

1-1-2011

CONSTRUCTING COLDSTREAM: SUSTAINABILITY AND THE POLITICS OF LOCAL ECONOMIC DEVELOPMENT

John Taylor Shelton

University of Kentucky, taylorshelton@uky.edu

Recommended Citation

Shelton, John Taylor, "CONSTRUCTING COLDSTREAM: SUSTAINABILITY AND THE POLITICS OF LOCAL ECONOMIC DEVELOPMENT" (2011). *Masters Theses*. Paper 103.
http://uknowledge.uky.edu/gradschool_theses/103

This Thesis is brought to you for free and open access by the Graduate School at UKnowledge. It has been accepted for inclusion in Masters Theses by an authorized administrator of UKnowledge. For more information, please contact pwilson@email.uky.edu, mbthomson@uky.edu.

ABSTRACT OF THESIS

CONSTRUCTING COLDSTREAM: SUSTAINABILITY AND THE POLITICS OF LOCAL ECONOMIC DEVELOPMENT

This thesis explores the evolution of the Coldstream Research Campus, a high-tech research park operated by the University of Kentucky. Conceived of in the late 1980s and built in 1992, Coldstream was expected to become the ‘economic engine’ of central Kentucky through the commercialization of applied scientific and technological research coming out of the university. Twenty years later, with Coldstream having failed to live up to expectations, the university initiated the process of updating the Coldstream Master Plan to incorporate a decided emphasis on the concept of sustainability. Through a mix of archival research and semi-structured interviews, this thesis argues that the newfound emphasis on sustainability is important insofar as it opens up the possibility for perpetuating the existence of the Coldstream Research Campus as a real estate development, even in spite of its failures in other arenas.

KEYWORDS: research parks, economic development, sustainability, political economy, Lexington

John Taylor Shelton

April 26, 2011

CONSTRUCTING COLDSTREAM:
SUSTAINABILITY AND THE POLITICS OF LOCAL ECONOMIC DEVELOPMENT

By

John Taylor Shelton

Dr. Matthew Zook

Director of Thesis

Dr. Michael Samers

Director of Graduate Studies

April 26, 2011

THESIS

John Taylor Shelton

The Graduate School
University of Kentucky

2011

CONSTRUCTING COLDSTREAM:
SUSTAINABILITY AND THE POLITICS OF LOCAL ECONOMIC DEVELOPMENT

THESIS

A thesis submitted in partial fulfillment of the
Requirements for the degree of Master of Arts in the
College of Arts and Sciences
at the University of Kentucky

By

John Taylor Shelton

Lexington, Kentucky

Director: Dr. Matthew Zook, Associate Professor of Geography

Lexington, Kentucky

2011

Copyright © John Taylor Shelton 2011

ACKNOWLEDGMENTS

Although this thesis took nearly eighteen months of on-again-off-again work from conception to completion, it is undoubtedly the product of much more than my own intellectual labor. These acknowledgements are by no means exhaustive, as thanking all of the people who have, in some way or another, helped me get to this point would take a life's worth of work on its own.

First, thanks to my family for all of the support they've given me over the course of the last twenty-four years, even when they're unsure of what exactly I'm studying or why it's important. Without the countless, undoubtedly painful sessions at the kitchen table, I'm not sure I ever would have learned how to write a coherent paragraph.

Second, thanks to all of those in the Department of Geography who have provided so much guidance to me over the last five years. In addition to my committee members, Dr. Sue Roberts and Dr. Andy Wood, a special thanks to Dr. Morgan Robertson and Dr. Michael Samers for all of their help in making me the geographer that I am. The most serious debt of gratitude goes to my advisor, Dr. Matt Zook. Whatever it is that I've already accomplished as a geographer, and anything I might accomplish in the future, can surely be traced back to Matt in one way or another.

Though I won't list them by name, I would be remiss in not expressing my thanks to my fellow graduate students. To those who welcomed me as a mid-year entry into the graduate program, and eventually shared more beers, basketball games and bad stories than we can count, you're all the best friends I could possibly ask for. Thanks for making my life a little more worth living.

The greatest appreciation goes to my partner, Emily, who has endured more hours of wishful thinking, complaining and talking shop about geography than anyone else. Despite never having taken a geography course, she has likely experienced more informal instruction in the discipline than anyone else I know, and for that she should be commended.

Last, but certainly not least, I would like to thank all of the individuals who contributed in some way to this particular research project. From those people who agreed to be interviewed and provide me with their own personal insights into the goings on at the Coldstream Research Campus, to the staff of the University of Kentucky Special Collections, to anyone who might have contributed an idea here or there, this thesis exists because of you.

Thanks.

TABLE OF CONTENTS

Acknowledgements.....	iii
List of Figures.....	vi
Chapter 1: Introduction.....	1
Chapter 2: Conceptualizing University Research Parks.....	4
Research Parks and Economic Development.....	4
Disjunctures in Research Park Discourses and Practices.....	7
Research Parks as Real Estate Developments.....	10
Chapter 3: Methodology.....	14
Chapter 4: A Brief History of Coldstream.....	21
From Acquisition to Development.....	21
The Growth of the Coldstream Research Campus.....	30
Contextualizing Coldstream’s History.....	41
Chapter 5: Coldstream and the Politics of Sustainability.....	46
Reading the 2009 Coldstream Master Plan.....	47
Institutionalizing Economic Development and Sustainability.....	55
Sustainability in the 2009 Coldstream Master Plan.....	57
Building a Sustainable Growth Machine?.....	61
Defining and Deploying Sustainability.....	64
Perpetuating the Development of the Coldstream Research Campus.....	67
Chapter 6: Conclusion.....	70
Appendices.....	76
Appendix A: Interviews.....	76
Appendix B: Companies at Coldstream.....	77
References.....	78
Vita.....	85

LIST OF FIGURES

Figure 2.1: Location of University Research Parks in the United States.....	5
Figure 4.1: Barn at Coldstream Prior to Development	22
Figure 4.2: Kentucky Kernel Editorial Cartoon.....	25
Figure 4.3: Coldstream Research Campus Development Plan	29
Figure 4.4: Hughes Aircraft Building Plans and Mockups.....	31
Figure 4.5: The Development of the Coldstream Research Campus.....	33
Figure 4.6: Coldstream Research Campus Promotional Brochure	37-38
Figure 5.1: Coldstream Farm Proposed Land Use Plan.....	48
Figure 5.2: The Carnahan Center Neighborhood.....	50
Figure 5.3: The Proposed TIF District at Coldstream.....	52
Figure 5.4: Envisioning the Coldstream Community	54
Figure 5.5: The Coldstream Trails Plan.....	60
Figure 6.1: The Future of Coldstream?.....	74

CHAPTER ONE: INTRODUCTION

Situated on Newtown Pike and visible from the interstate thoroughfare, the Coldstream Research Campus is often the first encounter one has with the University of Kentucky when entering Lexington-Fayette County from the north. Coldstream is, however, much more than just a visual reminder of the university's near-ubiquitous presence in central Bluegrass region of Kentucky. In many ways, the history of Coldstream is the history of the University of Kentucky, and is indicative of the many successes and failures experienced at a scale much larger than the research campus itself. This thesis begins from the following question: how has Coldstream, in spite of its many shortcomings, been able to perpetuate itself for nearly twenty years?

Originally conceived as an engine for economic growth in the region, a way of making Kentucky more competitive in the new global economy, the Coldstream Research Campus was expected to promote regional development through the commercialization of university research and attraction of existing firms who could benefit from a newfound proximity to the university. In 2009, however, university administrators began exploring alternatives to the research campus' current master plan, just as they had done some twenty-two years earlier when deciding to decommission the property as an agricultural research facility and turn it into the research campus it is today. These newest alternatives, however, no longer focused exclusively on the importance of innovation and entrepreneurship to the success of the region. Instead, they also employed a series of discourses about the *sustainable* development of the remaining land on the Coldstream property as a necessary condition for its survival. This thesis investigates how and why the university administration attempted to construct the Coldstream Research Campus as

‘sustainable’. As will be argued, the introduction of an emphasis on sustainability in the planning of the research campus helps to legitimate and perpetuate the university’s role in property acquisition and development in Lexington and the surrounding Bluegrass region. These discourses of sustainability are, in many ways, a response to Coldstream’s failure to live up to the expectations set out for it in the late 1980s and early 1990s. It is important to note, however, that Coldstream has not been a failure by all measures. Indeed, apart from delivering the broader economic benefits that were promised, Coldstream has been quite the successful venture for the university.

In order to argue these points, this thesis conforms to the following structure: first, the case of Coldstream is contextualized within the broader literature on university research parks and local economic development. This chapter shows that much of Coldstream’s history has been unextraordinary, but allows for the unique aspects of the Coldstream case study to be identified and examined later. Second, a brief overview of this project’s methodological approach is given, with special attention given to the importance of critical discourse analysis to this project. Third, this thesis provides a history of the Coldstream property, from its original acquisition as an agricultural research farm by the University of Kentucky in the mid-1950s to its transition into the Coldstream Research Campus in the late 1980s and early 1990s and even further to the re-envisioning of the Coldstream Research Campus as a model of sustainability. Although this history is not intended to be comprehensive, it appears to be the first effort at constructing such a narrative, and supports the assertion that the Coldstream Research Campus is first and foremost about property acquisition and development, and not high-tech business incubation. This chapter also begins to place some of these processes in the

analytical language of the urban growth machine, allowing for some connection to previous work while acknowledging the shortcomings in using it as the guide for this project in its entirety. Fourthly, this thesis begins to explicate the how and why of introducing sustainability into the 2009 Coldstream Master Plan. This chapter relies on fieldwork undertaken from late 2009 until early 2011, designed to analyze the different ways sustainability was used as a justification, if only partially, for the continued development of the Coldstream Research Campus property. Special attention is paid here to the ways that these discourses of sustainability were designed to co-opt the language of an oppositional counter-coalition in order to neutralize potential opposition to the new Coldstream Master Plan. In conclusion, the broader implications of this shift towards sustainability are discussed, with particular attention paid to the usage of sustainability discourses in justifying potentially *unsustainable* development projects.

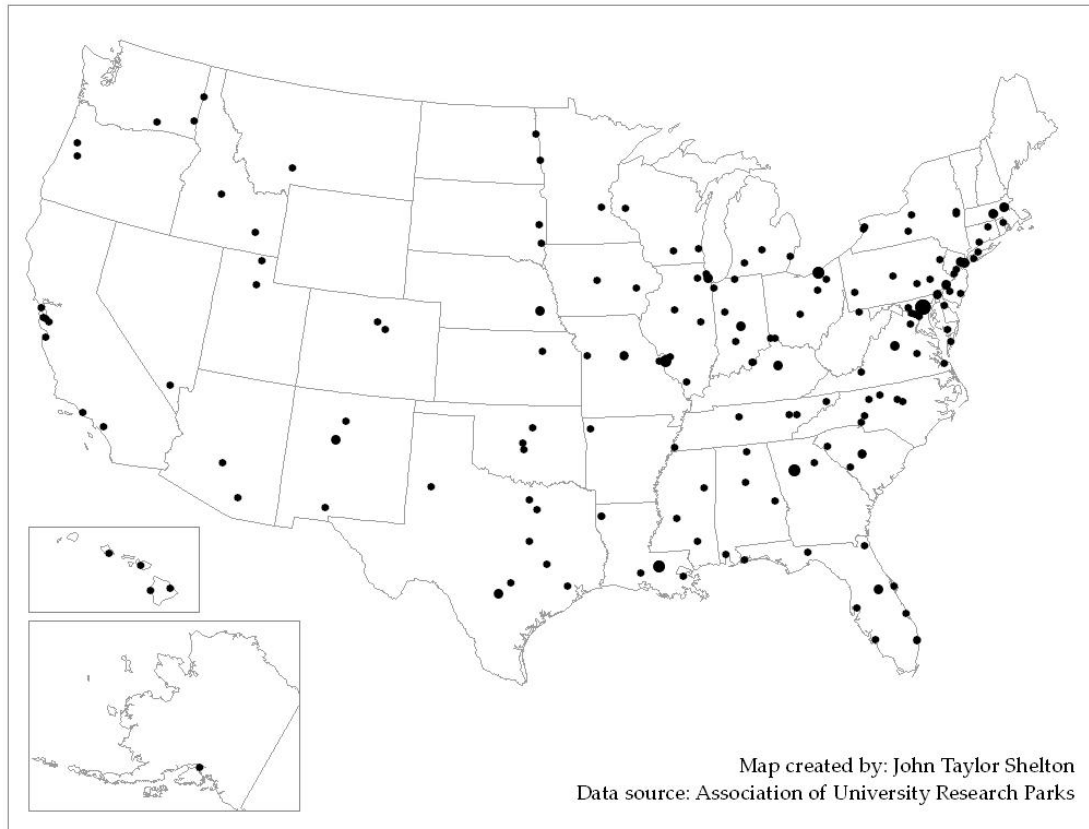
CHAPTER TWO: CONCEPTUALIZING UNIVERSITY RESEARCH PARKS

In many ways, the Coldstream Research Campus can be seen as a response to the wave of post-Fordist economic restructuring occurring since 1973, which has alternatively been referred to as the ‘new economy’, the ‘knowledge economy’, or the ‘information economy’. Although these terms are not entirely interchangeable (nor are they entirely coherent and without internal contradictions), they represent an attempt to define and analyze the changes taking place in the social organization of the economy occurring since the mid-1970s, especially with regard to the dual processes of deindustrialization and financialization (Bluestone and Harrison 1992; Amin 1994). While it is not necessary to go into the literature on post-Fordism in depth, it should be recognized that this shift represents an important backdrop for the events taking place at the Coldstream Research Campus since the mid-1980s. Concomitant with changes in the macro-economy has been the emergence of a new form of urban politics focused on the promotion of economic development. This has largely taken the form of a variety of policy strategies aimed at making particular localities more attractive to increasingly mobile flows of capital (Cox and Mair 1988; Cox 1995). More recently, theories of ‘the creative class’ have gained purchase in policy-making circles by instead emphasizing the importance of attracting and retaining highly mobile *labor*, rather than capital, to promoting regional development (Florida 2003, 2007).

Research Parks and Economic Development

Although it is by no means the only way to promote the attraction and retention of hyper-mobile capital and labor, especially in high-technology fields, the research park

Figure 2.1: Location of University Research Parks in the United States



Source: Author's Analysis

model (elsewhere referred to as science parks, technology parks, and technopoles¹) is one such policy that has been turned to in order to promote the end of regional economic development. As of 2005, at least 174 research parks were operated by public or private universities in the United States and Canada (Battelle 2007). Although each research park has different characteristics and fits into a range of possible categorizations, Luger and Goldstein define research parks “as organizational entities that sell or lease spatially contiguous land and/or buildings to businesses or other organizations whose principal

¹ The terminology of “research parks” is primarily used in this thesis because it is the nomenclature used by the University of Kentucky and the Coldstream Research Campus. In general, “research park” is interchangeable with the aforementioned alternatives.

activities are basic or applied research or development of new products or processes” (Luger and Goldstein 1991: 5).

Primarily, research parks are constructed with the stated goal of promoting economic development, albeit using a number of different strategies². First, research parks are seen as beneficial insofar as they represent a concrete policy designed to promote agglomeration economies. By locating multiple knowledge-based industries close together, it is assumed, perhaps falsely, that linkages between proximate firms will create “knowledge spillovers” that have positive benefits for all involved. Second, it is assumed that these inter-firm connections will breed something of a culture of innovation that will lead to the formation of new firms and, thus, new employment opportunities for local residents. Alternatively, the research parks can be seen as opportunities to *attract* new businesses and highly-skilled workers rather than promote the *creation* or *incubation* of new firms from an already-existing workforce in a particular locality. Third, in the case of research parks affiliated with a university, it is assumed that the park will promote linkages between the academy and the business world. This connection is often conceived of as being two-way. That is, not only does the research park help put businesses in touch with cutting edge facilities and researchers that may bolster their status, but the possibilities for attracting businesses from other localities, as well as incubating new, homegrown firms, provides an opportunity to employ graduates of the university and strengthen the local tax base (Luger and Goldstein 1991: 29).

Taking all of these things into account, the research park model can be seen as one possible institutional response to the changing character of the knowledge economy.

² For a more in depth assessment of these strategies, cf. Goldstein 2009.

As was pointed out over two decades ago, technology-based economic development strategies are usually assumed to be more immune from both cyclical and structural crises than other economic sectors, thus making them an attractive era for state-led investment (Malecki 1984). So even if the increasing importance of information and communication technologies has caused a shift from the ‘space of places’ to a ‘space of flows’ (Castells 1989, 1996), “digitalization has not created an economy that has become completely footloose in which any task can be done anywhere” (Malecki and Moriset 2008: 2). Research parks thus represent an attempt to use the potential positive externalities of industrial clustering to attract both capital and labor to a particular place (Markusen 1996). Research parks are, however, like other industrial recruitment strategies, often forced to offer significant subsidies or tax abatements in order to attract potential tenants (LeRoy 2005). That is, research parks act to ground otherwise mobile capital and labor and fix them in place by way of a number of strategies, some more effective than others, though it should be noted that this is neither a stable nor permanent process.

Disjunctures in Research Park Discourse and Practice

Despite these constructions of research parks as a preferred means of promoting local economic development and the difficulties with measuring this in any kind of objective manner, it is important to understand the disjuncture between how research parks are discursively constructed and how these discourses are translated into material practices and outcomes (Luger and Goldstein 1991: 119; Massey et al 1991: 8). One potential example is Massey et al’s (1991) highlighting of an individualist, entrepreneurial and free market discourse about research parks as a means of promoting capitalist growth. And yet, many research parks were not only founded with the help of

public institutions, be they government, local development agencies or universities, but they also continue to be dependent upon them for their own perpetuation.

Another such disjuncture is the belief that research parks can be successful regardless of the particular context they are situated in. While it could be said the ideal model of a research park is rooted in past experience, such experience is limited. For the most part, the promise of research parks as an economic development tool can be traced to the successes of the first research parks in the United States: The Research Triangle Park in North Carolina and the Stanford Industrial Park in California's Silicon Valley. Likewise, the Route 128 area around Cambridge, Massachusetts represents successful innovation cluster with many of the social and economic characteristics of a research park, despite not being formally organized around the collective provision of land and services. Although the successes of these research parks – both in promoting economic development as well as generating meaningful technological advancements – are undoubted, they are also unparalleled, and should not be taken to be easily replicable in other contexts. The confluence of circumstances in each case was different. For example, the Research Triangle Park is operated by a non-profit foundation and is tied closely to one private and two public universities, whereas the Stanford Industrial Park was and continues to be run and primarily associated with the university itself. Route 128 was something of an emergent research cluster resulting from spin-off companies based on faculty and student research at Harvard University and the Massachusetts Institute of Technology. Even beyond such simple differences in institutional makeup, a wealth of non-replicable social, cultural, political and economic factors were arranged in just the right way so as to make these facilities successful. Some have attempted to boil these

successes down to a universal formula, albeit at the exclusion of any evidence that research parks may not always have such luck (Smilor et al 2007). The assumption that these factors could be re-created in different times, places and contexts has fueled the growth of research parks as economic development strategies not just in the United States, but across much of Canada, the United Kingdom and western Europe. Given the success rate of less than 25% for research park facilities in the United States³, it is evident that this confluence of factors is certainly not present in all situations. The persistence of spatially uneven development has also constrained the possibilities for research park development. Indeed, those underdeveloped places most in need of the potential benefits of economic development are often the least able to capitalize on such initiatives (Huggins and Johnston 2009). Even “successful” research parks are commonly seen as having a negligible effect on regional economies. Luger and Goldstein report “a majority of [research park managers] believed that their parks had *no* significant effect on improving regional economic performance” (Luger and Goldstein 1991: 57). Because anecdotal accounts such as these are frequently criticized for a lack of rigor, some have attempted to quantify the benefits of research parks.

In a series of longitudinal analyses between new technology-based firms (NTBFs) located on research parks and similar firms not located on research parks in the UK, the benefits of firm location on a research park has been shown to be questionable at best. While research park-based firms are found to have more significant connections to institutions of higher education than non-park counterparts (Westhead and Storey 1995),

³ Luger and Goldstein (1991) posit that half of all US science parks never reach financial viability. Of the remaining half, another half are required to repurpose away from scientific or technological research toward other roles, such as a general purpose industrial or office park facility.

they do not possess any greater quantity of R&D inputs (e.g., highly-trained employees, financial investment) or outputs (e.g., patents, trademarks or products released to market) than similar non-park firms (Westhead 1997). Taking all of this into account, it has been argued that "existing evidence suggests that the 'returns' to location on an U.K. research park are negligible" (Siegel et al 2003: 180). But just as "no two research parks are alike" (Grayson 1993, in Westhead 1997: 46), neither are the various contexts in which research parks exist. So while many research parks in the US and UK have been shown to not live up to expectations (Luger and Goldstein 1991; Westhead 1997; Siegel 2003), research parks in other locations have been shown to have significant positive effects, on job creation, for example (Löfsten and Lindelöf 2002). At the very least, previous research has shown the effects of research parks to be contingent on a variety of circumstances, and that skepticism of their benefits is well warranted.

Research Parks as Real Estate Developments

Perhaps the most important mismatch between discourse and practice in research parks, at least for the purpose of this thesis, is in the contradictions between research parks as sites of innovation and research parks as property ventures. Indeed, it is widely accepted that "[s]cience parks are, by definition, property initiatives" (Massey et al 1991: 213). Because of this, park managers and investors often conceptualize the success of research parks not in terms of promoting economic development, technological advancements, or even the growth of new businesses, but in the ability for research parks to further accumulation by way of real estate transactions (Massey et al 1991: 100; Luger and Goldstein 1991: 38, 181). Luger and Goldstein even argue that universities' role in research parks is often spurred by the need to capitalize on university-owned property

(Luger and Goldstein 1991: 39), confirmed in the case of the Coldstream Research Campus by former university spokesman Jack Blanton when he was quoted as saying “The real asset that land-grant universities have is land” with regard to the planned research campus in the Lexington Herald-Leader (Anderson 1988). Research park administrators have admitted the undue emphasis on real estate developments in contexts as far away as Singapore (Phillips and Yeung 2003).

Even in envisioning the future of research parks, industry reports continue to emphasize real estate, albeit by way of the provision of mixed-use, amenity-based land development at research parks (Battelle 2007; Engardio 2009). But as Massey et al warn, however, “there may well be conflicts between the objectives of science-park-as-property-investment and science-park-as-part-of-local-economic strategy” (Massey et al 1991: 225). That is, even if significant emphasis is placed on scientific innovation rather than the mere extraction of land rent from occupant businesses, the influence of the property-based development model may continue to interfere with the proposition of promoting something of a new, flexible style of accumulation based on high-tech industries. But, as I will argue, these discontinuities are productive, insofar as the research park qua real estate development model has been, in many ways, dependent upon the discourse of research parks as an innovation engine. That is, without the justification that research parks will inexorably lead to greater competitiveness in the market, economic development and an increased standard of living for all, research parks as a means of accumulating capital through real estate transactions would not be able to exist. As will be explained later in the context of the case study, this dominant discourse

of economic development is now slowly receding as the concept of sustainability is brought to the fore in justifying the existence of the Coldstream Research Campus.

Perhaps because of the contradictions raised by research parks as property developments rather than innovation engines, some research parks have begun a re-visioning of what the ideal research park should look like in the 21st century. Although it is recognized that an infinitely large number of possible scenarios exist, including the privatization of previously publicly-funded parks (Tamasy 2007), it is widely accepted that there must be shift *away from* the traditional real estate-based research park model (Townsend 2009). Because the provision of research facilities has not proven to have any significant effect on innovation output, it is increasingly seen that innovation can, in many cases, occur *without* such facilities. Enabled by the ease at which researchers can now communicate near instantaneously across space and time, physical research parks are no longer necessary to generate the kind of ‘untraded interdependencies’ or tacit knowledge that has been thought to result from the spatial concentration of industries in one place (Storper 1997). In short, the benefits of research parks can be gained without actually building a research park.

In the place of research parks, it is expected, will grow non-proximate networks for research and development, or “research clouds”, that will continue to promote scientific innovation, but without the heavy investment and reliance on real estate (Townsend 2009; Townsend et al 2009). Whether or not these forecasts are proven true is not of particular concern, but the importance of research park managers beginning to understand the limitations to the real estate model for research parks cannot be understated. On the other hand, it has been argued that “[r]eliance on IT networks must

continue to be complemented by face-to-face interaction” (Malecki and Moriset 2008: 176), suggesting that perhaps traditional research parks, or something like them, will continue to have a role in the new economy, either as promoters of innovation or as real estate ventures.

Regardless of the particulars of each individual research park, it is important to recognize “that while there will necessarily be a politics of local economic development” (Cox and Mair 1988: 322). So while the economic impacts of these initiatives can be analyzed and modeled *ad infinitum*, this thesis is more particularly interested in investigating the political dimensions of high-tech research parks and how these economic development projects are brought into being through a highly politicized process.

CHAPTER THREE: METHODOLOGY

The research undertaken for this thesis was performed primarily through a combination of archival research and interviews with individuals involved in the new Coldstream Research Campus master plan. Because the new Coldstream master plan was rarely reported on in the news media, very little could be gleaned about the master plan and the process that went into it without conducting personal interviews with various actors involved with it. Interviews were undertaken in three clusters: one group of interviews were conducted in December 2009 as part of the Coldstream master plan faculty and staff input process itself, with a second group of interviews taking place in July and August 2010. These interviews with university faculty and staff were meant to gather further information about the process through which their input about sustainability in the Coldstream Master Plan was solicited. The final interviews with University of Kentucky administrators were conducted in February 2011. Throughout this time, archival research was undertaken in a variety of forms, including the use of the Coldstream Farm General Reference File from the University of Kentucky Special Collections Library and in-depth readings of various official university documents relating to the Coldstream Farm and Coldstream Research Campus.

As a member of the President's Sustainability Advisory Committee, which was asked to help solicit feedback from faculty and staff about the proposed master plan, I was able to attend various meetings with faculty and staff and record their responses to the pre-prepared list of questions asked of all those whose opinions were sought. This participation is the foundation of the first group of interviews. Three separate interviews, with a total of five people interviewed, were conducted, with one individual conducting

the first two interviews and another conducting the third. Both of the interviewees were later interviewed in the second group. For the purposes of citation, each individual interviewee is cited as their own interview, though information from just three of these five interviewees is used. The information gathered through the answers given by the interviewees provided a series of working hypotheses about the Coldstream Research Campus, in general, and the new master plan, in particular. These hypotheses were then further investigated through intensive archival work. Although various news pieces about the Coldstream Research Campus were continually gathered throughout this process, the use of the University of Kentucky Archives proved most helpful in gathering historical information about the origins of the property, its acquisition by the University of Kentucky and subsequent development. Files under inspection included various news clippings from the *Lexington Herald-Leader* and *The Kentucky Kernel*, university press releases and official documents, as well as minutes of the meetings of the University of Kentucky Board of Trustees accessed through the library's digital repository. A close reading of official documents relating to the Coldstream Research Campus, such as the 1988 Coldstream Alternative Uses Study, 1992 Coldstream Master Plan and the 2009 Coldstream Master Plan and Design Guidelines, some of which were later provided to the author by interviewees, provides much of the basis for this thesis. Although the information collected during archival research confirmed the working hypotheses, there remained many questions, mostly related to the most recent years in Coldstream's history. The first rounds of interviews and subsequent archival research informed the questions that would then be asked to the second group of interviewees in July and August 2010 and the final group of interviewees in February 2011.

Six interviews were conducted in the second group, five of which were University of Kentucky faculty and staff members who were involved in some capacity with the Coldstream master plan, whether in an advisory or leadership role. Individuals selected for interviews in this group were chosen based on the author's knowledge of those involved, which was the result of the aforementioned advisory committee membership. Because of this, as well as the general topic under scrutiny, many of the individuals interviewed are or were involved in campus sustainability activities. Some interviewees were intentionally chosen because of their criticism of the Coldstream master plan, while others were chosen because of a more positive or neutral attitude towards the master plan. Interviewees also reflected a diversity of ages, positions within and lengths of tenure at the University of Kentucky. The final group of interviewees was composed of two separate interviews with University of Kentucky administrators involved in various ways with the administrators of the Coldstream Research Campus. Because the previous interviewees were largely critical of the new master plan and the Coldstream Research Campus, in general, these final interviews were meant to provide some balance to the group of interviewees and gain further insights into the administration of Coldstream.

Most of the interviews throughout the project were conducted in the on-campus offices of the faculty or staff, although more semi-public spaces were sometimes used. The lone exception was an interview that was conducted using VoIP (Voice over Internet Protocol). Interviews were semi-structured, with a series of potential questions available for consultation, although the general strategy was to allow interviewees to discuss their experiences and opinions with as little direct questioning as possible. This allowed interviewees to discuss the topics they found most relevant or the most confident in

speaking about (Valentine 2005: 111). Interview length ranged from thirty minutes to nearly two hours, with the average interview lasting around one hour.

In accordance with the University of Kentucky Institutional Review Board exemption request (#10-0275-X4B), none of the interviews conducted were taped. Instead, handwritten notes were taken during the interview, followed by a more thorough note taking immediately after each interview was completed. In addition, the anonymity of each interviewee is preserved in this thesis, although interviewees are randomly assigned a number (e.g., “Interview #7”) and some descriptive characteristics when being quoted, albeit not in a way that jeopardizes said anonymity (e.g., “a tenured professor remarked that...”). A summary of the interviewees can be found in Appendix A of this thesis. The quotations from these interviews provided in this thesis are, more often than not, direct quotations that were deliberately taken during the interview. Some quotations, however, are not verbatim transcriptions of the interviewees’ words, though they do preserve the intended meanings.

Throughout the time period in which these materials were compiled, these texts – whether written or visual, in printed materials or resulting from interviews – were interpreted through the framework of critical discourse analysis. Critical discourse analysis starts from the assertion that “the exercise of power, in modern society, is increasingly achieved through ideology, and more particularly through the ideological workings of language” (Fairclough 1989: 2). That is, language itself is productive, and simultaneously a product, of power relations. Thus, a critical analysis of language serves the purpose of opening up a space for these power relations to be analyzed.

Although critical discourse analysis does not demand a particular set of methodologies, Fairclough does systematize it into an analysis of three separate discursive moments: (1) of the text itself, (2) of the processes which produce the specific discourse under analysis, and (3) of the social structures within which the discourse is embedded (Fairclough 1995). Likewise, Rose (2001) sees discourse analysis as necessitating an examination of both the structure of the text and its broader context. For the purposes of this research project, this means looking closely not only at the 2009 Coldstream Research Campus Master Plan documents themselves, but using information gleaned from semi-structured interviews for insights into what went into these policy documents, and even into a larger-scale analysis of the context in which Coldstream is situated and from which the master plan emerged. Because the research conducted for this thesis lasted over fifteen months, the importance of context is heightened due to the evolution of events taking place at the Coldstream Research Campus. For example, from the time that the initial interviews were conducted to the final interview, the new Coldstream Master Plan was prepared for introduction to and approval by the university's Board of Trustees, then publicly withdrawn from the Board and delayed due to concerns over the effects of the recession on the real estate market, and again revived thanks to the introduction of a bill in the state legislature that would allow financial incentives for "mixed-use development located in a university research park" (H.B. 310: 1). The constantly changing status of the 2009 Coldstream Master Plan presents an important subtext to the interviews and archival research, and in many ways influenced the kind of topics that were asked about and investigated. Similarly, given the different positions of the interviewees within the university, each interviewee's responses were representative

of their own positionalities. For some, this may not necessarily render their responses problematic, whereas for other interviewees, the importance of promoting a particular political opinion associated with their position within various institutional hierarchies may outweigh the importance of providing certain details in their responses. The method of critical discourse analysis does, however, call attention to this variety of potential changes in context and offers a way of inviting these contextual differences into the research rather than simply ignoring them.

In general, critical discourse analysis is relevant to political-economic studies such as this because it allows for the exploration of disjunctures between the discourses themselves and the material conditions that are simultaneously the cause and result of these discourses. In this research, discourse analysis helps one to look at “the ways in which language is used to pursue political and organizational objectives” (Jacobs 2006: 40). This is especially true when looking at contested terms, like ‘sustainability’ or ‘sustainable development’ in the case of Coldstream, whose success in the policy realm is largely the result of their discursive ambiguity and ability to be applied in a diversity of ways by a diversity of actors without stimulating conflict (Rose 2001; Lees 2004; Rydin 2005). This particular analysis is taken up later in Chapter Five, within the context of the 2009 Coldstream Master Plan and its emphasis on concepts of sustainability. Regardless of the particular instances in which critical discourse analysis is deployed later in this thesis, looking critically at language and how it is both reflective and constitutive of power is extremely relevant for examining urban political economy. As Rydin (2005) writes:

"a discourse approach to policy in a substantive area allows the analyst to understand the different actors' perspectives and self-presentations to the

policy process. It enables a fuller understanding of the engagement of actors within the policy process, an engagement that is fundamentally communicative and hence discursive. It can link the actors' use of discourses with societal discourses, suggesting how the discursive power of an actor's representations may draw on these broader social resources. At the same time it can identify how actors actively use language to pursue their interests" (76-77).

Taking this, along with the more general approach to discourse analysis offered by Fairclough, as a starting point, this research now turns to actually examining and analyzing the various discourses about the Coldstream Research Campus that have had a role in perpetuating the project despite its many shortcomings.

CHAPTER FOUR: A BRIEF HISTORY OF COLDSTREAM

This chapter offers a brief history of the Coldstream property, beginning with its purchase by the University of Kentucky, continuing through the development of the research campus until the present. Although the recounting of events here is by no means comprehensive, nor is it intended to be, it is the first such attempt at a synthetic account of Coldstream's history that can be found. The purpose of this history is to establish a foundation for the claims to be made later in this thesis. This foundation is focused on the central importance of property acquisition and development to the idea of Coldstream as it is held by university administrators, and how discourses of innovation, entrepreneurship and economic competitiveness served to justify the construction of the Coldstream Research Campus to the public in the late 1980s and 1990s. Because the vision laid out during Coldstream's inception has failed to materialize, these events set the stage for a new discourse of sustainability to emerge in order to support the continued development of the Coldstream property, which will be analyzed further in the following chapter.

From Acquisition to Development

Called "one of central Kentucky's most historic tracts" (Kentucky Kernel 1957a), the Coldstream Farm was purchased by the University of Kentucky in December 1956 (Reister 1957). Owned previously by a variety of wealthy horsemen and industrialists (Kentucky Kernel 1957b), the farm was acquired in order to replace the land on which the UK Medical Center currently sits, which had previously been used for research undertaken by the Department of Animal Sciences in the College of Agriculture (University of Kentucky 1996: 8). Despite the quality of the property, the acquisition of

Figure 4.1: Barn at Coldstream Prior to Development



Source: University of Kentucky Archives

the Coldstream Farm did not fail to generate controversy, as it was called into question in an editorial published in the *Louisville Courier-Journal* on September 8, 1959, which chastised the university administration for focusing too much on similar real estate transactions and not enough on the construction of adequate classroom facilities for university students (University of Kentucky 1959: 17). This perpetual repurposing of university lands continued several years later when the university considered building a new football stadium on the Coldstream Farm to replace Stoll Field, which was to be developed to create new classroom spaces (University of Kentucky 1966a), despite previous disapproval of such a plan by the *Lexington Herald* editorial board and City-County Planning Commission (Lexington Herald 1964a, 1964b). After the largest number of students to vote in a referendum voiced their disapproval of moving the

football stadium away from campus (University of Kentucky 1966b), the university eventually chose to relocate the stadium to the University Farm on Cooper Drive, where Commonwealth Stadium remains today (University of Kentucky 1967).

Despite these initial controversies, the Coldstream Farm was utilized for research by the Animal Sciences department for nearly thirty years without any major incident, until it was decided by the university administration “that Coldstream Farm can no longer fulfill the needs of the research program carried on by the College of Agriculture. The encroachment of urban development and the deterioration of the soil have affected the research value of this property” (University of Kentucky 1987a: 164). One tenured faculty member who was interviewed argued that the declaration of the Coldstream soils being unfit for further agricultural research lacked a scientific basis, and was largely a way to silence potential critics of the university’s development plans⁴ (Interview #2). Although this fallacious declaration of Coldstream’s obsolescence has largely faded from memory, it is important to note that played an important role in marginalizing opposition to, and tenuously securing support, for the farm’s development. By the time that the university had officially declared Coldstream unfit for further agricultural research, its future had already been in question for two or more years, suggesting that the development of the property was a foregone conclusion, regardless of the quality of the soils at Coldstream.

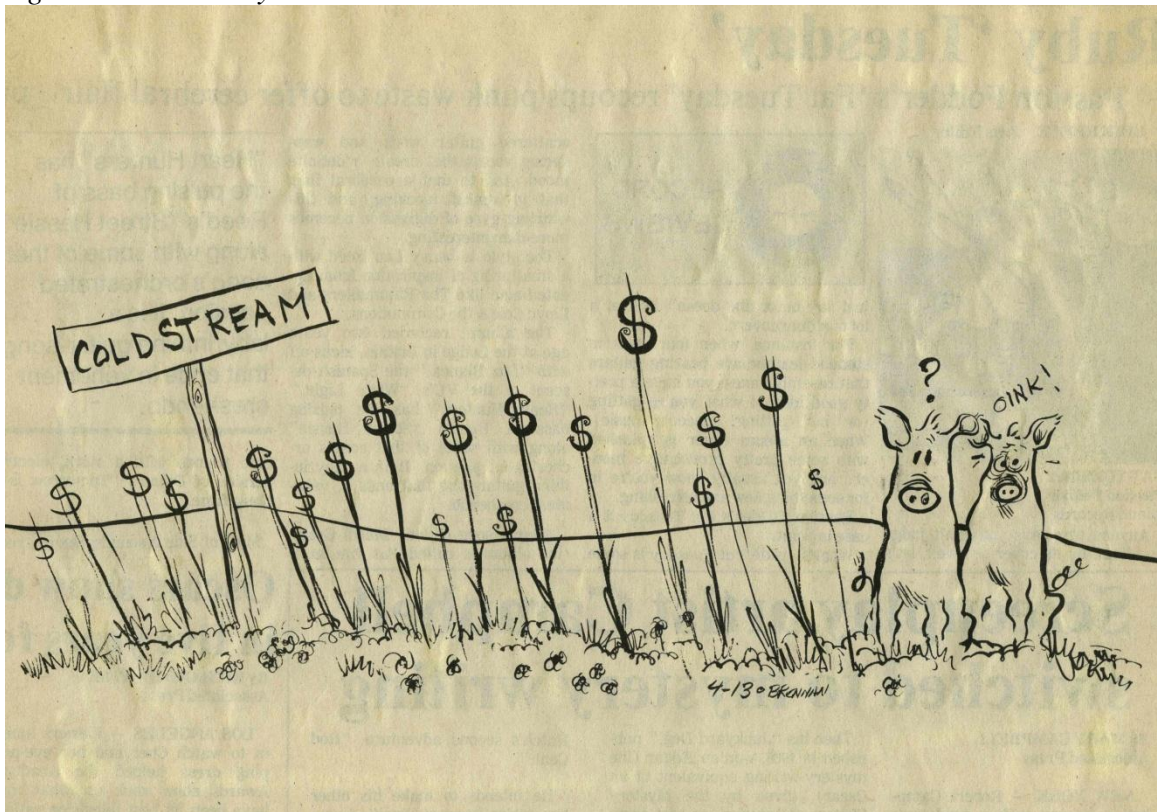
⁴ The argument against the university administration on this point is twofold: first, because the Coldstream Farm was used for livestock research, it is unlikely that any chemicals that may degrade the soil were being used. Second, even if the soils at Coldstream were degraded, this would not preclude the farm from being used for any variety of agricultural research projects.

The university would eventually hire MPC and Associates, a Washington, D.C. consulting firm, to study the potential development of Coldstream. In the mean time, however, various other consulting reports and development plans focused on Coldstream were made public between 1985 and 1988. Seemingly the first mention of things to come, a citywide study of potential economic development projects suggested the development of a high-tech research park affiliated with the university on the Coldstream property (Duke 1985). Less than one year later, in the fall of 1986, local property developers Dudley and Donald Webb, along with W.B. Terry, publicly proposed purchasing or leasing the land at the Coldstream Farm from the university in order to lead efforts to develop it, although the particulars of their plan were not elaborated (Poole 1986). The Webbs' proposal did, however, preempt another consulting report by Scruggs and Hammond⁵, submitted to the Lexington-Fayette Urban County Government (LFUCG) Master Plan Task Force, suggesting a large mixed-use development on the Coldstream Farm, which “would be the largest commercial, residential, industrial and office project in Lexington’s history” (McCord 1986), and would include a regional shopping mall, university research park, and smaller office, retail and residential developments.

Such plans were, however, highly criticized in a number of local media outlets, albeit for a variety of reasons. While the *Lexington Herald-Leader* editorial board was not opposed to the sale of the property in principle – indeed, they thought it would be in the best interests of the university to sell it – they collectively saw the initial plans for Coldstream development as being quickly thrown together in order to meet deadlines

⁵ Scruggs and Hammond would go on to author the initial Coldstream Research Campus Master Plan in 1992. See Figure 5.1 for a map of the initial Scruggs and Hammond development plan.

Figure 4.2: Kentucky Kernel Editorial Cartoon



Source: *Kentucky Kernel*, April 13, 1988

associated with the re-writing of the city's master plan and without any serious consideration of the costs and benefits associated with the development of the land (Lexington Herald-Leader 1986, 1988). Some citizens opposed the plans as a betrayal of the university's primary research and teaching mission in favor of involvement in commercial endeavors (Padgett 1986; Edwards 1986). Even former two-time Kentucky Governor and U.S. Senator Albert B. 'Happy' Chandler, who guided the Commonwealth's purchase of the Coldstream Farm while in his second term as governor, expressed his discontent with the university in pursuing the development of the property, saying "I didn't give [Coldstream] to [the University of Kentucky] to turn it into a subdivision or a mall" (Cooper 1987).

The outright sale of the Coldstream property was officially ruled out the following December, when the university hired MPC and Associates, Inc. to “to study the potential development of Coldstream Farm so as to maximize its economic return to the University and contribute to the economic development of the Commonwealth in an optimal way while serving the mission of the University” (University of Kentucky 1987b: 6-7). The university’s decision not to sell the land was likely less due to the airing of grievances by the public than by the premature disputes over whether the College of Agriculture alone should receive the benefits drawn from the sale of the property (Lucke 1988). In June 1988, MPC returned to the University of Kentucky Board of Trustees with its report, derived from a series of interviews and focus groups with interested parties (including students, faculty, government officials and business owners), as well as gathering of background information on the site itself and the regional economy.

The “Coldstream Farm Alternative Uses Study” provided an outline for the development of the Coldstream property, including the various components that were previously imagined, most important among them being the shopping mall (MPC and Associates, Inc. 1988: 5-8). A retail mall was seen primarily as a means of generating revenue for the university, approximated between \$50 million and \$70 million over a ten to twelve year period, based on the proposed terms of a leasing agreement (University of Kentucky 1989a: 2). The previously suggested outright sale of the property was estimated to provide the university between \$37 million (McCord 1986a) and \$50 million (Brammer 1986). Based on public comments, this money would have allowed the university to purchase another tract of land for animal science research to replace the Coldstream Farm, as well as provide funding for the infrastructural development

necessary for the build up of the Coldstream property, and, seemingly, a scholarship program for university students (University of Kentucky 1989a: 2-3). That being said, the issue of depleted university funds was frequently brought up during discussions of the Coldstream property, with Trustee Larry Forgy, a three-time Republican gubernatorial candidate, arguing that the proposed shopping mall be built because “[t]he University is in serious need of additional revenue” (University of Kentucky 1989b: 3). So not only would the university have been able to replenish its coffers through the sale of the Coldstream Farm, it would have also been able to further its involvement in property acquisition through the purchasing of a new livestock research farm, which, like Coldstream, could potentially yield a positive cash flow and further perpetuate the university’s role as a real estate developer.

On August 16, 1988, the Board of Trustees approved moving ahead with negotiations for the mall with Homart Development Company and the Crown American Corporation (University of Kentucky 1988: 94). Because of difficulties in planning and financing a route for direct access from I-64/I-75 (Kaiser 1989), which was constructed through Coldstream in the early 1960s (University of Kentucky 1963a: 7, 1963b: 13), the plans for a shopping mall never materialized, much to the dismay of some members of the Board of Trustees, who saw the shopping mall as the best use of the land available at Coldstream (University of Kentucky 1989a: 2-3). In lieu of the shopping mall, some members of the Board of Trustees saw the research park, a secondary feature of the proposed land use plans up to that point, as the most important first step in the development of the Coldstream property, seemingly because of pressure from a company willing to relocate to the new park (University of Kentucky 1989b: 2).

The research campus itself was expected to “significantly benefit economic development in Kentucky through the recruitment of new industry and the fostering of existing and start-up Kentucky businesses... foster University/Industry cooperation and stimulate economic growth...[and] enhance the technology base in the state, to stop the exodus of the brightest students to schools and employment outside the state, and to create an economic base founded in the twentieth century” (Coldstream Research Campus 1992: 2). In addition to the expected economic benefits of the research campus, the relatively small footprint of the research park development allowed much of the agricultural research at Coldstream to continue until the Brookside Farm #2, in Woodford County, was purchased as a replacement farm for the Department of Animal Sciences (University of Kentucky 1991: 8). The original development plan for the research campus, shown in Figure 4.3 overlaid on current satellite imagery, shows the different plots the farm was divided into in order to effectively separate ongoing agricultural research activity from the construction of the new buildings for the research campus.

Before the first tenant for the research campus was even announced, the plans for the Coldstream Research Campus were justified almost entirely by the economic benefits they were expected to bring about. Although concrete numbers were only occasionally produced in order to estimate the number of jobs, amount of wages or potential tax revenues, these discourses revolved almost completely around the more nebulous idea of promoting economic competitiveness. Coldstream was thought to help the university, and presumably, by extension, the city and state, in “preparing for the 21st century” (MPC and Associates, Inc. 1988: 1). One member of the Board of Trustees even argued that without building a research campus, “the University will take a back seat to its competition and

Figure 4.3: Coldstream Research Campus Development Plan



Source: University of Kentucky Archives

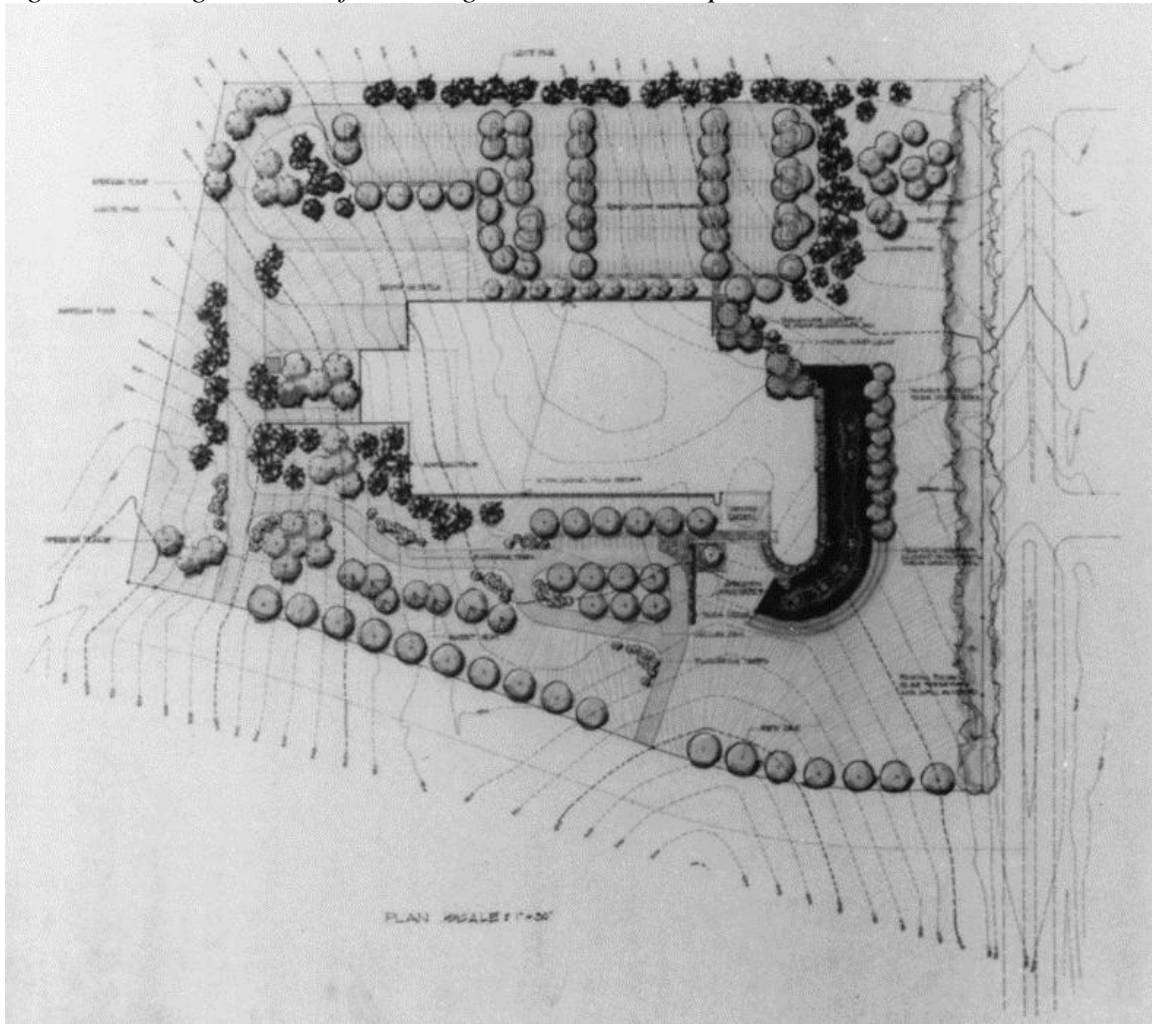
the rest of the country” (University of Kentucky 1989a: 3). In more recent years, the university has continued to echo these previous positions, stating that “we have a dream that Kentuckians ‘can compete just like everyone else’” (University of Kentucky 2003: 139). But what plans were proposed for reaching this state of competitiveness? By and large, the University of Kentucky administration relied upon a fairly standard notion of the role of a university research park. That is, through aiding in the recruitment of existing businesses and the development of new, locally grown enterprises, the university

could strengthen its ties to industry, creating flows of both capital and personnel between the two. In so doing, the university would create an avenue through which academic research could be more easily commercialized. Of course, policies would be in place for the university itself to capitalize on the potential profits of such an arrangement. Regardless, these connections would lead inexorably to competitiveness and, in turn, economic development and an increased standard of living. In only somewhat more specific terms, this dream of competition could only fulfilled by “accelerat[ing] industry-funded research and partnerships, technology transfer, and businesses development” in order “to develop further our intellectual property, corporate relationships, and business ventures” (University of Kentucky 2003: 139).

The Growth of the Coldstream Research Campus

The first tenant of the Coldstream Research Campus, the Hughes Aircraft Company, was confirmed in the summer of 1990 (University of Kentucky 1990: 2). Figure 4.4 shows the mockups and a basic floor plan for the building, which now houses the offices of the Coldstream Research Campus staff and a variety of smaller businesses. Hughes Aircraft did, however, remain the only tenant of the Coldstream Research Campus for over five years (Poore 1996). Hughes’ location of a new facility at Coldstream was primarily the result of its connections to Lee Todd, Jr. Todd, who would later become the President of the University of Kentucky, was the founder of Projectron, Inc., which was purchased by Hughes (Stamper and Blackford 2003; Blackford 2004). Coldstream’s growth was slow throughout the 1990s, averaging just one new tenant each year for the entire decade (University of Kentucky 2000: 10).

Figure 4.4: Hughes Aircraft Building Plans and Mockups



Source: University of Kentucky Archives

Once tenants began moving into Coldstream in the late 1990s, some were existing corporations like Hughes Aircraft and the largest tenant of the campus, IBM, while some high-tech startups moved to Coldstream from the University of Kentucky's Advanced Science and Technology Commercialization Center (ASTeCC) (University of Kentucky 1999: 20). The tenants of the research campus span everything from the headquarters of the American Board of Family Medicine to a company manufacturing medical products from blackberries to companies engaged in research on aerodynamics for military applications (see Appendix B for a full listing of the current tenants of the research campus). One prominent business, Coldstream Laboratories, Inc., started out as the University of Kentucky Center for Pharmaceutical Science and Technology, which relocated to the Coldstream Research Campus in 2006 (Staley 2006). In 2007, the Center for Pharmaceutical Science and Technology was spun off into a private business, Coldstream Laboratories, Inc., with the university as a major shareholder, which is expected to sell at a profit within the next two to three years (Interview #6). However, as will be discussed below, this success is not without its fair share of controversy.

Although Coldstream continued to have problems attracting tenants⁶, the campus did experience relative growth from 2000 to 2005, at which time the campus was home to 28 tenants and 723 employees, although much of that growth came in 2005 alone (University of Kentucky 2005: 3). As of late 2009, the Coldstream Research Campus housed 51 tenants in 14 buildings, employing approximately 1,000 people (Truman 2009a). As of late 2010, there were 57 tenants still employing around 1,000 people,

⁶ As of August 2002, twenty-four lots had been readied for construction at the Coldstream Research Campus. Only eleven of these had been built upon (Lexington Herald-Leader 2002).

Figure 4.5: The Development of the Coldstream Research Campus



Source: Author Photo of Google Earth Imagery

occupying 15 buildings and 660,000 of a total 800,000 sq. ft. of space (University of Kentucky 2011). Figure 4.5 shows the development of the Coldstream property over time, with Google Earth imagery from 1993, 1997, 2002, 2004, 2006 and 2010. Consistent throughout this development is the presence of the Carnahan House, constructed in the 1920s as the farmhouse, and the University of Kentucky Veterinary Diagnostic Laboratory, built in 1971 at the southeastern corner of the campus bordering on Newtown Pike and Citation Boulevard. But especially noticeable in these images is the development between 1997 and 2002 of numerous buildings and the campus' prominent circular road, McGrathiana Parkway. In this time period, the six building Kentucky Technology Center complex was constructed, along with the Embassy Suites Hotel, the IBM building and the Maharishi Peace Palace. Even more stark are the comparisons between the imagery of 2002 and 2010, in which time the Coldstream Research Campus has constructed three large buildings, including the Lexhold Center and facilities for Coldstream Laboratories and Hewlett Packard. Also visible in the most recent imagery is the construction of the new Eastern State Hospital facility at Coldstream, located at the southernmost corner of the research campus property. Although there have been no studies of the broader impacts of these businesses on the local or regional economy (Interview #6; Interview #9), they do generate an annual payroll of \$44 million, while the land leases generate \$685,000 in property taxes⁷ (University of Kentucky 2011).

⁷ Because all of the land at the Coldstream Research Campus is publicly owned and leased to private companies, property taxes are not paid on the land itself. Instead, taxes are paid only on improvements to the land, meaning that only the buildings built on the property are taxed.

It is important to note, however, that many of the businesses located at Coldstream do not fit the image of a university research park; that is, businesses engaged in the commercialization of high-tech scientific research performed by highly trained academic scientists. For instance, the newest tenant at Coldstream, Allconnect Inc., is primarily a call center operation (Sloan 2011). Although any jobs are surely welcomed by local officials, the relocation of a call center planning to pay just \$12.51 an hour is hardly the cause for celebration made out by Governor Steve Beshear, Mayor Jim Gray and the Coldstream administration. And while it is highlighted here as the most recent example, Allconnect is not the only business at Coldstream that doesn't fit the mold of the average research park tenant. This points to, at least in part, Coldstream's failures over the past twenty years. Because of the relative lack of actual high-tech companies located at Coldstream, the research campus administrators need to accept any and all comers to the campus, even if they do not exactly fit the mold of the ideal tenant business that was laid out in the original vision.

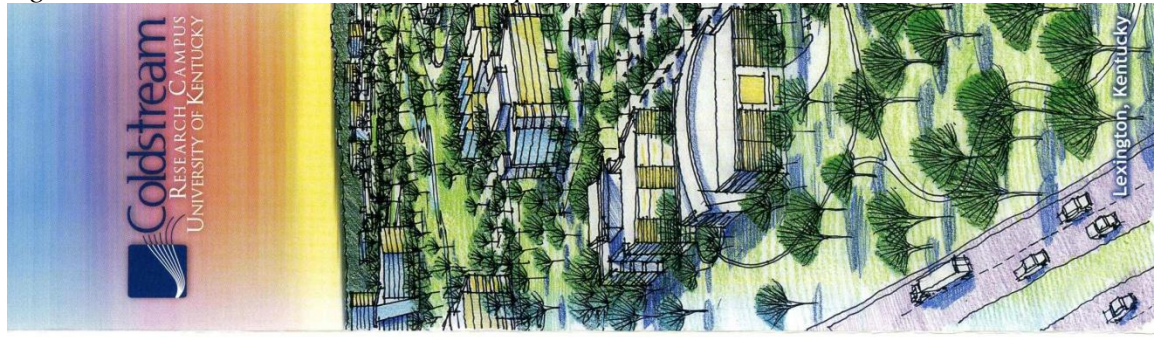
But even in spite of Coldstream's inability to attract and/or grow high-tech businesses at the expected, the university continues to pour resources into making various aspects of the campus successful. The university invested \$5.5 million in Coldstream Laboratories, in late 2010, despite protests from some trustees that Coldstream Labs had not shown sufficient progress with the \$26 million already invested in it by the university (Truman 2010b; Moak 2010). These investments are not, however, limited only to financial resources. Indeed, the university has expended considerable effort in promoting the Coldstream campus. Although the reality of such a claim could be disputed, Coldstream's promotional materials trumpet it as a place "where business and research

connect”, playing up the role of the research park in bridging the supposed divide between academia in industry (see Figure 4.6). But not only do the promotional materials argue that Coldstream allows business and research to connect, but so too do the businesses who relocate get to “connect with a highly educated workforce and dynamic business professionals”.

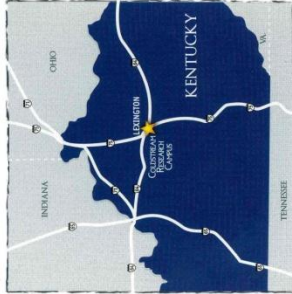
Like other research parks, Coldstream attempts to mobilize this trope in the interest of self-promotion. Coldstream is, however, arguably more unique in that the connections between business and university research are more speculative than already realized. This is even translated onto the artistic renderings shown in the promotional brochure, which appear to be based on the expected build out of the campus in accordance with the 2009 Master Plan, rather than the current state of the research campus, which has a notable absence of the trees and foliage depicted in the brochure. This speculation is not, however, limited to Coldstream’s business attraction strategy. The promotional materials also trumpet various other aspects of the 2009 Coldstream Master Plan that have yet to be realized.

Other aspects of the master plan – sustainability, urban spaces, walkability – that are not currently realized at Coldstream, also feature prominently in this representation (see Figure 4.6). They are even expounded upon further, when the reader is beckoned to “experience public art, bike trails and parks, green living, urban ambiance and an eclectic mix of amenities and activities”. Although Coldstream is already home to a stretch of Lexington’s Legacy Trail and a city-operated dog park, the other aspects of the brochure are almost certainly absent from the present day Coldstream Research Campus. Though the brochure does continue the theme to call on the reader to “Connect with the *new*

Figure 4.6a: Coldstream Research Campus Promotional Brochure



Coldstream Research Campus
Where Business and Research Connect



- Ideal location at I-75/I-64
- 735 acres / 10 minutes to downtown Lexington and UK campus
- Exceptional lease/build opportunities
- Redundant power and fiber optics
- Specialized facilities for R&D
- University of Kentucky partnerships
- UK Center for Applied Energy Research
- UK Livestock Disease Diagnostic Center
- Coldstream Laboratories Inc., GMP sterile, drug product production

Join the Companies at Coldstream including IBM, Hewlett Packard and Embassy Suites Hotel; biotech, pharmaceutical and equine companies; venture capital firms; and service and retail businesses.



Coldstream Research Campus • Lexington, Ky.
859.231.8324 • coldstream@uky.edu
UKColdstream.com



Lexington, Ky. is one of the best cities for **business** and careers, quality of life and relocating families. **connect** with a highly educated workforce and dynamic business professionals.

Figure 4.6b: Coldstream Research Campus Promotional Brochure



Be part of
a distinct, vibrant
master-planned
business community.

Experience
public art,
bike trails
and parks,
green living,
urban ambiance and
an eclectic mix of
amenities and
activities.

connect
with the new
Coldstream



connect
with
University
of Kentucky
research
and technology.

Strong R&D programs
in ag biotech,
equine research,
pharmaceutical development,
biofuels, and
energy generation
& storage
technologies.



Coldstream” (emphasis added), it is not clear if the idealism in these discourses is clear to the brochure’s intended audience, though it is probably fair to say that the language presented herein borders on misrepresentation.

In a similar manner, the Coldstream Research Campus website attempts to play to the strengths of Lexington and the University of Kentucky in attempting to lure potential tenants to the campus. On the one hand, Coldstream touts various business magazine rankings of Lexington as the 2nd most educated workforce, 6th best mid-size place to start a small business, 7th best city in terms of business cost and 9th best place for business and careers, in addition to “offer[ing] enviable affordability and many desirable features which attracts and retains the best employees and their families” (Coldstream Research Campus n.d.). These statements, rather than directly referring to the benefits of the Coldstream Research Campus, attempt to construct an image of Lexington as a good place to live, especially for those “best employees” that Coldstream and its tenant businesses are trying to attract. Just as Coldstream attempts to market Lexington as a nice place to live for the educated, high-tech, ‘creative class’-type workers it’s hoping to bring in, it also must show that the campus offers some tangible benefits to tenants. For the most part, Coldstream relies on the expected benefits of affiliating with a university “with a top medical center, agriculture, engineering and the No. 5-ranked pharmacy program on one central campus”, and on the patents that have come from the university in these areas of research (Coldstream Research Campus n.d.; see also Figure 4.6). However, like earlier Coldstream discourses about economic development, there is nothing in the way of specifics that details how having highly-ranked departments at a university or a high number of patents necessarily leads to, or even helps with, local economic development.

Although not necessarily a cause, the university's persistent avoidance of details when discussing the importance and benefits of Coldstream seems to at least be a symptom of the park's failures to this point.

As in its earlier days, Coldstream has once again become a site of controversy in recent years. In addition to Coldstream's various shortcomings with regards to fulfilling its mission as a dynamic economic engine for the university and the Commonwealth (Associated Press 1994; Muhs 1995; Stamper and Blackford 2003), various public officials who feature prominently in Coldstream's history have been shown to have abused their positions for personal gain. For example, Doug Gibson, director of economic development for the city of Lexington under Mayor Scotty Baesler until September 1988, was found to have been involved in the ethically questionable acquisition of property bordering the Coldstream Farm while working for the city. After leaving the city, Gibson went to work for UK as a marketing specialist promoting the then-potential Coldstream development to various companies interested in locating there. Although Gibson was not found to have broken any laws, his ability to guide the development of the Coldstream property in a way that would then benefit him financially – through higher property values associated with proximity to the research park – is, at the very least, ethically dubious (Johns and Lucke 1988).

Such problems have not, however, been isolated in the past. Although he left the University of Kentucky on good terms in 2007, former Coldstream Executive Director and Associate Vice President for Research and Economic Development John Parks was fired from a similar job at the University of South Carolina in 2009, primarily because of questionable business practices carried over from his time at UK. Parks was fired on

September 8, 2009 for failing to disclose to the University of South Carolina administration the criminal history of developer Kale Roscoe, who had previously served time in prison for felony tax evasion. Parks and Roscoe had collaborated on several buildings at the Coldstream Research Campus, including the Lexhold International Center for Technological Innovation, which remains incomplete, not to mention the source of numerous lawsuits due to Roscoe's failure to pay subcontractors and respond to millions of dollars in liens on the building (Truman 2009a). The completion of the Lexhold Center, originally conceived of as two identical buildings with complementary uses, has been all but abandoned due to ongoing litigation. Although work on the first building was resumed in 2009 and completed in 2010 in Roscoe's absence (Truman 2009b, 2010a; Musgrave and Truman 2011), the complex as a whole remains incomplete.

Contextualizing Coldstream's History

Given the shortcomings of the Coldstream Research Campus, both relative to its competitors and its own mission of promoting economic development, it is necessary to question the discourses employed to justify the campus' existence and expansion, and to what ends these discourses serve. It is clear, through the examples above, that throughout the history of the Coldstream property, it has largely been viewed as a piece of land that can generate revenue for the university. From the swaps of agricultural land on what became the Chandler Medical Center at UK and the initial purchase of the Coldstream Farm by the university, to the extended search for a feasible development plan and potentially fallacious justification for the development, the importance of the Coldstream property as a financial asset for the university should not be underestimated. Multiple university faculty articulated that the development of the Coldstream Research Campus

was really about the university further involving itself in real estate transactions, and not serving as an economic development tool (Interview #2; Interview #4; Interview #5). Even former Kentucky governors Happy Chandler and Brereton Jones recognized and were critical of the university's role in buying and developing property in order to make money (Cooper 1987; Associated Press 1994). One university administrator involved in operations at Coldstream even argued that the Coldstream Research Campus had not been 'troubled', as was suggested by a recent *Lexington Herald-Leader* article (Musgrave and Truman 2011), because of the success of Coldstream as a real estate venture. He said, "If people think that having fifteen buildings in twenty years is trouble, then maybe the expectations were set too high" (Interview #9). This, of course, ignores the fact that most consider Coldstream to have been a failure because of its inability to produce the expected minimum of 20,000 jobs that was used to sell the research campus (Poole 1988). This difference between broader public opinions of Coldstream as a failure and the opinions of University of Kentucky administrators, who see Coldstream as having been successful, highlights the different ways that Coldstream is viewed, and suggests the need for a new justification for Coldstream's continued involvement in real estate transactions.

Given the central role of property development to the idea of Coldstream, and even research parks more generally, it is potentially useful to turn to some concepts drawn from thinking around the urban growth machine (Molotch 1976, 1993; Logan and Molotch 1987). At its core, growth machine theory seeks to explain urban politics by assigning primacy to the coalitions of land-holding elites who work together in order to promote growth within their particular localities. These elites, by virtue of their ownership of land, stand to gain from growth writ large, even if indirectly. Where the

growth machine thesis falls short in this case, however, is in the role it assigns to institutions like the University of Kentucky. Logan and Molotch argue that universities, along with museums, symphonies and professional sports teams, serve neutral, “auxiliary” roles in the growth machine. That is, while “they may have less of a stake in the growth process”, they too stand to gain from unfettered growth (Logan and Molotch 1987: 75). But as the history of the Coldstream Research Campus shows, universities play much more than a secondary, supporting role in promoting growth. Instead, universities can play quite an active role in property development, becoming a part of the rentier class itself, acting in order to promote not just a generic form of growth in the city, but one that maximizes the university’s financial self-interest.

That being said, universities continue to be bound by expectations and standards beyond those of the traditional rentier. They are also unique insofar as universities are comprised of administrators, faculty, staff and students, each of which hold divergent views and varying degrees of power, but are all equally placed under the umbrella of the university. Because of this, the university as a whole must find some way of justifying to its constituent parts its participation in this more unorthodox practice of property development, largely by connecting it to the threefold mission of land-grant universities: research, teaching and outreach. That is, the university, unlike other corporate entities, is subject to a much greater degree of internal politics, while continuing to have to navigate local government. So in addition to helping the university profit by maximizing the rents extracted from the land, the existence of the research campus also serves a more symbolic and ideological purpose. That is, the mere existence of the Coldstream Research Campus stands as a material testament to the University of Kentucky’s goal of reaching beyond

the boundaries of the campus by promoting economic development. Although the research campus continues to struggle, the university's refusal to abandon Coldstream is a material expression of its vocalized commitment to economic development in the state. Whether or not the symbolic value of the campus exceeds the monetary value of the campus as a piece of property, or if it actually promotes economic development in the region, the development of the Coldstream Research Campus allows the university to capitalize on both expressions of value, as opposed to the earlier, unrealized plans for Coldstream that would have required the university to forego one or both of these benefits.

The growth machine also retains some purchase in the case of Coldstream in its discussion of counter-coalitions. What Molotch calls the always present "subversive thread of resistance" (1976: 326), these groups coalesce in order to oppose the interests of the growth machine. And while the growth machine usually attempts to neutralize such opposition with the promise of jobs, as was done in the early years of Coldstream, this does not sufficiently explain the politics of the growth machine/counter-coalition relationship. In particular, the possibility for these oppositional groups to be co-opted and folded into the growth machine is considered only momentarily, when Logan and Molotch (1987) write that "associations formed to oppose development may acquiesce after entrepreneurs and political figures co-opt their leadership" (38). They further argue that "part of the tension of the urban drama consists in this making and unmaking of coalitions" (39), though they do not analyze with any depth the particular ways that oppositional groups can be folded into the growth machine at a variety of scales. This theme has, however, been considered elsewhere in the urban politics literature (Cox and

Mair 1988; Harvey 1989; McCann 2001, 2002). The next chapter turns to analyzing the particular ways that sustainability has been brought into the Coldstream Research Campus and how these discourses of sustainability, in many ways, worked to neutralize the potential opposition of campus sustainability advocates to the expansion of the Coldstream Research Campus. Even further, the ways in which these discourses of sustainability mirror the discourses of economic development that were used to justify the construction of the research campus over twenty years ago are considered.

CHAPTER FIVE: COLDSTREAM AND THE POLITICS OF SUSTAINABILITY

When the University of Kentucky broke ground on the Coldstream Research Campus in 1989, with a stated mission of “transfer[ing] the knowledge and technology of the university to the marketplace” (Coldstream Research Campus 2009a: 3), it was expected that Coldstream, like other university-owned research parks, could serve to promote economic development in Lexington and the larger central Bluegrass region of Kentucky. With the promise of 20,000 to 27,000 new jobs as a result of the research park’s construction, and thus millions of dollars in potential tax revenues for local and state governments, the Coldstream campus seemed like a sure bet (Poole 1988). University administrators warned, however, that too much not be expected of Coldstream too soon; research campuses are a long-term investment with a “philosophical goal to transfer the technology out of the university and incubate new businesses” (Lexington Herald-Leader 1996). It was expected that it would take until at least 2005 for Coldstream “to reach its potential”, perhaps even several years longer (Bean 1993). But after twenty years of limited, if any, success at achieving these goals, University of Kentucky administrators began looking for an alternative to the status quo for Coldstream.

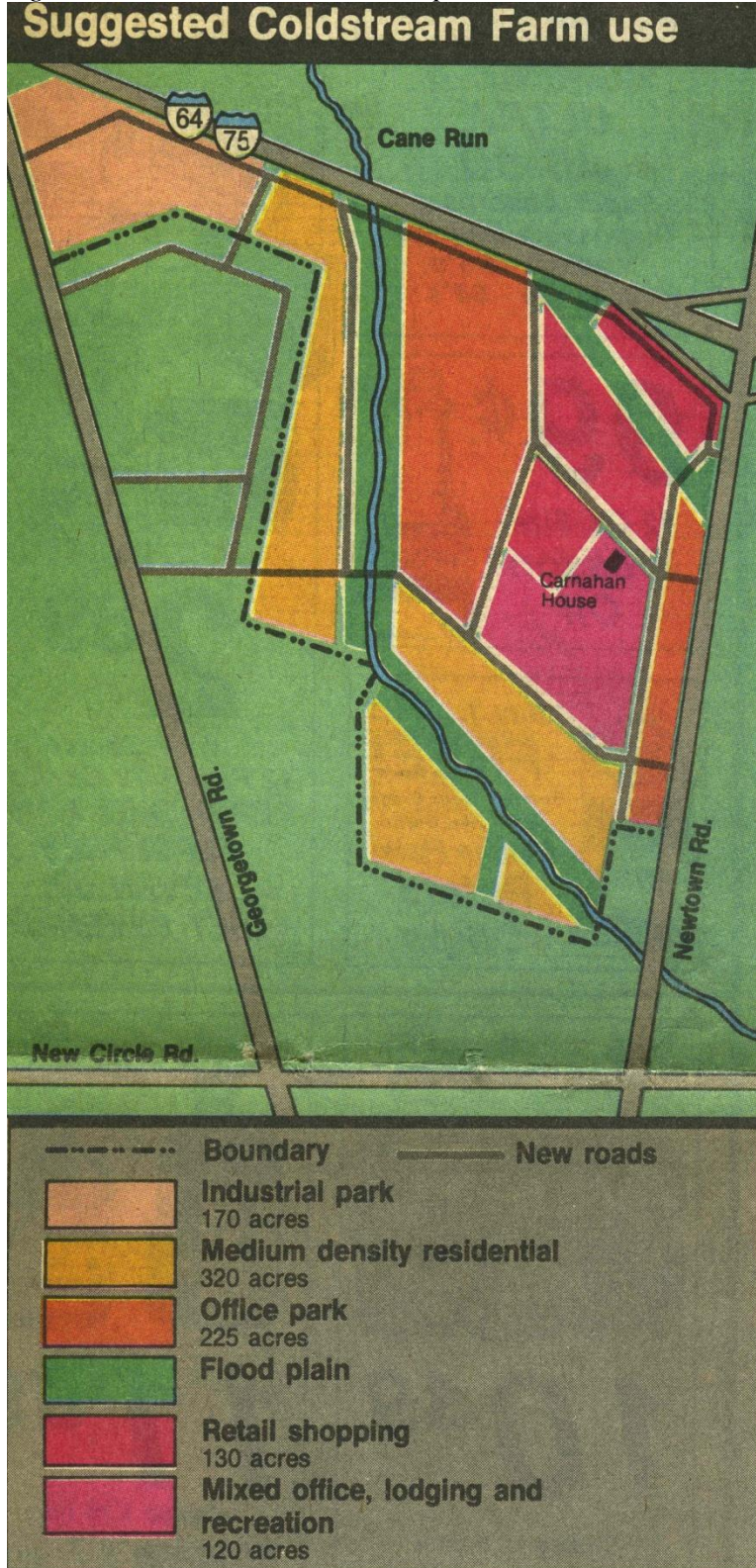
After commissioning a study and master plan for the future development of the mostly intact 735-acre campus in June 2008 (University of Kentucky 2009a: 9), much like the one commissioned some twenty years earlier that would guide the development of the Coldstream campus to begin with, members of the university administration proposed reconstructing Coldstream as a model for sustainable development. In October 2009, UK Vice President for Commercialization and Economic Development Len Heller

presented the Board of Trustees with a proposal to revise the Coldstream Research Campus Master Plan (University of Kentucky 2009c: 13). The new master plan, prepared by a consortium of planning, architecture and engineering firms in April 2009, was supposed to provide a “new vision for Coldstream Research Campus in the twenty first century” (Coldstream Research Campus 2009: 1.0). This chapter turns to analyzing the 2009 Coldstream Master Plan in depth, with special attention paid to its connections to the 1992 Coldstream Master Plan and the introduction of a new series of discourses about sustainability that emerge within the plan.

Reading the 2009 Coldstream Master Plan

Although much of the updated master plan focuses on continuing the research park’s role in promoting economic development through applied research activities in partnership with private enterprises, the new master plan does, however, have two distinctive elements. First, its emphasis on the continued development of the land, and specifically plans for a mixed-use development, harkens back to the proposed plans for Coldstream property, from Scruggs and Hammond in 1986 and MPC and Associates in 1988, which envisioned a massive, self-contained residential, retail, research and commercial office complex (see Figure 5.1). It should be noted, however, that while the new master plan in some ways resembles the very first plans for the Coldstream property, it is a distinct departure from the 1992 Coldstream Master Plan, also prepared by Scruggs and Hammond, whose design was based on the principle that “it should be especially evident that this is not an industrial park, a college campus or other unrelated development” (Coldstream Research Campus 1992: 27).

Figure 5.1: Coldstream Farm Proposed Land Use Plan



Source: Scruggs and Hammond, Inc.

Herald-Leader map/David Williams

Source: McCord 1986, adapted from Scruggs and Hammond plan

More specifically, the 2009 Master Plan calls for the development of four distinct ‘villages’, each subdivided further into neighborhoods with different mixes of use. For example, the neighborhood built around the historic Carnahan House, located within what would become the Northeast Village, is described as “the front door to Coldstream” and “Coldstream’s mixed-use urban core developed around the main street... incorporating open green spaces, and improved public amenities.” (Coldstream Research Campus 2009a: 5.1). The Carnahan Center neighborhood is constructed in the master plan as a new urbanist’s dream, “a true mixed use environment” that helps in “creating a vibrant urban experience” (Coldstream Research Campus 2009a: 5.1). This vision of the Carnahan Center neighborhood is even made real through a series of speculative mockups, showing the streets of the Coldstream Research Campus lined with abundant trees, retail shopping stores and restaurants with packed sidewalk seating (see also Figure 4.7 for further representations included in Coldstream’s promotional material). One photograph in the series even depicts a bicycle race through the neighborhood. It is not clear, however, where this scene comes from. Regardless, these photographs are useful in that they project an image of the future into the present, a speculation on what the vibrant street life at Coldstream could be like, should the new master plan be implemented as it was written. Given that these photos were not actually taken *in* Lexington at any currently existing location, they are either fully transplanted from some other context, or entirely imagined through digital manipulations. This speaks to the generic nature of the master plan and the image of Coldstream that the university has accepted. It is not, as will be discussed later, grounded in the local experiences or knowledge of Lexington, as has been pointed out by many critics of the plan. In order to serve the purposes of the

Figure 5.2: The Carnahan Center Neighborhood



Source: Coldstream Research Campus 2009a

university administration, however, the plan does not need to be specific; it only needs to call for the further development of the property in such a way as to maximize the university's profits while maintaining a veneer of respectability.

The development plan for the Coldstream Research Campus also calls for a variety of other single use neighborhoods to be constructed in close proximity, creating something of a satellite city in the suburbs of Lexington. Neighborhoods such as the Citation neighborhood in the Southwest Village are designed to house large laboratory and manufacturing operations not suited for the more densely developed areas of the campus, all while “[m]aintaining the green spaces around this neighborhood [in order] to beautify the public side of Coldstream and better conceal the daytime workings of an

effective research campus” (Coldstream Research Campus 2009a: 5.2). On the other hand, the Southwest Village is constructed as a single neighborhood village to be used entirely for housing units (Coldstream Research Campus 2009a: 5.3). Regardless of the many particulars proposed in the new master plan, the idea for a full-scale build out of the Coldstream Research Campus, organized around multiple units with different uses represents a distinct departure from the reality of Coldstream for the past twenty years, although it is in many ways reminiscent of the earliest plans for the research campus.

As of early 2011, the university administration had amended its plans to implement the 2009 Coldstream Master Plan. Rather than approve the plan wholesale, as was intended in late 2009 when the plan was delayed in being voted on by the Board of Trustees, the plan will now be approved in phases (Interview #6). In an interview with a high-level university administrator, he commented that in discussions with members of the Board of Trustees on the future of the master plan, it was thought that the plan was “too big” to be approved all at once (Interview #6). As part of this step-by-step plan, initiative has been taken to seek tax increment financing (TIF)⁸ for the area roughly congruent to the Carnahan Center neighborhood laid out in the 2009 Master Plan to be developed as the first phase of implementation (Musgrave and Truman 2011; Interview #9). The TIF district alone is officially projected to create 1,000 additional jobs at

⁸ Tax Increment Financing is a public finance tool designed to promote the re-development of blighted areas. The bill under consideration in the state legislature would broaden the definition of TIF areas to include yet-to-be-developed land, including that on a university research campus. The central premise of TIF is the deferral of property taxes for a period of time in order to finance any variety of public infrastructure projects. Other prominent TIF projects in Lexington include the yet-to-be-built CentrePointe project, the Distillery District and a proposed mixed-use facility on Angliana Avenue.

Figure 5.3: The Proposed TIF District at Coldstream



Coldstream and add 500,000 sq. ft. of space⁹. Additional phases of the project, such as the other previously mentioned neighborhoods, are not expected to begin, much less be completed, in the coming ten to twenty years.

Second, and perhaps more importantly, the 2009 Master Plan is unique insofar as it introduces an emphasis on the concept of sustainability. This emphasis is variably articulated through principles of “a walkable community” at the human scale, a mixed-use development, “the preservation of natural systems” and “a comprehensive open space network”, but especially through the goal of “set[ting] a benchmark for environmental

⁹ These figures represent a 100% increase in jobs and a 63% increase in square footage above existing levels.

stewardship within the region” (Coldstream Master Plan 2009: 4.1). It is notable, however, that not only are these buzzwords not defined for the non-expert, there exists practically no connections between these various traits and the concept of ‘sustainability’ within the Master Plan. This invocation of various empty signifiers creates something of a tautology within the master plan: the Master Plan is sustainable because it emphasizes these initiatives, while these initiatives emphasize sustainability by virtue of being associated with the Master Plan.

This boilerplate terminology further argues that Coldstream should no longer be just a site of applied scientific research, but a “community” (see Figure 5.4). As was shown previously in the specific instance of the Carnahan Center neighborhood (see discussion of Figure 5.2), the drawings included in the Coldstream Master Plan could feasibly be of *any* place. Indeed, they are drawings of no place in particular, but are created in order to elicit a particular vision of what Coldstream may be in the future: a person-centered development that does not completely do away with the present (note the continued presence of automobiles in the speculative landscape), but represents a significant departure from the current state of the research campus. Densely and diversely developed neighborhoods with citizens walking and interacting in public spaces is surely attractive, but what specifically connects these mockups with the Coldstream Research Campus?

With a price tag over \$24 million and an indefinite starting and completion date, the Coldstream Master Plan is nothing if not vague. But with such significant aspects of Coldstream’s future remaining unaddressed (e.g., which companies will fill the vacant space? Who will live in these mixed-use developments? Why build a self-contained,

mixed-use community several miles outside the city center?), and the already delayed introduction to and approval of the Master Plan by the university Board of Trustees (Truman 2010), the extent to which the vision set out will be realized remains unknown. One Coldstream administrator even remarked that, “I don’t know where it’s going to end up with sustainability”. He continued to say that while the plans themselves were precarious, the most important aspect was providing a long-missing vision to the Coldstream Research Campus (Interview #6). Even if the plans are not implemented exactly as they were drawn up, the Coldstream Master Plan represents an important move by the University of Kentucky with regard to the management of the Coldstream facility and the university’s connections extending beyond the formal boundaries of the main campus near downtown Lexington.

Figure 5.4: Envisioning the Coldstream Community



Source: Coldstream Research Campus 2009a

As Coldstream’s vision of promoting scientific and technological innovation for economic development has failed to play out as expected, it appears as though the university has turned to the idea of sustainability to guide the future of Coldstream. Instead, as will be argued, this turn to sustainable development can be viewed as an attempt to mobilize a political sentiment around environmentalism in order to build a

broader coalition of university faculty and staff supportive of the expansion of the Coldstream Research Campus. This cooptation of potential opponents like this, as Cox and Mair (1988) have argued previously, serves to build consensus and effectively push through particular development projects. Because not only do growth machines have to actually enact their preferred policies, so too must they convince the public that these growth-oriented policies are a good thing for everyone (Jonas and Wilson 1999: 8). While this is often done by appealing to collective imaginaries of community (Cox 1999), so too can this be done by appealing to more particular ideologies, such as sustainability. Before this argument about sustainability as a means for building a new growth coalition can be fully articulated, however, it is important to sketch out the actual ways that new discourses of sustainable development have been brought to the fore in the new Coldstream Master Plan.

Institutionalizing Economic Development and Sustainability

Although institutional discourses cannot have complete explanatory power without some connection to material practices, some have argued that discourse remains important insofar as it constitutes “a form of disciplinary power by which the order and stability of society is assured” (Bridge and McManus 2000: 20). Bridge and McManus argue that, “[b]y adopting the rhetoric of sustainable development...industries are able to co-opt the language of environmental protest, at once disenfranchising opposition and establishing themselves as authority and guardian of protestors’ ideals” (2000: 38). That is, through the use of different discourses, powerful institutional actors can consolidate their power by appealing to certain oppositional actors, in this case environmentalists. In the case of the Coldstream Research Campus, the primary means by which these

discourses have been communicated is through the new 2009 Coldstream Master Plan and Design Guidelines. It is argued that, regardless of the extent to which a commitment to sustainability is legitimate and eventually realized, these discourses of sustainability act as a means of justifying and stabilizing the further expansion of the Coldstream Research Campus and the University of Kentucky's role in real property speculation and development. This use of sustainability as a justification for the expansion of sustainability remains connected to, and is analogous with the university's previous mobilization of discourses around economic competitiveness, which served to support the initial development of the research park in the late 1980s.

With the 2009 Coldstream Master Plan, the university administration has strayed from its limited focus on high-tech business incubation as an economic development tool that was evident in the earlier master plan from 1992. Although the supposed economic development potential of the Coldstream Research Campus has not been abandoned in the new guiding documents, as it provides some guidelines for revising Coldstream's business model (Coldstream Research Campus 2009a: 2.1). Indeed, the entire second section of the 2009 Coldstream master plan (about 28 pages of text and figures) attempts to position Coldstream's business development and recruitment efforts within the context of the regional economy and other research parks that represent the model that Coldstream is attempting to replicate, as far as mixed-use development with significant amenities goes (Coldstream Research Campus 2009a: 2.3). In addition to the principles of building a mixed-use community that emphasizes sustainable design, this section of the master plan argues that Coldstream needs to:

“[f]ocus business recruitment strategy on niche sectors where Lexington has a competitive advantage. Target companies at all scales, from

elephants (the largest companies), which are easy to spot and hard to move, to gazelles (start-ups), which are more nimble and hard to find. Target a diversity of bioscience and industrial/energy companies while building scale so that in the future Coldstream can have the critical mass to attract larger companies” (Coldstream Research Campus 2009a: 2.4).

Because of this continued emphasis on the importance of business attraction, albeit with a decidedly more focused and realistic tone than previous Coldstream strategies exuded, it is necessary to stress that the university has not completely abandoned its construction of Coldstream as an economic engine in the region. However, because of Coldstream’s failure to deliver on the promise of 20,000 jobs, the broader economic development benefits derived from the further development of the research campus fails to hold much sway. So without forsaking the supposed importance of Coldstream as a place of innovative economic activity, the university has turned to sustainability in order to appeal to a variety of concerns that reach beyond the university, just as fears of economic collapse in a post-Fordist period of restructuring allowed the research park to be sold to the public over twenty years ago. As one of the Coldstream administrators argued, the master plan is explicitly focused on reconstructing Coldstream’s design, not Coldstream’s business plan (Interview #9).

Sustainability in the 2009 Coldstream Master Plan

Between the master plan document itself and the accompanying design guidelines, the future of the Coldstream Research Campus is posited as one founded on the principle of sustainability. This is done in both a general sense through the discursive construction of Coldstream as a site of sustainability and in a more specific sense through the development of concrete policy proposals. Because the new Coldstream Master Plan has not been approved, much less realized in a material form, it is necessary to rely on the

discourses that have been constructed about Coldstream through the master plan documents as the legitimate expressions of the university's intent with the campus. While these discourses can be deconstructed through a reading of the disjunctures between the university's discourses and practices, they remain, by necessity, the 'official' voice of the university on the future of the Coldstream Research Campus.

In many ways, the Coldstream Research Campus' commitment to sustainability is only evident insofar as the master plan documents make such a commitment clear. As is stated in the July 2009 Coldstream Design Guidelines, "The overall objective in establishing design guidelines for site development at Coldstream Research Campus and other development areas of Coldstream Farm is to ensure a sense [of] aesthetic value and environmental sensitivity in the development of the campus" (Coldstream Research Campus 2009b: 1.0). The design guidelines later state plainly that "[s]ustainability is important at the Coldstream Research Campus" (Coldstream Research Campus 2009b: 3.0), as well as the goal of permanently protecting the "environmental values" of the campus (Coldstream Research Campus 2009b: 1.0). Similarly, the final, and seemingly all-inclusive and most important, objective of the Coldstream Master Plan is to "set a benchmark for environmental stewardship within the region" through the "inclusion of principles of sustainability into planning, design, and maintenance of the campus" (Coldstream Research Campus 2009a: 4.1). All told the terms "sustainability" or "sustainable" are used thirty-five times in the Coldstream design guidelines and eleven times in the less text-oriented master plan, itself. Although these examples are often referring to the somewhat nebulous idea of sustainability – indeed, neither document provides a working definition of sustainability or sustainable development – these

documents also “illustrate specific strategies to achieve the goal of sustainable development” (Coldstream Research Campus 2009b: 3.0).

Throughout the two planning documents for the Coldstream Research Campus, a number of suggestions are made as to concrete policy initiatives that could be undertaken to make the campus more sustainable. Perhaps one of the more laudable goals of these plans is the desire to produce energy on-site through geothermal heating and cooling and solar photovoltaic cells (Coldstream Research Campus 2009b: 3.7). Some faculty and staff members even proposed the possibility of the campus being a model energy producer by producing 100% of its energy on-site (University of Kentucky 2009b). Renewable energy even takes on a symbolic quality in the Coldstream Design Guidelines, with the text describing a series of wind turbines, capable of generating only enough energy to power some small external lights (Interview #9), lining a major road and greenspace in order to denote “the mission of the research campus as a place of innovation and technology” that both acknowledges the past and “speaks to the future” (Coldstream Research Campus 2009b: 2.0).

Other aspects of the physical planning of the new Coldstream development are founded in principles of sustainability. Everything from the use of porous paving techniques to minimize storm water runoff and heat island effects to energy-efficient light fixtures to landscaping using native plant species and organic fertilizers are included in the plan. The design guidelines pay special attention to the issue of storm water pollution, highlighting a variety of initiatives that could mitigate the negative effects of storm water runoff and pollution, including harvesting the storm water for irrigation purposes (Coldstream Research Campus 2009b: 3.7). The design guidelines likewise set a goal for

all new construction to reach Silver status according to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) architectural guidelines (Coldstream Research Campus 2009a: 2.4) and encourage these projects to make use of local, sustainable, and potentially recycled materials in order to lessen the environmental impact of the construction materials being used. With the new plan to approve and implement the 2009 Master Plan in smaller phases, much of the new development will be undertaken by master developers after a competitive bidding process (Interview #6). Because the university will then lease the land to the master developer, who will in turn lease it to tenant companies, the master developer will not be held to any specific standards, such as those suggested by the 2009 Master Plan (Interview #6).

Figure 5.5: The Coldstream Trails Plan



Source: Coldstream Research Campus 2009a

In many ways, the Coldstream Master Plan and Design Guidelines attempt to address questions of sustainability through the promotion of a broadly New Urbanist planning agenda. The master plan documents employ standard New Urbanist elements such as high-density, mixed-use development, conservation of green spaces, pedestrian and bicycle-friendly transportation infrastructure (see Figure 5.5), and talk of “human-scaled” neighborhoods and streets, in order to construct a future image of the research campus. Ultimately, however, the master plan and design guidelines, as well as the series of meetings and interviews meant to drum up support for them, see these New Urbanist design elements as part of a broader sustainability agenda that was discussed above. But, as others have noted previously, the New Urbanist deployment of concepts like ‘nature’ and ‘sustainable development’ have been problematic, to say the least. On the one hand, New Urbanist planners continue to rely on fairly narrow, mainstream conceptions of nature, which reinforce the false binary between nature and society (Till 2001). On the other hand, the act of New Urbanist development actually does more to promote and reinforce traditional processes of capitalist expansion in cities than to provide ‘sustainable’ alternatives to capitalist growth (Zimmerman 2001).

Building a Sustainable Growth Machine?

In addition to the official policy documents, Coldstream’s commitment to sustainability, however superficial, can be seen in the process undergone to drum up support among university faculty and staff for the master plan and design guidelines. This process was initiated by University of Kentucky Vice President for Commercialization and Economic Development Len Heller, whose office is responsible for overseeing the Coldstream Research Campus, when he approached the President’s Sustainability

Advisory Committee in early May 2009 with the hope of receiving support for the new Coldstream Master Plan (Interview #3; Interview #7; Interview #11). As a result of this, a follow-up meeting in August was organized with around twenty faculty and staff members with various interests in sustainability and then-Executive Director of Coldstream, Tina Carpenter¹⁰ (Interview #1). All of those interviewed saw this August meeting as a disaster due to the conflicts that emerged. While some saw the meeting as an attempt to placate faculty and staff without listening to or being prepared to address their concerns about the master plan (Interview #1), others thought that some faculty and staff were more inclined to find fault with the plan than suggest tangible ways of making it better (Interview #1; Interview #3). One faculty member thought that the absence of Len Heller, at both the August meeting and another follow-up meeting in September, spoke to the university administration's disinterest in productively engaging with faculty and staff, instead choosing only to seek out their seal of approval after the process of developing the master plan is already over (Interview #11). These sentiments are not especially surprising, given that they are representative of widespread problems in the processes designed to solicit public participation in planning issues (McCann 2001).

As a response to the failed meetings in August and September, a series of one-on-one or small group interviews were conducted throughout November and December in order to gather feedback from faculty and staff in a less antagonistic setting (Interview #3; Interview #11). The results of these interviews, which included suggestions such as having community gardens for residents, developing a transit system for residents that goes to downtown Lexington, relocating all university-related research centers to the

¹⁰ Carpenter resigned from her position as Executive Director in January 2010 and was replaced by George Ward in September 2010 (Lexington Herald-Leader 2010a, 2010b).

campus, and using the campus as a site of fieldwork-intensive undergraduate education and research into sustainability, were then aggregated and submitted to Len Heller to be included as an appendix to the Coldstream Master Plan that, at this point in time, will not be approved as it was originally intended. While the purpose for attempting to include university faculty and staff is certainly up for debate, the fact that university administrators went to these ends in order to gain the approval of key members of the university community on sustainability issues, signals another example of the importance of sustainability to the new Coldstream Master Plan. Although they were misguided in their attempts to win over these individuals, the university administration saw reaching out to a variety of faculty and staff members involved in sustainability activism – faculty and staff members otherwise unlikely to support a plan calling for a multi-million dollar re-development of a research park largely viewed as a failure – as a way of building support for the new master plan where it otherwise wouldn't exist. Though some concessions on sustainability could be made, the university was ultimately acknowledging “that longer term growth can be facilitated...by programs that pacify, co-opt, and placate oppositions” (Logan and Molotch 1987: 68). It was, quite plainly, an attempt at building a political coalition, a mutually beneficial relationship where sustainability advocates would see the university commit significant funds to a forward-looking development and where the university administration would gain support for a further entrenchment of their unpopular development plan. By bringing new voices into the coalition for support of the development, it would effectively insulate the university from future criticism were it not to fulfill the current set of promises. This works, as Mitchell (2003) puts it, as “a means of displacing scrutiny and blame” (178). At the same

time, it would effectively neutralize opposition to the development by allowing the university to show that an otherwise oppositional group, a counter-coalition in the growth machine language, had already bought in to the new plans, thus arguing that others should follow suit.

Defining and Deploying Sustainability

But, in spite of all of the university's attempts to convince people of it, the question remains: how sustainable is the new master plan for the Coldstream Research Campus? Answering such a question, of course, also requires defining what exactly sustainability, or sustainable development, is. Perhaps the most common definition of sustainable development comes from the Brundtland Commission report, which defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987). Alternatively, sustainability is often conceptualized as representing the intersection of economic, environmental and social well-being, which is frequently, but not uniformly, expressed with terminology like 'economic vitality', 'ecological integrity' and 'social equity'. Apart from the different words used to express the same idea, there also remain competing conceptions of what this confluence of economic, environmental and social concerns should actually entail, often tied to very particular worldviews (Williams and Millington 2004: 100). As one UK staff member put it, the practice of sustainability can require a complete societal paradigm shift for one person, and simple recycling for another (Interview #7). This difference is often characterized as a dichotomy between 'weak' and 'strong' definitions of sustainability (Neumayer 2004), although some stress the importance of seeing the

differences between weak and strong sustainability as “a spectrum of contrasting perspectives rather than an either/or dualism” (Williams and Millington 2004: 101; cf. Gibbs 1996). Other aspects that might influence a weak or strong definition of sustainability include the importance of process and participation (Interview #1; Interview #10), the scale at which sustainability initiatives are being implemented (Interview #8), and how integrated the series of sustainability initiatives are with one another (Interview #1; Interview #8).

How one conceptualizes sustainability or sustainable development is important to the case study of the Coldstream Research Campus because of the criticisms levied at the new master plan and design guidelines as “greenwashing”. While some interviewees felt that the charges of greenwashing could have been a function of the plan’s aforementioned lack of specificity and attention to local conditions (Interview #1; Interview #3), others felt that the disagreements over how ‘green’ the new Coldstream master plan was were illustrative of the always “contested and variable definitions of sustainability” (Interview #7; cf. Interview #1, Interview #8, Interview #11). Ultimately, it can be said that while aspects of the Coldstream master plan certainly have the potential to be sustainable, the plan itself relies on a relatively weak, and incredibly vague, definition of sustainability. One faculty member critical of the plan described the sustainability aspects of the master plan as little more than “empty gestures” and a collection of “a few less bad things”, in an attempt to highlight the lack of integration between them as a fatal flaw in the plan (Interview #8; cf. Interview #11). Another university staff member saw the sustainability elements as an afterthought to the plan, rather than a guiding principle in its development, which could be used to market the campus to potential tenants (Interview #7; cf.

Interview #11). One tenured faculty member who was interviewed suggested that the emphasis on sustainability in the new master plan serves to distract from the various failures of the Coldstream Research Campus (Interview #11), while a college-level administrator new to the university said that the administration shouldn't be "asking design to rectify a failed business plan" (Interview #10). These comments are indicative of the feeling that despite the Coldstream Master Plan emphasizing sustainability, few, if any, faculty and staff members involved saw the master plan as a positive contribution to the research park (Interview #8; Interview #11). If anything, the role of sustainability in the new master plan was an example of "invok[ing] other rationales in order to perpetuate [the failed business venture]" (Interview #4). That is, even if the actual business model of the Coldstream Research Campus doesn't change and continues to fall short of its goals for attracting jobs and growing new businesses, the symbolic value of its continued existence is perpetuated through a series of new discourses that act to legitimize it. Because the completion of the entire vision of the 2009 Master Plan remains decades into the future and its sustainability components are largely seen as being contingent upon the success of TIF funding from the state government (Interview #6; Interview #9), the extent to which the faculty and staff critical of the plan will be validated will be unknown for quite some time. In the interviews with university administrators in February 2011, however, neither demonstrated any command over the language of sustainability included in the 2009 Master Plan¹¹, and seemed visibly uncomfortable when asked to discuss these

¹¹ Both interviewees failed to mention anything beyond the desire to have all new building construction strive for LEED Silver certification. It should again be noted that the LEED standards have been critiqued for promoting a generally 'weak' approach to sustainability (Interview #8), and the singular focus on this issue points to the lack of an integrated, "strong" conception of sustainability that was an original point of contention

aspects (Interview #6; Interview #9). When asked about the criticisms voiced by the faculty, one of the administrators dismissed them by saying that “there will always be the faculty who say we don’t need Coldstream” (Interview #6).

Perpetuating the Development of the Coldstream Research Campus

Ultimately, the definition of sustainability does not matter to evaluation how sustainable the new master plan may be, but rather to how these different definitions are mobilized for political ends. With this in mind, the selective definition (or lack thereof) and use of ‘sustainability’ or ‘sustainable development’ in the Coldstream Master Plan can and should be viewed as a political imperative necessary to legitimate an otherwise unfavorable, and potentially unsustainable, policy initiative. Haughton and Counsell (2004) suggest that:

“by incorporating 'sustainable' into [mainstream policy] rhetorics in a sometimes superficial manner...[these rhetorics can] enforce or legitimate particular preferred approaches by adopting and policing, through a variety of scientific or quasi-scientific techniques, particular understandings of sustainable development in pursuit of wider policy goals" (141-142)

This is precisely the case at Coldstream, where the goal of the new Coldstream Master Plan is not to implement sustainability policies in and of themselves, but to use sustainability policies as a way of tempering criticism of the university’s further investment, both of its reputation and financial resources, in the research campus. This is manifest not only in the discourses within the 2009 Coldstream Master Plan and Design Guidelines, but also in the actions of the university administration in attempting to drum up support for the new master plan with campus sustainability advocates. Using the

during the faculty and staff consultation process (Interview #1; Interview #7; Interview #8; Interview #11).

language of the urban growth machine these attempts to gain support from environmentalists can be viewed as a way of co-opting the language of a potentially oppositional counter-coalition in order to neutralize their opposition.

In general, the proposition that rhetoric of sustainability can be used to support otherwise unrelated, and often neoliberal, policy interventions is not new (Drummond and Marsden 1995; Gibbs 1996; Bridge and McManus 2000; Maxey 2009; While et al 2010). The case of the Coldstream Research Campus is somewhat unique, however, in the ease with which it has shifted from a discourse focused on economic competitiveness to one of environmental sustainability in order to more effectively justify its continued presence. These instances represent two moments crucial to the continued development of the Coldstream Research Campus. Whether or not these particular efforts are ultimately successful remains to be seen, as the adoption of the Coldstream Master Plan has continued to be delayed. Depending on the outcome, whether or not Coldstream successfully perpetuates itself for another extended period of time, these moments can be looked to as potential turning points in the history of the Coldstream Research Campus.

While doubts about Coldstream's usefulness linger, the question as to why exactly the university continues to divert resources toward it remains unanswered. Though the two Coldstream administrators argued that the research campus itself is revenue-generating from year-to-year (Interview #6; Interview #9), the investment and returns over the course of Coldstream's history remain unknown. One potential answer to the question of why Coldstream has continued is to focus not on the strictly economic impacts of the research campus, but instead to look at the political or ideological forces at work at Coldstream. Because of the symbolic value of Coldstream to the University of

Kentucky – as a major initiative designed to tie the university to the economic future of the region – the project becomes difficult to abandon because of the potential loss of political clout to those who have supported it previously (Interview #4).

It is, of course, difficult to assign such importance to these discourses of sustainability to the future of Coldstream, as there is no guarantee that the use of sustainability as a justification for the further development of the research campus will be successful, or that the sustainability initiatives will even be implemented (Interview #6). Indeed, given that multiple individuals interviewed remarked that the actual reason the Coldstream Master Plan was delayed in being introduced to and approved by the Board of Trustees was that the university administration was waiting on the outcome of Lexington's 2010 mayoral election, and would update the master plan in order to cater more towards the particular policy preferences of the elected mayor (Interview #3; Interview #11), the emphasis on sustainability in the 2009 Master Plan is not guaranteed until not only the plan is adopted, but entirely implemented. The university's willingness to adapt the discourses within the master plan, which only serve to support the further development of the Coldstream property rather than construct some kind of ideal future for the campus, confirms that the ways in which the Coldstream Research Campus is constructed and justified as a desirable policy remains a flexible and fluid process. Indeed, should the emerging discourses of sustainability fail to make Coldstream a viable initiative in the eyes of the public, it would be unsurprising to see the university entirely abandon their efforts at sustainability in favor of something else. What that is, and whether it is necessary, however, remains to be seen.

CHAPTER SIX: CONCLUSION

Throughout this thesis, it has been argued that the Coldstream Research Campus should primarily be considered as a mechanism by which the University of Kentucky has involved itself in property acquisition and development, and thus also in the politics of local economic development. Beginning with the initial purchase of the Coldstream property by the University of Kentucky, Coldstream has long been viewed as a latent financial asset for the university. Not only can the property itself be sold or leased, but the initial acquisition of the property was the product of, and further opened up the expansion of the University of Kentucky's real estate holdings. Coldstream was purchased to replace the agricultural research farm that is now occupied by the Chandler Medical Center, and the development of the research park at Coldstream allowed for the university to further expand into Woodford County with the purchase of a new property in order to relocate the animal sciences research farm. Whether or not this expansion of university real estate holdings was intentional, the resulting effects are clear.

Further, it was argued that because the university is not a rentier in the traditional sense, it is subject to a greater degree of internal political contention than the average corporation, and must maintain some semblance of a commitment to the greater public good in addition to its desire to derive profits from real estate investments. In the case of the Coldstream Research Campus, it was argued that due to the research campus' failures to successfully attract high-tech businesses and jobs to the park, the university administration has been forced to undergo a transition in how it justifies the research campus' existence to both members of the university community and the public at-large, to whom the university is supposedly accountable.

This gradual shift, primarily comprised of an introduction of discourses about sustainability and the future sustainable development of the remaining vacant land at the park in the 2009 Coldstream Master Plan, is important insofar as it represents the university administration's acknowledgment of Coldstream's failures and need for a new direction, as well as a recognition that a new political strategy must be employed in order to gain support for the future development of the Coldstream Research Campus. By prominently including sustainability as a guide for the future development of the campus, and then explicitly reaching out to university faculty and staff involved in sustainability advocacy, it was argued that the university was attempting to co-opt the language of an oppositional counter-coalition, in this case environmentalists, whose support could help to bolster the administration's arguments for the continued development of the research campus.

Although this thesis is largely an empirical account of one particular economic development project and its underlying politics, the analysis presented here does have broad applicability to a variety of situations, not just the particulars of the Coldstream Research Campus, the University of Kentucky, the city of Lexington or the Commonwealth of Kentucky. To begin, it is important to stress that the experience of the Coldstream Research Campus is not entirely unique. The troubles Coldstream has experienced in following through on its bold claims about economic development over the past twenty years are not somehow specific to its circumstances. As was argued previously, it is much harder to find successful research parks than it is to find research parks absent the necessary conditions for their success. Similarly, Coldstream is just one of many examples from around the world, even around the University of Kentucky, of the

growing influence of neoliberalism within higher education (Gaffikin and Perry 2009). The University of Kentucky's liberal interpretation of the outreach or extension component of its land-grant mission has led it to reach out and extend its physical boundaries in a number of ways. The acquisition, development, and occasional re-sale of property both near the university in surrounding neighborhoods and in more distant locations such as the Coldstream Research Campus or the Brookside Farm in Woodford County is just the most obvious example. The investment of over \$30 million in university funds in a private corporation is but another example of the continually creeping logic of accumulation into the university.

With this in mind, the case of the Coldstream Research Campus should serve as something of a warning to universities eager to transform their intellectual advantages into financial advantages through the commercialization of university research. Indeed, it can easily be argued that the emphasis on university promotion of economic development can actually be counterproductive to their educational mission, as the University of Kentucky's continued and growing investment in the Coldstream Research Campus and Coldstream Labs has required funds to be diverted from other parts of campus at a time when all university faculty and staff have failed to receive even a cost-of-living raise for three consecutive years, not to mention various other 'necessary' roll-backs of the university's mission. This failure should not be surprising in the least, however, as both Luger and Goldstein (1991) and Massey et al (1991) pointed out the likely failure of university research parks some twenty years ago, just as the Coldstream Research Campus was getting off the ground.

And yet, in spite of the failures of the Coldstream Research Campus and similar ventures around the United States, the University of Louisville is currently planning to develop a research park at a cost of \$1.1 billion, with only \$1.4 billion in expected tax revenues over thirty years (Associated Press 2010). While the specific circumstances are somewhat different, little points to the new Louisville research park as having any more chance of success than the Coldstream Research Campus. In fact, because the competition between university research parks continues to grow and evolve into new debates over what research parks should look like, it is even more doubtful that the new facility will be as successful as Coldstream. That is, of course, only if the success of these ventures remains pegged to their ability to follow through on promises of job creation, business attraction and bringing about a utopian, high-tech, knowledge economy in Kentucky.

Because of this, perhaps the most important aspect of this research is the attention it calls to the variety of ways in which untraditional institutions, in this case universities, are active participants in the urban growth machine. Rather than just passive supporters of economic growth, these institutions perpetually seek to maximize their own financial self-interest. Universities in particular, however, are very peculiar insofar as they are complex assemblages of different constituencies, whose antagonisms must be reconciled, potentially through the production of discourses that mask intention while preserving intended effects. The changing focus of the Coldstream Research Campus over time from economic development to sustainability calls attention to the flexibility with which any variety of development initiatives can be justified to the public. The fact that the university has so willingly and ably reached out to various constituencies in order to

Figure 6.1: The Future of Coldstream?



Source: Coldstream Research Campus 2009a

further legitimate their role in the acquisition and development of property, at best only tangentially related to the university's primary mission as an educational institution, shows that the hidden, but very much intended, political ramifications for these actions need to be paid attention to. In the case of Coldstream, this process is seen clearly in the university administration's attempt to reach out to key faculty and staff members involved in sustainability on campus in order to have them support the new Coldstream Master Plan because it was 'green'. This effort, however, was compromised by the administration's failure to understand the multiplicity of ways in which sustainability was understood by these individuals, and the direct incompatibility of some of these individuals' definitions of sustainability and the proposed initiatives at Coldstream. By paying attention to these political actions and imperatives in other situations, it may be possible to find new grounds on which to oppose such policies, or at least be aware of the

Faustian bargains being made when such coalitions are formed, although there is nothing that guarantees these efforts will mean success.

APPENDIX A: INTERVIEWS

Interview #1: Sustainability consultant

Interview #2: University of Kentucky faculty and department chair

Interview #3: University of Kentucky staff

Interview #4: University of Kentucky faculty

Interview #5: University of Kentucky faculty

Interview #6: University of Kentucky administrator

Interview #7: University of Kentucky staff

Interview #8: University of Kentucky faculty

Interview #9: University of Kentucky administrator

Interview #10: University of Kentucky dean

Interview #11: University of Kentucky faculty

APPENDIX B: COMPANIES AT COLDSTREAM

Name of Company	Date of Original Relocation
AB Dick/KopyKat Inc.	2007
Adaptive Intelligence Systems	2010
Advanced Dynamics Inc.	2007
Affinity Photoprobes	2009
ATI Inc. (Alloy Technology Innovations)	2008
Allylix Inc.	2007
American Board of Family Medicine	2004
Artemetrx	2009
Berryceuticals LLC	2008
BET Labs	2004
BET Pharmacy	2005
Center for Aluminum Technology	2000
Coldstream Laboratories Inc.	2004
E&H Integrated Systems	2007
Embassy Suites Hotel Lexington	1999
Enventif Solutions	2010
Equine Diagnostic Solutions	1999
Finley Engineering Company	2006
Fisher Scientific	2008
Form and Function	2008
Hagyard Pharmacy	2001
Hewlett-Packard	2008
Human Development Institute	2004
Idealitet	2009
Ionx	2009
Kentucky Seed Capital Fund	2005
Kentucky Horse Council	2008
Laura's Lean Beef	2006
Lexel Imaging Systems Inc.	2001
M2 Technologies Inc.	2006
ms2data	2011
Maharishi Peace Palace	2002
MedTech College	2009
Referral Institute/BMI	2010
RAAM Global Energy Company	2002
Rood & Riddle Veterinary Pharmacy	2005
Secat Inc.	2001
Selma's Catering	2007
Strand Associates Inc.	1999
Summit Biosciences Inc.	2009
Triacare Pharmacy Network	2005
UK Veterinary Diagnostic Laboratory	1971
uHAPS Media	2011
Veda Design LLC	2002
Vedic Health	2002

REFERENCES

- Amin, Ash, ed. 1994. *Post-Fordism: A Reader*. Blackwell Publishers.
- Anderson, Virginia. 1988. "Coldstream plan stresses education". *Lexington Herald-Leader*. July 3.
- Associated Press. 1994. "Jones suggests selling Coldstream". *Kentucky Kernel*. February 11.
- Associated Press. 2010. "U of L seeking to finance \$1.1B research center". *Lexington-Herald Leader*. September 21.
- Battelle. 2007. *Characteristics and Trends in North American Research Parks: 21st Century Directions*. Association of University Research Parks.
- Bean, Dottie. 1993. "Pharmaceutical plant next step in UK plans". *Lexington Herald-Leader*. April 11.
- Bluestone, Barry, and Bennett Harrison. 1982. *The Deindustrialization of America: Plant Closings, Community Abandonment, and the Dismantling of Basic Industry*. Basic Books.
- Brammer, Jack. 1986. "Study OK'd to determine UK farm's value as mall site". *Lexington Herald-Leader*. December 17.
- Bridge, Gavin, and Phil McManus. 2000. "Sticks and Stones: Environmental Narratives and Discursive Regulation in the Forestry and Mining Sectors." *Antipode* 32(1): 10-47.
- Castells, Manuel. 1989. *The Informational City: Economic Restructuring and Urban Development*. Wiley-Blackwell.
- Castells, Manuel. 1996. *The Rise of the Network Society*. Wiley-Blackwell.
- Clark, Ernest L. 1970. "Nunn Warns Against Reapportionment Fight." *Louisville Courier-Journal*. July 31.
- Coldstream Research Campus. 1992. "Coldstream Research Campus, University of Kentucky: Master Plan". February.
- Coldstream Research Campus. 2009a. "Coldstream Research Campus, University of Kentucky: Master Plan". April.
- Coldstream Research Campus. 2009b. "Coldstream Research Campus, University of Kentucky: Design Guidelines". July.
- Coldstream Research Campus. n.d. <http://coldstream.uky.edu>. Last accessed 6 March 2011.
- Cooper, Brad. 1987. "Board approves steps governing Coldstream sale". *Kentucky Kernel*. June 25.
- Cox, Kevin R. 1995. "Globalisation, Competition and the Politics of Local Economic Development." *Urban Studies* 32(2): 213-224.

- Cox, Kevin R. 1999. "Ideology and the Growth Coalition". In *The Urban Growth Machine: Critical Perspectives Two Decades Later*, eds. A.E.G. Jonas and D. Wilson. State University of New York Press.
- Cox, Kevin R., and Andrew Mair. 1988. "Locality and Community in the Politics of Local Economic Development." *Annals of the Association of American Geographers* 78(2): 307-325.
- Drummond, Ian, and Terry Marsden. 1995. "Regulating sustainable development." *Global Environmental Change* 5(1): 51-63.
- Duke, Jacqueline. 1985. "Sewers seen as key to north side's future". *Lexington Herald-Leader*. December 13.
- Edwards, Robert L. 1986. "UK shouldn't join the development stampede". Letter to the editor. *Lexington Herald-Leader*. November 26.
- Engardio, Pete. 2009. "Research Parks for the Knowledge Economy". *BusinessWeek* 1 June 2009.
- Fairclough, Norman. 1989. *Language and Power*. Longman Group.
- Fairclough, Norman. 1995. *Critical Discourse Analysis: The Critical Study of Language*. Longman Group.
- Florida, Richard. 2003. *The Rise of the Creative Class*. Basic Books.
- Florida, Richard. 2007. *The Flight of the Creative Class*. Harper Paperbacks.
- Gaffikin, Frank, and David C. Perry. 2009. "Discourses and Strategic Visions: The U.S. Research University as an Institutional Manifestation of Neoliberalism in a Global Era." *American Educational Research Journal* 46(1): 115-144.
- Gibbs, David. 1996. "Integrating sustainable development and economic restructuring: a role for regulation theory?." *Geoforum* 27(1): 1-10.
- Gibbs, David. 2006. "Prospects for an Environmental Economic Geography: Linking Ecological Modernization and Regulationist Approaches." *Economic Geography* 82(2): 193-215.
- Goldstein, Harvey A. 2009. "Theory and Practice of Technology-based Economic Development." In *Theories of Local Economic Development: Linking Theory to Practice*, ed. James Edward Rowe. Ashgate.
- H.B. 310, 2011 Kentucky Legislature Regular Session.
- Harvey, David. 1989. "From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism." *Geografiska Annaler* 71B(1): 3-17.
- Haughton, Graham, and Dave Counsell. 2004. "Regions and sustainable development: regional planning matters." *The Geographical Journal* 170(2): 135-145.
- Huggins, Robert, and Andrew Johnston. 2009. "The economic and innovation contribution of universities: a regional perspective." *Environment and Planning C: Government and Policy* 27(6): 1088 – 1106.

- Jacobs, Keith. 2006. "Discourse Analysis and its Utility for Urban Policy Research." *Urban Policy and Research* 24(1): 39-52.
- Jenks, John. 1964. "Dairy Center To Boost State, Breathitt Says". *Lexington Herald*. July 8.
- Johns, Brian and Jamie Lucke. 1988. "City official bought prime land while on public payroll". *Lexington Herald-Leader*. December 28.
- Jonas, Andrew E.G. and David Wilson. 1999. "The City as a Growth Machine: Critical Reflections Two Decades Later". In *The Urban Growth Machine: Critical Perspectives Two Decades Later*, eds. A.E.G. Jonas and D. Wilson. State University of New York Press.
- Kaiser, Robert. 1989. "Coldstream mall now unlikely, UK says". *Lexington Herald-Leader*. June 22.
- Kentucky Kernel. 1957a. "Coldstream Farm Bought For Experiment Station". January 11.
- Kentucky Kernel. 1957b. "Coldstream Will Add Acres For Expansion". February 15.
- Lees, Loretta. 2004. "Urban geography: discourse analysis and urban research." *Progress in Human Geography* 28(1): 101-107.
- LeRoy, Greg. 2005. *The Great American Jobs Scam: Corporate Tax Dodging and the Myth of Job Creation*. Berrett-Koehler Publishers.
- Lexington Herald. 1964a. "Is Coldstream Suitable For Stadium?". Editorial. November 30.
- Lexington Herald. 1964b. "Coldstream Proposal Rejected By Planners". December 24.
- Lexington Herald-Leader. 1986. "No reason for UK to rush in developing Coldstream". Editorial. September 18.
- Lexington Herald-Leader. 1988. "Is Coldstream plan sound?". Editorial. July 3.
- Lexington Herald-Leader. 1996. "A place where research grows". Editorial. April 28.
- Lexington Herald-Leader. 2002. "UK's Coldstream campus to undergo review". August 14.
- Lexington Herald-Leader. 2010a. "Coldstream director is retiring". January 6.
- Lexington Herald-Leader. 2010b. "New director named for Coldstream Research Campus". September 15.
- Löfsten, Hans, and Peter Lindelöf. 2002. "Science Parks and the growth of new technology-based firms--academic-industry links, innovation and markets." *Research Policy* 31(6): 859-876.
- Logan, John, and Harvey Molotch. 1987. *Urban Fortunes: The Political Economy of Place*. University of California Press.
- Lucke, Jamie. 1988. "House OKs bill restricting funds in farmland sale to UK ag college". *Lexington Herald-Leader*. February 23.

- Luger, Michael I., and Harvey A. Goldstein. 1991. *Technology in the Garden: Research Parks and Regional Economic Development*. The University of North Carolina Press.
- Malecki, Edward J. 1984. "High Technology and Local Economic Development." *Journal of the American Planning Association* 50(3): 262-270.
- Malecki, Edward J., and Bruno Moriset. 2008. *The Digital Economy: Business organization, production processes, and regional developments*. Routledge.
- Markusen, Ann. 1996. "Sticky Places in Slippery Space: A Typology of Industrial Districts." *Economic Geography* 72(3): 293-313.
- Massey, Doreen, Paul Quintas, and David Wield. 1991. *High Tech Fantasies: Science Parks in Society, Science and Space*. Routledge.
- Maxey, Larch. 2009. "Dancing on a Double Edged Sword: Sustainability within University Corp." *ACME: An International e-Journal for Critical Geographies* 8(3): 440-453.
- McCann, Eugene. 2001. "Collaborative Visioning or Urban Planning as Therapy? The Politics of Public-Private Policy Making." *The Professional Geographer* 53(2): 207-218.
- McCann, Eugene. 2002. "The cultural politics of local economic development: meaning-making, place-making, and the urban policy process." *Geoforum* 33(3): 385-398.
- McCord, Tom. 1986. "UK gets Coldstream Plan". *Lexington Herald-Leader*. September 17.
- Mitchell, Don. 2003. *The Right to the City: Social Justice and the Fight for Public Space*. Guilford Press.
- Moak, Taylor. 2010. "Board members question funding". *Kentucky Kernel*. December 7.
- Molotch, Harvey. 1976. "The City as a Growth Machine: Toward a Political Economy of Place." *The American Journal of Sociology* 82(2): 309-332.
- Molotch, Harvey. 1993. "The Political Economy of Growth Machines." *Journal of Urban Affairs* 15(1): 29-53.
- MPC and Associates, Inc. 1988. *Summary of the Phase I Final Report Presentation: Coldstream Farm Alternative Uses Study*. University of Kentucky.
- Muhs, Angie. 1995. "UK finds attracting tenants to Coldstream a slow process". *Lexington Herald-Leader*. October 23.
- Musgrave, Beth and Cheryl Truman. 2011. "Bill to help mixed-use project at UK's Coldstream campus advances". *Lexington Herald-Leader*. February 8.
- Neumayer, Eric. 2004. *Weak Versus Strong Sustainability: Exploring the Limits of Two Opposing Paradigms*. Edward Elgar Publishing.
- Padgett, Ellen. 1986. "Coldstream is a research facility". Letter to the editor. *Lexington Herald-Leader*. October 29.

- Peck, Jamie. 2005. "Struggling with the Creative Class." *International Journal of Urban and Regional Research* 29(4): 740-770.
- Phillips, Su-Ann Mae, and Henry Wai-chung Yeung. 2003. "A Place for R&D? The Singapore Science Park." *Urban Studies* 40(4): 707.
- Poole, Shelia M. 1986. "Venture formed to develop farm owned by UK". *Lexington Herald-Leader*. September 13.
- Poole, Sheila M. 1988. "Study: Coldstream would bring jobs, revenue and development". *Lexington Herald-Leader*. September 21.
- Poore, Chris. 1996. "UK moves on plans to develop Coldstream". *Lexington Herald-Leader*. April 18.
- Prudham, Scott. 2009. "Pimping climate change: Richard Branson, global warming, and the performance of green capitalism." *Environment and Planning A* 41(7): 1594-1613.
- Reister, Joe. 1957. "U.K. Hopes to Utilize Mansion". *Louisville Courier-Journal*. January 17.
- Rose, Gillian. 2001. *Visual Methodologies: An Introduction to the Interpretation of Visual Materials*. Sage Publications.
- Rydin, Yvonne. 2005. "Geographical knowledge and policy: the positive contribution of discourse studies." *Area* 37(1): 73-78.
- Siegel, Donald S., Paul Westhead, and Mike Wright. 2003. "Science Parks and the Performance of New Technology-Based Firms: A Review of Recent U.K. Evidence and an Agenda for Future Research." *Small Business Economics* 20(2): 177-184.
- Sloan, Scott. 2011. "Lexington call center to hire 220". *Lexington Herald-Leader*. March 31.
- Smilor, Raymond, Niall O'Donnell, Gregory Stein and Robert S. Welborn. 2007. "The Research University and the Development of High-Technology Centers in the United States." *Economic Development Quarterly* 21(3): 203-222.
- Stamper, John and Linda Blackford. 2003. "Bid for High Tech Hasn't Paid Off". *Lexington Herald-Leader*. March 9.
- Staley, Hollye. 2006. "New Pharmaceutical Facility is 'Factory of the Future'". University of Kentucky Press Release. May 1.
- Tamasy, Christine. 2007. "Rethinking Technology-Oriented Business Incubators: Developing a Robust Policy Instrument for Entrepreneurship, Innovation, and Regional Development?." *Growth and Change* 38(3): 460-473.
- Till, Karen. 2001. "New Urbanism and Nature: Green Marketing and the Neotraditional Community." *Urban Geography* 22(3): 220-248.
- Townsend, Anthony. 2009. "Is There a Future for Science Parks?: Alternative Scenarios for 2030 Should Inform Policymaking." *Science Progress*.
<http://www.scienceprogress.org/2009/08/science-parks/>.

- Townsend, Anthony, Alex Soojung-Kim Pang, and Rick Weddle. 2009. *Future Knowledge Ecosystems: The Next Twenty Years of Technology-Led Economic Development*. Institute for the Future.
- Truman, Cheryl. 2009a. "UK Coldstream research campus developer awash in financial, legal woes." *Lexington Herald-Leader*. September 6.
- Truman, Cheryl. 2009b. "Work to resume on stalled building at UK's Coldstream campus." *Lexington Herald-Leader*. November 18.
- Truman, Cheryl. 2010a. "Coldstream master plan stalled until economy improves." *Lexington Herald-Leader*. February 17.
- Truman, Cheryl. 2010b. "UK Trustees OK \$5.5 million for Coldstream Laboratories". *Lexington Herald-Leader*. December 7.
- University of Kentucky. 1957. Minutes of Meetings of the Board of Trustees, Meeting of January 22.
- University of Kentucky. 1959. Minutes of Meetings of the Board of Trustees, Meeting of September 15.
- University of Kentucky. 1963a. Minutes of Meetings of the Board of Trustees, Meeting of January 18.
- University of Kentucky. 1963b. Minutes of Meetings of the Board of Trustees, Meeting of February 15.
- University of Kentucky. 1966a. Minutes of Meetings of the Board of Trustees, Meeting of June 17.
- University of Kentucky. 1966b. Minutes of Meetings of the Board of Trustees, Meeting of December 13.
- University of Kentucky. 1967. Minutes of Meetings of the Board of Trustees, Meeting of May 2.
- University of Kentucky. 1987a. Minutes of Meetings of the Board of Trustees, Meeting of June 23.
- University of Kentucky. 1987b. Minutes of Meetings of the Board of Trustees, Meeting of December 8.
- University of Kentucky. 1988. Minutes of Meetings of the Board of Trustees, Meeting of August 16.
- University of Kentucky. 1989a. Minutes of Meetings of the Board of Trustees, Meeting of November 7.
- University of Kentucky. 1989b. Minutes of Meetings of the Board of Trustees, Meeting of December 13.
- University of Kentucky. 1990. Minutes of Meetings of the Board of Trustees, Meeting of August 21.
- University of Kentucky. 1991. Minutes of Meetings of the Board of Trustees, Meeting of September 17.

- University of Kentucky. 1996. Minutes of Meetings of the Board of Trustees, Meeting of October 22.
- University of Kentucky. 1999. Minutes of Meetings of the Board of Trustees, Meeting of December 14.
- University of Kentucky. 2000. Minutes of Meetings of the Board of Trustees, Meeting of December 12.
- University of Kentucky. 2003. Minutes of Meetings of the Board of Trustees, Meeting of June 24.
- University of Kentucky. 2005. Minutes of Meetings of the Board of Trustees, Meeting of August 21
- University of Kentucky. 2009a. Transcripts of Meetings of the University Senate. Meeting of February 9.
- University of Kentucky. 2009b. Minutes of Meeting of Coldstream Research Campus Working Group, Meeting of August 14.
- University of Kentucky. 2009c. Minutes of Meetings of the Board of Trustees, Meeting of October 27.
- University of Kentucky. 2011. 2010 Commercialization and Economic Development Annual Report.
- Valentine, Gill. 2005. "Tell me about...: using interviews as a research methodology." In *Methods in Human Geography*, eds. Robin Flowerdew and David Martin. Prentice Hall.
- Westhead, Paul. 1997. "R&D 'inputs' and 'outputs' of technology-based firms located on and off Science Parks." *R&D Management* 27(1): 45-62.
- Westhead, Paul, and D. J. Storey. 1995. "Links between higher education institutions and high technology firms." *Omega* 23(4): 345-360.
- Williams, Colin, and Andrew Millington. 2004. "The diverse and contested meanings of sustainable development." *Geographical Journal* 170(2): 99-104.
- World Commission on Environment and Development. 1987. *Our Common Future*. Oxford University Press.
- Zimmerman, Jeffrey. 2001. "The "Nature" of Urbanism on the New Urbanist Frontier: Sustainable Development, or Defense of the Suburban Dream?." *Urban Geography* 22(3): 249-267.

VITA

John Taylor Shelton
Born: August 7, 1987
Louisville, KY

EDUCATION

2008 University of Kentucky, Lexington, KY
B.A. Geography and Political Science
Minor in Appalachian Studies

ACADEMIC EMPLOYMENT

2009 – 2011 University of Kentucky, Department of Geography
Research and Teaching Assistant

PUBLICATIONS

Peer-Reviewed Journal Articles

- 2011 **Shelton, T.**, M. Zook and M. Graham. The Technology of Religion: Mapping Religious Cyberscapes. *The Professional Geographer*. Forthcoming.
- 2010 Zook, M., M. Graham, **T. Shelton** and S. Gorman. Volunteered Geographic Information and Crowdsourcing Disaster Relief: A Case Study of the Haitian Earthquake. *World Medical and Health Policy* 2(2): 7-33.

Cartographic Publications

- 2011 Zook, M., M. Graham and **T. Shelton**. "The Presidential Placemark Poll". In *Atlas of the 2008 Elections*, eds. S.D. Brunn, G.R. Webster, R.L. Morrill, F.M. Shelley, S.J. Lavin and J.C. Archer. Rowman and Littlefield. Forthcoming.
- 2010 Graham, M., **T. Shelton** and M. Zook. "U.S. Abortion Providers and Alternatives". In *Mapping America: Exploring the Continent*, ed. F. Kessler. Black Dog Publishing. pp. 140-141.

HONORS AND AWARDS

- 2011 Conference Travel Support Grant (\$400)
- 2009 Honorable Order of Kentucky Colonels
Ellen Churchill Semple Research Award
Elected Phi Beta Kappa
- 2008 Graduated Summa Cum Laude
- 2007 – 2008 Academic Excellence Scholarship (\$1500)

John Taylor Shelton