land-owning city department, plus the annual renewal of financial appropriations via the Memorandum of Agreement, are examples of Legal Sunsets that may be too short to promote stability of self-governance. Legal Sunsets that are too short can destabilize an organization, bogging it down in administrative procedures of revision and/or renewal, or in this case, lending to an unstable future of access to the resource itself that can discourage self-governance. In particular, lands leased by the Extension Service are under continual threat of development, making it difficult for the Extension Service or community members to become invested in their long-term use. The insecurity this poses places the Extension Service in a precarious situation of being responsible for community gardens, without sufficient support from either the city or community residents.

Conversely, the Intergovernmental Agreement creating NeighborSpace appropriated funds to be provided annually for 20 years, thus providing NeighborSpace with a long-term Sunset giving the organization the space to improve, and to identify its weaknesses. By virtue of its long-term agreement with the city, and its status as a land trust, NeighborSpace is able to give communities long-term use that can bolster self-governance, encouraging their commitment and allowing them to invest sustained time and effort into development of greenspace.

Institutional Design Principles

In addition to the Three Foundational Principles and Legal Sunsets, I found that Chicago and Louisville differed substantially in terms of Institutional Design principles, originally proposed by Ostrom (1990). Where the Legal Design Principles are proposed to encourage establishment of state-reinforcement, these Institutional Principles may encourage the establishment and support of self-governance.

Well-Defined Boundaries.

Well-defined social and political boundaries are present in NeighborSpace. These boundaries are important for developing trust and respect among participants (Ostrom, 1990). The social Boundaries can be attributed to the defined Roles and Responsibilities of all Stakeholders in NeighborSpace's gardens, which provide a unique opportunity to enhance self-governance, as

proposed by Ostrom (1990). NeighborSpace provides its gardens with a document stating the Roles and Responsibilities of four important entities: NeighborSpace, the Garden Leadership Team, the Community Garden Partner, and Garden Stakeholders. This last category includes the gardeners themselves, along with visitors, volunteers, neighbors, local businesses, schools, and anyone else who is, or could be, involved in the garden. The Roles and Responsibilities of Garden Stakeholders, as described by the NeighborSpace document, are to try and integrate the garden into everyday life, to actively support the garden, and to participate as often as possible.

The Political Boundaries of NeighborSpace are also Well-Defined. The roles of the founding city departments (City of Chicago, Chicago Park District, Forest Preserve District of Cook County) are defined in the Intergovernmental Agreement where it is stated that these departments “wish to support” NeighborSpace (pg. 4). As stated in the Intergovernmental Agreement, these departments are responsible for creating the NeighborSpace Board of Directors, thus directly overseeing NeighborSpace operations (but stepping back from decision-making, Bylaws Art. V §1). The founding departments also provide financial contributions, and provide discounted or donated land including tax delinquent properties for the purpose of creating and preserving community open space.

The presence of defined roles and responsibilities of all NeighborSpace entities (NeighborSpace, Garden Stakeholders, Leadership Team, Community Partners, City Departments) can be considered Well-Defined Socio-Political

Boundaries. Explicitly stating *who* is involved in garden operations, in NeighborSpace operations, and related government operations, as well as *how* all these actors should be involved and contribute to the sustainability of NeighborSpace and its community-managed open spaces, shows that these Boundaries are Well-Defined, and therefore potentially contribute to successful self-governance.

In contrast, the Extension Service does not have such documentation that explicitly defines the roles of all stakeholders and city departments. Lease agreements identify the role of the city department as land owner, and while the Extension Service does have a Gardener Agreement that outlines the roles of the Extension Service and the gardeners within the gardens, it does not include the breadth of stakeholders present in NeighborSpace's Roles and Responsibilities document (i.e. neighbors, community partners, volunteers, etc.). This is yet another example where the Extension Service seems to be inadequate in providing self-governance.

Participatory Decision-Making

The Legally Binding Authority and Responsibility of NeighborSpace to delegate management and decision-making of garden business to the garden groups reflects a high degree of Participatory Decision-Making which Ostrom (1990) and DeCaro et al. (2017) indicate as an important factor in successful cases of self-governance. In contrast, the Extension Service does assign a Garden Leader to help with the day-to-day decisions however, the Extension

Service still maintains the majority of decision-making authority regarding its gardens thus potentially hindering self-governance within the garden. Both organizations are in close communication with city departments regarding community gardens and are often involved on a consultation basis or partnerships around new gardens or garden improvements.

Internal Enforcement

NeighborSpace is not directly involved in garden monitoring or enforcement, but leaves that up to the garden leadership team, community organization partners, and garden stakeholders. NeighborSpace does, however, require an annual Online Partnership Agreement form to be filled out that essentially reports how the garden is functioning and if any changes have been made. Thus, the majority of NeighborSpace gardens are internally monitored and their rules internally enforced. In addition, NeighborSpace itself is internally monitored as the founding city departments are not directly involved in NeighborSpace functions. This can encourage successful self-governance as the rules are more likely to be enforced and followed when done internally (Ostrom, 1990). In contrast, the Extension Service's horticulturist is typically involved in the gardens on a daily basis, providing education, assisting gardeners, and monitoring and enforcing garden rules. This monitoring and enforcement by an external agent could potentially be a detriment to successful self-governance, for Ostrom (1990) suggests that when the monitoring is done internally, the monitors understand the norms and are held more accountable for their findings and

enforcements. The land-owning city departments are also involved in monitoring and enforcing the actions of the Extension Service and are thus external enforcements rather than internal.

Internal Conflict Resolution

Conflict Resolution mechanisms can support successful self-governance by providing users with clear rules, and simple mechanisms to build and restore trust (Ostrom, 1990). NeighborSpace provides its gardens and gardeners with a Conflict Resolution Plan in which gardeners are encouraged to solve their conflicts by open communication and active listening practices. Hence, conflict resolution is governed first internally by the community itself. When that fails, NeighborSpace then provides its gardens with a mediation service, though this has rarely been needed. In contrast, the Extension Service does not provide its gardeners with a conflict resolution plan, but does abide by the University of Kentucky's conflict resolution plan when following through on complaints. In fact, Extension Service is centrally involved in conflict resolution within the gardens it manages, and does not rely much on a community's internal conflict resolution.

5b. LIMITATIONS AND MOVING FORWARD

In the course of this thesis, I examined the Three Design Principles in significant detail, but did not do so for the subsequent design principles. Future

research will be able to fill in these gaps, examining all design principles with as much detail and determining how all the principles interact with each other and their influence on state-reinforcement of self-governance and on self-governance itself. To do this, in addition to further examination of NeighborSpace, future research may also look at similar programs such as the land trusts in Seattle, WA and Baltimore, MD that preserve several community gardens. Examination of these cities, and potentially others, can expand the knowledge of how State-Reinforced Self-Governance emerges and what types of Legal and Institutional Factors are fundamental to the SrSG of community-managed open spaces. More research is also needed to determine what factors lead city governments and citizens to provide avenues of land security for community open space (i.e. Land Trusts), and how cities that lack these avenues can establish them.

Furthermore, this thesis looks at these cases in one moment in time although, throughout this paper, I have acknowledged that these processes (social-ecological dilemmas) are dynamic and constantly changing. The results of this study indicate that the factors of State-Reinforced Self-Governance that seem to be currently present in NeighborSpace can lead to good self-governance outcomes, whereas those that are lacking in the case of the Extension Service may lead to poor self-governance. Future research will be needed to examine these processes as they unfold through time, and then assume more concretely the potential success of these cases related to State-Reinforced Self-Governance.

5c. RECOMMENDATIONS

After examining how NeighborSpace emerged, and the Legal factors given to it by the city as state-reinforcement of self-governance, I aim to explore ways in which Louisville could create a similar organization, or at the very least, come to the same conclusion as Chicago that community open space is just as important to urban sustainability as large natural parks and open space systems.

In a Perfect World

Ideally, Louisville government would prioritize the use of vacant lots as open space by communities, recognize that communities cannot manage these spaces adequately if they are burdened by property ownership responsibilities and liabilities, recognize that the permanence of these spaces are critical to self-governance, and create a third-party organization to act as broker for these spaces – acquiring the land through ownership and then leasing it to communities to use as open space. Louisville currently recognizes that the majority of its vacant lots are in neighborhoods that are already poor and underserved, and predominately minority. While Louisville is improving the accessibility of these lots to be purchased, more often than not it prefers that the purchaser be a bona fide business or organization rather than an individual or small group of community members. To address this, Louisville could provide individuals or small community groups with access to these lands by creating an

entity that would purchase the land on behalf of the community members. This not only satisfies city government by removing liability of these properties and ensuring that the property is moved into trusted hands, but satisfies the communities in being provided the Authority to manage these spaces. Furthermore, Louisville must recognize that these spaces are not only beneficial for temporary use, but have long-term impacts on the communities and therefore must be preserved indefinitely.

Should Louisville create an organization that is similar in purpose and function to NeighborSpace, it must also provide the organization, and therefore the community groups, with Legal Authority, Legal Responsibility, and Tangible Support to carry out self-governance of community-managed open space. In doing so, Louisville will provide state-reinforcement of self-governance, which in turn creates a stronger sense of autonomy and ownership, increasing self-governing activities, and ultimately improving the Social, Economic, and Environmental Sustainability of the communities, and of the city itself.

In a More Realistic World

Currently, Louisville already has a Land Trust in the form of the Louisville & Jefferson County Environmental Trust. This trust is accredited by the Land Trust Alliance and was created in 1997 as a result of the Cornerstone 2020 open space goals (“Louisville & Jefferson County Environmental Trust”, Louisvilleky.gov). This is similar to NeighborSpace in that it is a Land Trust created during the design process of a comprehensive planning document.

However, just like how Louisville's open space planning documents focus more on improving large parks and natural areas than small community green spaces, the Louisville & Jefferson County Environmental Trust protects mostly large parks and open space, as well as agricultural and historical lands.

The Mission of the Louisville/Jefferson County Environmental Trust is to weave "together strategies for meeting the park and land preservation needs of current and future Louisville residents" ("Louisville & Jefferson County Environmental Trust", Louisvilleky.gov). Many of the goals of the Environmental Trust are related to natural land conservation and preservation therefore it is possible that the mission of this Environmental Trust may not apply to small community-managed open spaces within the city. This is something that should be explored as Louisville attempts to find ways to preserve community open space and community gardens.

If the Land Trust avenue does not work for Louisville, there is a second option. Louisville Grows is currently contracted with Metro Louisville to help the city reach its tree canopy goals by planting trees in many neighborhoods around the city. While this is an important goal, Metro Louisville could also give Louisville Grows more support for their community garden program. Currently, Louisville Grows manages approximately 5 community gardens but also supports several others around the city. Most recently, Louisville Grows offered a \$1,000 grant in materials to seven Louisville community gardens.

If Metro Louisville were to give Louisville Grows substantial financial and administrative support, Louisville Grows could potentially be an avenue through

which community gardens could establish land ownership and be sustained long-term. Provided that Louisville Grows is given the proper supports, it has the ability to purchase land from Louisville Metro Government, and as a nonprofit, would be exempt from property taxes. This is a potential avenue for community garden support and permanence in Louisville, but would need to be explored more thoroughly.

Lastly, Brightside is another possible organization in Louisville that could be given more Authority and Support to manage community gardens in the city. Brightside historically managed several community gardens for the city as part of their Brightsites program. Brightside was established by the Mayor of Louisville in 1986 as a 501(c)(3) nonprofit to unite “people in clean and green activities that beautify and foster pride in our community through volunteerism, planting, sustainability, & education” (“Brightside”, louisvilleky.gov). Brightside currently functions in a similar manner to NeighborSpace only in that it is a partnership between Metro Government and a nonprofit organization (created by the government) for the purpose of improving communities. During the course of this study, I was unable to pursue the history of Brightside much further as there is limited documentation on this organization and its historical accomplishments and purposes. However, future research could include more interviews with key informants to examine how this organization managed community gardens in the past, and to determine its potential to do so again in the future.

5d. CONCLUSION

Previous studies (i.e. Ostrom, 1990) have indicated that self-governing groups and organizations rarely, if ever, function without influence by centers of authority (i.e. federal, state, local government), therefore self-governing groups that aim to manage and improve a social-ecological dilemma should be given legal reinforcements by centers of authority to perform their work adequately and sustainably (Ostrom, 2009; Sarker, 2013; DeCaro et al., 2017). This study proposed that *state-reinforcements* can be significantly provided through related and reinforcing Legal Authorities, Legal Responsibilities, and Tangible Supports. And that in providing state-reinforcement, self-governing activities can potentially be improved. Throughout this paper I refer to the three related principles as the Three Foundational Principles of State-Reinforced Self-Governance whereby government authorities provide self-governing groups or organizations the Authority and Responsibility to form and/or operate, to make-decisions without government influence, and to carry out their mission by providing legal avenues to do so. These organizations or groups also require substantial financial, technical, material, and/or administrative Supports by governments that both encourage and provide significant assistance for the groups to adhere to their mission, purpose, and Legal Authorities and Responsibilities.

In creating and sustaining NeighborSpace, Chicago has provided NeighborSpace, and its citizens, with several of the factors of successful State-Reinforced Self-Governance to its communities and their ability to manage and

preserve community open space as community gardens permanently. Chicago, in creating NeighborSpace, also recognized that land ownership and the responsibilities associated with it are often too cumbersome for community garden groups themselves, and thus required a third-party organization to take on ownership and liability responsibilities. Louisville has not yet come to the same conclusion and while it offers avenues for communities to purchase land for community gardens, it does not recognize that land ownership is a significant hindrance to community gardens and does not provide communities with a substantial alternative. Currently, the Jefferson County Cooperative Extension Service is the organization that Louisville has provided to its communities as a third-party land manager for community gardens. However, significant limitations on the organization, including financial limitations by the city, and other limitations as a part of its creation by Federal Act and State Statutes, prevent it from managing more than 10 community gardens and thus potentially restrict it from providing adequate self-governing opportunities.

Louisville's lack of consideration to the importance of community open space and of the long-term sustainability of these spaces may be that it has not ever been forced to consider these concepts. In 1982, The Chicago Parks Department was sued by the U.S. Justice Department for not providing equal access to recreational facilities, specifically in its racial minority and underserved communities. This seemingly prompted several city authorities to pay attention to the need for community parks and recreational areas influencing several parks and open space plans, including the comprehensive open space plan, CitySpace

(1998) that ultimately spurred the creation of NeighborSpace. While Louisville currently has a large parks system, the majority of its residents do not live within walking distance of a park or other open space/recreational area, yet Louisville also has a high number of vacant lots.

Louisville Metro currently prefers to sell its lots to organized businesses or nonprofits with a current vision for these spaces as opposed to selling directly to individuals. This is not uncommon and Chicago's policies are similar, however, Chicago also provides citizens with an organization that can purchase land in their stead whereas Louisville does not. In an ideal world, Louisville would recognize the importance of community-managed open space to neighborhoods, recognize that community gardens are not just allotment vegetable gardens, and provide Louisville communities with a legal avenue to secure land for these spaces permanently. However, it is unlikely that Louisville will come to this conclusion on its own, and there are currently at least three organizations in Louisville that have the potential to assume this role. These are the Louisville & Jefferson County Environmental Trust, Louisville Grows, and Brightside. These organizations currently operate as a land preservation organization, a community garden support organization, and a neighborhood beautification organization respectively. These are all aspects that are important to the creation and preservation of community-managed open space. It is possible that Louisville could provide one of these organizations with the Legal Authorities, Legal Responsibilities, and Tangible Supports to operate a community garden support and preservation program.

Ultimately, community-managed open spaces improve community Economic, Environmental, and Social sustainability. Community sustainability improves urban sustainability and as urban populations continue to grow over the course of this century, urban sustainability and resilience will need to be at the forefront of development practices (*The Global Campaign on Urban Governance*, 2002). Louisville is currently working to improve its sustainability, as is Chicago, and many other metropolitan areas, yet not emphasizing or even recognizing the importance of community open space, and the preservation of that space, especially in minority and underserved communities, is detrimental to a city's overall sustainability. Sustainability is all-encompassing and sustainable development cannot only focus on a select few areas of planning (Wheeler, 2000), but must include all aspects, including even the smallest of community spaces, in planning for a sustainable future. Providing communities with state-reinforcement of their ability to self-govern open spaces for their benefit and enjoyment directly improves Social Sustainability which in turn improves Economic Sustainability, and by being stewards of the land in preserving community green open spaces, communities given State-Reinforced Self-Governance can also improve Environmental Sustainability.

REFERENCES

“21st Century Parks”. The ParkLands of Floyds Fork. Retrieved April 06, 2018 from: <https://www.theparklands.org/21st-century-parks.html>.

A Project of the Livability Committee of Cornerstone 2020 (1995). *Parks and Open Space Master Plan*

“About”. Openlands: Conserving Nature for Life. Retrieved April 06, 2018 from: <https://openlands.org/about/>.

“About Brightside”. Brightside. Retrieved April 20, 2018 from: <https://louisvilleky.gov/government/brightside/about-brightside>.

“Adjacent Neighbors Land Acquisition Program (ANLAP)”. City of Chicago Economic Development. Retrieved April 06, 2018 from: https://www.cityofchicago.org/city/en/depts/dcd/supp_info/adjacent_neighbors_landacquisitionprogramanlap.html.

Allen, E. & Ela, N. (2015) *Cultivating Productive Landscapes. A vision for Community Based Urban Food Systems in the Millennium Reserve. A Study for the Illinois Department of Natural Resources – Coastal Management Program*

Amendment to Intergovernmental Agreement (1997)

Amended and Restated Bylaws of NeighborSpace (2016)

Armstrong, D. (2000). A Survey of Community Gardens in Upstate New York: Implications for Health Promotion and Community Development. *Health and Place* 6(4):319-327

Arnstein, S. R. (1969). A Ladder of Citizen Participation. *Journal of the American Institute of Planners* 35(4):216-224

Authorization for Execution of Intergovernmental Agreement with Chicago park District and Forest Preserve District of Cook County for Establishment of “NeighborSpace” (1996)

Baker, J. H. (1971). *Urban Politics in America*. New York, NY: Charles Scribner’s Sons

Baltimore Green Space (2010). *Preserving Community-Managed Open Spaces: Criteria and Process*

Barthel, S., Folke, C., & Colding, J. (2010). Social-Ecological Memory in Urban Gardens – Retaining the Capacity for Management of Ecosystem Services. *Global Environmental Change* 20; 255-265

Barthel, S., Parker, J., & Ernstson, H. (2013). Food and Green Space in Cities: A Resilience Lends on Gardens and Urban Environmental Movements. *Urban Studies* 52(7):1-18

Been, V. & Voicu, I. (2008). The Effect of Community Gardens on Neighboring Property Values. *Real Estate Economics* 36(2):241-283

Bhatta, B. (2010). Analysis of Urban Growth and Sprawl from Remote Sensing Data. In: Book series on Advances in Geographic Information Science. Springer-Verlag, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-05299-6_2

Birky, J. (2009). The modern community garden movement in the United States: Its roots, its current condition and its prospects for the future. *MS Thesis, Univ. South Florida, Tampa*

Bolund, P. & Hunhammar, S. (1999). Ecosystem services in urban areas. *Ecological Economics* 29:293-301 [http://dx.doi.org/10.1016/S0921-8009\(99\)00013-0](http://dx.doi.org/10.1016/S0921-8009(99)00013-0)

“Brightsites”. Brightside. Retrieved April 20, 2018 from: <https://louisvilleky.gov/government/brightside/brightsites>

Brown, K. H., & Jameton, A. L. (2000). Public Health Implications of Urban Agriculture. *Journal of Public Health Policy* 21(1):20-39

Cahn, A. L., & Segal, P. Z. (2016). You Can't Common What You Can't See: Towards a Restorative Polycentrism in the Governance of our Cities. *Fordham Urban Law Journal* 43(2):195-246

Chicago Metropolitan Agency for Planning (2010). *GO TO 2040 Comprehensive Regional Plan*

Chiesura, A. (2004). The role of urban parks for the sustainable city. *Landscape and Urban Planning* 68(1):129-138 <https://doi.org/10.1016/j.landurbplan.2003.08.003>

“City Owned Land Inventory” Chicago Data Portal. Retrieved April 06, 2018 from: <https://data.cityofchicago.org/Community-Economic-Development/City-Owned-Land-Inventory/aksk-kvfp>

Colding, J. & Barthel, S. (2013). The potential of ‘Urban Green Commons’ in the resilience building of cities. *Ecological Economics* 86:156-166
<https://doi.org/10.1016/j.ecolecon.2012.10.016>

“Common Earth Gardens”. Catholic Charities of Louisville. Retrieved April 06, 2018 from: <https://cclou.org/common-earth-common-table/common-earth-gardens/>

“Community Garden Grant”. Louisville Grows. Retrieved April 06, 2018 from: <http://www.louisvillegrows.org/urban-agriculture/community-garden-grant/>

“Community Land Trusts” Community-Wealth.org Retrieved April 25, 2018 from: <https://community-wealth.org/strategies/panel/clts/index.html>

“CUAMP Map”. Chicago Urban Agriculture Mapping Project. Retrieved April 06, 2018 from: <http://cuamp.org/#/searchGardens?community=-1&ward=-1&boardDistrict=-1&municipality=-1>

Daley, R. M., Rogers, J. & Stroger, J. H. (1998). *Cityspace: An Open Space Plan for Chicago*

DeCaro, D. A., Chaffin, B. C., Schlager, E., Garmestani, A. S., & Ruhl, J.B. (2017). Legal and Institutional Foundations of Adaptive Environmental Governance. *Ecology and Society* 22(1):32

Develop Louisville (2017) *Comprehensive Plan 2040 Revised DRAFT Community Form Policies*

Dietz, T., Ostrom, E., & Stern, P. C. (2003). The struggle to govern the commons. *Science* 302(5652):1907-1912

Downs, A. (2004). Smart Growth. Why We Discuss It More Than We Do It. *Journal of the American Planning Association* 71(4):367-378

Draper, C. & Freedman, D. (2010). Review and Analysis of the Benefits, Purposes and Motivations Associated with Community Gardening in the United States. *Journal of Community Practice* 18(4):458-492
<https://doi.org/10.1080/10705422.2010.519682>

Ela, N. (2016). Urban Commons as Property Experiment: Mapping Chicago’s Farms and Gardens. *Fordham Urban Law Journal* 43(2):247-294

Endres, B. A., & Endres, J. M. (2009). Homeland Security Planning: What Victory Gardens and Fidel Castro Can Teach Us in Preparing for Food Crises in the United States. *Food and Drug Law Journal* 64(2):405-439

Erickson, L., Griggs K., Maria, M., Serebrin H. (n.d). *Urban Agriculture in Seattle: Policy & Barriers*. Retrieved from:
https://assets.jhsph.edu/clf/mod_clfResource/doc/Urban%20Agriculture%20in%20Seattle%20Policy%20and%20Barriers.pdf

Ferris, J. F., Norman, C., Sempik, J. (2001). People, Land and Sustainability: Community Gardens and the Social Dimension of Sustainable Development. *Social Policy & Administration* 35(5):559-568

“Food in Neighborhoods Community Coalition”. Food in Neighborhoods Coalition. Retrieved April 06, 2018 from:
<https://louisvillefoodblog.wordpress.com/>

“Forms of Municipal Governance”. National League of Cities. Retrieved April 06, 2018 from: <https://www.nlc.org/forms-of-municipal-government>

“Forest Master Plan”. Jefferson Memorial Forest. Retrieved April 06, 2018 from: <https://louisvilleky.gov/government/jefferson-memorial-forest/forest-master-plan>

“Frequently Asked Questions” Vacant & Public Property Administration. Retrieved April 06, 2018 from: <https://louisvilleky.gov/government/vacant-public-property-administration/frequently-asked-questions>

Frisby, M. (n.d.) Separating the Powers. *American City & Country* 114(13)

Frumkin, H., Frank, L., & Jackson, R. (2004). Urban Sprawl and Public Health: Designing, Planning, and Building for Healthy Communities. *Washington, DC: Island Press*

Garvin, E., Branas, C., Keddem, S., Sellman, J., & Cannuscio, C. (2012). More Than Just an Eyesore: Local Insights and Solutions on Vacant Land and Urban Health. *Journal of Urban health: bulletin of the New York Academy of Medicine* 90(3):412-426

Giles-Corti, B., Broomhall, M. H., Knuiaman, M., Collins, C., Douglas, K., Ng, K., Lange, A., & Donovan, R.J. (2005). Increasing Walking: How Important is Distance to Attractiveness and Size of Public Open Space. *American Journal of Preventative Medicine* 28(2-2):160-176

Goddard, M. A., Dougill, A. J., & Benton, T. G (2010). Scaling up from Gardens: Biodiversity Conservation in Urban Environments. *Trends in Ecology and Evolution* 25(2):90-98

Green Governments Illinois Act (2007)

Gregory, M. M., Leslie, T. W., Drinkwater, L. E. (2016). Agroecological and social characteristics of New York city community gardens: contributions to urban food security, ecosystem services, and environmental education. *Urban Ecosystems* 19(2):763-794

Grim, N. B., Faeth, S. H., Golubiewski, N. E., Redman, C. L., Wu, J., Bai, X., & Briggs, J. M. (2008). Global Change and the Ecology of Cities. *Science* 319(5864):756-760

Groenewegen, P., van den Berg, A. E., de Vries, S., & Verheij, R. A. (2006). Vit. G: Effects of Green Space on Health, Well-Being, and Social Safety. *BioMed Central* 6(1):149

Grube, G.M.A., & Reeve, C.D.C (1992) *Plato's Republic*. Indianapolis: Hackett Pub. Co.

Harris, M. & Saad, F. (n.d.). *Healthy Louisville 2020: Creating a Healthier City*

Helphand, B. R (2015). Permanently Grassroots with NeighborSpace. *Cities and the Environment* 8(2):19

Heimlich, R. E., & Anderson W. D., (2001). Development at the Urban Fringe and Beyond: Impacts on Agriculture and Rural Land. *ERS Agricultural Economic Report NO. 803. US Department of Agriculture, Economic Research Service, Washington DC*

Hooke, R. L., Martin-Dunque, J. F., & Pedraza, J., (2012). Land Transformation by Humans: A review. *GSA Today: A publication of the Geological Society of America* 22(12):4-10

Illinois General Not for Profit Corporation Act of 1986

Judd, D. R. (1988). *The Politics of American Cities: Private Power and Public Policy*, (3rd Ed.). St. Louis, Missouri: Harper Collins

Judd, D. R., & Swanstrom, T. (1998) *City Politics: Private Power and Public Policy*, (2nd Ed.). New York, NY: Addison-Wesley Educational Publishers Inc.

Kates, R. W., Parris, T. M., & Leiserowitz, A. A. (2005). What is Sustainable Development? Goals, Indicators, Values, and practices. *Environment: Science and Policy for Sustainable Development*, 47(3):8-21

Kurtz, H. (2001). Differentiating Multiple Meanings of Garden and Community. *Urban Geography* 22(7):656-670

Lane, M. B. (2005). Public participation in planning: an intellectual history. *Australian Geographer* 36(3):283-299

"Large Lots". \$1 LARGE LOTS. Retrieved April 06, 2018 from:
<https://www.largelots.org/>

Lawson, L. (2005). *City Bountiful: A Century of Community Gardening in America*. Berkley, CA: University of California Press

Lelekacs, J.M., O'Sullivan, J., Morris, M., Creamer, N. (2014). Incubator Farms as Beginning Farmer Support. *Journal of Extension* 52(1)

Litman, T. (2015). *Analysis of Public Policies that Unintentionally Encourage and Subsidize Urban Sprawl*

Litt, J. S., Soobader, M., Turbin, M. S., Hale, J. W., Buchenau, M., & Marshall, J. A. (2011). The Influence of Social Involvement, Neighborhood Aesthetics, and Community Garden participation on Fruit and Vegetable Consumption. *American Journal of Public Health* 101(8):1466-1473

"Louisville Garden Map" Food In Neighborhoods Coalition. Retrieved April 06, 2018 from: <https://louisvillefoodblog.wordpress.com/gardens/>

"Louisville & Jefferson County Environmental Trust". Parks. Retrieved April 20, 2018 from <https://louisvilleky.gov/government/parks>

Louisville and Jefferson County Planning Commission (2000). *Cornerstone 2020 Comprehensive Plan*

Louisville Metro Government (2016). *Move Louisville: 2035 Transportation Plan Louisville Metro Government (Draft 2016)*

Louisville Metro Government (2017). *Sustain Louisville: 2016 Progress Report*

Louv, R. (2005) *Last child in the woods: saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books of Chapel Hill

Maas, J., Verheij, R. A., Groenewegen, P. P., de Vries, S., & Spreeuwenberg, P. (2006). Green Space, Urbanity, and Health: How Strong is the Relation? *Journal of Epidemiology and Community Health* 60(7):587-592

- Maller, C., Townsend, M., Pryor, A., Brown, P., St. Leger, L. (2006). Healthy nature healthy people: 'contact with nature' as an upstream health promotion intervention for populations. *Health Promotion International* 21(1):45-54
- Marshall, A. (2017). *Louisville's Dividing Lines: The Result of Redlining in the City*. Louisville, KY: Louisville Magazine
- Martin, D.G. (2004). Nonprofit Foundations and Grassroots Organizing: Reshaping Urban Governance. *The Professional Geographer* 56(3):394-405
- Mattijssen, T., Buijs, A., Elands, B., & Arts, B. (2017). The 'green' and 'self' in green self-governance – a study of 264 green space initiatives by citizens. *Journal of Environmental Policy & Planning* 20(1):96-113
- Mendes, W., Balmer, K., Kaethler, T., & Rhoads, A. (2008). Using Land Inventories to Plan for Urban Agriculture: Experiences from Portland and Vancouver. *Journal of the American Planning Association* 74(4):435-449
- Memorandum of Agreement: University of Kentucky Cooperative Extension Service and Louisville/Jefferson County Metro Government (2017)
- Metzger, J. T. (2000). Planned Abandonment: The Neighborhood Life-Cycle Theory and National Urban Policy. *Housing Policy Debate*, 11(1):7-40
- "Mission and Vision". Growing Home. Retrieved April 06, 2018 from: <http://growinghomeinc.org/about-us/>
- Mooney, A. (2014). *Green and Healthy Neighborhoods*
- Morrill Land Grant College Act (1862)
- "Municipal Government." Dictionary of American History. Retrieved April 06, 2018 from Encyclopedia.com: <http://www.encyclopedia.com/history/dictionaries-thesauruses-pictures-and-press-releases/municipal-government>
- National Recreation and Parks Association (n.d.). *Creating Mini-Parks for Increased Physical Activity*
- National Vacant Properties Campaign (2005). *Vacant Properties: The True Costs to Communities*
- Nier III, C. L. (1999). Perpetuation of segregation: toward a new historical and legal interpretation of Redlining under the Fair Housing Act, 32 J. Marshall L. Rev. 617. *The John Marshall Law Review*, 32(3):617-655.

Office of Sustainability (2013). *Sustain Louisville: Louisville Metro Sustainability Plan*

Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge [England]; New York: Cambridge University Press.

Ostrom E. (2009). *Property Rights and Land Policies*. Lincoln Institute of Land Policy, Cambridge, Massachusetts

Ostrom, E. (2010). Beyond Markets and States: polycentric governance of complex economic systems. *The American Economic Review* 100(3):641-672

Ostrom, V. (1994). *The meaning of American federalism: constituting a self-governing society*. Institute for Contemporary Studies Press, San Francisco, California, USA

“Our Programs” University of Illinois Extension. Retrieved April 06, 2018 from: <http://web.extension.illinois.edu/state/programs.php>

“Partnership Agreement Documents”. NeighborSpace. Retrieved April 06, 2018 from: <http://neighbor-space.org/get-involved/documents/>

Pelissero, J. P. (2003) *City, Politics, and Policy: A Comparative Analysis*. Washington D.C.: CQ Press, A Division of Congressional Quarterly, Inc.

“Political and Social Reforms”. CliffNotes Study Guides, U.S, History II. Retrieved April 06, 2018 from <https://www.cliffsnotes.com/study-guides/history/us-history-ii/the-progressive-era-19001920/political-and-social-reforms>

Poulsen, M. N., Hlland, K. R. S., Gulas, C. A., Pham, H., Dalglish, S. L., Wilkinson, R. K., & Winch P. J. (2014). Growing an Urban Oasis: A qualitative study of the perceived benefits of community gardening in Baltimore, Maryland. *Culture, Agriculture, Food and Environment* 36(2):69-82

Pratt, B., & Stevens, L. (2018) *Community Gardens in Louisville*. UofL Sustainability Roundtable, Presentation April 13

“Purchase Vacant Property from Metro”. Vacant & Public Property Administration. Retrieved April 06, 2018 from: <https://louisvilleky.gov/government/vacant-public-property-administration/purchase-vacant-property-metro>

“QuickFacts: Chicago city, Illinois”. United States Census Bureau. Retrieved April 06, 2018 from: <https://www.census.gov/quickfacts/fact/table/chicagocityillinois/PST045216>

“QuickFacts: Louisville/Jefferson County (balance), Kentucky”. United States Census Bureau. Retrieved April 06, 2018 from: <https://www.census.gov/quickfacts/fact/table/louisvillejeffersoncountybalancekentucky/AGE295216>

“Resources”. NeighborSpace. Retrieved April 06, 2018 from: <http://neighbor-space.org/guidebook-for-neighborspace-gardeners/>

“Resources and Information”. Advocates for Urban Agriculture. Retrieved April 06, 2018 from: <https://auachicago.org/resources/>

RKG Associates, Inc. (2013). *VAP Neighborhood Revitalization Study*

Robert Wood Johnson Foundation (2010). *The Economic Benefits of Open Space, Recreation Facilities and Walkable Community Design*

“Roles and Responsibilities”. NeighborSpace. Retrieved April 06, 2018 from: <http://neighbor-space.org/get-involved/documents/roles-and-responsibilities/>

Sales and Property Tax Exemptions PIO-37. Illinois Department of Revenue. Retrieved April 25, 2018 from: <http://tax.illinois.gov/Publications/PIOs/PIO-37.htm>

Sarker, A. (2013). The role of State-Reinforced Self-Governance in averting the tragedy of the irrigation commons in Japan. *Public Administration* 91(3):727-743

Sarker, A., Itoh, T., Kada, R., Abe, T., Nakashima, M., & Herath, G. (2014). User self-governance in a complex policy design for managing water commons in Japan. *Journal of Hydrology* 510:246-258
<https://doi.org/10.1016/j.jhydrol.2013.12.034>

Second Amendment to Intergovernmental Agreement (1999)

Smith-Lever Act (1914)

Stauffer, K. D. (2014). Community Acceptance of Natural Brownfield Remediation Methods in Baltimore, MD. *A Thesis in Landscape Architecture at Pennsylvania State University*

Sustainability Council (2012). *Sustainable Chicago 2015: Action Agenda*

Sustainability Council (2015). *Sustainable Chicago 2015: Action Agenda 2012-2015 Highlights and Look Ahead*

Teig, E., Amulya, J., Bardwell, L., Buchenau, M., Marshall J. A., Litt, J. S. (2009). Collective Efficacy in Denver, Colorado: Strengthening neighborhoods and health through community gardens. *Health and Place*

Thomas, J. M. (1997) *Redevelopment and Race: Planning a Finer City in Postwar Detroit*. Baltimore, MD: The John Hopkins University Press

The Trust for Public Lands (2016). *2016 City Park Facts*

UN-HABITAT (2002). *The Global Campaign on Urban Governance 2nd Revised Edition*

United Nations (2014). *World Urbanization Prospects*

“Urban Agriculture”. Chicago Botanic Garden. Retrieved April 06, 2018 from: <https://www.chicagobotanic.org/urbanagriculture>

USDA Forest Service (2007). *Open Space Conservation Strategy*

U.S. Environmental Protection Agency (2001). *Brownfields Technology Primer: Selecting and Using Phytoremediation for Site Cleanup*

“Vacant Lot Sales Programs”. Vacant & Public Property Administration. Retrieved April 06, 2018 from: <https://louisvilleky.gov/government/vacant-public-property-administration/vacant-lot-sales-programs>

Wakefield, S., Yeudall, F., Taron, C., Reynolds, J., & Skinner, A. (2007). Growing urban health: Community gardening in South-East Toronto. *Health Promotion International* 22(2):92-101

Wang, H., Swallow, B., & Qiu, F. (2014). Can community gardens and farmers’ markets relieve food desert problems? A study of Edmonton, Canada. *Applied Geography* 55:127-137

Westphal, L. M., & Isebrands J. G. (2001) Phytoremediation of Chicago’s brownfields: consideration of ecological approaches and social issues. *In: Brownfields 2001 proceedings; Chicago IL*

Wheeler, S. M. (2000). Planning for Metropolitan sustainability. *Journal of Planning and Education Research* 20:133-145

“Who we are”. Chicago Food Policy Action Council. Retrieved April 06, 2018 from: <http://chicagofoodpolicy.com/about-2/>

WWF (2014). *Living Planet Report 2014: Species and spaces, people and places*

“You can do it!” Louisville Lots of Food. Retrieved April 06, 2018 from: <http://www.louisvillelotsoffood.com/you-can-do-it.html>

APPENDIX A.

LEGAL DESIGN PRINCIPLES

These refer to the laws and policies that government centers (i.e. federal, state, local) can put in place to provide state-reinforcement of self-governing groups/organizations to manage and improve a social-ecological dilemma.

Legally Binding Authority

Legal avenues given to self-organized groups by centers of government authority (i.e. federal, state, local governments) to form/operate, to make decisions without government involvement, and legal ways to carry out multiple aspects of their mission.

Legally Binding Responsibility

Legal responsibilities given to self-organized groups by centers of government authority (i.e. federal, state, local governments) to uphold their mission and purpose, encouraging these groups/organizations to make the best possible decisions to manage and improve a social-ecological dilemma.

Tangible Support

Substantial financial, material, technical, and/or administrative support given to self-organized groups by centers of government authority to fulfill their mission, purpose, and Legal Authority and Legal Responsibility.

Reflexive Law

Laws that reflect the dynamic nature of social-ecological dilemmas by, for example, creating legal floors and ceilings (maximums and minimums) within which a self-governing organization can make and carry out decisions.

Legal Sunsets

Legal provisions that encourage laws and/or practices to be reviewed and/or revised after a set period of time, thus also reflecting the dynamic nature of social-ecological systems.

INSTITUTIONAL DESIGN PRINCIPLES

These refer to the rules, responsibilities and other institutions in place that provide space, opportunity, and internal responsibilities for organized groups to self-govern aspects of a social-ecological dilemma.

Well-Defined Boundaries

Boundaries, both physical, social and political, that are explicitly defined and communicated so that each stakeholder understands their boundaries, and their roles and responsibilities in managing a social-ecological dilemma.

Participatory Decision Making

Decisions that are directly related to the work of the self-governing groups involve all stakeholders.

Internal Enforcement

Monitoring and Enforcements that are done internally, by an individual or group of individuals from within the organization, promotes an environment that is fair and just, and dissuades individuals from breaking the rules in place.

Internal Conflict Resolution

Plans that encourage communication among individuals or groups in disputes, and a designated approach to dealing with conflicts that cannot be handled with communication alone.

APPENDIX B.

Interview Questions:

State Reinforced Self-Governance (Community Gardens)

Topic: *These questions investigate “state reinforced self-governance.” They ask about the kinds of support organizations like NeighborSpace and Louisville Grows, which facilitate the creation of smaller, community-based organizations (e.g., community-managed gardens), receive from the government*

Type of Organization: *Facilitative, non-governmental organizations, like NeighborSpace (Chicago, IL) and Louisville Grows (Louisville, KY)*

Introductory Background Statement:

One of the things we would like to understand about community gardens, and organizations like yours, is the role that federal, state, local, and metro governments have played in giving your organization the authority and support it needed to get started and continue to work effectively. This includes things like financial and technical support, legal authority, and key laws or legal processes that may directly or indirectly influence your organization’s capacity to function well. We would also like to understand if these laws and legal systems may pose barriers to your work as a community organization.

I'd first like to ask about the history of your organization.

1. **Historical Origins:** We are interested in learning how community organizations like yours got their start
 - a. Could you please describe why your organization formed?
 - i. Were there any major catalysts that lead to its formation?
For example: a serious environmental issue, community pressure, political event, or other circumstance?
 - b. Could you please describe how those involved (people, groups, organizations, etc.) in the creation of your organization were helpful or necessary, if at all?
 - i. Were there any parties who hindered your progress?
 - c. From conception to implementation, approximately how long did it take for your organization to form? If you could please provide dates and timeframes as well.
 - d. The following questions ask about how laws and policies have played a part in the process of forming your organization. "Laws and policies" include those on the federal, state, local, and metro government levels.
 - i. What governmental agencies or departments were supportive of your organization's formation?

- ii. Was there opposition to the formation of your organization from any governmental agencies or departments?
 - 1. If so, what was the reasoning for such opposition?
- iii. What, if any, negotiations or trade-offs had to be made in order to form your organization?
- e. Could we get a copy of your organization's charter and bylaws, which explain your organization's purpose and its rules and regulations? If you have them with you now that would be great, otherwise you can send it to me after the interview
- f. Do you know of any historical accounts, books, or documentaries, that have been done about the history of your organization?

Next, I'd like to ask you about the kinds of financial and other support your organization has received.

2. **Tangible Support:** In particular, governments (at the Federal, State, Local, and Metro levels) sometimes have programs that give community organizations like yours grants or other funds to help them start their organization and support their ongoing work, for example, USDA Microloans. Community organizations like yours also often receive funding from other sources (e.g., public donations).

We would like to know the kinds of financial support, and other support, your organization has received to help us understand the kinds of support

community organizations like yours receive in general, and how this affects their effectiveness.

Records Request

These questions can get pretty technical, because we are trying to identify specific government programs (and other sources of support) over many years.

To help with that **would it be possible to work with you to get summaries of your organization's financial records** – specifically, funding sources and amounts or percentages?

That would make it easier, because we can talk about the overall picture of your financial support in today's interview, and then I could get the specific details from the records later.

Discuss arrangements for obtaining the records.

a. *Funding:*

- i. Overall, what were some of the most important funding sources that helped your organization to get started?
(Grants, donations, etc.)
- ii. What kinds of funding sources currently support your organization's activities? (Grants, donations, etc.)

b. *Other support:*

- i. In addition to funding, what kinds of other support did your organization receive from the government to help it get started **in the beginning years**, and who gave that support?

For example

- Training
- Equipment
- Access to important facilities
- Access to important information (e.g., databases, research findings)
- Communication (e.g., with a government agency)
- Human resources (e.g., staff, volunteers)
- Legal assistance (e.g., legal consultation, defense) (forming bylaws, articles of incorporation, 501(c)(3) tax designations, etc.)
- Help with meeting important people (social networking)
- Financial advising, or consultation
- Etc.

- ii. What kinds of non-governmental support did your organization receive in its beginning years, and who gave that support? For example, donations of gardening equipment; a lawyer who volunteered to help form your bylaws, etc. Can you think of any other examples?

- iii. Does your organization continue to receive non-financial government support today? If so, what kinds?
- iv. Does your organization continue to receive non-financial support from non-government organizations today? If so, what kind?

The following questions refer to the legal and institutional design principles that could influence community gardens and community organizations like yours.

Before we move to these questions, however, I have a few general, housekeeping questions.

- A) How many gardens has your organization helped to form?
 - a. After helping start a garden, who takes it over from there? What community groups, or other organizations?
- B) How many gardens does your organization actively manage today?
- C) Do your gardens all follow similar guidelines or do individual gardens and gardeners write their own?
- D) Are most of your gardens on leased or owned lands?
 - a. What do you think is the benefit of leasing over owning, and vice versa?
 - b. Would you rather own some of the land you are currently leasing?
 - c. Are most leased lands privately or publically owned?

E) Has your organization ever bought land from Louisville Metro for the purposes of a community garden?

3. Legally Binding Authority:

a. **Supportive:** The U.S. legal system, and governments, can sometimes support community organizations like yours by passing laws or creating legal processes that give organizations direct or indirect authority to manage aspects of community gardens.

- i. For example, do you know of any laws that allow organizations like yours to buy publically owned land for the purpose of community gardens and/or have full control over management of that land?
- ii. Another example might be the amendments made to the land development code regulations in 2013 that allowed community gardens on many residential and commercially zoned areas.
- iii. How has the legal system (e.g., Federal, State, Local, and Metro laws and processes) supported your organization and made it possible to self-organize and make important decisions or actions?
- iv. Are there non-legal rules by or agreements with government agencies that give your organization authority over certain

aspects of community gardening, and that help your organization work effectively?

- b. **Barriers (unsupportive)**: In what ways has the legal system been a barrier to your authority and capacity to manage certain aspects of community gardens? For example, do HOAs or deed restrictions hinder your organizations ability to manage a garden effectively?
 - i. Are there non-legal rules by or agreements with government agencies that hinder your organizations ability to work effectively?

4. **Legally Binding Responsibility**

- a. Are there any ways that the legal system or governments have made your organization (or type of organization) legally responsible for the management of or important aspects of community gardens? For example, are there laws stipulating how you are to manage the land, and what your organization is responsible for, should problems arise such as nuisance claims or damages?
 - i. Are there non-legal rules by or agreements with government agencies that give your organization responsibility over certain aspects of gardening?

5. **Reflexivity (general)**:

- a. **Rigidity:** Are there any ways that you find the legal systems (e.g., laws and legal processes) are too rigid or inflexible, causing significant barriers to your organization's work, or otherwise causing problems that interfere with good management of community gardens from your organization's standpoint?
 - i. Are there non-legal rules by or agreements with government agencies that are too rigid?
- b. **Flexibility:** Are there any ways that you find the legal system has beneficial flexibility, that supports your organization's work and facilitates its role in supporting community gardens? For example, zoning codes were amended in 2013 to allow community gardens on many residential and commercially zoned areas in Louisville.
 - i. Are there non-legal rules by or agreements with government agencies that have significant flexibility?

6. **Legal (and Institutional) Sunsets:** Legal systems (or policy systems) that affect organizations like yours sometimes try to improve flexibility and provide an opportunity for change, or to rethink existing policies, by having sunset clauses. This is when policies and practices are tried on a provisional basis or are reviewed and revised after a set period of time.
- a. Are you aware of any examples of this, for your organization?
 - i. If yes, how, if at all, have these legal sunsets affected the ability of your organization to do its work, good or bad?

- b. How long, typically, are the leases for the land you acquire?
 - i. Is there a review process when you reapply?

7. **Well-defined boundaries:** Research suggests that it may be easier to manage a complex problem, like community gardens, when the physical and social/political boundaries of the problem are well-defined and known by all the major stakeholders (e.g. government, citizens, non-government organizations). Should any stakeholders be unaware of a physical and/or social/political boundary, it is considered an unclear boundary.

- a. In your experience, how well defined are the physical boundaries for community gardens? For example, are the spaces for gardens well defined? Other physical boundaries might include access to water, waste disposal or compost, etc.
 - i. How have these boundaries affected urban community gardens, good or bad?
 - ii. How have these boundaries influenced the ability of your organization to do its work effectively, and achieve its mission?
- b. In your experience, how well defined are the social and political boundaries for community gardens? For example, in Louisville, often the land owner, community garden organization, and overseeing department are three separate entities. This can lead to

confusion over who is responsible for particular management aspects of the garden.

- i. How have these boundaries affected community gardens, good or bad?
 - ii. How have these boundaries influenced the ability of your organization to do its work effectively, and achieve its mission?
- c. Has your organization done anything to try to improve the definition, or clarity of these boundaries, or to increase stakeholder awareness of them?

8. Participatory Decision Making: Research suggests that it may be important for relevant stakeholders to have the opportunity to participate in important decisions that affect them. This may include participation in the design of policies, solutions, and their implementation. Relevant stakeholders can be anyone with any interest or stake in the issue, for example, government, community garden members, community members, and grassroots organizations.

- a. To what extent do you think the management of community gardens in Louisville is conducted in an inclusive and participatory way? Are decisions made about a specific garden, or community gardening in general, conducted in an inclusive and participatory way?

- i. How has this affected community gardens?
 - ii. Has this had an effect on your organization?
 - b. To what extent are major decisions made about your organization done in an inclusive and participatory way? For example, decisions by local government about the scope and limitations of your organization.
 - i. How has this affected your organization?
 - c. Are there any **significant shortcomings** in participatory decision making? Are there any **improvements** you would like to see?
- 9. **Enforcement:** Research also indicates that it might be important for community gardens to have garden management, and the laws or policies that influence them be monitored and enforced by, for example, official governmental policing as well as grassroots citizen monitoring.
 - a. Is garden monitoring done by your organization or a garden manager?
 - i. Does your organization oversee the garden manager? For example, is the garden manager required to respond to your organization or are they autonomous?
 - b. Are garden rules and regulations consistent within all Louisville Grows gardens? Or is each garden run differently depending on the community and the garden manager?

- i. If they are different, how does this impact the ability of your organization to monitor and enforce the rules and regulations at each garden?
- c. Are there any instances when local government would be involved in monitoring or enforcing action on a Louisville Grows garden?
- d. Is your organization monitored by local government or any other governmental organization? Is your organization required to report to anyone?
- e. Overall, to what extent do you think monitoring and enforcement is conducted in a comprehensive and effective way?
- f. Are there any **significant shortcomings** in monitoring and enforcement? Are there any **improvements** you would like to see?

10. Conflict Resolution: Conflicts can occur among stakeholders in community gardens (organizations like yours, metro government, garden members, local residents, etc.) and can sometimes escalate into significant problems that involve formal lawsuits or courts. However, sometimes conflicts can also be relatively quickly and easily resolved, and major conflicts can be prevented or reduced through various formal and informal methods, such as open dialogue, mediation, or informal “hearings or meetings”.

- a. To what extent do you feel that conflicts within your organization are internally resolved or avoided quickly and easily without major escalation of the problem?
 - i. Do you have any examples of conflicts that were handled quickly and easily? Perhaps a disagreement between board members?
 - ii. Do you have any examples of conflicts that got out of hand and involved formal lawsuits or courts?
- b. To what extent do you feel that conflicts among stakeholders in community gardens are resolved or avoided quickly and easily without major escalation of the problem?
 - i. Do you have any examples of conflicts that were handled quickly and easily?
 - ii. Do you have any examples of conflicts that got out of hand and involved formal lawsuits or courts?
- c. Are there any **significant shortcomings** in conflict resolution and prevention? Are there any **improvements** you would like to see?
 - i. Do you have any examples?

Thank you for your time today. Is there anything else you think I should know about this topic, or look into, for my project?

CURRICULUM VITA

Willow Dietsch

3228 Richard Ave.

Louisville, KY 40206

wskietsch@aol.com

PERSONAL STATEMENT

I am passionate about learning and teaching and always strive towards the highest achievement possible. I put a lot of pressure on myself to do well and it shows in the quality of my work. Both in teaching and researching, I enjoy sharing my knowledge, and passion for knowledge, with others. Furthermore, I very much enjoy working with children and since becoming a mother my enthusiasm for playing with, teaching, and sharing wisdom with children has only intensified. I am also a nature-girl at heart and thrive both in the outdoors and in contact with animals.

EDUCATION

Bachelor of Science in Biology, Magna Cum Laude:

University of Louisville, December 2015

GPA 3.75

Concentration in Cell/Physiology

Minor in Chemistry

Mahidol University International College, Spring 2015

Salaya, Bangkok, Thailand

GPA 4.0

Master of Science in Interdisciplinary Studies - Sustainability:

University of Louisville, May 2018

Current GPA: 3.94

Thesis Title: *State-Reinforced Self-Governance of Community-Managed Open Space in Chicago, IL and Louisville, KY*

WORK EXPERIENCE AND INTERNSHIPS

University of Louisville:

January 2013 – April 2013

Undergraduate Teaching Assistant in the Principles of Biology lab

Bristol Bar & Grille:

April 2015 – November 2015

Catering Staff

November 2015 – April 2016

Server

The Food Literacy Project:

July 2015 – December 2015

Farm Based Educator

Kentucky Waterways Alliance Internship:

August 2015 – December 2015

Researched and worked on creating a non-binding resolution in support of the Microbead Free Waters Act of 2015

VOLUNTEERING

Volunteer Researcher at the University of Louisville, Microbiology

Department:

May 2014 – August 2014

Sampled the environment and performed genetic testing for *Burkholderia cepacia* complex and *Stenotrophomonas maltophilia*

These bacteria commonly infect the lungs of individuals with Cystic Fibrosis

Food Literacy Project:

May 2015 – July 2015

Oxmoor Farms

Taught young elementary school children on the importance of local, organic foods; In charge of the worm activity

SKILLS

Research:

Since we first got a computer in my home, I have enjoyed researching various topics and summing them up so I can share my findings. As an undergraduate and graduate student, this passion translated in high

quality research papers. Outside of school, I also did significant research with the Kentucky Waterways Alliance on microbeads and their harm to water-ways and ecosystems.

HOBBIES AND INTERESTS

Teaching:

I have a passion for sharing knowledge and helping others grasp concepts by taking the time to explain things in ways they may not have thought of before

Being outdoors:

Gardening and hiking are some of my favorite outdoor activities

REFERENCES

Dr. Daniel DeCaro:

Thesis Mentor

University of Louisville, Department of Urban and Public Affairs

Daniel.decaro@louisville.edu

502-852-2927

Dr. Kelly Kinahan:

Previous Graduate Professor and Thesis Committee Member

University of Louisville, Department of Urban and Public Affairs

Kelly.kinahan@louisville.edu

502-852-8212

Dr. Lauren Heberle:

Previous Graduate Professor and Thesis Committee Member

University of Louisville, Department of Sociology

Laruen.heberle@louisvile.edu

502-852-4749

Dr. Deborah Yoder-Himes:

Previous Undergraduate Professor and Mentor

University of Louisville, Department of Biology

Deborah.yoder-himes@louisville.edu

502-852-0991