

**Organizing business for sustainability: learning in an emerging
field of practice**

Molly V. Shea
B.A., The Colorado College, 2002
M.B.A., University of Colorado, 2010

A thesis submitted to the
Faculty of the Graduate School of the
University of Colorado in partial fulfillment
of the requirement for the degree of
Doctor of Philosophy
Department of Education Psychology
and Learning Sciences
2013

This thesis entitled:
Organizing business for sustainability: learning in an emerging field of practice
written by Molly V. Shea
has been approved for the School of Education

Aachey Susan Jurow, Ph.D.

Margaret Eisenhart, Ph.D

Kris Gutiérrez, Ph.D

Kevin O'Connor, Ph.D

Richard Wobbekind, Ph.D

Date_____

The final copy of this thesis has been examined by the signatories, and we
Find that both the content and the form meet acceptable presentation standards
Of scholarly work in the above mentioned discipline.

IRB protocol # 11-0405

Shea, Molly (Ph.D., Education, Education Psychology and Learning Sciences)

Organizing business for sustainability: learning in an emerging field of practice

Thesis directed by Associate Professor Aachey Susan Jurow

ABSTRACT

All too often conversations about education and learning assume that we know what learning is, how it happens, and to what ends the process should be directed. Learning, in this case, was not confined to classroom activities, but happened as students reorganized material and ideational tools to across settings to create new opportunities for emerging expertise. Designing for learning where the end goals are well defined is challenging enough. But, how do we design for learning if the end goal is to solve problems where solutions do not yet exist? Little is known about the *process* of organizing for innovation to address pressing global issues.

The study this multi-sited ethnography exploring how participation in a student-run club focused around sustainability affects the development of MBA students' knowledge, skills, and identities as business professionals. And importantly, how do participants learn as part of the NI network? Learning occurs across contexts in distributed networks of social practice (Nespor, 1997; Eisenhart, 2001; Jurow, 2009). As such, this study is designed to see a group of MBA students navigate business school and at the same time affect changes in the way business is conducted. Using social-cultural theories of learning with an emphasis on networked activity, movement across sites allowed students to explore contentious environments and create small innovations to reorient sustainable business practices.

DEDICATION

To Dr. Aachey Susan Jurow for her unwavering support.

ACKNOWLEDGEMENTS

I would not have completed this work without the love from my family; the informal mentorship from Dr. Mark Paich and Dr. Jeffrey Wasserman; and the levity plus caffeine provided by my friends at The Cup Espresso Café.

TABLE OF CONTENTS

INTRODUCTION	1
Overview	2
Organization of Chapter	3
<i>A historical perspective on the role of business within society</i>	4
<i>Collective organizing to transform business</i>	8
<i>B-Corporations as legal activism</i>	9
<i>Occupy Wall Street as public activism</i>	10
<i>Social entrepreneurship as a form of business activism</i>	13
<i>University supported business activism training</i>	14
<i>Net Impact as student organized business activism</i>	17
Significance	20
Research Questions	24
CHAPTER ONE: Conceptual Framework	25
Contexts and implications for understanding learning	28
Networks distributed in space and across time	33
Identity and learning	41
Unstable and Changing Social Practices	48
<i>Examining Networks in Practice</i>	51
CHAPTER TWO: Literature Review	57
Overview	57
Knowledge, learning, and identity formation in business	58
Sustainable business movement	63
Studying learning in distributed networks	67
CHAPTER THREE: Research Design	73
Background	73
Setting	74
Net Impact Description	75
<i>Participation in the distributed network of Net Impact</i>	78
Methods	79
Statement of researcher subjectivity	89
CHAPTER FOUR: Producing expertise in an emerging field of practice	91
Overview	91
Net Impact organization	96
Sustainable Business Movement	98
Actors in the local Net Impact network	99
<i>Sam, the Diplomat</i>	101
<i>Carl, the Spokesperson</i>	112
<i>Virginia, The Entrepreneur</i>	127
<i>The Case, The Instigator</i>	144
<i>Andrew, The Go-Getter</i>	156
Conclusion	165
CHAPTER FIVE: Organizing for small-scale innovations in an emerging field of practice	170
Case study	177

The Argument.....	180
<i>Figure 1 Distributed cognition timeline</i>	182
Identifying the problem in the local setting.....	182
Placing blame on traditional business school experts.....	191
Reframing “legitimate” business expertise.....	196
Building a small-scale innovation.....	203
Becoming advocates for changing individual learning trajectories.....	207
Apprenticing advocates for changing individual learning trajectories.....	212
Building consensus towards developing the small-scale innovation.....	219
Creating collective tactics to reorganize the discipline.....	222
Becoming collective agents for systemic change.....	224
Summary.....	224
CHAPTER SIX: Summary and Implications.....	227
Research question 1.....	228
Research question 2.....	233
Significance.....	235
Implications for methods.....	238
Implications for theory.....	239
Implications for practice.....	240
Future directions for research.....	242

Introduction

Historically, making a profit in business has meant disregarding the social and environmental good. Although corporations have developed corporate responsibility programs and smaller businesses often support local causes, these efforts are viewed as peripheral to the central aims of business. Porter & Kramer (2011) argue that corporations and social entrepreneurs should focus instead on creating “shared value” – ways to benefit society through business that can also reap profits, increase worker productivity, and foster innovation. This model places new demands on business leaders – from developing an understanding of society to working effectively with community partners and governments. In response to this desire for change, business schools are increasingly creating programs focused on social entrepreneurship and sustainability. Business school students, too, are responding to the desire for change by forming interest groups around sustainability. Net Impact (NI), a student-run, international club of MBA students, is one example of an informal network that has formed around how economic, social and environmental gains can mutually develop through business. The questions that lead this project are: What is the nature of MBA students’ participation in the NI network? How does MBA student participation in a distributed network focused around social and environmental sustainability affects participants a) knowledge and b) developing identities about their roles within the changing world of business?

Overview

This project is an interdisciplinary ethnography on how the everyday practices of people index global problems in order to learn and innovate in the changing world of business. The primary assumptions that underscore this project are connected and interdisciplinary.

- Economic and social upheaval is prompting change in the business sector.
- Social and environmental sustainability is a growing arena for change in business and society.
- MBA students, our future business leaders and social entrepreneurs, are striving to develop new forms of knowledge/expertise around issues of sustainability.

Current calls for corporate reform, accountability, and environmental justice highlight tensions between business aimed solely at making a profit and emergent forms of business striving to create shared value between business and society. Students pursuing MBA degrees are not deaf to these calls for reform; in fact, many of these students are at the cutting edge of these efforts.

Evidence of these efforts can be seen in many places within society and are situated within contentious struggles to change broader social structures that reproduce economic, educational, and social inequities, health problems, and support environmental degradation. These efforts include but are not limited to a growing field of research on corporate social responsibility, new legal incorporations, public protests, and student groups organizing around reforming businesses. As business school students negotiate unstable career trajectories positioned between traditional business careers and innovative social and environmental enterprises, they are learning and creating the world in which they

hope to work. The range of collective efforts to reform the role of business in society is diverse and interconnected. After reviewing several collective efforts that make up a larger network of changing business practices, I will focus on the efforts of an organization called Net Impact and their activities to produce knowledge in order to reframe the role of business within society. In the process of organizing to change business, they attempt to change their roles within the changing business practices.

Organization of the chapter

Throughout this study I draw on social, historical, and cultural processes embedded in our everyday practices that have evolved over time in specific locations. Businesses drive economic vitality within our society, but they are also deeply implicated in social and environmental problems plaguing society. For the remainder of the chapter I will situate the activities of the NI club within historical context and within the larger social movement aimed at changing the way business functions within society. I will review a brief history of influential arguments on the relationship between business and society. After situating the study in historical terms, I will discuss the current social practices organized around changing the role of business within society. I describe several cases where people are collectively organizing to understand and/or change the role of business within society. The cases outlined below are not the focus of this study, but provide the necessary context to understand the activities of the local NI chapter as part of a larger collective effort to change business practices. The activities of NI cannot be understood as learning and collective organizing without also understanding how their activities are connected to other collective efforts to change the role of

business within society. After I describe several collective efforts to change the effect of business within society, I will discuss the significance of studying NI as sites for understanding consequential learning.

A historical perspective on the role of business within society

In the eighteenth century Adam Smith created an economic model of business, which suggested that the “needs and desires of society could best be met by the unfettered interaction of individuals and organizations in the marketplace” (Smith, 1776). The self-interests of individuals, according to Smith (1776), would produce and deliver the goods and services that would earn them a profit, and importantly, meet the needs of others. These basic principles contributed to the expansion of industrialization and corporate influences that spawned both economic growth and newfound power for businesses within society.

Over a century later, the idea of corporate social responsibility emerged from the academy. Bowen (1953) published a book entitled: *Social Responsibilities of the Businessman*, which became the seminal work that business historians cite as the beginning of corporate social responsibility (Carroll, 1999). In this work he suggested that corporations had a moral imperative to consider their role within society. By the 1960s, there was a growing schism regarding the role of business within society (De George, 1987). Friedman (1963) on the one hand argued that the primary responsibility of business is to make a profit for its owners, albeit while complying with the law. Furthermore, he argued that free markets and the collective self-interest of individuals would lead to the best outcomes for society (Friedman, 1963). Davis (1960) on the other hand argued that because businesses hold great

power within society, their responsibility to society should be commensurate. Profit generation, according to Davis cannot be assumed to also lead to the best social outcomes for society. Thus businesses ought to take a more proactive role in ameliorating societal problems by suggesting that businesses played a role in causing certain social and environmental ills and ought to be involved in considering the consequences of conducting business (Davis, 1960). McGuire (1963) argued that, “the idea of social responsibilities supposes that the corporation has not only economic and legal obligations but also certain responsibilities to society which extend beyond these obligations” (p. 144). Alongside the academic debates in the 1960’s, new legal mandates materialized and placed regulations on businesses. The regulations required businesses to adhere to equal employment opportunity, product safety, worker safety, and the environment (1963).

In the last twenty years, most corporations have added corporate social responsibility (CSR) departments to their organizations (United Nations Report, 2002). According to the United Nations report in 2002, most large corporations at least espouse a commitment to CSR and in some cases their initiatives go substantially beyond corporate philanthropy and corporate communications (Smith, 2003). The prevailing ideas that drove the adoption of CSR departments are justified in several ways. One justification for a focus on corporate social responsibility is that as corporations gain power and shape more spaces and activities within people’s lives, this power leads to greater social responsibility. Another justification for the existence of CSR departments is based on the notion that a stronger community leads to stronger business returns. These historical examples help to

frame the activities of the NI club as activities that allow students to rethink the way business is currently organized and justified within society. In the past decade, arguments in the business literature are not about whether corporations should have corporate social responsibility departments as much as how corporations should address social and environmental issues through CSR departments (Smith, 2003).

Although the growth of CSR departments have been significant, and efforts have been made through these departments to create more socially responsible businesses, there is plenty of research that criticizes 1) the utility of CSR departments and 2) the effectiveness of these departments in achieving their stated goals (cite). First, CSR departments are often critiqued for being nothing more than reactionary entities used to quell public responses to corporate missteps. For example, on August 31, 2011 Forbes Magazine published an interview with a senior vice president of a major corporation to revamp their CSR department. The interviewer asked Cole: "Don't most [CSR] programs begin as reactions to things?" To which she answered, "it's certainly a mix. Some companies that have been doing this for a long time are doing well, and CSR contributes to that reputation. They build trust. Others are more reactionary, but they won't be sustained or provide strategic value in the long run." Cole expresses a major tension with the advent of CSR departments that merely respond to questionable corporate operations within society. The research in the field of business ethics reiterates this tension. According to Smith (2003), many firms choose to create CSR departments to avoid reputational risks that stem from irresponsible corporate practices.

The second major critique of CSR departments is that the departments remain disconnected from the business operations (Porter, 2006). In the same *Forbes Magazine* interview Cole explains that there is a business case for CSR programs that are more than reactionary public relations firms. Specifically, CSR departments with a long-term vision of their impact within communities develop better brands that customers trust. Cole suggests that there is consumer demand for companies “to put together more strategic CSR programs, programs that are distinguished, unique to the company, and meaningful. Consumers are smart these days. They can see when something is reactionary and when it has been a long-term commitment. They trust brands that have long-term missions and whose programs are in sync with brand value” (Singh, A., 2011). In the field of business and ethics, research suggests that CSR departments have too often become “a hodgepodge of uncoordinated CSR and philanthropic activities disconnected from the company’s strategy that neither make meaningful social impact nor strengthen the firm’s long-term competitiveness” (Porter, 2006). Although CSR departments were designed with an aware of these tensions, the underlying issues are difficult to resolve. CSR departments have directed concerted energy toward lessening the negative environmental and social impacts of business practices within communities, but the tension between the demands of business to maximize profit and do no harm to society remains.

To some, the effort of high quality CSR departments marks changing tides and real-world examples for businesses to reach higher standards of practice. To others, even well intentioned CSR departments are not enough of an answer to

account for large sweeping environmental and social concerns that society faces (Hawken et al., 1999). For these critics, CSR departments are still fundamentally embedded in corporations that have a singular mission to maximize profits for shareholders.

The debate about the role of business within society has not been resolved but continues to surface in academic, legal, and social contexts. More recently the idea of shared value has replaced the notion of CSR departments as reactionary departments within major corporations running public relations campaigns. Shared value, described by Porter & Kramer (2011) shifts the focus of business away from either utilitarian profit maximization or moral reproach accompanied by subsequent legal mandates. A new wave of business critics realign Friedman's frame of profit maximization to include a utility in sharing the environmental and social burdens with society. These recent attempts to realign business with social and environmental issues connect the work of NI members to the historical context of a much longer debate.

Collective organizing to transform business

This research will explore the network of business professionals seeking to carve out new kinds of careers in business. However, the network of people disenchanted with business as usual extends beyond business professionals. Before I discuss the specific focus of my ethnographic research, I will lay out some of the larger influences that inform business school students as they seek to carve out their role in the changing world of business. Local university business school students are aware of and influenced by larger trends to change business. The

trends I will review have all been mentioned in my initial field work and they include: Benefit Corporations, Occupy Wall Street protests, foundations supporting social entrepreneurship, and university supported social entrepreneurship programs. The examples of organized activism that I present below are all collective efforts that seek changes within business. These activities are connected to the NI network, but they are not the central focus of the study. The last group I will discuss is the student run MBA club that is connected to a distributed network of like-minded business students and professionals seeking to use business practices to change the world. The students in the NI club may be engaged with the activities in other collective organizing efforts, but after outlining the larger connected system of business activism, I will focus my discussion on the local NI chapter at a business graduated school in the western United States.

B-Corporations as legal activism

Benefit Corporations (B-Corps) are a new type of incorporation that measure and maximize other activities within an organization in addition to profit maximization. Advocates of B-Corps have created a network of individuals working to create legislation in various states to standardize more responsible business practices. These reform efforts leverage the legal system to pass laws “creating a new class of corporation required to create a material positive impact on society and the environment and to meet higher standards” (bcorps.net). Business and legal experts are attempting to institutionalize more responsible business practices. By creating standards and more transparent reporting systems to which organizations must adhere, consumers and business investors can support companies that create

value for corporate shareholders as well as their workforce, our communities, and for the environment at the same time. B-Corporations seek to formalize—and by doing so—make visible business practices that value social and environmental effects of business in addition to profitability. In the early stages of introducing B-Corporations, 350 companies in 34 states have been certified as companies that value social and environmental sustainability as part of organizational practices. These companies that began with a certification process are now working towards legislative measures to create a new corporate form. Legislation has been passed in Maryland and Vermont this year to incorporate companies that seek to do more than maximize profits for shareholders. In 2011, legislation was introduced in New York, New Jersey, Pennsylvania, and Michigan to legalize B-Corporations and create a business that openly reflects the values that reflect a more socially and environmentally responsible business incorporation. There are 8 more states in the U.S. preparing to pass B-Corp legislation and formalize new values within business to give entrepreneurs and business investors another choice about the type of business they want to create. The creation of new standards for corporate entities is one example of a collective effort to redefine the role of business within society.

Occupy Wall Street as public activism

Another collective effort emerging out of the tension between business and society are the protests known as Occupy Wall Street. In the past protests have been waged against single businesses (i.e. individual corporation protests were launched against Shell Gas 1995, Nike 1996, Kleenex 2004). NGOs like Greenpeace have a long history of eliciting corporate response from public protests and public relations

campaigns. These protests have often been spurred on by NGOs that threaten to launch public awareness campaigns to boycott companies for bad business practices. The recent Occupy Wall Street protests are a much broader campaign launched against the idea of corporate greed. The protests inspired sustained media attention over several months. Unlike many previous protests, no one company or business practice was specifically targeted. Paul Martin, former prime minister and finance minister of Canada and Ernesto Zedillo, former President of Mexico and doctor of economics were interviewed for a New York Time piece on reactions from elites regarding the protests. Dr. Ernesto responded to the criticism that the Occupy Wall Street protests do not provide a solution to the problems of the role of business in society. He retorted, “[t]hese criticisms — ‘Oh, they don’t have an agenda, they only pose problems and provide no solutions’ — well, they are citizens and they have earned the right to express a very serious, real problem.” The protests are not a solution, but Dr. Ernesto reminds us all that this collective effort swept across the world expressing, through public demonstrations, a deep concern for the effects of business on our communities and our environment. And although Occupy Wall Street did not have a singular message, Mr. Martin suggests that the protest “hit a chord that really is touching the middle class — the middle class in Canada, the middle class in the United States, the middle class right around the world — and I think that makes it actually very, very powerful.” The protests inspired reflection on social problems that were brought into public discourse through the Occupy protests.

This strand of collective efforts reflects dissatisfaction with business despite not answering the question of how change might come about. For the very practices that inspire public outcry also produce and distribute the food we eat, create pharmaceuticals that we buy, generate the taxes we pay, provide the household incomes in most families, and sustain and grow our savings through investment in financial markets. The articles in the news and the protests on the streets suggest that there is an ever-loudening cry to change business practices. Peaceful public protests are an indispensable method and tool for people within society to draw attention to social ills. While the protestor may not have had a solution for how to fix the problem, the collective efforts of Occupy represented the will of the people expressing an overwhelming dissatisfaction with “Wall Street” and business as usual. The widespread dissatisfaction with business suggests that many people want change, not simply those who took to the streets. My research on business school students looks at if and how students seek to change the role of business in society from within business school.

At the time of the protests several of the Net Impact members protested with the Occupy Movement in the local area. The Net Impact club did not collectively attend the protests, but the public protests affected the speeches at the NI Annual Conference and the activities of Net Impact students. The vision for changing the role of business within society takes many forms. One tension MBA students, as the future business leaders in our communities, negotiate is how to understand their role within the business community and the large society. This is not a simple question to answer, but the Net Impact network has been grappling with impact of

business on the larger set of stakeholders affected by the direct and indirect effects of business practices on the greater community. To study how students are learning and grappling with their identities and function within the business world, we have to situate the NI participants as connected to a larger conversation about corporate influence on communities that is circulating in the media and dinner tables around the world.

Social entrepreneurship as a form of business

Efforts to reform how business functions within society can be seen through public protests, new legislation, or education. Across university systems, there are activities that directly or indirectly seek to change the way business and society function together. Occupy protests exist on the same campuses with academic efforts to refine the financial markets for more efficiency. And still further academic efforts exist to redefine the role of business within society. Social entrepreneurship is an emerging field of interest for incoming business school students. Where CSR departments work within pre-existing corporations to realign the business activities to address social and environmental concerns. Social enterprises are created, in part, to change social outcomes through new business ventures. Broadly defined, social enterprises are new ventures created to explicitly focus on addressing social issues (York, 2011). As part of the emerging trend of social enterprises, business schools across the country are admitting a larger number of students who seek to utilize the traditional skills cultivated in business to ameliorate harms that stem from the profit generating centers of the economy (Blackman, 2011).

The potential for social enterprise as a viable career path remains unclear, but the Unreasonable Institute, the George Foundation, and the Skoll Foundation are examples of organizations working to support this career trajectory outside of the university system. The Unreasonable Institute website explains that the social ventures they support “are designed to generate sufficient internal revenue to cover their operational costs without dependence on external assistance such as grants and donations. Ultimately, it is financial viability that will allow the ventures we work with to scale on an international level” (Unreasonable Institute website). Thus the concept of social entrepreneurship takes as foundational the idea that profitable enterprises can aim to optimize other outcomes besides profit. Rather than placing profit at the center of a business venture, social enterprises take what traditional businesses dismiss as the unintended consequences of doing business and pursue intentional consequences for some of the world’s most intractable problems.

University supported business activism training

As part of the emerging trend of social enterprises, business schools across the country are admitting a larger number of students who seek to utilize the traditional skills cultivated in business schools to ameliorate harms that stem from the profit generating centers of the economy (Blackman, 2011). Instead of tackling social issues through charity work or government service, students enrolling in business schools increasingly seek to create new career pathways where the role of business within society more explicitly accounts for multi-dimensions of impact within society. Rather than maximizing profits as the only goal of business, a trend is underfoot where the driving forces for measuring success within business extends

beyond profit maximization. For example, triple bottom line and low-profit business models are entities that still generate profits and also explicitly account for the impacts on people and the planet.

Social entrepreneurs, for better or worse, are reorganizing traditionally contradictory concepts of making a profit and alleviating social ills into one pursuit. Increasingly social entrepreneurship has become a viable track for young professionals to pursue in order to work towards social change. Social enterprise has become a global phenomenon and many business schools are responding by creating programs, new classes, and revised curricula so that students can explore social entrepreneurship as a career path. What is more, entirely new graduate business school programs are emerging in response to the sustainable business movement. Bainbridge Graduate Institute is a new business school with the distinct mission of using business to change the world.

We believe that business—as society’s most influential institution—is a powerful force for social change. Because of this tremendous power, business has the opportunity to be a great force for good in the world. At BGI, we harness that power by integrating environmentally and socially responsible innovations with traditional business education, enabling future and current business leaders to create a sustainable world.” (bgi.edu).

In part, business school applicants and current students are driving demand for new kinds of business classes and curriculum, and hoping to create careers in this emerging field. While there are many social activists who want to acquire a deeper knowledge of finance, marketing, and operations in order to run effective social ventures, a recent Wall Street Journal article aptly points to a gap between the desire to learn about social entrepreneurship and the availability of jobs in this undeveloped field. The Wall Street Journal reports that:

Despite the fact that students sign up en masse for social-entrepreneurship classes, intern at nonprofits and participate in charitable extracurricular activities, fewer than 5% of graduates from many top business schools take jobs in nonprofit organizations right out of school, with some institutions placing just 1% or 2% in the field. Even the Yale School of Management, which has built a reputation for creating nonprofit managers, sent just 9% of its class into that sector this year. (Korn, M., 2011)

This Wall Street Journal article is a reminder that the efficacy of this emerging field still remains a question rather than an inevitable solution for creating long-term systemic changes in the world. Upon graduation, students from graduate business school programs face pressures to pay-off loans and support families (Korn, M., 2011). Furthermore some students enrolled in social entrepreneurship classes ultimately decide that creating small changes within CSR departments is more effective than creating a new social venture that, by the numbers, has a greater risk of failure.

At the local university formal course work as well as university sponsored events has emerged to support the development of social entrepreneurs. Beginning this year, students at the local university can compete in a local business case competition to vet their social and environmental initiatives to panels of experts. Supported by university centers, local business leaders, and legal professionals, the New Venture Challenge is one avenue that students across campus can take to gain expertise and become successful social entrepreneurs. In addition, an elective course in Social Entrepreneurship was created at the School of Business in 2009. Students can work on business plans that endeavor to create social change through the creation of new organizations.

Through social entrepreneurship tracks and other research initiatives, degree programs, course work, training programs, and student-run groups,

Universities are involved in the movement to create more socially and environmentally sustainable business practices. Within business schools there is often a required class on the effects of business on society, which explores business ethics. These classes are not a new phenomenon although the content of these courses change, examining the ethical dilemmas that businesses face is not a new trend in business schools. However environmental studies, engineering, law, and business schools are creating new certificate programs, centers for research, and degree programs directed towards interdisciplinary studies that address relationships between business and other disciplines. The emergence of Benefit Corporations, Occupy Wall Street protests, and social entrepreneurship as a career trajectory is an indication of a larger movement to change the way business functions in society. When business becomes a mechanism for creating positive change in the world, maximizing profits is no longer the singular goal of the enterprise. This fundamentally changes the way we conceive of business. Such conceptions of business may not be successful, however all of the aforementioned groups seek to grapple with this problem.

Net Impact as student organized business activism

The focus of my ethnographic research is not a manifesto on the ways in which business must change nor that business is the correct avenue to create lasting social change. Rather this is a study of a network of MBA students learning and organizing knowledge in an attempt to effect social and environmental change through business practices. The activity generated by students in the local Net Impact club is the focal “setting” for studying how people are making sense of and

reorganizing information to form new networks to solve real world problems. I follow a subset of business school students who have self-selected into an international club with a local university chapter. Spear-headed by aspiring business professionals, this extracurricular club provides opportunities and resources for students to question, critique, and change the way businesses and business people address social and environmental issues within society.

Net Impact (NI) is a global member supported network started by MBAs with the mission of using business to change the world. Founded in 1993, Net Impact has grown to include 20,000 members who are “dedicated to improving the world through business” (Net Impact website). At the local university there is a thriving local chapter of Net Impact, which has “gold status” due to the number of members enrolled in the club and the number and quality of activities that the local club sponsors. The local club is run by business school students for business school students, but supported by the Center for Environmental and Social Responsibility within the business school. The Net Impact network acknowledges chapters by their level of participation in Members of the Net Impact club at the local university take part in organizing events such as case competitions, guest lectures, and a volunteer program for NI participants to volunteer on local non-profit boards for one year. They practice leadership skills, advocate for curriculum changes in the business school curriculum, and find ways to volunteer their time in the community. Importantly, members of Net Impact use their shared interests and values to find internships and jobs. NI is not part of the formal business school curriculum, and yet, students make time, despite busy schedules, to attend talks and meetings, start

offshoot clubs, and find ways to connect business school classes to their social missions. The network that has been created is student run, interest driven, and oriented towards negotiating new career pathways in business.

The students involved in the MBA club are part of a larger network of activities that seek to change the role of business within society. NI participants have referenced all of the activities mentioned above during the course of local interactions. However these activities do not encapsulate the network of activities that inform student participation in the network. These cases give the reader a sense of the ways in which local interactions are informed by ideas stretching out in many directions and extend into classrooms and student activities in significant ways. NI participants are navigating tensions that are not easily reconciled. Business school students are making sense of the changing business practices, collective efforts protesting business practices, and simultaneously considering their future careers in an imperfect business world. The traditional tools of business are leveraged to accommodate new visions of businesses that might create more equitable and sustainable futures for people within society. Creating positive impact in the world through business, however, requires people to confront the tensions of generating profit while providing products and services that address difficult and often persistent social and environmental issues. The tensions in all of these collective efforts to change business and by doing so improve environmental and social outcomes within society are rich sites for studying learning. The effort of this network to reorganize business, as a field of practice, to meet the future needs of society is the focus of this research. The extent to which NI contributes to the

development of this new way of organizing business and how they contribute is not yet understood, but its potential is too important to ignore. The club's rapid growth, with its international membership of 20,000 students, extensive web presence focused on linking and educating its members, annual conference, and first corporate chapter (at Microsoft), indicates that it is seen as a valuable network for young business professionals.

This qualitative research study of MBA students' participation in NI is designed to deepen our understanding of the nature and value of this network as a learning environment. This robust and geographically distributed network of actors as a site for research is useful for understanding learning as changing participation in networks organizing knowledge in space and time to cultivate influence. Students are organizing and connecting across networks to explore their roles in the shifting social and economic arrangements of business and society. Understanding this network can provide valuable insights into the study of learning because NI is student run, interest driven, and explicitly oriented towards the creation of career pathways in uncharted territory.

Significance

As business school students negotiate unstable career trajectories positioned between traditional business careers and innovative social and environmental enterprises, they are learning and creating the world in which they hope to work. The emergence of new kinds of businesses, I will argue, is accompanied by new identity trajectories for aspiring business people concerned with the social and environmental health within society. People entering graduate business schools are

reimagining their role and impact within businesses or seeking to create new businesses where the fruits of their labor align with their values to promote social and/or environmental change within communities in which they do business (Akerlof, 2011). I focus on the student-run club Net Impact's efforts to organize and produce knowledge to reframe the role of business within society. In the process of organizing to change business, they attempt to change their roles within the changing business practices. This ethnographic research explores 1) how people organize knowledge and learn across locations in order to change the trajectories of their collective pursuits; and 2) how networks are shaped by everyday practices, and in turn, how people shape new economic futures within society.

This study has significance both to business and to the Learning Sciences. With respect to business, studying MBA students' learning in NI is significant for understanding the development of innovation and new forms of expertise within sustainability and business. Although there was growth potential for renewable energy (biomass and wind energy in rural counties) in 2004, recently there has been much more uncertainty as to where the economy is headed (Wobbekind et al, 2004; Wobbekind, 2011). The growth of sustainable businesses requires new kinds of knowledge and expertise, which students seek to learn despite the economic uncertainty. Business schools have the opportunity to guide and cultivate the trajectory of training that business school students are in the process of creating in spaces both inside and outside of the classroom. With respect to the Learning Sciences, this study can uncover how people develop expertise, new skills, and values in interest-driven networks without the benefit of an established model for

how to do so. Within any given activity, we are simultaneously interacting with people and things within the immediate context as well as people and things spatially removed. Nespor (1994) suggests that, “to understand how activity is connected to learning and knowledge, we have to deal with both threads of interaction.” (p. 11). I am studying how people learn in order to reorganize the world, develop new identity trajectories, and become different kinds of actors in the world. Through this work, I argue that we must understand learning as more than an activity that happens in schools. Learning is situated within the multiple contexts of our everyday activities but is also powerfully connected to distant settings through increasingly dense economic and cultural ties (Latour, 1987; Lemke, 1994; Nespor, 1994).

Studying learning that is student-directed and connected to the personal, professional, and community-oriented interests of students within distributed networks will allow for insights into how identities are negotiated across locations over time. When learning is organized around collective pursuits, people cultivate passion for their interests that enable them to produce the knowledge, skills, and dispositions needed to develop and extend their individual and collective efforts (Gee, 2007). Formal schooling is not currently designed to facilitate this kind of robust learning and yet, people are finding ways—in networks comprising people and technologies loosely connected to educational institutions and outside of any official curriculum—to engage in these meaningful pursuits. Sociologists, cultural theorists, and business researchers have drawn attention to how information and ideas flow across space and time in our highly connected society, but the

implications of these networks for learning across settings is not well understood (Leander, 2010; Phillips, & Taylor, 2010).

The design of this study is uniquely positioned to observe how students learn, organize, and vie for recognition across sites based on their interests in changing 1) the way businesses consider the social and environmental impacts within communities, and 2) the course of their careers to fit into the changing economy. Political leaders, business leaders, and learning scientist researchers alike do not know what combinations of knowledge, skills, and connections will become consequential for solving social and environmental problems within society. Thus as people negotiate and vie for power in this contentious environment, knowledge acquisition is an uncertain and non-linear process. Learning therefore must be understood as the process of connecting ideas, people, and tools into spaces in order to facilitate new organization of knowledge and with it, new kinds of business people. Understanding learning as contained within a classroom will not suffice, we must begin to understand learning as a process that reaches far beyond the face-to-face interactions that happen with school (Nespor, 1997), and begin to think of learners as reaching into past experiences and future ambitions to cobble together new ways of thinking and acting in the world (Gutiérrez, 1995; Cole, 1996). People use the resources of the space and within the confines of educational setting to gain expertise and become new kinds of actors in the world. Investigating how participation in NI shapes MBA students' ideas about transforming business can enhance our understanding of how networks can facilitate learning and innovation. NI is an ideal site to understand more about how learning is distributed across

locations and study the socio-technical environments that have the potential to facilitate innovations that protect our natural resources, revitalize communities, and create a stronger economy.

Research Questions

The questions that lead this project are:

- What is the NI network?
- How do MBA students who are members of NI produce sustainable business identities through their interactions with the NI network?
- How do people construct new knowledge and practices where the infrastructure of knowledge and accompanying practices are unstable?
- How does movement across places inform sense-making activities in particular settings?

Chapter 1

Conceptual Framework

Learning happens in the nooks and crannies of our lives. At best, learning fills our imaginations and tools us with the capability to move, express, self-determine, and transform our human experience (Moses, 2002). This is the ideal and end goal of what learning could be, but too often learning does not incorporate the multiple communities that people navigate in order to achieve valued social futures. The current conversation about education and learning assumes that we know what learning is, how it happens, and to what ends the process should be directed.

My empirical research is an inquiry that views learning as a deeply social process one where people struggle, bend, extend, imagine, and sometimes create new practices and tools in order to solve problems and move differently in the world. Other researchers have argued that learning processes are “intrinsically social and collective phenomena” (Teece et al, 1994, p. 15). This does not deny the agency of individuals, but suggests that what individuals learn always reflects the social context in which they learn (Brown, 2000). The social context, then, plays an important role in shaping what people learn and what they come to value.

I am studying how people learn and seek acknowledgement in order to reorganize the world, develop new identity trajectories, and become different kinds of actors in the world. The framework for this investigation draws on social practice theories of learning (Lave & Wenger, 1991; Holland, 2008) and actor-network theory (Nespor, 1994, 1997; Latour, 1987, 1996, Leander) to understand how a local group of MBA students negotiate the tensions of creating social and/or

environmental change using the traditional tools of business. Studying learning that is student-directed and connected to the personal, professional, and community-oriented interests of MBA students within distributed networks will allow for insights into what people are learning and how identities are negotiated across locations over time. This is a close study of action as a nexus of practice. In order to see this action and the way identities and identity trajectories are negotiated, I will trace action, where it came from, and where it is directed (Wertch, xxxx; Nespor, 1994, 1997; Latour, 1979, 1987, 1996).

I have organized the chapter by defining context in order to provide a theoretical basis for understanding learning as social and embedded in historical contexts. Next, I will discuss learning as connected not only to increasing knowledge and skills, but also to the development of valued identities that arise through social practices (O'Connor & Allen, 2010). Learning arises through social practices where people are negotiating identities through local interactions, which are always indexing ideas that stretch across place and time (Nasir, 2006; Polman and Miller, 2010). Drawing on actor network theory, I explore how learning and identity formation extend beyond the face-to-face interactions through networks that inform social practices across time and space (Latour, 1979; Nespor, 1994; Leander, 2010). In order to understand learning as connected to powerful networks that extend beyond classrooms, I hope to build on the work of researchers who pay close attention to learning situations where relations are in flux and identity trajectories within networks have not been stabilized (O'Connor & Allen, 2010).

Contexts and implications for understanding learning

Conceptions of context inform and often direct scholars' understandings of human action. Gaining insight into how people learn in and with context requires knowledge of 1) the historical construction of specific activities, 2) the rituals of the current activities within a context, and 3) how these practices or activities change over time.

Context allows us to make sense of human activity. Metaphors for context explicate a particular point of view about the limits of human agency within a socially constructed environment. According to Cole (1996), context is "the most prevalent term used to index the circumstances of behavior" (p. 132). The way in which scholars define context and understand the relative weight of context on informing or directing human action is widely contested. Depending on the way context is understood, agency, identity, learning and their interrelations have widely differing interpretations. For example, if context is defined as "that which surrounds," as Bronfenbrenner (1979) suggests, it implies that context is 1) separate from the individual, 2) stable, and 3) hierarchical (Cole, p. 134). Scholars who use this metaphor understand human activity and the context of the activity as distinct and separate. Using this conception of context, local activity is constrained from structural hierarchies outside the control of individuals. Context theorized as that which surrounds, implies unidirectional changes within society that can only be informed from above (Cole, 1996).

People, places, and tools must be understood together as part of powerful networks of activity. To understand the complex relations of humans, institutions, and settings Cole suggests a different conception of context, one that renders

context inextricable from human action. The metaphor for context, in this case is “that which weaves together” (Cole, 1996). What used to be reduced to either the task or the context is rejoined as one phenomenon, impossible to understand one without the other. Context in this case becomes more dynamic and informed by human activity, often in indirect ways. And conversely, human activity is informed by the contexts in which it occurs. Importantly, then, tools within a context become part of human activity and connected to the act of thinking. The implication of this framing is that an act and the context arise only by virtue of the other (McDermott, 2009). We think and act in systems of social practices. Historically specific practices, their objects, artifacts, and social organization mediate human activities (Cole & Engeström, 1993). Thus context is an ever-changing relation between tools in an environment and social practices. Human activity is bound to the context, but also moves and re-forms the context in a dynamic process.

Context understood as “that which weaves together” brings attention to the use of tools in the act of thinking and learning. My approach to studying mediational tool use is inclusive. The rationale for mediational tool use is deeply connected to cognition and learning. Tools mediate how we think (Vygotsky, 1978; Hutchins, 1995; Latour, 1979, 1981; Gutiérrez, 2005) and become important historical artifacts, material and representational productions, and representational technologies that capture how learning is connected to other times and distant places. We think through the use of tools in our ongoing social practices. These mediational tools are constructed in the past and continue to mediate or remediate

our activities through our everyday social practices. We index the past through the use of tools in our daily lives.

Tools as historical artifacts or representational productions are deeply implicated in human cognition. Human action and thinking, according to Pepper (1942), can only be understood “in and with its setting” (Cole, 1995, p. 136) and in relation to the spatial and temporal aspects of context. The negotiation of human activity in and with setting is always informed by a history of social practices that involve the use of tools from a previous time (for example language, books, math equations, computers, types of clothing). Importantly human activity, then, is not separate from the tools or material productions that exist within a setting that have representations from previous social practices. Human activity is realized through “different cultural tools or mediational means used for carrying out action, tools that in turn shape individual functioning” (Penuel, W. & Wertsch, 1995). Referring to tools as material and representational productions within settings draws attention to how humans produce the tools that inform and shape human activity. Tools understood as cultural artifacts reference past use, knowledge practices, and in specific social practices. These cultural artifacts have a history of meaning and use. Thus, every current activity is informed by material productions from the past, which play a role in shaping our current actions.

People often use tools across settings and thus specific cultural and historical references are also instantiated across settings. Tools are not static, but are appropriated in spaces and social practices to make sense of impromptu social activity (Gutierrez & Stone, 1999). Human activity shapes and reshapes tools within

a setting as people make sense of new ideas in and with more practiced patterns of behavior (Bourdieu, 1977; Giddens, 1979). Thus human activity includes the use of tool, which can neither be understood as always outside of the individual nor always inside the individual's mind. Tools are used as people engage in social practices and help to shape what is learned and how we problem solve (Hutchins, 1995; Gutierrez & Stone, 1999). As will be discuss in more detail later, tools are appropriated as people make sense of ideas from distant places and times in new contexts. In an effort to understand how learning takes place across multiple contexts where trajectories of learning are in flux, tools are integral to the social and cognitive process of learning and identity formation.

Social practice perspectives have productively drawn our attention to how learning is always part of ongoing social arrangements. People and their practices again became central in the conversation about how change happens and how human actions are centrally implicated in reproducing, manipulating, and shaping powerful structures that afford and constrain human activities (Ortner, 1984). Lave and Wenger take up the charge to put people and their practices as central to what and how people learn. They argued that learning takes place in the routine forms of participation. This shift brought education researchers into the conversation about learning in everyday practices. Communities of practice became the central unit of analysis within their work and drew out the routine forms of participation that led to learning or reproducing shared skills and knowledge. Important elements of communities of practice include groups of people who develop and share competence, build relationships in order to learn from each other, and develop a

shared repertoire of resources (Wenger 1998). Learning, then, is happening as people participate in communities, but is not a distinct activity separate from participation in the community. Wenger (1998) explains that for the individual, “learning is an issue of engaging in and contributing to the practices of their communities” (p. 7). How people think, reproduce actions, and create new practices, and ultimately learn is connected to the social activities in which we participate. Furthermore, these social practices are always referencing cultural and historical practices from the past as we use tools to act, think, and learn.

Views of learning as a form of participation in social practices provide a useful lens to study learning in face-to-face local settings (Jurow, 2005). Studying learning through the lens of communities of practice where learning is connected to local activities contained within a community captures how everyday social practices are developed through participation, but the frame of the community leave scholars less analytical room to consider the affects of distant times and locations on local activity (Nespor, 1994, 1997; Leander 2006). Communities of practice as a framework for understanding learning has been critiqued for neglecting to adequately consider the ways in which interactions between people and things happen across distant locations. For example, Nespor (1994) argues that “people don’t participate as ‘individuals’ in pristine ‘communities of practice’ (Lave and Wenger, 1991), nor do they take on stable ‘identities’ by becoming ‘full participants’ in such communities” (Nespor, p. 9). The concern for social scientists in this case, is that learning is rarely contained within one stable and ongoing community of practice where participants are fully engaged and their identities can be understood

through participation in this particular community alone. The position that someone holds in one community may be very different than the position that they hold in another setting.

Participation varies within communities of practice, and not simply based on level of expertise. Dreier (1999) suggests that participants occupy other positions in other communities, and “their positions matter to them in other ways in other contexts” (p. 77). Thus the various positions that people hold within different communities, changes how they interpret the meaning of a given activity. Viewing people as participants within a single community of practice oriented towards a shared goal limits how we understand variations in participation and available identities within a given activity. Observing participation and learning within a particular setting must be linked to the concept of location (Dreier, 2007).

Participants observed in one social setting are always linked to other locations and settings. For social scientists, then, we must consider people’s participation within one setting, but not lose sight of how participants index other settings. This, according to Dreier (2007) was necessary because people situate their experiences, reasons, and participation in one setting to their trajectory within that particular social structure. Rather than viewing learning and participation within one social structure as contained and stable, trajectories of participation vary. Social structures are linked to other social structures, and individuals are therefore simultaneously engaged in multiple and sometimes competing social structures (Polman and Miller, 2010).

In the next section, I will build on this idea by drawing on theories that account for distant threads of activity that inform, sustain, and change participation and how we understand identity formation. The boundaries of communities are always changing and unstable. Actor Network Theory (ANT) explicitly conceptualizes the messy boundaries between activities and the ways in which activities are connected across distant places and times and affect learning within a given setting.

Networks distributed in space and across time

Central to my conception of context is attention to both how actions shape and are shaped by the immediate context as well as more distant contexts. Nespor (1994), theorizes interaction and learning as connected to face-to-face activity as well as distant places, times, and roles within other communities. He argues that “[w]hen we act we are simultaneously interacting with the people and things in the immediate environment and with people and things spatially and temporally removed from us, but none the less present in the situation in some way.” (p. 3). Learning in this case is conceptualized as attempts to reorganize social relations that go beyond face-to-face interactions. Learning must be understood as “the web of movements spun from multiple flows of material resources and representations” (Nespor, 1994, p. 6). Networks—like spinning webs—move, organize, and reorganize information across local activities and index distant locations. This creates demands for researchers as they attempt to capture and trace the simultaneous interactions between local activity and more distributed activities within the network (Geertz, 1973).

Actor-networks are the conceptual model that Nespor (1994) used to depict the way knowledge is organized and produced across distributed locations, but connected to formal learning settings. Importantly, the organization of information within networks is about more than information exchange (for example: receiving an email does not imply a probability for behavioral change). Actor networks are ways to understand the complex social relations in which people negotiate identities and take on new activities that further develop their ways of being, organizing, and making sense of the world around them. Actor-networks allow for people to have “fluid and contested definitions of identities and alliances that are simultaneously frameworks of power” (p. 9). Human activities and learning are not arbitrary, nor are they straightforward.

Learning is socially organized around activities that people within society value. Networks, then, are the associations and sites for knowledge production that individuals can move through as they make sense the multiple activities in which they participate (Nespor, 1998). People make alliances and become certain kinds of actors within a network as they aim towards futures (that are more often than not) supported by the network. According to actor network theory, people within a network are only one type of actor within the network. Actors in a network include both entities (people, corporations, institutions, etc.) and items (power point presentations, smart phones, water bottles, etc). The changing and evolving nature of the actors within the network also change the nature of the network. As such actor-networks are neither in a final state nor stable (Latour, 1996). The

relationship between actors within the network and how these relationships change is the key to understanding learning in unstable and dynamic contexts.

Within networks there are often heightened levels of activities between people and resources; these exchanges are considered nodes within a network. From the nodes of a network people, ideas, and representational technologies flow to other places across time and space. Nodes are active places where people are making sense of the multiple flows of resources and representations toward shared activity and/or shared objectives. For example, Nespor (1997) identifies an elementary school as a node or a site within several different networks where a variety of activities and values intersect in the shared activity of school. Nodes are intersections in space and time where people organize and produce knowledge that travels through and shapes the social practices within the network. In the case of this study, the graduate school of business at the local university is not a self-contained network for learning rather it is a node within several much larger networks. Ideas from finance, the sustainability movement, marketing, the local foods movement, entrepreneurship, and the social enterprises circulate through student discourse, class content, and guest speakers' talks. Furthermore, these networks are not necessarily mutually exclusive and as such students are always making sense of multiple networks within school. The school or the classroom has often been considered a bounded and local setting for learning, but this conception of the school overlooks the more complex set of activities negotiated in the school and across settings. By expanding our understanding of context as "that which weaves together" outwards, we can understand that schools are nodes of activity

that are connected across space and time by the use of language, symbols, technologies, and social practices that are valued across the same network.

Learning, understood as taking place within and across networks, connects activities from distant locations in space and time. Drawing on actor network theory to frame the fuzzy boundaries that must be accounted for when examining the process of learning, we can trace human activities across places and observe how learning is deeply connected to distant activities and social structures (Nespor, 1997). Human practices do not just reproduce activities or ways of knowing in an isolated space, for example a classroom focused on acquisition of knowledge and skills. Rather flows of information from other places and times inform activity within any setting and may produce distinctly different ways of knowing. Social practices within networks, according to Nespor (1994), “aren’t just situated *in* space and time, they are ways of *producing and organizing* space and time: they are networks of power” (p. 9). In the case of disciplinary learning, the curriculum shapes the actions and values of students, as they become different kinds of actors within a network. For example, students within the business school are being trained in the disciplines of finance, marketing, and operations. However, a sub-set of business school students are interested in reshaping the way the business school perceives their responsibility for training future business leaders and the way environmental sustainability is incorporated into the more traditional disciplines within business.

Students engaged in social practices to define sustainability within the business school and mold new sustainability curriculum accordingly, are producing and organizing space and time to account for their beliefs about the role of business

within society. For example NI students discuss meeting with the new Dean to define sustainability for the school of business. A representative for NI explained that students within NI want to change the curriculum to address sustainability in particular ways. He explained their collective interest in changing the business curriculum to reflect their beliefs about how everyday business practices should be conducted.

Our students don't necessarily want sustainability classes, they just want sustainability integrated into ahh each of their other classes. So if you're in a finance class and you're building financial models that are based on all of these assumptions then generally I think that we feel that um the assumption of what's the regulatory environment or yeah what's the regulatory environment for the environment--how is that going to play into ah this hypothetical project that this hypothetical business may be financing? So where a lot of business schools might say, probably not anymore but, hypothetically they could say that in a financial model: let's build this project that has a side effect where all the waste goes in the river and nobody ever pays for it. I think our goal is to have a classroom environment where if we're building a financial model for that project we've got to incorporate the cost to clean up the river or to um put in some sort of mitigating equipment that has an additional cost. (NI co-president, 1/23/12)

In this example, students within the business school seek to organize and change the conversation within business school classes to account for the environment in the midst of everyday business decisions. The NI student connected the formal classroom activity of learning how to create and manipulate financial models to what he believed were larger problems within the business network. His collective work within the NI club to change the business school curriculum was connected to the larger societal problem of "incorporat[ing] the cost to clean up the river". Through their work with the administration, students hope to change the way people see problems, think through solutions, and act within traditional business practices. Through curriculum reforms, inviting guest speakers with diverging views of the roles within business, and creating business cases that centrally include

environmental and social issues, students involved in NI seek to reshape the actions and values of the business school as they become experts within the field of business.

Learning is a process that extends far beyond the classroom where powerful networks shape and reinforce behaviors and ways of valuing within classrooms. If we account for the possibility that disciplines themselves are changing, then even learning in a classroom is an orchestration of moving parts and not a static representation of the world. People become defined by certain kinds of knowledge and skills that are valued and supported by actors and activities within the network. At the same time, people seek to define the kinds of knowledge that training programs acknowledge as valuable. Within actor networks people are enrolled and mobilized along particular trajectories where they learn in order to gain access to other parts of the actor network. People, then, seek to move across the network as well as move other parts of the world into the network (Nespor, 1994). For example, students seek to experiences within school in order to be acknowledged as experts in other parts of the sustainable business network. In the case of the NI club, one of the students running the case competition on natural gas fracturing talked about his recent interview with a car company. He explained how his activity within the NI club afforded him the opportunity to speak with confidence about the potential of using natural gas as an alternative to oil in the car industry. As MBA students in NI move into industries, they not only seek to gain access to new parts of the network, they also discuss the need to change the types of expertise that is currently acknowledged within the network. The ability to mobilize people and objects across

places and through time is a way to understand the process of learning that directly accounts for power relationships within a given network.

The process of mobilizing people and objects into activities within a network involves organizing material and representational production into local spaces. The tools and artifacts that actors use to learn are ways in which networks represent ideas from distant places and times. Books like “Natural Capital” (1999), movies like “Gasland” (2010), reusable containers for liquid, combined with group meetings held in boardrooms rather than classrooms produce spaces that bring students into a distributed network of business practices that bring into focus issues of environmental and social responsibility from distant places through a business lens. Actors within the network are not simply focused on learning as a benign activity of accumulating knowledge and skills. Actors are negotiating tensions to define their place within networks and work to shape activity across space and time. In ANT actors are “any element that bends space around itself, makes other elements depend upon itself and translates their will into a language of its own” (p. 21). Actors can be people or objects that either organize space to conform to networks of social practices or get organized into spaces. This endeavor, however, is not unitary and individualistic if you think of people as “stretched out in many directions at once” and intertwined with many networks across space and time. We then have to rid ourselves of the notion that we are dealing with “cognitively and socially discrete actors” (Nespor, p. 22). Rather people, as particular kinds of actors within a network, are engaged in intersections of activities defined by different networks.

New and valued identity trajectories are the outcome of contentious power negotiations that are collectively built and have the potential to alter the direction of a network. Where Nespor (1994) views trajectories within a discipline as relatively static, actors within a network may not accept the traditional trajectories. Actors are also working to create valued trajectories, new ways of framing problems, and new ways of creating the world in which they study and work. People move along paths organized across space and time and intersect with other possible paths. As members of multiple networks, we can veer off one path and on to another or attempt to create slightly different trajectories towards which our everyday practices aim. The mesh of trajectories that come into contact in a site like a school must be understood in order to capture what motivates people to learn within any given activity.

Motivation to participate in, learn through, and identify with a network is simultaneously driven by ideas and values within a local setting in the present moment and to past experience, future ambitions, and distant places or locations. Conceptualizing learning as distributed across networks reminds us that public organizations, like schools, are powerful network builders that shape the activities and identity trajectories within a network. The methodological implications of studying learning through networks are such that we must simultaneously attend to activity in local spaces with ideas that circulate through the network and across locations. With this more complex understanding of how learning is connected to distant places requires us to deal with both face-to-face interactions as well as how these face-to-face interactions are connected to distant locations in space and time.

Thus using actor network theory connects actors across sites and allows us to see the “arenas of social practice” that create a deeper understanding of learning.

Actors react to ideas or construct new ideas that flow through the network in local spaces but these activities stem from distant places, socio-historical practices within the network, and other networks altogether. The ways in which people are thinking and not thinking, engaged and disengaged, and working with ideas from distant times and locations from the memory of the past and notions about their future is integral to understanding learning and motivation to learn (Nespor, 1994; Dreier, 1999). The orchestration of the our values, identities, and everyday activities must be taken into account as educators attempt to organize for learning that becomes consequential for to the multiple settings in which people live and work.

Identity and learning

Developing a meaningful theory of learning in order to understand and create more robust learning environments requires us to understand learning as becoming different kinds of actors in the world. Learning happens in a number of contexts, across events in time, and through interaction with people and cultural artifacts. Learning involves making meaning and changing behavior within a social practice. Taking an ontological approach to learning means that learning “necessarily involves changes in identity.” The various ways in which people participate in activities requires us to always make use of cultural artifacts and our previous experiences to make sense of current activities and participate in new ways. For the past two decades, researchers of learning have advocated for greater attention to how learning is situated in social practices and deeply connected not

only to increasing knowledge and skills, but also to the development of valued identities (e.g., Jurow & Pierce, 2011; Lave & Wenger, 1991; Nasir, 2009; Wenger, 1998). The trouble with framing identity development and learning as two separate activities is that we miss important ways in which motivation to learn is often related to how people envision their present and future role within a network of activities. Akerlof (2002) recently won a Nobel Prize in economics for suggesting that identity plays an important role in how students respond to schooling. To ignore the implications of identity and positioning within learning environments would be a missed opportunity for understanding possible intervention points for creating consequential learning. By understanding how present activities connect to students' ideas about their futures, we can both better understand the nature of learning and improve participation and engagement in learning environments for all students.

Identities are negotiated moment-to-moment in social interaction in the course of our daily activities (Nasir, 2009), and tied to distant places and other locations (Drier, 1999). Identity is defined as a changing sense of self and social position (Beach, 1999). As we learn, we change social position and the roles and responsibilities we can take on within a given network of activity. Thus to ask research questions about learning, is to ask questions about trajectories of participation that inform our changing sense of self within an activity. Polman (2006) argues that "cognition gets intertwined with identity development to a sufficient degree that analyzing the two issues together provides explanations an

analysis of either alone might miss” (p. 222). The valued social futures toward which activities aim, inform learning and identity.

In regards to this study, the roles that students choose to play within the NI club are related to their experiences outside of business school and connected to their passions and values. One NI participant, Virginia, did not choose to be centrally involved with the club, but she participated as the offerings of the club fit her passions. In an interview I asked Virginia what brought her to business school and what her passions were. She mentioned both “macro and micro causes” that brought her back to school. Before returning to business school she had already started an apparel line and wanted to understand how to make a business out of it. During her time in business school Virginia described how many of her passions were developing and coming together:

The dots are connecting in this sort of women empowerment way, which is great for me. But if you’d have asked me a few years ago I probably wouldn’t have been something I would have called a passion if that makes sense. But it’s very important to me and I’m extremely happy to have it and understand like oh this is a way that I can make a significant difference. And just trying to leverage you know whatever pieces of the business make sense to—to empower as many women as possible—even in a small way because even small ways um you know they do they still empower you and they still give you this bit of self confidence that maybe you didn’t have before. So I think it’s—even though it seems small it’s actually pretty big.

Her experience in apparel and her passions for the outdoors and empowering women started to come together. NI was never the main focus of her attention, but when the club spoke to her passions she would engage. To understand what Virginia is learning through the network of NI and the trajectories that she explores, we must understand how her passions led her to volunteer on a local non-profit board. She describes her involvement with the NI network, in part, through her engagement with the board fellow program. Her passions to support women drove

the nature of her engagement and determined the types of learning trajectories she would explore. The NI network organized her work with the GCA, but her participation involved working with the GCA directly on community projects dedicated to supporting women. Her current effort to start a social venture that empowers women's education is another enduring activity that has been promoted on the NI facebook page. Virginia's interest in learning about business in order to support her apparel line has expanded and evolved to include supporting and empowering women in the community. For Virginia's, learning about finance and marketing became connected to empowering women. To study what people learn, why they attend school, and how they pursue thinking within marketing or finance class, for example, must be connected to how they see themselves and their motivation for taking part in a network.

Learning involves forming skills, practices, and expertise toward becoming acknowledged within a network of valued social practices. People often learn as a secondary outcome or unintended consequence of participating in activities that interest them (Lave & Wenger, 1991). Dreier (1999) adds a necessary level of complexity to learning and identity formation through our everyday practices activities by suggesting that we are always "pursuing concerns and stances across contexts in [our] trajectories of participation in structures of social practice" (Dreier, 1999, p. 99). As we move through setting within a network our roles may vary across time and location. We seek and become certain kinds of actors within networks according to our social positions, acknowledged skills, and desired goals for participation within a context. For example NI members are simultaneously

leading events for the MBA club while also pursuing interviews with industry leaders where they seek to become acknowledge as adept business people within established industries.

Within actor-networks, the changing sense of self and social position vis-à-vis the activities in which people engage often shapes motivation to learn and engage in skill mastery. The multiple topics that students pursue in business school, for example, index experiences from other times and connected to distant places. Business school students pursue concerns that stem from other contexts and connect ideas and values introduced in the past. Through business school and NI specific events, students described cobbling together ideas about how to alleviate social and environmental problems using the tools of business. One former aerospace engineer, current MBA student, and NI member sought to pursue the business skills needed to create value in his own life by creating a social venture that has the potential to change the everyday lives of people in poverty. He was motivated to learn about the tools of business in order to help alleviate poverty or improve access to drinking water in India. The desire to alleviate poverty in India, however, was shaped by experiences the student had previous to attending business school.

Identities are influenced by the context and range of possible futures available within networks (O'Connor 2010, Jurow & Pierce, 2010). Learning is the process of building skill sets, social norms, and ways of communicating within networks with valued activities and accompanying social futures toward which participants often aspire. When we think of learning within business school, then,

we must consider not only the course work and the traditional tools of business, but also the larger network of activities that students engage with or create. In an interview with Timothy he described his interests in social venturing. His interests led him to organize a speaker event to discuss a social venture bringing water pumps into developing countries. Timothy actively looked for ways to meld his values, his previous skills, and his developing business skills to forge a different career trajectory within the field of business. He described the concept of social entrepreneurship and how his motivation to learn more about this idea led to a summer internship that connected his values with his evolving knowledge of traditional business tools. He explained that social venture generate profits, but profits alone is not the goal of the venture. Timothy wanted to know all about traditional business tools because “if you can understand those tools well enough then you can look at them in a new way to try and help people.” In the NI network, many of the students who self-selected into NI were actively seeking to change their role within an industry but unsure of how to proceed. Timothy explored the idea of social entrepreneurship as a way to pursue a career that more directly benefited people. The desire to look at the problem of alleviating starvation through the lens of business is influenced by the availability of examples and ideas within the network that would allow people to seek out new pathways. NI students are both exploring available trajectories and working to create new pathways.

Actor-network theory provides a framework to understand how identity and practice are part of ongoing interactions between local actions, like lunch conversations with social entrepreneurs, and more distant imaginations like

Timothy's ideal profession of owning a firm "that does design for um that base of the pyramid population—people who really don't have much" (Timothy, 11/8/11).

Identity trajectories are linked to networks of activity where certain practices, skills, and types of knowledge are privileged. Identities are not discrete characteristics of the individual rather they are integrally linked to the social structures in which people participate (Dreier, 1999). 'Trajectories of identification' refer to the paths that individuals take in moving across and through different nodes or activities within a network (Polman & Miller, 2010). For example, within business school tracks Timothy has been building expertise in finance, but he really wants to become a "jack of all trades". The work with NI allows for students to gain exposure to people who are seeking non-traditional paths and identities within business. Students are building identities through the NI network that will help them move in different directions upon graduation from school. The trajectories should not be seen as destined paths, but rather as a direction of motion with momentum and influences.

The distinction between the cognitive approach to identity formation and the social practices approach to identity trajectories aids our understanding of how people become change agents within a larger social movement. Rather than looking at individual identity trajectories, the unit of analysis for understanding identity trajectories is the larger web of activities that frame an actor network. Along a given trajectory, individuals participate in multiple social contexts, in which they possess only partial understandings and influence over the larger social practice (Dreier, 1999). Social contexts are not free-floating, but are interrelated with other social

contexts, making the heterogeneous nature of the larger social structure more complex. Because individuals are engaged in multiple social practices, they are forced to reflect upon the various ways in which they participate in different contexts, and this reflective action causes the individual to “gradually configure a particular subjective composition to the way they feel located in the world” (p. 21). Neither the network nor individual actors in relation to the network are static. Identity trajectories, then, within a network are not seen as a static concept either. It is through the repeated activities within a network that individuals take up identities that evolve if they remain engaged with activities in a network of power. For example a first year student within an MBA program has a trajectory in which they soon become a second year MBA student and finally a business practitioner and a future business leader. The patterned evolution of identity within a stable identity trajectory of a network can be observed (Polman & Miller, 2010). Less understood is how new networks form and how new identity trajectories within current networks are created (O’Connor & Allen, 2011). Situated in the field of learning sciences, in order to organize for more equitable social futures within communities, it is crucial for the field to understand how networks of power evolve to include new kinds of identity trajectories for participants.

Unstable and Changing Social Practices

Social practice theorists have paid less attention to developing accounts of learning in situations in which these relations are in flux, where learning and identity trajectories have not yet been stabilized (O’Connor & Allen, 2011).

Recognizing this gap in our understanding, Holland et al (2008) argue that the study

of social movements, where groups of people are attempting to change the structures that constrain and afford their actions, can provide insight into the processes of learning involved in collectively organizing and imagining social futures. Social movements are assemblies of persons, contested ideas, material resources, and practices located in local interactions and in multiple and changing contexts organized around societal changes (Latour 1979, 1981; Nespor 1994, 1997). Building networks is a process of organizing collective efforts to produce new kinds of valued knowledge and develop identities through limiting or expanding trajectories of practice. As a researcher, I am interested in exploring methodologies that enable me to observe the process of building new identity trajectories, which requires that I follow students across locations as they negotiate multiple settings and seek to be acknowledged within a changing network. This research may also help network builders create learning environments that account for negotiating identities across locations over time.

The theoretical frame for this work is situated within the learning sciences research focused on organizing processes involved in learning. Research on face-to-face interactions in learning contexts have been highly effective in displaying how people work together to organize learning contexts, and how consequentiality of performances in those contexts is negotiated (McDermott, 1993; Mehan, 1979; Michaels, 1981; Stevens, 2010). However, as Wortham (2005) has argued, this interactional tradition has tended to pay less attention to how consequentiality is organized “beyond the speech event,” with the result that such broader organizing processes are less understood as a process of learning. Other approaches, for

example from cultural psychology, anthropology, and related fields, have attended to the location of interactional processes within broader systems (Lave and Wenger, 1991; Nespor, 1994; Rogoff et al., 2003). Much of this work, though, has tended to assume the stability of these broader contexts, assuming as well that the relevant “knowledgeable practices” (Lave and Wenger, 1991) will themselves be relatively stable and readily recognizable. Other work has aimed to overcome this latter limitation by focusing on practices or activity systems that are overtly undergoing change, either through researchers’ active intervention (Engeström and Sannino, 2010; Gutiérrez and Vossoughi, 2010) or because participants in the activity are themselves attempting to reorganize social relations (Holland, 2003; Holland and Lave, 2001; O’Connor and Allen, 2010). These latter approaches offer a valuable strategy for understanding the contingent organizing of consequential learning.

Emerging social practices aimed at changing the status quo offer an important site for research on learning, not least because they are both highly complex (Yamagata-Lynch, 2010), situated as they are at the boundaries of many existing social systems, and also overtly aimed toward social transformation (Stetsenko, 2008). At the same time, these very strengths result in dilemmas for researchers, in that the conditions within which “learning” will be recognized as such have not yet been fully stabilized, and are subject to ongoing negotiation and even contestation as various participants within and outside the movement attempt to frame the goals and outcomes of the movement (Benford and Snow, 2000; Holland, 2003). This research on organizing in order to change business practices is centered within a university club in the western United States and adds to this latter

tradition, focusing attention on dilemmas involved in understanding how learning is organized across space and time to result in valued futures for those involved in this network.

Examining Networks in Practice

In this section I layout the key analytic tools, aligned with my conceptual framework, that I will use to put the spatial and temporal aspects of learning to use in my analysis. The roles and responsibilities we can take on within a given network of activity change as we learn and become recognized by others. Furthermore, as network actors move across locations over time they learn and change positions within the network. In order to see the network of practices that inform and often direct learning, I will study face-to-face interaction and the use of mediational tools in and across settings. I will draw on a variety of strategies and techniques from Interaction Analysis (Jordan and Henderson, 1995), sociolinguistics (Goffman, 1974, 1981; Goodwin C., Goodwin M., 1996), and sociocultural analyses of mediated action (Cole, 1996). In the following section, I will focus on three particular tools that will be useful for my analysis of learning in the growing actor network of sustainable business.

Part of learning and engaging in a network of activity requires participants to understand the language, social cues, and rules of interaction in order to move across locations and be acknowledged for their ideas and their expertise. To see expert identities emerge, we must follow people and how they position themselves across time and various locations within the distributed network. Erickson (2006) created a methodological tool to see how people performed social identities through

social interaction and in doing so positioned themselves and others. In the contentious struggle to be acknowledged as an expert in the world of business people create their identities through the articulation of problems and use of representational productions and other mediational tools. The study design is a multi-sited ethnography where I follow a group of MBA students who self-select into the Net Impact club focused on creating environmental and social change through the tools of business. As students navigate a network of business students, industry professionals, and academic advisors, they are learning how to engage in conversations and become certain types of business professionals through their social interactions. Some of the conceptual tools that I plan to use in combination with others to trace ideas and dispositions across sites include: participation frameworks and footing (Goffman, 1981), boundary objects (Star, 1995), and indexicality (Bucholtz & Hall, 2005).

Face-to-face interaction where discourse is produced is a rich source of data for this study on learning and identity formation (Erickson, 2006). Interviews as well as participant observations are places where participants take stances or align themselves with and against other participants in the course of interaction (Goffman, 1981). These stances and alliances that emerge through interaction are what Goffman (1981) calls footing. I will use footing as an analytical tool to see how people vie for recognition within the changing world business. These discursive moves where participants take stances or align themselves with or against others can reveal attributes of identity, which are made salient through social interaction. Identities within the Net Impact network are constantly negotiated and changing as

participants gather more information about business and sustainable business practices. Furthermore only certain aspects of a persons' identity become salient in any given social interaction. The ways in which participants use footing to position themselves within conversations can reveal how they make sense of new ideas as they relate to the larger network of activity in which they live there lives.

An example of the ways in which footing within face-to-face interactions became important for learning and identity can be seen in an early observation of a first year business school student interacts with her business and society instructor. As they discussed the merits of Walmart over lunch in the crowded conference cafeteria, members of the same network positioned themselves vis-à-vis the corporation differently. The instructor mentioned that he was becoming more convinced that Walmart "was not all bad" each time they made choices to consider their environmental footprint. The first year student entered the conversation by explaining that she was from a small town. This discursive move opened up her position on Walmart. From the perspective of a person who had just revealed herself to be from a small town, Emma discussed how Walmart had put several local companies out of business in her town. Emma aligned herself with the local companies from her small town and for the moment this position became a salient lens through which she negotiated her point of view within the conversation. Thus participants took stances on a corporation within the network by calling on values made salient as the conversation went on. For the instructor, the environmental footprint became the metric of evaluation and for Emma the loss of small town businesses became the metric of evaluation.

The contested nature of learning and identity formation within a network can be seen in local speech events. This can also be seen as people construct and negotiate spaces. In order to attend to time and activity “beyond the speech event” I will see how people position one another and index the past, future, other places, and identities over time. Wortham (2007) explains that to understand learning and identity in the social negotiations where people vie for recognition and power we must look beyond single interactions. He argues that researchers studying identity must attend to “more widely circulating categories and practices”, and also describe how identities are contextualized and sometimes transformed over time (Wortham, 2007). The goal of social action over time may change as identities and practices shift. Further, agents may have more than one goal in any social interaction (Polman, 2006). Thus, how people index and position over time may afford insight into the way identity and identity trajectories shift with in an unstable network of activity.

Local interactions within a network imply movement of identity, social position, and knowledge across location and time. To “see” this movement beyond the speech event, I will attend to the how actors in the network create, use, and move representational productions across networks. The movement of ideas within networks can be made visible as we follow representational productions across sites. In order to gain some analytical specificity, I will think of representational productions as boundary objects. Star (1989) defines boundary objects as an analytic concept for objects “which both inhabit several intersecting social worlds... and satisfy the informal requirements of each of them” (p. 393). In the formation of

a network where claims to different expertise and value systems may arise, understanding the boundary objects that physically move across locations will help to make sense of the how people are “developing and maintaining coherence across intersecting social worlds” (p. 393). Although not all tools are boundary objects, this analytic tool will provide another method for understanding how information travels, how knowledge claims become tangible and are contested within a network.

This study is an exploration of the ways in which learning is guided and constrained by the trajectories of our imaginations, which are deeply rooted in our everyday lived experiences. The tensions that create conflict are key places to understand how learning is connected to our identities, which are, in part, shaped by powerful institutions (McDermott, 1995). Learning in a classroom has become so routine that we forget to separate out social conventions that demarcate learning from learning that is made consequential and holds the potential to shift practices toward valued social futures (Scribner & Cole, 1973; Gutierrez, 2009; O'Connor & Penuel, 2010). These contentious environments where the answers are not precisely in place and knowledge is actively being constructed are rich sites for studying consequential learning through social negotiations. The conceptual frame that is woven throughout my dissertation is about learning as a process of connecting ideas, people, and tools into spaces, which requires a complex organization of knowledge and social relations extending beyond classrooms and face-to-face interactions in schools. By looking at symbolic contexts of meaning through ethnographic research, face-to-face interaction, and the role of mediational

tools in linking and negotiating meanings across contexts, I will explore how people learn and identify over time and across settings.

Chapter 2

Literature Review

Overview

There have been several exemplary studies on learning in business settings (Michel & Wortham, 2009; Wenger, 1998; Nespor, 1994), but few have focused on learning business fundamentals in a changing world of business. My study is designed to address the ways in which people organize knowledge and change business practices in pursuit of more socially and environmentally sustainable futures across time and distances. In this section, I will highlight studies that examine how people learn and form identities in business. Next, I review literature on calls for change in business. Then, I explore how other scholars account for how knowledge and identity move through distributed networks of changing expertise in the fields of scientific practice, magic, and museum curation. Finally I turn my attention to the study of learning and identity within the changing practices of business where social futures are unstable and especially susceptible to change.

Knowledge, learning, and identity formation in business

Several studies have explored how people learn and form identities in business settings. I focused the literature review on scholarship that explored learning in business through the lens of social practice perspective on learning and identity. This literature theorized learning within business as a socially organized activity. Exemplar works include a study of learning and identity within an insurance claims processing firm (Wenger, 1998), a comparative study of students navigating the networks of undergraduate physics and management programs

(Nespor, 1994), and a comparative study of how bankers learn to approach problem solving in two different investment banks (Michel & Wortham, 2009).

Wenger (1998) studied how workers within an insurance claims office learn to perform their jobs and become proficient workers within a community of practice. Situated in the community of insurance claims workers, Wenger attended to how learning is influenced by the boundaries between communities of practice. The notion of boundaries between communities suggested that claims processors take up new practices and learn the business of insurance claims through their work in the office as well as their connections to other communities. Specifically, people at the claims processing office changed practices based on formal training at the office, work with more experienced co-workers, and experiences from other places. Activities in one context extend out into other arenas of our lives and are called upon in order to make sense of new practices (Wenger, 1998; Dreier, 2008). Wenger (1998) argued that connections to other communities of practice are more than “information flows” (p. 74), they are shared practices that lead to increased levels of participation “that always coexist and shape each other” (Wenger, 1998, p. 131). Through the discussion of the boundaries of communities of practice, Wenger connected learning and sense making in one place to ideas that come from other areas of their lives.

Wenger studied learning within the claims processing firm, but did not account for how the firm as a whole might evolve. The study attended to individual knowledge practices in the local office building (the site of his research), but did not follow participants in the study across locations. The way in which workers are tied

to other communities of practice and learn through these everyday lived experiences remain a static abstraction in the study. In part, these are limitations of the study design and thus the study can only point to the ways in which people move across space and take up different roles and change practices or identities based on their experiences in different communities (Eisenhart, 2001).

Nevertheless, the study discussed the importance of ties between communities and describes these ties as shared historical roots, shared belonging in institution, shared artifacts, shared beliefs in a cause, or shared styles or discourses. This work pointed to learning and identity formation in the context of work and placed communities of practice within a larger constellation of connected communities. Thus Wenger (1998) situated the bounded community of an insurance claims office within a larger network of communities. In doing so, he challenged the notions that learning within a community can be set apart from other places and networks of activities.

The ways in which learning and identity are tied to other places and times was focused on more explicitly in Nespor's (1994) work on learning and identity trajectories in engineering and management education. The study explored how students are moved through space and time toward becoming practitioners in their respective fields. Nespor (1994) used representational and material productions to theorize the ways in which knowledge is produced and embodied in order to move people along trajectories of practice within disciplines. By attending to the movement of productions across places Nespor explored how students in management became part of corporate life. Even more fundamental to his argument

about learning and identity formation in management school, Nespor (1994) suggested that gaining access to new positions within the network required students to become representational productions that were recognizable in other parts of the network. For example students wore suits to interviews, prepared answers to interview questions according to norms within the network, and produced behavior in order to become acknowledged within the network. Through these exercises students learned to consume and produce the symbols and material representations of the network in order to gain the ability to move further into the network of management.

In his work, Nespor (1994) theorized the students of management and the ideas within management to be highly moveable across time and place, but the network of management was theorized as relatively structured and static. In their comparative study of two investment banks, Michel & Wortham (2009) addressed this issue by showing distinct variation in identity based on organization level practices. The empirical evidence from the study revealed major variation between the two firms in the same industry. This finding showed the variation and complexity within business contexts that reveals flaws in Nespor's (1994) conception of networks as static environments where students had very little agency and were obsequiously approaching the confining chains of corporate life. In Michel & Wortham's (2009) work, the variation in identity and learning across the two companies in the same industry revealed that bankers' identities were affected by their work in the firm and not fully formed within the school setting.

Furthermore, the bankers' views about their identities as experts varied by firm and

this identity tangibly affected the way they approached and solved problems at work. The variation in approaches led to divergent practices and outcomes for the firms. These findings have implications for how learning and context are conceived within business. In Michel & Wortham's (2009) study, the expectations of participants within a firm shifted the activity and overall performance of the firms in different ways. Participants in one firm took up identities as experts within an area of investment (for example healthcare or technology). This expert identity rendered bankers less tolerant of uncertainty and narrowed the scope of their decision-making practices. By contrast participants in the other firm did not specialize within an investment segment and bankers made fewer assumptions about the nature of an investment and maintained a larger scope of possible uncertainty for investments. Over the course of the study the firm where bankers did not see themselves as experts made investments that performed better in the market over time. Learning and identity varied across firms and these variations, Michel and Wortham (2009) argue, led to different approaches to problem solving.

Nespor (1994) followed representational productions through business school and limits the scope of his study to the students' experiences within the context of engineering and management classes. Corporate life, which was the other end of the network, was theorized as a static network with well-traveled career paths and similar identities across corporations. This study design choice positioned business school students as increasingly less agentic (p. 127). The trajectories of business school students were assumed to be static. Without empirically observing any interaction between different sites within the same management network, we

cannot see the variation between how the management school categorizes business practices and how business practitioners experience variation across firms. Multi-sited ethnographies can empirically account for the juxtaposition of locations within the network and address the variation in learning and people move across locations (Marcus, 1995; Eisenhart, 2001). In my study I will account for how learning and identity shift as I follow business students across contexts as they seek to shift the network of business as they also seek to secure a place within the changing network of business.

In each case above, learning in business was studied as enmeshed with identity formation and trajectories of movement within different business settings. However, in each study learning was empirically studied within one setting. And in each study business practices remained static and knowledge production was not accounted for. These studies of businesses have not accounted for the possibility that business practices and the values of business practitioners are changing across settings. In the next section of the literature review, I make the case the there is a movement afoot to change the way business is conducted. This movement requires us to look at how people identify within business differently. After a brief history of sustainable business ethics, I will review a few exemplary studies that study how people become experts in contentious and unstable contexts. These studies view a network of social practice as an ongoing negotiation for recognition within a complex network of practice. The push to change business practices implies the creation of a new kind of valued business expertise and new possible career trajectories within business. I will describe the argument that suggests that a change

from within business is possible and then review social practice research that empirically account for learning in distributed networks.

Sustainable business movement

There is a movement both inside and outside of business to change the role of business within society. Understanding learning within business schools must theorize students as agents and possibly agents of change rather than simply representational productions of corporate America. The literature that calls for changes in the way business is positioned within society.

The ways in which people are learning or share information about sustainability across time and distances are shaping new kinds of practices within business. Incorporating more sustainable practices within business relies on a confluence of expertise in emerging technologies, finance, economics, and environmental sciences. Additionally changing consumer behavior and social values requires an understanding of how people learn in these innovative spaces. After outlining a short history of Corporate Social Responsibility research in the first chapter, in this chapter I present a short history of the ideas that are shaping the calls to change business practices from economic and environmental perspective. These two histories overlap. It is the overlapping of calls to change business practices that the network of sustainable business can best be understood.

In 1972, a group from MIT Sloan School of Business published *Limits to Growth*. The paper considered the long-term consequences of resource consumption on the planet and human societies. The team created a non-linear economic model that predicted the world would face physical limits to growth within the next

hundred years (Meadows et al, 1999). Using available information on population growth, resource consumption, food production, and pollution, they found that if societies continued the same patterns of consumption then major natural resource shortages that would bring major industries to a halt (Hawken et al, 1999).

Although the paper was widely contested at the time and many of their predictions did not come to pass (World Oil, 1997), the report outlined recommendations for transitioning the economy to using resources more productively (Meadows et al., 1972). The model was critiqued extensively, but successfully began a conversation about the ways in which economies would have to adapt to diminishing resources.

After the publication of *Limits to Growth*, academic research on sustainability and the environment continued throughout the 1980s and 1990s. In these attempts to create more sustainable practices within society, some environmentalists turned from protesting business practices to working with businesses in order to think about natural resources differently. And importantly, groups that were once pitted against one another (i.e. business people and environmentalist) were now in conversations about how to make businesses more sustainable and at the same time remain profitable. In 1999, the ideas proffered in *Natural Capitalism* ignited a frenzy of support to revolutionize business practices. The authors compiled academic research from various fields in order to argue for major overhauls in the way we use resources. The book argues that creating more sustainable industries is not a moral imperative, but rather a necessary aspect of conducting business in the future (p. 322). Rather than continuing to create value through the industrial model of extraction, production, and distribution—a new and more sustainable economy will

have to value and measure natural resources as an important form of capital. As the title suggests, Natural Capital calls for changes in how we use resources to produce goods, create systems to reduce waste, promote long- and short-term incentives for companies to use resources more efficiently, and invest in systems that preserve natural resources. All of the recommendations outlined in the book have major implications for business practices. In fact the authors call on businesses to lead the way in reaching across industries and “solicit cooperation from competitors, critics, and perceived adversaries alike” (Hawken, P. et al, 1999). The book was not the first innovation, but a collection of research projects and lived examples where the turn toward more sustainable use of resources was already taking place.

Since Natural Capital was published several changes have taken place within corporate life. For example, *One Report* refers to an emerging trend in business taking place throughout the world where companies are going beyond separate reports for financial and nonfinancial (e.g., corporate social responsibility and/or sustainability) results and integrating both into a single integrated report. Providing best practice examples from companies around the world, *One Report* shows how integrated reporting adds tremendous value to the company and all of its stakeholders, including shareholders, and also ultimately contributes to a sustainable society.” As mentioned above, Corporate Social Responsibility departments within corporations have become commonplace and often create initiatives to incrementally improve efficiencies within businesses. Although these efforts are encouraging, Natural Capital calls for businesses to fundamentally reevaluate their roles and responsibilities within society.

The ways of doing business were incrementally changing in relation to sustainability. What remains less understood are the ways in which people are learning across the world to value sustainability and change their behaviors as business practitioners, consumers, and citizens. Orr (2004) discussed the ways in which institutions of higher education are adapting to new calls to learn and rethink society's relationship to the environment. In particular, Orr catalogs the trials and tribulations of building a new environmental center at Oberlin College. Although this is a compelling piece of work underscoring the realities of fundraising, collaborating, and political negotiation to bring new groups of people together under the same roof to begin rethinking the environment and education, it does not detail the ways in which people see, think, reflect, and act in order to start making new decisions and changing behaviors toward sustainability. In addition to Orr's work, Senge (2000) has written extensively on the need for organizations to shift their practices in order to adapt to the changing world of business. By decentralizing the role of leadership in organizations, Senge (2000) suggested that businesses could enhance the ability of employees to work productively toward sustainable goals. There is a vast literature of conceptual pieces within the field of business ethics making suggestions about what corporations are doing or should be doing to address social and environmental sustainability (Porter & Kramer, 2011). However, there is very little research on understanding how these new ideas are being combined with the disciplinary practices in business to address the changing economic and environmental challenges of our time.

Studying learning in distributed networks

The broad swath of literature on sustainability and business attend to calls for change within business and major systems that will need to change in order to move away from fossil fuels, change food production and consumption practices, or address water scarcity issues. However, very little attention has been paid to how people learn, change practices, and gain power within a contentious and distributed network of activities that inform current environmental practices. To see how people learn and negotiate these tensions across distributed networks, we must attend to the way in which knowledge is produced and expertise is cultivated in a distributed network. In order to take part in the knowledge production within an unstable and distributed network, people must be recognized and trusted as a capable practitioner within the changing world of business. Although no one has done research on this topic within the field of sustainable business, several scholars have conducted studies on how knowledge is cultivated and expertise is developed in other distributed networks of practice. Latour (1979), Leander (2003), O'Connor & Allen (2010), and Jones all explore learning and knowledge production in distributed networks of practice. After an introduction to these literature, I focus on Jones (2011) as an exemplar multi-sited ethnography of becoming an expert in a distributed network.

Latour (1979) studied laboratories as part of the social structure that supports the making of scientific facts. His work made visible the intricate network of social practices that necessarily support science and technology research. Specifically, Latour studied how scientific facts are abstracted from their original

context and made mobile. Through this seminal study, Latour (1979) unhinged knowledge as a fixed, factual, and detached from a context and showed how the production of knowledge always requires a material context and networks of social practices. These networks create productions that can be mobilized in order to make action at a distance possible. The end point of scientific exercise is like other social practices, scientists seek to create a network to support the work of science. Distributed actor networks have been used to research other social practices. For example Leander (2006) followed adolescence as they traversed online and offline spaces and explore multiple meanings of texts. Leander made visible the social practices of a group and uncovered how meaning was made across locations in order to negotiate multiple discourses in multiple locations. My study will also look at how people negotiate language across contexts in order to build a network and carve out new and valued expertise within that network. O'Connor and Allen (2010) explore the development of a network that creates valued social futures for youth who practice slam poetry. All of these projects supported the view that learning involves identity formation, but in order for learning and identity to be recognized as powerful and consequential, networks must be built to recognize people as members of a group. In order to study how knowledge and practices circulate in social networks, we must follow people through the action centered on sharing ideas and information. Once ideas and practices become mobile, people can become experts with regards to specific knowledge practices. To understand how people became expert in the practice of performing magic, Jones (2011) followed magicians through local magic clubs, supermarkets, street performances, and online forums.

He conceptualized learning magic as an effort that can be based on individual drive and effort, but inextricably connected to a culture of magic. Using Lave & Wenger (1991) apprenticeship model to understand activity in local settings, Jones (2011) connects situated activity to distributed set of practices that move beyond one site of activity. He defines the culture of magic is “a familiarity with and an appreciation of the artistic and technical heritage of conjuring” (Jones, 2011, p. 74). The study used an historical and ethnographic lens to attend to how expertise was cultivated in a changing world of magic. As Jones learned the art of magic, he also conducted interviews and watched magicians as they shared and concealed magic tricks. Based on the complex social dynamics meant to both promote the spread of magical expertise and protect the secrets from becoming commonplace, Jones made explicit the ways in which people learned through this distributed network of magic. To examine these social practices, Jones looked across settings to find out how people became experts in a field that relies on keeping secrets.

Gaining expertise was not just about acquiring skills. In addition to acquiring tricks or skills, Jones explicates how magicians learned to *become* magical. Becoming magical was in part due to knowing magic tricks and in part due to “magicians’ overall strategy of self-presentation” which enacts personas that align with cultural expectations of what a magician should be (Jones, 2011, p. 123). The cultural expectations of magicians are historically constructed and play into social constructions such that knowing the trick is not enough. Like any other social practice, the presentation of self must align with the social expectations of the community in order to gain acknowledgement as knowledgeable. In the magic

world, this means that a magician's self-presentation must engender the trust and imagination of the crowd in order to perform magic successfully. The famous saying among magicians that "presentation is more important than technique" is a reminder that the technique of performing a trick is only one dimension of what makes magic powerful (Jones, 2011, p. 124). Other dimensions of presentation that people negotiated within the network of magicians were social constructions of race, gender, and heterosexuality. In this case, the network of practice for magicians relies upon presentations of self that are salient historically and connected to larger social constructions of race, class, sexual orientation, and gender that pervade identity formation in other arenas of social life.

The changing forms of practice in the magician community happened in multiple sites within a loosely held community of practitioners. Changes in knowledge and identity formation within magicians' communities were informed by networks of social practices that allowed for the exchange of secrets between some participants and not others. Thus expertise became a coveted combination of magical skills and dispositions. These skills and dispositions were portable and identifiable so that magicians learned across sites. Jones (2011) followed magicians into various enclaves of magical performance and described the moves that various magicians used to stake out their identity within the magical world. Learning then became a product of a complex social network of participants that were both protective of their position within the network of magicians' and protective of the larger reputation of the magicians' as a field of experts. Jones shows how magicians have to protect the standards of conduct and appearances that define the group

while allowing for expression and innovation within the world of magic (Goffman, 1969). The tension within the network is made salient as magicians practice new forms of magic. Where the old form of magic was becoming less popular and not well supported by the state, the contemporary magic is en vogue. However, a magician from the old caste expressed real concern that the new magic carried with it a pretention that would both change the magic and the audience reaction. The fracture in magical style from playful wonderment to serious art changes both the audience as well as the magician. To be magical, then, is at risk of changing. At risk with the growing popularity of new magic is the identity of a cultural group. To capture the variation of identities and the changing practices of magicians, Jones explored magical practices instantiated in multiple locations and in many different forms. Only then was he able to explore the proliferation of magic as a social and cultural practice where learning was often an unintended consequence driven by a passion for the mysteries of conjuring magic.

Learning that materializes outside of traditional classroom setting is an important site for conducting research on how people adapt, improvise, and change practices in relation to their everyday lives. When learning is considered the social organization of knowledge, researchers must attend to how artifacts are used, negotiated, and produced to change the conversation and trajectories of activity across networks. Star (1989) draws explicit attention to this point in her analysis of the complex organization of knowledge production within the work of museum curation. By paying close attention to the productions of museum artifacts, Star makes visible how people and objects afford and constrain the social organization

across a distributed network of amateur and professional ecologists. Star connected this expansive network through her study of how information was “disciplined” and boundary objects were created to facilitate communication between worlds. These studies trace people and productions over time to make sense of how people learn and organize the world across locations.

My study builds on and extends prior research in business by accounting for the ways in which people seek to change business practices. Like Nespor (1994), I use actor network theory to explore how business school students adapt to current practices within business. However, I extend his work by following students across locations as some students attempt to organize in order to change business practices. As they negotiate the tensions within the network of business school, they learn and adjust their trajectories to be acknowledged by the network that some of them also seek to change.

Chapter 3

Research Design

This framework provides the theoretical grounding to explore the interdependence of identities and learning across multiple locations in which business school students take part. Designs for learning environments are informed by our understanding of what robust learning is and how it occurs in a distributed network over time. With a new framework that accounts for learning and identity formation across locations and with digital technology, we might design learning environments differently. In particular, this line of research has the potential to design for sparking innovation around more socially equitable and environmentally sustainable futures within society. This study seeks to understand how learning and identity are shaped and reinforced by exploring the boundaries between informal and formal learning environments in which business school students participate. Identity trajectories are formed and reinforced through networks loosely organized through distributed activities in everyday life as we interact with various institutions and activity systems.

Background

Research in the field of education is often focused on formal learning settings where there are stated outcomes in the form of stated knowledge and skills acquired through a method of teaching and a set of curricular elements. Students are ushered through disciplines with specific networks of activities that lead to a stable set of skills directed towards disciplinary expertise. The multiple calls for business reform, unprecedented instability in financial markets, environmental degradation

and depletion of natural resources, and technological innovations leads to unstable futures within business. Business as usual is changing. Students and business professionals alike are organizing, learning, and adapting to the changing environment of business. This unstable environment is at the bleeding edge of innovations within society that could lead to substantial shifts within society. Traditional disciplines within academia combine and reorganize in this loosely organized network of university students, corporate professionals, academics, and social entrepreneurs. They are engaged in a social practice that uses digital technology to communicate and problem solve. The traditional disciplinary skills and language patterns are also utilized and shape official learning spaces. However, there are also less visible networks at play that aid in the organization of new career pathways and means of conducting business.

Setting

The study is focused on following graduate school students at the local university who have self-selected into the Net Impact network. The university is a research one institution situated in a college town of 100,000 people in the mountain west region. The surrounding town is a popular location for technology and environmental start-ups. The graduate student population in the business school comes from liberal arts colleges, major universities from around the country and internationally, a few ivy league schools, and a few city colleges. Their majors range from Business Administration, Music, Economics, Engineering, Biology, to English. These budding business professionals are highly mobile and have been trained across a variety of undergraduate departments and have experience in

variety of industries. For example the MBA students graduating in 2012 and 2013 are former concert pianists, aerospace engineers, clothing designers, journalists, and K-12 educators. The graduate school ranked in the top 25 schools in the nation for “leading the way in providing students with skills that are becoming increasingly valuable to businesses' bottom lines, including searching for innovative technologies and entrepreneurship opportunities around climate change, water scarcity, labor issues and poverty alleviation” (Aspen Institute, 2011). The school is also known for a strong entrepreneurship program with cross discipline initiatives with the law school.

Net Impact Description

Net Impact (NI) is a global member supported network started by MBAs with the mission of using business to change the world. Founded in 1993, Net Impact has grown to include 20,000 members who are “dedicated to improving the world through business.” At the local University there is a thriving local chapter of Net Impact that is run by business school students, for business school students. Members of the Net Impact club at the local university take part in organizing events such as case competitions, guest lectures, connect project in classes to the Net Impact goals, etc. They practice leadership skills, join non-profit boards, and find ways to volunteer their time in the community. And importantly, members of Net Impact use their shared interests and values to find internships and jobs. NI is not part of the formal business school curriculum, and yet, students make time, despite busy schedules, to attend talks and meetings, start offshoot clubs, and find ways to connect business school classes to their social missions. The network that has been

created is student run, interest driven, and oriented towards negotiating new career pathways in business.

This is a distributed network of business school students around the world organizing to change the business world in which they aspire to work. Activities associated with NI are organized to create pathways for MBA students to consider how they might become social change agents in the local community and beyond. NI is an informal network that brings people together because of a shared interest in improving the world through business. Net Impact has a strong national network and a growing international presence. As a site for learning, the connection to national and international business leaders provides ties that span great spatial distances. People with varying levels of expertise interact in local chapters and across distant locations to become connected through their shared interests.

This larger network exposes students to people and opportunities outside of their local networks. The larger network provides an imagined career pathway for people to see the possibility of both making a living while creating positive changes in the world. It is not clear that this pathway is large enough to support the ambitions and imaginations of all NI members who wish to live out this ideal. Nor is it clear the extent to which NI members are willing to make financial sacrifices for this ideal. However, the existence of this imagination about future careers and the intersection with local activity is the phenomenon at the center of this study. In this movement, where people increasingly believe that they can do business as a means to create positive change in the world, the new notion of doing business in order to do good in the world is not replacing the old notion of business. Rather allowing for

multiple identity pathways to exist within the same discipline fostered by simultaneously allowing for two previously dichotomies identities—the businesspeople and do-gooders. It is this new space, this hybrid space, that a new identities and thus trajectories are being created. It is in this space and through a learning sciences perspective that I situate my study.

The local chapter of Net Impact offers their members access to funding, academic resources, business leaders, and community groups. NI is recognized as an official club within the university. With this status, NI receives access to a portion of the required students fees to budget activities for the year. There are no grades, degrees, or certificates associated with the group and no requirements for participation.

There is a thriving chapter of NI run by business school students at the local university. Members of the club take part in and/or organize events such as case competitions, guest lectures, and class projects that organize around business practices that have a positive environmental or social impact within society. They run student meetings and sit on non-profit boards, and make connections based on shared interests/values to find internships and jobs. Members in the Net Impact network gain exposure to a range of businesses and non-profits using the tools of business to create changes within society. The club is also recognized by the greater university system by connecting with a faculty advisor who attends meetings and assists students with interesting projects. The club is actively working through tensions associated with creating sustainable changes within society and at the same time securing sustainable financial futures for organizations and individuals as

they endeavor to create change. Ultimately, people within the club are working out the trajectory of their futures in an unstable economy in which we all participate.

Participation in the distributed network of Net Impact

This multi-sited study is uniquely suited to explore how learning can be organized in a decentralized network that seeks to reform business practices. The unit of analysis is the activity system of the local university Net Impact club. I will follow Net Impact participants as they move through time and spaces in connection with Net Impact activities or their activities in connection to a shared set of values. From initial pilot research, Net Impact members talk about a set of values that they share with their NI peers. In a recent email communication with a NI member, I related my interest in understanding how people shift their identities and behaviors in relation to business practices aimed towards creating positive social and environmental impact. In response, the MBA student and Net Impact member wrote:

Adam: It is amazing how many people in our program really are shifting what they were doing and I think more and more people of our generation are looking for much more than money from their job and will often times sacrifice a chunk of their paycheck to feel like their job has a positive social or environmental impact.

This is one of many examples where students discuss their motivations for going back to school for a degree in business in order to affect positive social and/or environmental change. In addition to students, many of the NI sponsored speakers spoke of business as a means of achieving such impact at the expense of a lower paycheck. At the local level, students are exploring possible futures through informal networks that are connected to the business school, to the national

network of people with shared interests, and to social groups that identify with doing business for the purposes of creating positive social impact.

Methods

The purpose of this multi-sited ethnography is to see how participation in a student-run club focused around sustainability affects the development of MBA students' knowledge, skills, and identities as business professionals. And importantly, how do participants learn as part of the NI network? Learning occurs across contexts in distributed networks of social practice (Nespor, 1997; Eisenhart, 2001; Jurow, 2009). As such, this study is designed to see a group of MBA students navigate business school and at the same time affect changes in the way business is conducted. I am centrally interested in how members move through the sustainable business network embedded in other social structures as they seek to change the business world in which they are about to enter.

Conceptually, I have defined learning as interaction with people and things in the immediate environment as well as things spatially and temporally removed. However, the methods that support this idea are always imperfect. To understand student's motivation to learn within local settings we must always have one eye on the distant places from which they piece together the world and their place within it. Methodologically, the challenge is to observe how students participate as they move through different locations within a distributed network. Nespor (1994) suggests that researchers follow people, material and representational products, and kinds of activities as they navigate multiple networks. These productions are part of the social practices that define the network and demonstrate how students

draw on multiple sources of influence to fashion their own responses to the world of sustainable business.

One key to seeing learning in networks relies on understanding the material and representational productions that reoccur in and across settings. Material productions are ways of socially constructing space. Building design, location of activity within a city, and room arrangements are all examples of material representations. Material productions can be thought of as immobile and are used to set boundaries for activities (Nespor, 1994). Representational productions are objects that can move across space and through a network. Representational production can be seen as more mobile and are essential to crossing space-time thresholds and mobilizing network practices and practitioners (Nespor, 1994). Representational productions are used to mobilize knowledge across space and time. Symbols, language, technological tools, books, and business cards are all examples of representational productions.

As I trace productions across sites, I am try to figure out “what the important symbols are, how they are used, how they are being experienced, where they come from, what other phenomena they are connected to, and what they imply” (Eisenhart, 2001). For example, in the case of a contested word like sustainability, I am interested in understanding how it is being contested and negotiated in the context of the MBA program and in other places in the students’ lives (Eisenhart, 2001). In addition, I will pay close attention to the use of technology and the way it informs and facilitates activity and learning within the network. For example, in the NI club there is both an official NI page, but students find events and share articles

pertaining to sustainable business through a NI facebook page. These representations are part of (re)producing the network of sustainable business in the local NI club and building expertise in the emerging field of sustainable business.

In order to observe how activities are connected to the immediate environments as well as spatially and temporally removed and unstable environments, we must pay close attention to how people, places, and events become mobile. In a sense, we must see how expertise is produced and/or recognized across locations through networked activities. As such, systems of representation are central to following technologies of power through networks. Latour (1981) suggests that knowledge becomes mobile and therefore more powerful when a network invents means that render material representations of knowledge:

- (a) *mobile* so they can be brought back;
- (b) *stable* so that they can be moved back and forth without additional distortion, corruption, or decay, and
- (c) *combinable* so that whatever stuff they are made of, they can be cumulated, aggregated, or shuffled. (Latour, p. 223)

I will trace people, representational productions, and ways of valuing across activities and locations. However, within the untenable threads of networks that index into distant places, times, and activities, my focus will be on the activities of the local NI chapter. I will follow students as they mobilize and organize across space and time within the activities of the larger network of NI.

Latour (1981) and Nesper (1994, 1997) focus on material and representational technologies that flow through networks. This focus has been critiqued for deemphasizing the ways in which even newly created knowledge relies on other powerful flows within a network that are “well worn channels of social construction”. For example, we may not see the way that “masculine supremacy or racism or imperialism or class structure” affect the flows of knowledge across networks because the channels through which people communicate are still based on old-boys networks or traditionally elite networks that have been shaped overtime and continue to negotiate actors from non-dominant backgrounds out of the network (Nesper, 1994). I will address this concern in two ways. First, I will focus on one node of a much larger network. By selecting and following men and women as they negotiate the same network over time, I will look for differences in patterns of negotiations through that network based on gender and racial identification. Second, I will code for discourse where social constructions within the network are essentialized. For example, I will look for assumptions about “color blindness” or “gender laden” remarks in order to see if there are discursive patterns that negotiate and organize people and activities based on “enduring cleavages in the social order” (Haraway, 1992). Although not stated in my questions, part of identity formation and expertise within the network of sustainable business may rely on notions of cultural practices of other elite networks that reproduce inequities based on race, class, gender, and/or sexual orientation. As such, I will attend to positioning, footing, presentation of self, and indexing in my analysis of discourse and activities within the network.

With these considerations in mind, I will use a variety of ethnographic fieldwork methods to capture elements of MBA students' activities as part of NI. These include both direct and indirect observational methods paying special attention to productions that reoccur at different times and in different locations in networked activities. Direct observational methods will be used to capture activity as it unfolds. These observational methods include:

- participant observations in NI meetings, supported by written field notes;
- audio-recordings of informal interviews conducted in the course of observations;
- ethnographic interviews with members of the local NI club
- artifact collection of materials that circulate among and were produced by participants as part of NI activities, including copies of electronic documents, such as email messages.

Participant observations ask members to engage in prompted observant participation, in which they allow the researcher to observe and reflect on aspects of their activity. I will use observational methods including traditional ethnographic interviews and participatory observations of student participation in network related activities. I rely on an open-ended form of inquiry where the process cannot be fully determined in advance. However, based on pilot research the focal activities have been selected. The specific activities that I will focus on during the ethnography include: (1) the Internet; (2) Net Impact related events in the Denver-

Boulder metropolitan area; and (3) Net Impact related events outside of Boulder where Boulder-based Net Impact members attend.

Internet

I will analyze new technological tools in use to get a sense of how Net Impact members use Internet sites to organize ideas, events, and activities related to sustainability, innovation, and changing business practices. For example, since the beginning of the data collection period I have used the local NI Facebook page to track events promoted by the local chapter of NI. Once connected with the NI calendar on Facebook, I observed events and meetings, took notes, audio recorded the lectures, asked questions of the speakers, and chatted with NI members before and after events. I will also consider web content that is both static, such as website descriptions of business reform initiatives, and dynamic, such as message boards connected to business and sustainability efforts, including closed networks such as the Facebook page of an organization, authors, or of individual sustainability “celebrities”. I will also look at how students manipulate technology and information in their everyday practices to understanding learning as less bounded notions of learning in traditional classroom settings.

Local Net Impact events

In an effort to understand how business students make sense of changing sustainable business practices in the Denver-Boulder metropolitan area, I will observe events organized or promoted by Net Impact Boulder. The kinds of events I am interested in observing include guest lectures, student-run meetings, case competition related events, and campus wide activities promoted by Net Impact

members. The case competition is an MBA student-organized event where students find a corporate sponsor struggling with a sustainability-related issue. The students write a case related to a real world sustainability issue that the corporation faces, advertise the event nationally to MBA students involved in the NI club, find volunteer judges from various industries related to the issue, and host a two-day case competition where MBA students work in teams of four and compete against other schools to come up with the best solution to the problem presented in the case. The event brings students from around the country into contact with each other and with industry professionals that deal with similar issues within their daily lives. I will focus on NI gathering with and without faculty members, case competition planning meetings, the case competition event, local “brown bag” events with professors, invited guest speakers to sponsored NI events, and curriculum-connected activities related to NI events.

National Net Impact Conference

To understand the kinds and nature of learning that takes place as part of engagement in the Net Impact Network, I observed local Net Impact members as they interacted with the larger actor network by following students through events taking place in other parts of the country. In particular, I followed 5 Net Impact members as they navigated the activities available at the annual Net Impact conference. Of particular interest were the ways in which NI members from my study group navigated the activities and ideas present at the national conference. Where do they choose to go, how to they communicate with other NI members

during the conference, and how do these ideas travel back to local NI activities and into business school classes?

Local Net Impact Meetings

The regular NI events were infrequent and often goal oriented. For example the initial NI meeting of the semester was focused on introducing new students to the program. Other meetings have included reconvening after the NI annual conference and talking with faculty members about sustainability issues in the community. The guest speakers that NI promoted were sponsored entirely by NI funds, co-sponsored with another group on campus, or promoted by NI members without sponsorship. Events were often free and NI member attendance varied widely. All public events were audio recorded and I also took descriptive field notes paying close attention to artifacts that reemerge in the setting. Throughout the year, I conducted interviews with NI members who had varying levels of commitment to the club (some were second year MBA students holding positions of responsibility in the club, some were first year MBA students poised to run for office, and others were tangentially involved). The community and club sponsored events advertised on Facebook often had flyers and other informational advertisements of learning aids. I collected materials from events to use as part of the artifact collection.

Coding and Data Selection

Throughout the 2011-2012 academic year, I collected ethnographic data that included 115 observation hours, 22 interviews, 11 half-day shadow sessions. In order to answer my research questions about the nature of the NI network, how people learned within the network, and identity formation, I coded for uses of

technology; individual and group stances on structural change; definitions of sustainability; indexing distant locations, authority figures, claims about the future; claims about the affordances of business skills; and sense-making practices about sustainable business between students through talk-in-interaction. I operationalized these constructs using methods and insights from interaction analysis (Goffman, 1974), actor network theory (Callon, 1992), and studies of distributed cognition (Hutchins, 1995). Specifically I studied how participants used technology to share and reorganize information across locations, positioned themselves using language to negotiate identities as business experts, and used language and artifacts to index distant locations. Within these larger codes, I looked for patterns of activity that supported the reorganization of material and representational productions within the local business school. Finally, I chose relational portraits of particular people and the sustainable business case based on the density of emerging ideas that portrayed the struggle of learning in an unstable field of practice. The people and objects became central to the study in the first analysis chapter because they represented important aspects of the network and the practice therein.

To triangulate the data I connected patterns that became my findings across interviews, observations, artifacts, and multiple participants within the study. I conducted member checks by presenting data analysis to study participants. To make sense of how people constructed new knowledge and practices in local settings where the infrastructure of knowledge and accompanying practices was unstable, I chose to focus on one meeting that had a density of themes from the data,

and was a unique moment where NI members grappled with each other to better understand their role within the changing world of business. There were other events within the data corpus that could have become the focus of a deep discourse analysis, however this particular meeting had a high concentration of relevant codes, followed a highly active node of network activity, and contained only student conversation from Dovetown (no faculty members or business professionals from the community were present). This provided a unique opportunity to study how business school students were making sense of ideas within the network. My approach to this question was to follow study participants through a number of activities organized through a network of ideas, people, and objects. I privileged participants' mobility and collective sense-making practices to understand how ideas take hold and become consequential. I focus my analysis on the details of talk-in-interaction in one focal meeting that occurred just after the NI Annual Conference. This became a pivotal meeting and the object of closer analysis for four main reasons:

- 1) the meeting took place just after the NI annual conference, which was a highly active episode of movement in the network;
- 2) this was the only meeting that the local NI chapter called into session where they made sense of ideas between each other and not in reaction to an outside speaker;
- 3) three of six students referenced this meeting six months after it occurred to discuss their changing understanding of sustainability or to justify their other activities throughout the year; and

4) the content of conversation made visible the collective sense-making practices of the group.

Once I honed in on this meeting, I looked at the details of talk-in-interaction as participants made sense of their movement across settings through a node of distributed networks of activity (Schegloff, 1992; Star, 1989; Hall, Stevens, Torralba, 2002). Ideas that emerged through these interactions are temporally unfolding processes where participants contribute to the further progression of collectively building ideas (Goodwin). I used a distributed cognition framework to see knowledge creation unfold through talk-in-interaction (Hutchins, 1995, 2010; Hall, Wieckert, & Wright, 2010; Hall & Horn, 2012). I outlined temporally and spatially organized talk that takes place in one central meeting to see how students make sense of activities across locations within a changing field of practice. Following from the work of Hall & Horn (2012), I investigate how talk at multiple temporal scales moved back and forth across activities to make sense of incongruent practices. More specifically, I argue that constructing knowledge and practices requires that actors work back and forth across scales to organize new infrastructures for emerging trajectories of practice.

My subjectivity as a researcher

I graduated from Leeds School of Business Master of Business Administration 2.5 years ago. I was a non-paying member of NI, which means I went to events when I had time and voted for the leaders of the club. I was acquainted with one of the NI co-presidents of the NI chapter prior to my interest in studying the network. Indeed

gaining access to this network of MBA students was simple due to my previous affiliation to the school and the NI organization.

When I set up the design of the study with the social movement research group (Jurow & O'Connor, 2011), and positioned myself as a participant observer within the group. The participants in my study are all MBA students and have college degrees an average of 5 years of work experience. The large majority of the students are white and/or likely to come from middle or upper class families. Some of the families provided financial resources to pay for students' undergraduate work and/or current graduate school studies. The network created for business school students is a potentially powerful network for getting jobs, driving curriculum reform within the business school, and perhaps driving business and government agendas in the future. Often ethnographies study the least powerful members of communities, however this is a study of up and coming elites. Participating in this network is not open to anyone interested in business or sustainability. It is a powerful network with board membership from major corporations as well as esteemed public servants and university professors.

Chapter 4

Producing expertise in an emerging field of practice

Overview

The research questions that I answer in this chapter are: 1) What is the NI network; and 2) how do MBA students who are members of NI produce sustainable business identities through their interactions with the NI network? In order to answer these questions I use case studies to both describe 1) how participants instantiate the NI network in the local setting, and 2) use the network to build identities related to sustainable business expertise. Specifically I argue that the movement across places within the global NI network allowed participants to negotiate new kinds of business expertise at the local setting. Simultaneously, local NI participants leveraged the global reach of the NI network to explore specific aspects of sustainable business that may or may not be privileged in the local NI setting.

In order to study learning in a social movement where practices were distributed across a global network, I followed a group of students from one geographic location as they navigated various contexts to reorganize the local infrastructure of sustainable business practices. In addition to following participants across locations as they worked to make sense of distributed networks of activity, I interviewed students near the beginning and the end of my data collection period in order to create intentional interactions to co-construct their relationship to the sustainable business movement and their activities within the NI network. In this chapter I portray how people learn through interactions within the sustainable

business movement. I describe five agents within the network: 4 NI participants from the local business school and a business case co-constructed by students and business professionals. These agents instantiated the emerging sustainable business practices produced by the local chapter of the NI network.

Rather than considering my analysis a series of case studies with independent actors and identities constructed by a community of practitioners, I created relational portraits of agents that embodied key functions within the network. I explore how various people within the network negotiated multiple identities and worked towards creating new identity trajectories within the world of business. I also explored how a representational production worked to problematize ideas, mobilize participants, and reorganize the network to construct new knowledge within the network. I maintain a kind of symmetry between people, ideas, and representational productions in order to represent the network as a complex assemblage of heterogeneous materials and interactions that constitute networked activity (Law, 1994).

Through these relational portraits, I argue that the global reach of the network is present in the local setting and therefore becomes a powerful place to leverage change in the local setting. Each participant in the local NI chapter relied on the activities and resources of the larger sustainable business network as well as their fellow local participants to make sense of emerging practices and their position within the network of sustainable business practices. For analytical ease, I foregrounded the individual participants within the NI network through a relational portraits of actors within the network. These portraits draw attention to the variety

of practices, available identities, and resources being constructed in local setting. The production of new knowledge and expertise were cognitively distributed across the network of people, tools, and practices that are socially, culturally, and historically organized.

I take the perspective that people learn about accepted disciplinary practices and at the same time organize to change these practices through their everyday activities. Lave and Wenger revealed how learning takes place in local, situated activities. Their empirical evidence to support this claim, however, focused on well-established communities that apprenticed new participants into the stable community practices. Many researchers have appropriated this argument about the situated nature of learning and knowledge in ways that lost the nuance that allowed for learning through partial and less situated participation. These applications of situated learning diminished the possibilities for the creation of new kinds of knowledge and innovative practices that can emerge through the process of learning. I explore learning in a less “situated” model in order to theorize how new forms of knowledge or knowledgeability arose within existing disciplines. I offer empirical evidence to support a notion of learning in distributed networks where practices were not bounded by a spatial location or a single community of practice, rather the boundaries of practice were constantly being negotiated by actors within the network. Indeed students worked across spatial and temporal scales to negotiate new kinds of practices within a relatively stable discipline. Thus learning to become sustainable business activists did not mean abandoning established business practices and business identities altogether. Rather students worked

within current systems and available identities to reorganize the role of sustainability within business. Through these negotiations, they also worked to create new identity trajectories within the world of business.

Creating new identity trajectories and accompanying fields of expertise, requires that people work across multiple spatial and temporal scales to design for more stable fields of practice. As I demonstrate in my analysis, institutional practices do not change without coordinated human activity to reorganize accepted knowledge and resources (Latour, 1983; Star, 1989). To see how these transformational changes happen, we must observe the people in practice as they attend to immediate activities and work to connect new notions of acceptable business practices to inform long-term change. As people engage in collective organizing activities they make sense of disparate ideas and construct new knowledge and practices by tying together different strands of practice. Learning occurs, in this case, as people work to organize across temporal and social scales to create new identities in unstable practices. By widening the scope of situated learning to encompass the collective actions of humans and artifacts, across space and time, we can see how people learn through their concerted and often contentious efforts to develop new practices (Jurow, et al., under review). The following description of the network and accompanying collection of case studies provides the context for understanding how people produce new forms of expertise in an emerging field of practice.

The Net Impact network is a system of relationships between people, places, objects, and ideas that comprise a loosely organized set of practices in the local

business school. It is a space for participants to renegotiate business practices and professional identities to more directly include concerns of social and environmental sustainability. The NI network is situated within the discipline of business with local NI chapters located in business schools, corporations, or created as professional chapters for business practitioners. Participants within NI use the term sustainability to draw distinctions between themselves and other business students or practitioners. However it is significant that the term sustainability also binds people together in a network and a movement to change current business practices. I purposefully do not provide a “correct” definition of sustainability in this chapter because this term has become the object of negotiation within the sustainable business movement. The term sustainability is a representational production that is constantly negotiated through discourse and social practices as participants gain expertise in the network. Participants position themselves within the sustainable business movement by the position they take on sustainable business vis-à-vis other people within the network.

In the remainder of the chapter I briefly describe the NI organization and how it fits into a larger sustainable business movement. I do not go into much detail on the larger sustainable business movement because it is too untenable to study within this ethnographic project. However I describe the larger movement in order to provide context that situates the people and the local activities that comprise the local network of NI. The majority of the chapter is a series of relational portraits of focal actors engaging in activities, objects, and ideas that reconstitute the local NI network. As these actors interact with the NI network they reproduce, elaborate

upon, and change the context of participation in the sustainable business network. I focused on the web of connections that was stabilized in the moment to represent patterned activities that signify learning within the network. These patterns were prevalent over the course of my study as I participated in the network for four years and conducted research on the NI activities throughout the 2011-2012 academic year. The interviews with participants and observations of network activity are the representational materials I use to produce a deeper understanding of how people learn and innovate within an emerging field of practice.

NI Organization

Net Impact is an official 501c3 organization that facilitates a “vibrant chapter network”. The founding organization enrolls business school students and professionals to create local chapters and become part of a network that shares an interest in “us[ing] their careers to tackle the world's toughest social and environmental problems.” To become a Net Impact chapter the group must: 1) apply to the Net Impact central office; 2) maintain a minimum of 10 members; 3) pay dues of \$50 per member; and 4) create a minimum of 6 events (speakers, service work, or visit organizations fulfilling the Net Impact mission). For higher status within the network, NI chapters would have to maintain a higher number of members, run local programs, and create more events. When business school students or business professionals create NI chapters, they also become part of a larger network of Net Impact chapters connected through the central NI organization. NI members could connect with each other as well as sustainability business leaders by attending the Annual NI Conference or by joining online forums maintained by NI central office. At

the time of my study, the NI website also provided access to a job and internship board, a listing of industry news and reports, and guidelines for chapter leaders about requirements and potential local NI programing. The programs that the local NI chapter implemented included a sustainability case competition, the non-profit leadership programs, and a sustainability consulting internship.

As part of the activities of the local chapter there were two major events where students and professionals converged upon the same geographic location to work on issues pertaining to sustainable business. The first event was the NI Annual Conference that was held each fall in different cities around the United States of America. The second event was the NI Case Competition hosted by the Dovetown NI chapter. There were other occasions where students attended NI events in other parts of the country, but these occasions were rare. In Dovetown the NI chapter has existed for 18 years. There were 52 student members and one faculty advisor. Although the central office calls the local groups chapters, the Dovetown business school considers the NI chapter to be one of thirteen business clubs available to students when they enroll in the graduate school program. Similar to other business school clubs, mandatory MBA student fees financially supported many of the local NI activities. In addition to running 3 NI programs, the local NI chapter hosted many outside speakers. Using funding from the student fees allocated to NI, these speakers were paid to speak at the school on topics related to sustainable business and a light lunch was often provided for participants. The outside speakers addressed topics ranging from reinvestment in the local food system to building new engineering technologies in developing countries to sustainable real estate

investment. NI participants used these programs and speakers to grapple with issues of becoming sustainable business experts.

Sustainable business movement

Net Impact has created a network of NI chapters, but they are also a part of a much larger sustainable business movement. This movement includes individuals, businesses, governments, and associations that believe the business model is changing and/or they are working to collectively change business practices to address social and environmental sustainability. NI is part of this larger sustainable business movement as NI participants take up ideas, make connections, and become connected to each other in new ways. For example, during an interview with a Dovetown accounting professor she explained how her new curriculum was based on new government regulations in South Africa that require all businesses to report financial metrics along with environmental and social metrics. These reports are called “integrated reports”. The recent changes to regulation in South Africa changed the way businesses report their activities and their “illiquid assets”. Thousands of miles away in Dovetown this change in regulation provided new case studies that a local professor used to start teaching an experimental class called “Non-Financial Accounting”. Several Net Impact students enrolled in the class during the second half of my data collection period. The material covered in this business case is not associated with current accounting practices in the state, but the professor teaching the course explained to her students that she was “preparing them for the future of accounting”. This regulation in South Africa and subsequent

innovations in accounting methodology became an object enrolled in the activities of the local NI network.

The larger sustainable business movement was not driven by a single organization or entity, but activities became part of the NI network as local group members engage with ideas, people, objects, and activities in the larger movement and incorporate them into local activity. Members of the NI network can affect the larger movement, too. For example if a student in “Non-Financial Accounting” in Dovetown adapted the concepts they learned from the South African “integrated reports” to advise the accounting practices of a local business, they would be extending and adjusting the larger sustainable business movement into new places. These connections between the larger movement and local activities are the kinds of patterns that I highlight to exemplify learning understood as a process of organizing network relations in the sustainable business movement.

The field of sustainable business is an emerging field of expertise and therefore the jobs that would become available depended on a host of uncertainties like regulatory environments and business demand for measuring energy efficiency, etc. Although this chapter draws out much of the tensions that emerging experts face as they work to define sustainability and then move to create new futures within the world of business, the loose definition of the word sustainability tentatively holds the network of activities together and continues to draw people into the movement.

Actors in the local Net Impact network

The network comes to life through the people, technologies, and activities that weave together ideas and practices to create a more socially and environmentally sustainable world. In this section, I introduce the focal students, activities, and objects that constitute the NI network at the local business school. I introduce each actor through a relational portrait to draw out a key function that they serve within the distributed network. Through these activities, the actors are reorganizing social futures for sustainable business practitioners within the emerging field of practice. The first two focal participants were Sam and Carl, both white males in their late twenties. During the academic year in which I collected data, they were second year MBA students and held the position of co-presidents for the local NI chapter. Sam did work to enroll new members in the network and improve the status of the local chapter within the larger NI network. Carl worked to build imagined trajectories for experts within the emerging field of practice by working to build new programs and curriculum within the business school. Virginia was an Asian-American female in her second year the MBA program. She brought new topics of “social sustainability” into her education through the NI network and remained discerning about how she used the network to mobilize new ideas into the Dovetown network. The fourth relational portrait is of the case created by local NI participants to mobilize loosely connected business and sustainability professionals as well as students into a conversation about pressing issues for the emerging field. The case drew out tension within the field of sustainable business by working at the boundaries of the sustainable business movement. It brought new participants into a specific sustainable business conversation, while at the same time pressed others

to question whether the problem frame should qualify as a problem of sustainable business. The last relational portrait is a first year MBA student, Andrew, a white male in his late twenties. His use of the NI network mobilized him into multiple places outside the Dovetown business school to pursue sustainable business topics. Through his tireless work to connect with professionals grappling with issues of sustainable business he refined his understanding of sustainable business practices. These relational portraits are, as the category suggests, inextricably connected and involved in ongoing activity to create the context in which they are becoming.

The analytic approach I developed to understand learning within the network was focused on people within the local network and how their networked activities informed their emerging sustainable business expertise. Following Latour and Nesper, I attended to the representational and material productions that participants used to maintain, modify, and extend the network. I extend the work of Latour and Nesper by conducting a people-centered, multi-sited ethnography that privileges how networked movement informs learning and knowledge production. Through these portraits I hope to give readers a sense of the key practices, people, and events of the NI chapter and draw out the functions that allow the network to regenerate activity and hang together. For example, in presenting Virginia, I introduce several aspects of her personal history. However I am also presenting a kind of relationship that NI participants have with the network. This portrait was, in part, chosen because it was representative of the way other NI members interacted with the network. I drew upon multiple data sources to represent each portrait including: observations of network activity, movement across places with NI

participants, one-on-one interviews, email communications, and document analysis. I use written conventions to represent talk during audio recorded interviews and observations. Each type of data collection technique allowed for a methodological approach that captured a more people centered approach to studying learning in networks.

Sam, the Diplomat

Sam came to graduate business school from the energy trading industry, and was interested in transitioning to a career in renewable energy consulting. Sam was one of the co-presidents of the NI network in Dovetown and became what I describe as “the diplomat” who represented the local NI chapter to businesses and larger NI network. Although both NI co-presidents worked to create more sustainable business opportunities for students, they never parted with their identities as business professionals.

Coming back to school, for Sam, related to working in the energy field in a way that benefited society. Sam never viewed his old job in energy speculation as something he “want[ed] to do forever” because situations like that “are net zero at best as far as gain to the entire system and that relates to any sort of market trading role”. The economic downturn curtailed his ability to “make tons of money, and on top of that I’m speculating power, I’m not doing this in order to benefit someone”. Energy speculators buy energy in the short-term, take on high-rates of financial risk, and set prices for commodities in order to provide liquidity within a market. Focused on short-term gains, energy speculators pay little attention to the fundamental value of a commodity and therefore do little to improve energy

resources or consumption within the market. At best, Sam explained that they provide a necessary financial tool to keep the markets running. But they don't create value within the system. Sam's questions about who was really benefiting from this speculation led him back to business school and to NI specifically. Throughout this transition, his identity as a business professional never wavered.

I labeled Sam's relational role in the local NI network as "The Diplomat" for two reasons. First Sam conducted much of the administrative work to keep the local chapter in good status within the larger NI network. He maintained contact with NI central office, wrote copy for the NI annual publication to advertise the work of the NI chapter in Dovetown, and completed the paperwork to become a Net Impact "Gold Chapter". A Gold Chapter is a designation given to NI chapters with over 40 students enrolled in the chapter and over 12 sustainable business events hosted in the local area. Sam presented the work of the local chapter to the larger NI organization, recruited new members to the local club, and handled the relationships necessary to bolster the reputation of the local chapter in the Dovetown community and the larger NI network. Second, I labeled Sam "The Diplomat" because he worked to maintain the credibility of the local chapter as a group of skilled business professionals who were gaining expertise and producing knowledge in the realm of sustainable business. In our first interview Sam emphasized NI as a group focused on "creating more socially and environmentally responsible business atmospheres". When we pushed Sam to explain what he meant he elaborated his point:

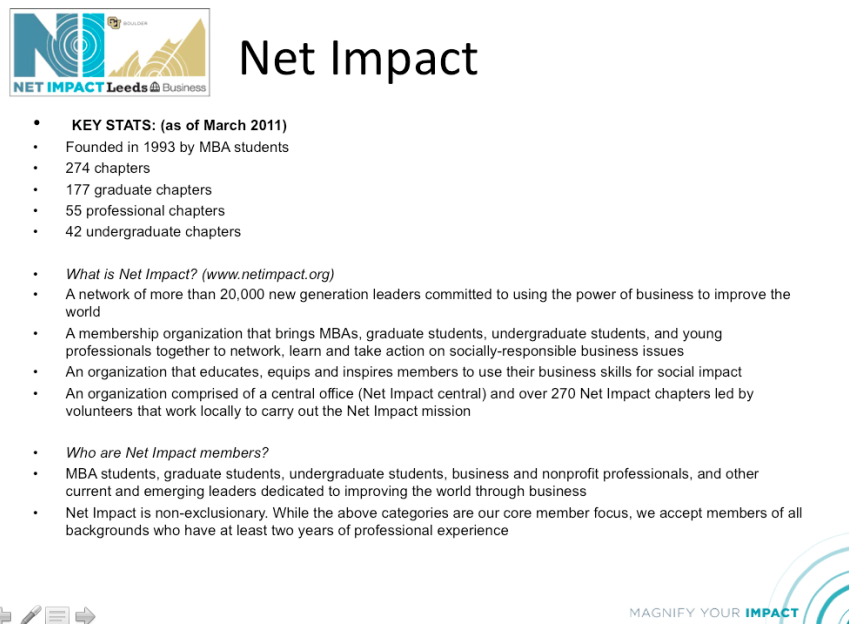
Sam: Well, you kinda start with thinking holistically. You start thinking about businesses that not only focus on the bottom line profit, but you focus on businesses that maybe have a social mission, or maybe have an environmental vision... We really try to focus on the business side - something that is actually profitable. That's one thing that I think makes Net Impact unique in this space is that it's not just asking for handouts in order to promote a cause. It's using the tools of business to create something that can sustain itself through its own operations.

Sam's description of the purpose of NI has an explicit focus on "the business side" of creating more socially and environmentally responsible atmospheres. The distinguishing feature of the NI network for Sam was the focus on maintaining profitable businesses that did not "ask for handouts" as they looked to create a more responsible business atmosphere. Unlike other people within the same NI chapter, Sam drew attention to the business component of the movement in order to uphold a reputation of credibility within the world of business.

Although Sam never used the word sustainable in his description of NI during our first interview, when Sam introduced the NI organization to the incoming business school students during the NI orientation meeting he used the term sustainability to encapsulate the activities of the NI chapter. The meeting took place at the beginning of the fall semester. Both Carl and Sam presented themselves as business professionals wearing button down collared shirts and slacks, the casual uniform of the business world. They prepared a PowerPoint slide deck to facilitate their hour-long presentation complete with an official agenda and numerical statistics to support descriptive claims. The meeting took place one of the main lecture halls in the business school where most of the core business school courses were held. Sam and Carl prepared a PowerPoint presentation, lined up speakers to introduce their affiliation with NI issues, and asked other classmates to discuss their

roles in the club. To kick off the meeting Sam introduced the mission of NI and then explained the choice to create a co-presidency to the first year students. Sam talked over a power point slide that provided “key stats” to support his presentation.

Figure 1. PowerPoint slide from the NI Orientation Meeting



Sam used slides with a branded logo in the top left and bottom right corner, which would be an expected practice for a business professional presenting at an industry conference. In his opening comments, Sam introduced the NI network but did not launch into the details of the business focus of the sustainable business network. He used the word “sustainability” to cover the broad scope of the network. In the following explanation, Sam used other NI organizations as a model to justify their decision to change the leadership structure:

Sam: NI is an org that has been around for almost 20 years. It was founded out in San Francisco and their mission is to use the tools of business to create a more environmentally and socially sustainable world. And then we were one of the ahh I believe flagship members of that organization, which now boasts 200 chapters internationally most of which are geared towards graduate

business MBA-type programs. You can see all of the stats here. I'm not going to read through all these for you guys. Um but a lot of students that are interested in NI are doing things like what me and Carl have been interested in and that's why we became co-presidents. It's something that I want to talk about briefly right now. It's something that is popular in a lot of NI organizations around the country but it's the only one here at Dovetown. And as co-presidents and we are piloting it here right now, to see if it works and I think we both agree that it works so far.

Carl: There's plenty of work to go around so the more hands on deck the better.

Sam takes the first two sentences of his introduction to explain the network of NI. In the first sentence he used the sustained existence of the network over time to frame the organization as legitimate. Next Sam provides the new business students with the mission of the club. He never paused or hesitated when he connected "the tools of business" to "social and environmental sustainability". Finally Sam pointed to the number of members of the organization and distinguishes Dovetown as a "flagship member" implying elevated status within the network. Within this opening statement Sam used the term sustainability to orient the ways in which people within this prominent network use the "tools of business". When Sam referred to his motivations for being in NI they were linked to the mission of using business to create a more sustainable world. Sam claimed that the mission of NI and the loose definition of sustainable business encapsulated his interests in becoming engaged with the network.

In our first interview, Sam did not often use the word sustainability. Instead he would refer to "socially and environmentally responsible careers". However when Sam discussed how his involvement in the NI network changed, he discussed how he used to have to seek out environmental projects through the NI network. Since he became a co-president of NI people who were interested in "the

environment and sustainability, they find Net Impact... and there you go". Although Sam did not use the term to define his activities within the network, he used the term to characterize other people's general interest in the movement and the activities of NI. In other words, Sam used the term "sustainability" when he wanted to bring people into the large network of practices that were very loosely related to one another. Once Sam wanted to draw distinctions between activities within the vaguely defined sustainable business movement, Sam changed his language to emphasize the business aspect of the movement.

In this introduction, Sam presented the local chapter in the context of the larger NI organization and gave a brief history of the Dovetown Business School connection to the San Francisco organization. He then moved on to explain the new co-presidency leadership structure at the local school. He justified their decision to create a co-presidency because both Carl and Sam were interested in the work of the club, and "other NI organizations [from] around the country" were also implementing this model. To change the structure of leadership Sam and Carl went against the traditional model of club leadership at the school of business. They used their dual affiliation with the School of Business and the Net Impact network to negotiate a new organization for the club. Instead of continuing the traditions of the school, they grounded their decision to create a co-presidency by leveraging their affiliation with other NI organizations with different established norms. This affiliation with two organizations (the Dovetown Business School and the NI network of chapters) created space within the traditional business school for students to suggest changing taken-for-granted structures. In this case Sam was able

to use a different frame of reference other than the common structure of Dovetown business school clubs to “pilot” the co-presidency model. Sam drew on the practices of other NI chapters in distant places as he justified their decision to change the governance structure of the club. In this case, Sam and Carl were reaching out into the network of NI chapters to create a case for changing practices back in Dovetown.

Sam and Carl prepared for this meeting and ran it like professionals running an industry meeting. In addition to the use of presentation slides and business casual attire, their choice of terminology invoked images of traditional business leaders giving presentations and overseeing the direction of a business organization. Specifically both Sam and Carl used analogies of leadership that conjured images of captains controlling a vessel. Sam suggested that they were “piloting” a new leadership structure for the organization. Carl affirmed the choice to become co-presidents by responding that, “the more hands on deck the better”. The pilot charting a course and the sea captain recruiting more “hands on deck” were both striking images of leaders guiding a group of people traveling towards new horizons. Although their positions as club presidents did not have the same responsibilities as piloting a plane to a landing strip or guiding a ship safely into harbor, Sam and Carl were positioning themselves as leaders in a network that had significant impact in charting new directions for business professionals. The negotiation of creating new business practices within the business school did not change many of the social practices associated with business professional identities. Sam and Carl both imagined their work to take them into businesses where they would use business skills (like creating pro forma budgets or business plans) to

make new arguments about how businesses should operate. Thus Sam and Carl orchestrated a meeting that reflected many traditional business practices despite their overall mission to change businesses to function with more consideration for social and environmental sustainability.

The responsibilities of the co-presidents required a great deal of coordination across places and established practices. Much of the tension in the sustainable business movement concerned the legitimacy of sustainability arguments within organizations traditionally focused on profit models with a one-year time horizon. The pushback from much of the business world came from a reluctance to consider social and environmental sustainability because it lacked rigorous financial justifications. Sam, as a skilled diplomat, was actively navigating these tensions as he selected his language, practices, and appearance within these networked activities. Throughout the time that I shadowed Sam at the annual conference, spoke with him over coffee and beer, and observed him in meetings with business professionals, other students, and professors Sam maintained this diplomatic front of a businessman taking seriously the issues of social and environmental responsibility within business.

Sam became the diplomat negotiating relationships with businesses and the other NI organizations around the country. He facilitated relationships with outside organizations to connect the Dovetown NI club to the greater reach of the NI network. He also recruited or enrolled incoming business school students in Dovetown to the club. Part of his diplomacy entailed translating terms and ideas across the affiliated groups. For example, within the Dovetown business school NI

was one of many business school clubs; however the larger NI organization did not refer to their affiliated groups as clubs. To the larger NI network the Dovetown NI group was considered a chapter, not a club. At the orientation meeting Sam did not refer to the NI group as a club; the Dovetown NI group was referred to as an organization, chapter, or member. The terms positioned the NI participants and the significance of their activities differently—either as an extracurricular student group or as an impactful professional association in the community. The notion of a club insinuates a group of people pursuing a fun hobby or side interest to learn a new skill (for example a chess club or a knitting club). In contrast a chapter insinuates a group of people participating in a professional association focused on advancing the concerns within a profession.

In our initial interview Sam emphasized the network organization that expanded beyond Dovetown in a distributed network of business professionals and students looking to change the way business functioned in the world. Sam coordinated the Dovetown efforts to remain compliant and keep a heightened status within the NI organization. Sam made a point to discuss this affiliation with an international group and his role to maintain a certain status within the network. He explained that NI was not just a local business club:

Sam: Because we are aligned with this international non-profit - we're not just a student club - um, in order to maintain a certain status with NI we have requirements to meet, so I guess that's the table stakes, right? There's a basic, there's a silver and there's a gold level chapter with Net Impact. We're a gold chapter right now, and, um, so meeting those requirements is kinda first priority of being president and it wasn't before me and Carl became co-presidents, um but going forward, I mean, that's going to be an obvious, I mean, you're going to have to at least maintain a gold level chapter every year.

Sam began by stating the affiliation with the larger Net Impact organization meant that they were “not just a club”. Sam’s initial distinction the NI was more than a club also translated into the way Sam presented himself within the NI chapter. The language Sam used to explain the NI organization still conjured business terminology to explain the structure of the NI organization. For example in his description of NI as more than “just a club” he described the requirements that NI leaders had to meet to maintain the status of the club. Sam likened meeting these requirements of the chapter to “table stakes” in gambling or business whereby the casino or a financial market sets conditions that groups must meet in order to participate in the card game or remaining viable in a market. In the case of the NI organization, Sam compared the paperwork and fees for NI membership to the “table stakes” of remaining viable in a market. These requirements were different than other local clubs that did not have an affiliation with a larger chapter network. Sam explained that meeting these requirements became the “first priority” of being a co-president. This was the first year that Dovetown was a gold chapter, but Sam already envisioned the role of the future presidents to be maintaining this status within the larger NI network. Throughout Sam’s time as the NI co-president, he never ceased to be a business professional with ties to the energy industry. Even throughout his time in graduate school, Sam never viewed his role as the NI co-president as the leader of an after-school club. Sam maintained a sustainable energy consulting internship throughout his second year of graduate school and maintained his identity as a business professional.

Leveraging the larger NI network became useful for making institutional changes in Dovetown, no matter how small (e.g. president to co-presidents). In our first interview Carl noted that, “the university chapter is whatever we want it to be. It can be active or slow or interactive with the community.” The co-presidents became gatekeepers for the local chapter whereby they would select the opportunities that would be passed along to local chapter. Sam would sift through opportunities from other parts of the university and the local community and decide if, who, and how much they would promote the various connections to the NI chapter. The use of information and opportunities within the network both facilitated institutional changes like a co-presidency, and at the same time limited access to opportunities based on Sam’s discretion. I portray Sam as “The Diplomat” within the network, because he served the function of working to heighten the status of the local chapter within the business community. He also worked to heighten the status of the local chapter within the larger NI network by documenting the existing local NI activities and increasing the number of events and the number of members within the local chapter. Sam worked to represent himself (and by extension the local NI chapter) as a business professional privy to the business challenges of creating a more “socially and environmentally responsible atmosphere” for conducting business.

Carl, the Spokesperson

Like Sam, Carl came from a traditional business background. Carl’s role as co-president was focused on representing the desires of the students to the faculty within the school. In order to strengthen the sustainable business curriculum, Carl

became what I came to understand through my analysis “the spokesperson” for the local NI students working with the administration and board members, attending sustainability meetings, and creating a sustainability council housed within the entrepreneurship center of the business school. I use this term to capture Carl’s way of participating in the network to highlight his role in articulating the problems posed by current business practices and the vision for new kinds of career trajectories in the emerging field of sustainable business. Across my ethnographic materials in both the local NI chapter as well as the larger global reach of the NI network there was a pattern of participation where ideational futures were proposed by both defining the current problems within business and charting out new imaginations for the future role of people within the network. This role within NI was part of Carl’s greater ambition in returning to business school to “do something positive for the planet” through his career.

Carl’s interest in NI came from his desire to do something that was starkly different than the job he took on Wall Street just after completing his undergraduate degree. One common theme among NI participants in the study was their belief that they wanted to use their career to create positive change in the world. Carl as a leader in the NI network was no different. Carl was crafting an identity for himself as a businessperson with strong disdain for the worldview among his financially successful former colleagues within the finance industry. He became a spokesperson for the local NI chapter and represented this stance in his dealings with faculty, students, and local businesses. In our first official interview he described his path to Dovetown and back to business school. After his initial work experience out of

college, he decided to change his path to reflect his distaste for the business world he had entered on Wall Street. I leave his story in transcript form, in large part because he told his story better than I could rephrase it and in part because Carl's reasons for returning to graduate business school from the professional world were similar to other NI members' stories. Part of the ethos that pervaded the stories of many NI local members started before they re-entered school, but were seeking avenues to use their careers to create a better world. Carl, like other members of NI, joined the NI organization because it extended the values that were forming before they arrived in the MBA program in Dovetown. Carl relayed his story of entering business school over a cup of coffee with me in a downtown Dovetown coffee shop in early January:

Carl: The whole career life story for me was I thought I wanted to work on Wall Street when I was an undergrad, and like straight out of undergrad I got the job and realized what complete unfriendly people there are in that industry. And um from there, I kind of transitioned from that sort of life to the nearest opportunity that opened up which was accounting and that was enough to get me out to Dovetown. And there was a good business school up the road so I figured I'd apply and see what happened. But definitely with the motivation of wanting to do basically the polar opposite of the Wall Street job and have a positive effect on the world around me.

Molly: You mentioned um – what was wrong with Wall Street? What do you mean by unfriendly?

Carl: Haha. Where do I start? I think just to simplify it down to the company I worked with—we were essentially just a glorified middleman where all we did was we um elected markets where our clients would buy and sell different bonds and basically exchange them with the other side of those trades. It was nothing more complex than talking to people and keeping track of the current list of numbers. There were no calculations involved or anything. There were people there that made tons and tons of money doing that, which there is nothing really wrong with doing that, but it was not difficult work and they were making certain amounts of money and they all had this entitlement issue of “well I don't even want my money taxed because I'm the only person in this world that works.” And it's just this total myopic, egocentric worldview. I'd kinda like to work on the other side and

lobby to tax those people. But I don't think that's necessarily where I'm going.

Carl did not have ambitions to work on Wall Street, but chose to move in a different direction because of the “complete unfriendly people” that he encountered. As I pressed him for details, he explained his initial adjective of “unfriendly” to depict a culture of entitled workers making money working at jobs that were not very challenging. With a soft voice and a calm demeanor Carl went on to attack their “myopic, egocentric worldview”. This, according to Carl, was enough to send him to the “nearest opportunity”. The adjectives that Carl used emphasized his extreme position vis-à-vis his previous colleagues on Wall Street. In this narrative, Carl began by implicating the people at his specific company, but by the end of his description he attributed the allegation of “myopic, egocentric worldviews” to the people at the company as well as a larger group of people. Carl used emphatic descriptors to express his heightened disdain for the worldview of traditional Wall Street businesspeople. He proposed that “they all had this entitlement issue” whereby people on “the other side” should lobby to tax those people”. In this portion of Carl’s narrative, he not only expands the pool of people with a “myopic, egocentric world view” to include a whole segment of the population who should be taxed differently, but he framed this worldview as having strong adversaries on “the other side”. Carl then included himself in direct opposition to “those people” and aligned himself with the “other side”.

Not only was Carl positioning himself against the greed inherent in this Wall Street worldview, he also gave a reason for his disdain, which was that the work was not difficult or complex. His personal experience on Wall Street not only took up

popular critique of Wall Street—that people were greedy and short-sided—but he further undermined these arguments by calling the work “not very complex”. These critiques separated his current ambitions in business by avoiding becoming a “middleman” and working to “have a positive affect on the world around [him]”. The lack of positive impact on the world, the simplicity of the work, and the entitlement of the workers on Wall Street were distinct and reinforcing reasons for Carl to leave the profession. However, Carl did not find anything inherently wrong with people “making tons and tons of money”. In this case, Carl was positioning a new career trajectory where positive impact and sharing wealth through taxation were not necessarily at odds with making money through business transactions.

During the time of this interview the Occupy Wall Street movement was still ongoing, but being dampened by the cold temperatures of the time of year. Although Carl never mentioned the Occupy Wall Street movement, his sentiments of joining “the other side and lobby[ing] to tax those people” set a clear boundary between his former life on Wall Street and his current station in business school as the co-president of NI. The use of the term “those people” positioned the Wall Street workers at a great distance from Carl and his current motivations. His word choices continued to set up problems with the current state of business practices on Wall Street when he discussed his distaste of the “glorified middleman”. Carl used this experience and narrative to explain the change in his career trajectory. Carl set up his new career ambitions in contrast to his experience after finishing his undergraduate degree. He hoped to “do basically the polar opposite of the Wall Street job” so that he could have “positive effects on the world.” Carl attacked the

ethos on Wall Street, and yet, he was in business school and viewed business practices as a means to have positive effects on the world around him. The mission that Carl set up for himself was one that extended beyond his personal, financial wellbeing in order to fulfill his moral duty and his desire for intellectual challenge.

Through Carl's participation in NI activities and other school activities, he found opportunities to use his pre-existing expertise in accounting and finance in order to create more sustainable business practices. In our final interview, Carl explained that prior to attending business school and becoming immersed in NI activities he had not considered how he could create more sustainable business futures through his previous role within an accounting firm. After attending sustainable business classes and being involved in a NI-related internship where they became "sustainability consultants" for an accounting firm, he could now see that his pre-existing skill set was crucial for creating more sustainable businesses. They created a business plan for measuring energy levels and company waste in order to measure the subsequent energy efficiencies for the company. At the end of the project, Carl explained that the company partner gave a speech and said, "This is more than doing the right thing its also doing the profitable thing so lets do it." Carl explained the there was an important role for accountants within the sustainable business movement, which he called sustainability reporting. He realized that his accounting skill set was "the same skill set and the same I guess management of data that applies whether you're trying to figure out what your financial bottom line is or your social or your environmental bottom line is." This realization came from Carl's exposure to sustainable business concepts in classes. But through his internship he

was able to see firsthand how to begin measuring “sustainability” within a business. He also realized that the barriers to changing practices involved knowing how to measure “non-financial assets” as well as working with company politics of organizational change. Finally, Carl also gained insight on becoming a sustainable business practitioner through his exposure to a business school board member and successful business entrepreneur who wanted to learn more about sustainable business movement and how to make his own business endeavors more sustainable.

As the spokesperson for the students, Carl often acted to embolden his classmates and support the as yet unstable identity of a businessperson who was also a business activist. Carl created three distinct reasons for critiquing Wall Street and he created several justifications for taking on a different business trajectory based on his critique of Wall Street-types as 1) having an egocentric, myopic worldview; 2) being “glorified middle-men” not doing challenging work; and 3) not having a positive effect on the world around them. Evidence of this narrative came up in other meetings that Carl participated in throughout the year. For example at other points throughout the year, Carl critiqued a logic of current business practices suggesting that a lot of businesses do “not have a legitimate mindset” because they could consider their environmental footprint and through this consideration conduct better business. In addition to critiquing current businesses, Carl suggested that NI members were becoming experts in a field and they might have better solutions to problems than the current business practices. Carl stated:

Carl: Yeah I think if we were able to do something with Dovetown corporations, where they could come in and I guess maybe sort of let down their guard a little bit so we could brainstorm with them ahh essentially how to impact

their corporation. I think that—basically what I am saying is that I think that we're a little bit ahead of the curve. Where people in business are kind of behind what we are learning over here. So if we could promote that to businesses in the area that essentially we would like to be involved with I think that would be a beneficial exchange of information.

As the spokesperson, Carl worked to disrupt current practices and through doubt into current models of practice. He also worked to position the NI participants as problem-solver or innovators. For example, when Carl stated that he thought, “we’re” (the NI participants in the meeting) were “a bit ahead of the curve”. Carl’s justification for this statement was that the NI members were learning cutting edge sustainable business practices and that “people in business” were not adopting new practices. This justification changed the view of students in school without jobs as the people cultivating ideas and innovations, whereas the people working within the current business structures were not pushing their thinking. This statement reframed NI participants as problem-solvers. He re-positioned himself and the others in the room as knowers and worked to create a new and potentially collective imagination to reimagine their role within the business world. Through his questioning of current business experts and reframing of current NI participants, Carl made available new imagined trajectories for business school students. The role of a spokesperson was to present new ways of seeing and doing, and different NI participants took up some of these stances over the course of the year, but not all. Carl was not bashful about his disdain for certain business careers, but he also instantiated alternative identity trajectories for business experts to have positive effects on the world.

Although Carl did not see himself pursuing his vision to “lobby to tax those people,” his vision for his future and his identity as a businessperson trying to create positive change in the world remained intact. I followed up on Carl’s suggestion that he was not likely to head in the direction of lobbying to tax people on Wall Street, by asking where he thought he was headed in his career. Rather than fighting for greater taxation, he was interested in increasing energy efficiency or building “more responsible energy infrastructure”. Our conversation continued to explore the new kind of career trajectory or expertise that Carl was hoping to pursue upon graduation:

Molly: Yeah? Okay, well we’re headed in that way. Where do you think you’re going?

Carl: So I think I’m somewhat narrowed down to you know some type of sustainability consulting or some notion of the term. And it could be anything from working with companies to increase energy efficiency on either the supply side or the demand side of the energy markets or um working with businesses and their supply chains to integrate I guess a more sustainable supply chain. Then the other possibility is just working directly in the energy field trying to find incremental ways to develop a more responsible energy infrastructure.

In this response, Carl’s narrative reflected some of the challenges students faced trying to find jobs within the unstable career path of sustainable business. On the one hand, students were involved in defining sustainability for the business school and for themselves. On the other hand, one of the major tensions for students and professionals in this network was how to create viable and stable career paths as innovators within an emerging field. For example Carl described the vague trajectory of “some type of sustainability consulting or some notion of the term”. In the previous narrative Carl spoke without qualifiers about what he would not be a

part of within the business world, and through his discourse was able to intensify his position vis-à-vis the people on Wall Street. As Carl discussed his future he hedged his assertions by inserting qualifiers into his speech. His new direction included “some type” and “some notion” of sustainability consulting. The uncertainty of his assertions about his future were not about his ability to find a job, rather they were about his ability to find a job that fulfilled his desire to have a positive impact and make a living. There was a deeper uncertainty about the definition of the career trajectory to which many NI participants aspired. Carl was emphatic about not pursuing a career on Wall Street, however, the path toward careers within business that consider the social and environmental sustainability of a community was less certain. The field of sustainable business was an emerging field and therefore the jobs that would become available depended on a host of uncertainties like regulatory environments, business demand for measuring energy efficiency, etc. Therefore becoming a sustainable business practitioner came with the uncertainty of changing infrastructures and the possibility of working within a more traditional energy company to negotiate incremental change and “more responsible energy infrastructure”. Carl saw these options for his own future, but throughout the year he also worked to construct new imagined career trajectories for other students within the local NI chapter.

Through his experience as the NI spokesperson, Carl was aware of the difficulties of making business arguments to pay more attention to sustainability. There were some major successes, like his NI sponsored internship with an accounting firm. Carl also experienced less success at capturing the attention of the

Dean of the business school to petition for incorporating more sustainability issues into the MBA curriculum. In this case Carl was a presence with the administration in order to remind the faculty that, “our students don’t want extra classes they want the assumptions in regular businesses to change”. Carl learned to interact with faculty in his official role as NI co-president and with business practitioners as a sustainability consultant. He was constantly working to convince various types of business experts and practitioners that there was a valuable role for sustainable business practitioners to play in and out of the business school setting. Often Carl explained that he was working to make incremental progress within the school and in the business community.

The local NI participants actively worked to create change within the infrastructure of the local business school. Carl as “The Spokesperson” played an integral role within the network as an advocate for changing the way the local business school incorporated new sustainable business curriculum. Carl set his sights on negotiating new horizons for business practitioners with faculty and local business professionals. By both articulating the current problems within business practices and presenting concrete methods for creating incremental change, Carl provided a clear vision for the future of the local movement. The students in the NI chapter wanted to see sustainable business practices integrated throughout the business school curriculum, and Carl was able to articulate how a traditional finance class could incorporate sustainable business concepts. After looking at the “regulatory and environmental climate”, Carl explained how a finance class would take up sustainable business ideas within the course:

Carl: So where a lot of business schools might say—probably not anymore—but hypothetically they could say in a financial model “let’s build this project that has a side effect where all of the waste goes into the river and nobody ever pays for it”. I think that our goal is to have a classroom environment where if we’re building a financial model for that project, we’ve got to incorporate the cost to clean up the river or to put in some sort of mitigating equipment that would have an additional cost.

In this example, Carl implicated “a lot of business schools” in promoting business models that did not consider the environmental side effects of polluting in the river as a cost within the financial model. Carl suggested that his presence in the administration is to push for more business cases where environmental costs were considered as businesses considered the cost of building a project. These negotiations were only partially successful. Carl did not secure a meeting with the Dean, but he was able to work with business professionals through a center in the business school to create a “Sustainability Council” where local business and MBA students could work on creating more sustainable businesses within the community rather than directly through the dealings of each class. The council would provide mentorship for students and at the same time students would advise business leaders about sustainable business solutions for their respective companies.

By the end of the school year Carl’s desire to have a positive impact through his work in sustainable business had not changed and he was negotiating the realities of finding a job in an emerging field of practice. The possibility for more businesses to become engaged with sustainable practices was promising, but the reality of finding a job was setting in. Carl knew that pursuing this career path was tenuous because sustainable business positions were not in high demand. In May, just before graduation, Carl discussed the “slippery slope” of entering the

sustainable business workforce. When I asked Carl what was next for him, he replied:

Carl: So here's where I was hoping this wouldn't turn into a slippery slope or a cop out.

Molly: Oh? Ah-hu.

Carl: Ah so now that I'm applying for jobs, 2012 is a really tough year specifically for wind development but it seems like a lot of energy positions have been hiring quite a bit for the past couple years mostly around policy initiatives and government policies that are promoting the transition to renewables and this year PTC is set to expire at the end of this year and as long its renewed by congress um wind should see development grow, but we're sort of in this holding pattern of hiring until probably the November election if not further. Nobody wants to hire right now and then there's a lot that's kind of plugged up right now. It's tough to find a job in utilities —it's tough to find a job in energy consulting companies. And ah so that would have been my top choice of area to go into um other than that I would love to get into some sort of sustainability role but again like between the political-climate right now and also the economic-climate mixed with the fact that sustainability is still sort of undefined. Um not having a technical science-type background, I am not necessarily the most qualified person to go into either of those—a lot of those pure sustainability roles. So I will likely go into something a little bit more finance oriented maybe (inaudible) related maybe and I'll just have to figure out the right sustainability levers to pull in those positions.

Molly: Why do you say slippery slope? Like why are you worried about this?

Carl: So in my mind there is sort of a trade off with a lot of these positions. That um – it's almost my own triple bottom line where I need to put food in my mouth and I need to have a roof over my head and it would be kind of nice to have a car to drive around and burn some fossils fuels in and if the jobs that pay those types of bills are less quote unquote impactful than the jobs that are better more impactful for me to further social and environmental goals um that could be maybe too easy a decision to choose dollars over values and I'm hoping that's not the case. I don't think it should be, but I think its something to be weary of.

At the end of the school year Carl was still looking for a job that would meet his moral and intellectual ambitions to create environmental change within the business world. He worried that if he did not take a job in the field of sustainable business then he would be selling out. There were trade-offs for him to consider. He

had a skill set that would allow him to secure a high paying job, but he would not be living up to his ambitions to “do something positive for the planet.” The double bind was that the traditional business jobs not only paid more, but there was far more demand for workers with his finance and accounting expertise than his sustainable business expertise. Carl described the slippery slope that he and many other high-minded graduates faced when their ambitions to create change in the world was not met with an influx of job offers to pursue these ambitions. But Carl saw his predicament in a different light. To a certain extent, Carl believed that he could work within a normal business and slowly convince the company to start making sustainable business changes. Therefore to an outsider, if Carl took a job within a finance firm or an accounting firm, they may think he had dropped his interests in sustainable business, but Carl believed he could integrate sustainable practices into any company he joined.

Throughout the school year students were learning that creating a more sustainable futures through business could be accomplished in any specialty within business. Carl, like other students in the Dovetown NI chapter, was abiding by his commitment to sustainable business practices within a difficult “political” and “economic climate”. Despite the difficult renewable energy climate Carl was dedicated to incorporating sustainability into whatever job he found. If he accepted a finance job, for example, then Carl would have to “figure out the right sustainability levers to pull”. This notion that no matter where Carl ended up, whether it was in a traditional business or a sustainability consulting firm, he now knew where to start creating more sustainable business practices. Being a

sustainable business expert did not necessarily require Carl to be within a “sustainability” role within a company. Carl described that he had learned how to be a sustainable business expert because he knew where to find “levers” to create change and he had developed an enduring disposition of being a sustainable businessperson. This disposition was less dependent on the position that he would eventually fulfill within a business and more dependent on his ability to “figure out the right sustainability levers to pull”. In part, that was what Carl had been learning all year.

Carl explained this tension as one that he was living with as he looked for a job to pay the bills. He was not taking on an activist role within business by protesting on the lawn of a major corporation with picket signs. Carl still envisioned his kind of activism to work within businesses to “further social and environmental goals” and at the same time remain profitable. This is the enduring practice that NI students were working to understand throughout the year. Carl acknowledged that it was still financially appealing to take a higher paying job in an industry that seemed unrelated to sustainability practices. He was hoping that if he did not land a sustainable business position he would still be able to make a positive impact through his role within an accounting or finance department.

The way students defined sustainable business and positioned them vis-à-vis other business professionals became a representational production that they used to negotiate their identities within the world of business. For example even if Carl could not find a job in renewable energy and decided to take a finance job, he did not necessarily see this as a cop out. He had learned to pull “sustainability levers”

within a traditional business setting, and hoped that he could do this again.

Although this argument was a “slippery slope” according to Carl, he was optimistic that he could further the goal of creating more environmentally and socially sustainable business practices from within any business. To extend Carl’s analogy, there were levers to pull no matter what business he worked for or created. The first two focal participants, Sam and Carl, were heavily involved in the details of organizing NI activities. The next two students were participants in NI and used the network according to their interests and imagined career trajectories, however they were not explicitly involved in administering the NI program in Dovetown.

In this final interview, Carl continued to present alternative pathways for creating environmental and social change within the world of business. In this case, Carl explained how sustainable business expertise was not contingent upon being in a position within a company that was entitled “sustainable”. He had built an enduring disposition to create change from within traditional businesses or through a sustainable business consulting position. In his work throughout the year as co-president he was making arguments to the Dean, business professionals, and anyone else who would listen that sustainability could and should be incorporated into core business classes like Finance and Accounting because he was learning that sustainability was in every part of the business model and within every industry. Carl, as the quiet spokesperson, continued to articulate pathways for business students and business professionals to pursue activism and social change through their business professions.

Virginia, The Entrepreneur

Virginia was a second year MBA student with specific interests in recycled and repurposed goods, organic and natural products, and finding ways to empower women around the world. I portray Virginia as The Entrepreneur within the NI network because she often worked independently from the network and was discerning about the NI events and ideas with which she would engage. Virginia used the NI network to cultivate her specific interests, which she pursued with great focus over the course of her time in business school. Specifically, Virginia established the Wholesome Products Club with three other MBA students in Dovetown and founded a women's recycled materials apparel company. Despite her other activities, she still intermittently engaged with the NI network. Over the duration of her time in business school, Virginia volunteered for the Net Impact Case Competition, attended the Annual Conference, planned several speakers, and completed the non-profit leadership program. However by Virginia's own account she did not identify as an "overachiever" in NI. Virginia's position within the NI network was decidedly different from Sam's and Carl's. She did not run any NI programs, instead she was discerning about which NI activities fit within her specific interests and standards for sustainable business practices. Virginia also voiced thoughtful critiques of the local NI chapter during our interviews, but did not voice these critiques during NI meetings. All the while she continued to participate in a select subsection of NI activities. Unlike Carl, Virginia did not take an active role in attempting to change the business school curriculum or the local NI chapter. She used the NI network to pursue her passions, but she did not look to become further enlisted in the local chapter. Instead, Virginia went to the conference, attended talks

to learn about new kinds of businesses and gather what she described as “takeaways” from business practitioners who shared her more specific interests. Importantly, Virginia more readily identified with ideas that were less prominent in the local setting. She found kinship with people from distant places within the larger NI network. When I asked Virginia to describe the first time she heard about NI she described her partial affiliation with the NI chapter.

Virginia: There are a lot of students that are more involved in NI and were from the beginning—you know that was their thing. They were like “I’m sustainability—go!” And to me it’s a diluted word and it had been before I started school so I didn’t respond as powerfully to the word of sustainability. So I think that was a big reason I wasn’t in, in, in Net Impact.

Virginia drew a distinction between her involvement in the local NI network and the involvement of more committed NI members. Virginia positioned herself as more critical of the word sustainability and the associated activities of the sustainable business club. Virginia engaged with NI talks and activities when they aligned with her particular interests, but she did not identify as being “in, in, in Net Impact”. Nevertheless Virginia and all other MBA students were welcome to join NI events and partake in programs as they appealed to their interests. Thus Virginia engaged selectively in NI activities without committing to all activities and ideas that might receive the name sustainability. Virginia still decided on the value and utility of NI activities on a case-by-case basis and did not attend each activity because they were somehow considered “sustainable”.

Specifically, Virginia’s peripheral commitment to the local NI chapter stemmed from her skepticism about the meaning of the term sustainability. The NI network was committed to sustainable business, which held little meaning to

Virginia, and she was not alone in her skepticism of the word. At one point or another every NI participant that I interviewed expressed hesitation when using the term sustainability. The most common reason for participants' hesitation to rally behind the word sustainability was because the term lacked specificity. What is more, for Virginia, the overuse of the term diluted her interest in the NI network. By contrast other students in her MBA class were drawn to the NI chapter immediately and without hesitation based on the idea of sustainability. Virginia described these students as distinctly different from her because of their clear affiliation with the concept of sustainability. According to Virginia, other participants in NI were building their professional identities around sustainability whereas she kept her distance from fully identifying with the sustainable business movement.

Many students loosely affiliated with NI used the network to seek out specific interests. Virginia dabbled in NI activities and through her intermittent participation she was able to extend her business education in ways that suited her interests. Although the word sustainability lacked specificity, the broad meaning of the term captured the disparate interests of a wider group of students. If students were compelled to attend a talk on a more specific concept, they could participate in a small selection of events without holding official membership in the NI chapter. Students could cater their participation to their individual interests under the vague term of sustainability without agreeing on its definition of the broad term sustainability and without holding the same convictions about how businesses should incorporate sustainable business practices.

Virginia's participation in NI exemplifies how many students pursued specific interests within the NI network without working to change the direction or the focus of the local NI chapter. Unlike a more situated, local community of practice, where members are focused on shared activities within a restricted community of practice, members of a distributed network can pursue disparate interests without needing to change the other practices within the community. In other words, Virginia could exist within the network, critique aspects of the network, pursue her specific interests with discernment, and step away as she pleased. She had very few, if any, obligations to the NI network other than paying membership dues. Thus Virginia could remain at a distance from the local NI chapter and still use the larger network to mobilize resources to inform her work.

The first NI activity in which Virginia participated in was a program that placed MBA students on a non-profit board for a year of the board's operations. Two second-year MBA students running the program matched students to non-profit organizations that aligned with the NI participants' specific interests. Virginia expressed an interest in "women's empowerment". She was matched with the local non-profit focused on empowering women through education and community engagement. She served on their board for a year and attributed a change in her convictions based on her work with the local women's group. Virginia acknowledged that this experiences was organized by NI, but required very little interaction with the NI club:

Virginia: Because [NI] was a club, I went to the meetings you know and interacted. So I'm actually a non-profit leadership fellow, which is one of the programs of Net Impact. So I am a non-profit leadership fellow with the Girls Community

Association now, which is again connecting one of those women empowerment dots, which is pretty cool. Um but so I've been involved in that capacity, which you know doesn't have a lot of club linkage because were fellows off-site at the GCA... so it's really great experience because of Net Impact but not necessarily that involved if that makes sense. It's kind of like a side project of the club.

Virginia had a specific interest in empowering women in the Dovetown community and around the world. The activities that Virginia pursued through NI were more broadly dispersed than empowering women, however when she recounted the specific activities that sustained her interests during her second year of work with NI empowering women was the predominant topic of conversation. NI matched students with non-profits based on the overlapping passions. Virginia was connected to NI insofar as the topics connected to the “dots” of interest that Virginia was personally driven to pursue. She described her engagement with NI as discrete process of connecting “dots” within her personal interests. Virginia was not alone in this use of the network. Dale, another second year, discussed his work with a renewable energy start-up and only upon further prompting did he recall that he was introduced to that company through the Net Impact network. From the moment he was engaged with the company, the connection to the NI chapter faded into the distance. Similarly Virginia did not view her work with GCA to be linked to the “club” once NI created the initial connection.

Virginia, like other similarly engaged NI participants would selectively participate in activities based on topics of interest and often these experiences led to internships, jobs, or new insights about sustainable business. However the experience was less about their engagement with NI on campus or solidarity to a unified cause. Working with GCA allowed Virginia to pursue a mission of supporting

girls through educational programming, play in the outdoors, and leadership training. This affiliation with sustainability was different from Sam and Carl, who both primarily focused on the energy industry. The work with the GCA was important to Virginia, but the Dovetown NI club was not focused on women's empowerment. In fact, the non-profit leadership program was a new program in the club and not a focus of activity for the core members of the local NI club. In our last conversation before Virginia graduated she explained that "[the non-profit leadership] program is sort of like a separate pod of NI but it's not really an important focus of the club or the organization". Unlike Sam, Virginia referred to NI as a club to which she acknowledged a loose affiliation.

Although she had critiques of sustainability, the NI network provided a space for Virginia to imagine herself within the business world without buying into the traditional business practices of privileging profitability in isolation. One of the affordances of learning in a distributed network such as NI was that its participants could critique major aspects of the local organization and still find avenues within the network to explore their more specific interests. In addition to participating in the non-profit leadership program, the second NI activity that Virginia participated in was the Annual NI Conference. At the end of her second year of business school, I asked Virginia to discuss the most memorable aspects of business school. She did not mention NI. When I specifically asked about the most memorable aspects of participating in NI she cited the NI Conference as the highlight of her year of participation. Virginia described her experience at the conference as "mind expanding". I will detail her overall interest in the conference and then show how

Virginia used the conference to pursue her specific interests in empowering women through business. In general the conference was “big” for Virginia because she was able to engage with other business school students and professionals focused on some part of sustainable business:

Virginia: It’s just so nice because in business school you know you’re surrounded by a lot of like-minded people but then you’re also surrounded with a lot of people who are like supply-side analyst you know? Like how much money can you make on that—on a stock drop or whatever? It’s weird. It’s not weird, but that’s not their focus. And it’s not that they don’t care about it but that’s not their focus and it’ll never be their main focus. So it’s just nice to be in a place where everybody is like the zealous—you know like you’re with the other zealots. You kind of feel like a little more normal, you know?

The conference provided an opportunity for Virginia to meet people from other schools and professionals interested in sustainable businesses. In her experience in the Dovetown business school she distinguished between students who were “like-minded” and others who were pursuing careers as “supply-side analysts” and cared about making money on “stock drops”. These critiques of her Dovetown peers were emblematic of global issues being critiqued within business. “Supply-side” or sell-side analysts have been the subjects of critique in the past decade for overvaluing stocks in order to benefit from inflated sales. In short, sell-side analysts were expected to determine the value of companies for investment banks and brokerage firms, and in turn make a commission off the sale of company stock. After the Enron scandal Mr. Levitt, the former Chairman of the Securities and Exchange Commission testified that he thought, “Wall Street sell-side analysts has lost all its credibility” (January, 2001). The reputation of sell-side or supply-side analysts in the past decade has become corrupted by conflicts of interests that led these analysts to

overvalue stocks in order to financially benefit from the subsequent inflation of stock sales. Virginia denigrated her classmates with ambitions to become supply-side analysts concerned primarily with financial gain even at the expense of the health of financial markets and everyday investors. She also positioned herself against her fellow Dovetown business school students interested in making money on “stock drops” where day traders make money in the market without creating value for society. Virginia distanced herself from some of her classmates who were vying for careers that made money but either corrupted the veracity of the stock market or did not create value within the market.

Notably Virginia did not identify with many of her business school classmates and valued spending time amongst the other NI participants at the conference. Like Carl, Virginia distinguished herself from the business people who were interested in making money on a “stock drop” without consideration for or a focus on what Virginia mentioned during a separate interview as care for “our people and our planet”. She went one step further than Carl and identified people within her class, not just people currently working on Wall Street, as pursuing these corrupt interests. Unlike Carl, Virginia never identified as a Wall Street insider trader and was still reluctant to identify with many of her classmates interested in pursuing careers in a compromised field where business professionals stand to benefit from compromised valuations.

Under the heading of sustainability, Virginia could remain at arms’ length from the diluted aspects of sustainable business within her local NI chapter and still find people who were “like-minded” within the larger NI network. The conference

was her most memorable portion of her year of participation with NI activities because she could spend time talking with other business people explicitly focused on the NI mission of “using the tools of business to create positive change in the world” rather than people interested in accepted business practices that were fiscally conservative and not focused on creating sustainable futures through business. In the first section of dialog, Virginia positioned herself as reluctant to fully identify with NI because the word sustainability was diluted within business. This critique was mild in comparison to her distancing from local business school students with no regard for sustainable business. By contrast Virginia reported feeling “a little more normal” amongst the “zealots” at the NI Annual Conference.

Some of the “like-minded” NI participants Virginia mentioned from the NI conference were already acquaintances from the previous year of NI activities. Virginia had met students from a business school on the West Coast last winter in Dovetown when they came to compete in a NI case competition. She supported their solution to the recycling challenge even after the team complained on a blog that the Dovetown NI case competition was poorly judged. Just before our interview Virginia ran into one of the team members at the Annual Conference in the Pacific Northwest and they went to get a beer and catch up. On the way back to Dovetown Virginia got into an argument with another Dovetown NI member, Bradley, about the merits of their recycling solution that did not end up winning. Bradley was also a second year and one of two people running the NI case competition in Dovetown this year. She and Bradley got into an argument about the subsequent complaint regarding the judging process at the competition. As Virginia recounted the “political crap” that

unfolded in the aftermath of the case competition, she aligned herself on the side of the sustainability zealots over and against her classmate in the local NI chapter.

Virginia: There was a lot of weird political crap and actually I had the pleasure of riding home from the airport with Bradley and he still had a lot of—there was a lot of bad blood going on. Essentially I was like “Bradley it was a good idea. Get over yourself”. He was like “yeah well the CEO guy from Tonic Cola brought it up that what if a kid brings his dad’s beer can to school?” And I said, “Nothing happens.” I was like “the kid brings the beer can and it goes into the machine, and the kid gets a point for it” You know I was like, “we had can-drives all the time when I was little and we had beer cans mixed in with pop cans and it didn’t matter and it shouldn’t now.” You know? And he kind of shut up after that. It was very interesting to hear like that he had just—he’s an absorber of that type of bullshit anyway. So he had just taken whatever he heard and regurgitated it to me without really thinking about it. It’s clearly frustrating but umm it’s just baffling—it’s like, “how are you here if that’s your operation?” It’s like what? Anyway he’s a bit of a yes man. It’s a little frustrating. But I was glad to be able to be like “ehh I disagree with you.” You know?

The dispute over the case competition is an example of students working to negotiate the tensions of creating more sustainable business practices with a wider audience than the typical business school classroom or a corporate boardroom. In this excerpt, Virginia sided with NI case competition participants from another part of the country who had a more invasive recycling solution that involved implementing recycling centers within schools. The group of business students that came in second place (and therefore did not win a cash prize) wrote a blog post critiquing the Dovetown NI case completion for being too accommodating to corporate interests. Bradley was protective of the corporate response to the recycling ideas and angry with the west coast business school student who wrote a public ridicule of the case competition. However Virginia thought the students were “entitled to express an opinion” that questioned the merits of the judging at the local case competition.

Virginia's positioning vis-à-vis other local NI members was important for understanding learning and identity formation in a distributed network. Within the local NI network, she saw her fellow NI member, Bradley, as an "absorber", a "yes man", and someone who "regurgitated" messages from powerful businessmen. She did not hold allegiance to the members of the local NI chapter nor to the reputation of their local case competition. She held allegiance to "good ideas". Bradley, on the other hand, ran the case competition and was very protective of the Dovetown NI reputation. He was protective of the corporations involved with the competition and protective of the overall reputation of the Dovetown NI Case Competition. Virginia was standing her ground with other NI members from the around the country who were willing to push back on corporate politics that might get in the way of those good ideas. The loyalty Virginia held was not to a tight local community of emerging sustainable business professionals, but to a distributed, more critical group of business school students and business experts from around the country. What is more, Virginia affiliated with a group of people unafraid to make more radical arguments to business executives about the initiatives to tackle in the name of sustainable business. In this example, Virginia more specifically criticized a "diluted" practice within the sustainable business network by criticizing Bradley. According to Virginia, he unthinkingly accepted corporate rationale for taking a more conservative path towards systemic change. Bradley, her classmate and member of the local NI network, was an example of a frustrating actor complicit in making diluted arguments about sustainable business.

In addition to meeting other “like-minded” NI participants, Virginia praised the conference for organizing speakers and panels that were “timely and relevant”. Virginia did not critique business as a whole for diluted sustainability practices. She drew a distinction that separated her from Bradley because she was not immediately convinced by an argument simply because it came from a CEO. However Virginia was eager to listen to “good ideas” and they could come from within corporations when she thought their initiatives held merit. Virginia’s critique of NI and by extension sustainable business was more nuanced than boycotting big business altogether. There were people within corporations and corporate initiatives that directly pertained to her interest in empowering women. This topic was not a particular emphasis of the local NI chapter and so Virginia also sought out these initiatives within the larger network. In her description of her experience at the conference, she spent time explaining one particular panel:

Virginia: This was badass. So the woman—one of the women from ah the empowering women in developing countries—um she was a Tent Level (name of the company) woman so she is an exec somewhere in Tent Level and she was talking about what they’re doing to try and level the field and also I mean a huge part of what their sort of equality initiative or supporting women initiative is education, right? Trying to keep girls in science classes um so they do everything from just getting girls in schools in developing countries to like supporting girls in science programs here you know from 7th grade on or whatever. Um and they like afterschool programs just for girls and—but one of the things she said they do in-house inside of Tent Level is what they called the micro-inequities program or something. I still haven’t Googled it yet, but I imagine if you Google it something will come up. And she’s like “so we do this training in-house about these micro inequities going on so people A) realize they’re doing it” and she said it’s been really nice the way they’ve implemented it at Tent Level and everyone has like a really open mind about it and also it just very open. So it’s like “hey that was a micro-inequity that you just did”. So it’s like a happy thing versus because you know they’re learning. You know at the same time and like, “oh I didn’t even realize that I was marginalizing you with that random statement that I’ve made a hundred times before in my life”. You know so it was very

interesting but that sounded very cool because it sounds like it works you know and its like there's a framework that helps you understand when you do this—

In this excerpt, Virginia brought up a “badass” panel from the NI Conference where she was able to learn more about how businesses were working to support women’s empowerment. Over the course of her two years in the NI network, Virginia targeted the issue of supporting women and girls through non-profit and corporate initiatives. These experiences through the network informed her entrepreneurial endeavor to empower women through outdoor apparel for women. Her company, Tent Level, was also committed to donating one percent of their profits to educating girls around the world. Through this panel she learned about the efforts of a major corporation working to empower women in the world as well as within their corporation.

The “in house” initiative at Tent Level was a program that taught the employees about “the small things we do daily that are inequities.” Virginia stated in two different places that the program was especially impressive because of the “open” conversation about inequities. Initiating a dialogue about the ways in which corporate culture in America tolerates inequality. As Virginia described the program, she revoiced people within Tent Level learning how everyday conversations can still work to marginalize groups within the organization. In this case, Virginia did not vilify members of the company. She described people learning without resistance and pointing out each other’s “random statements” involved subtle ways of marginalizing people.

As Virginia described the panel called “Empowering Women in Developing Countries”, she focused on gender equity within an American corporation. She then went on to connect what she was learning about micro-inequities in Tent Level to a larger problem within corporate America and the more specific culture of the Dovetown business school. In the next portion of the conversation, Virginia observed how this new term of “micro-inequities” could be applied to other business contexts:

Virginia: And you know once you realize it then slowly it starts to disappear. You don’t do it anymore. So that was pretty cool. Um and I felt like it has a large place in corporate America you know? And even in our school, like I was thinking about it program-wise and I was like “oh that would be really cool”. And I don’t think that we’ll necessarily be able to implement it here but definitely--

Molly: Why?

Virginia: Why? Um that’s a good question. Probably just time constraints. But I don’t know if it costs money I think its administered by some thing you know some entity that just came with it but God that would be great.

The larger NI network provided Virginia with information on the ways other parts of the sustainable business network dealt with, in this case, social sustainability. The culture at the local business school did not seem conducive to exploring “micro inequities” but Virginia was exposed to big ideas that were applicable to the local setting. The Dovetown NI chapter offered some engagement with sustainable business, but most often the focus was on clean energy and environmental sustainability. In this exchange Virginia took a passive role in critiquing the practices at the local school. Even though she described a smooth conversation that facilitated new realizations about micro-inequities, she did not advocate or press for change within the local school. Rather she suggested that time and money would not

be allocated for such a program even though she thought it would be great if that happened. In this case, Virginia was not taking an activist stance to fix “micro inequities” that she had experienced within the school. However, Virginia did use these ideas from the conference to inform her own business practices as she worked to build her own women’s apparel business that donated 1% of the profits from the company to empowering women around the world.

Virginia’s interest in women in business and her individual investigation of women in business at the conference led to a gentle critique of the local business school within our interview. Despite her enthusiasm for what she had learned about empowering women at the Annual Conference, Virginia never brought up this “badass” panel to her classmates in the local NI meeting, which occurred three days after our conversation. Sam specifically asked NI members to report back on interesting panels from the conference, but Virginia never raised the issue. However, through our conversation and our shared connection within the NI network Virginia brought the ideas of “micro-inequities” into the coffee shop where we had our conversation and into the official record of our recorded conversation. Although she did not choose to bring these topics to the attention of the NI group and change the business school setting, she carried with her new ideas about gender inequity and a new frame of reference to discuss these inequities in the future.

Virginia participated in the NI activities enough to critique them, but she did not actively seek to change the school or the local NI chapter to take on her passions for women’s empowerment or recycling. She used the network, not to become further enlisted in the local chapter, but to learn about ideas from distant places and

incorporate those ideas into her personalized business endeavors. Rather than becoming enlisted more fully in the NI community, Virginia went to talks to hear about and discover interesting ideas, learn about new kinds of businesses, and gather what she described as “takeaways” from the conference panels.

Some of the “takeaways” from the conference were also ideas that were not prioritized in the local NI network. Although Virginia never positioned her comments as a direct critique of NI or the local business school, she often distanced herself from key players in the NI group. Other students also focused their NI efforts towards more specific aspects of sustainable business that were tailored to their interests. The network of NI participants focused their activities in multiple directions. At times this was a useful attribute of the chapter, but as Virginia suggested it also could lead to diluting the more radical ideas within sustainable business. The loose network allowed NI participants to pursue disparate interests all under the heading of sustainable business. Often students talked about learning about particular aspects of sustainable business from the connection loosely facilitated by NI events. Participants, like Virginia, could supplement their individual business education with distinctly different interests under the encompassing heading of sustainability. These memorable experiences most often stemmed from the students’ direct contact with organizations following the initial introduction through a NI affiliated event or through contact with NI students from other parts of the distributed network.

Throughout my year of data collection, students used the word sustainability with hesitation because the meaning of the word remained loosely defined. During

the spring semester Sam, Carl, and the newly elected NI president worked with the NI faculty advisor and a Dovetown business professional to define sustainable business for the business school. In the absence of a clear definition of sustainability, students critiqued the use of the word. Despite this critique, the broad use of the term sustainable business brought a larger group of business students together to discuss many of the world's biggest challenges under the heading of sustainability. The benefit of a loosely defined term was that people could use term in a variety of ways to learn about and pursue an array of topics. For example, in the local NI network Carl and Sam often pursued sustainable concepts that focused on renewable energy, non-financial accounting, and sustainable consulting endeavors. Unlike Sam and Carl, Virginia was openly critical of certain people and practices within the sustainable business network. She pursued concepts related to her interests in women's empowerment, recycled goods, and organic and natural products, but when issues were less interesting or not in line with her values, Virginia withdrew her participation. When NI concepts overlapped with her interests, Virginia fully-participated and/or planned the activities herself. When the topics seemed to compromise her desire to "care for our people and our planet" through her work she remained quietly critical of NI practices that tolerated diluted versions of sustainability.

The Case, The Instigator

The intellectual work of business schools is often organized around the use and production of "cases". The case format within business educations has become a method to grapple with business problems and make accepted business practices

general. The purpose of a case within the NI network was to raise conflicting points of view and then grapple with possible solutions bounded by the constraints of current business practices. The case served the framework and neutral ground to discuss enduring struggles within a field of practice. The case was a representational production within the discipline of sustainable business. Once created, the case could travel across distant places within the sustainable business network in order to define a common problem around which aspiring experts in the field could compete to come up with the best solution to the problem presented in the case.

The case is often used as the centerpiece of a class assignment or the object around which students compete to come up with the best solution to a given business problem. The local Dovetown NI chapter had hosted a case competition for the past 11 years. The competition was open to MBA students from across the country, and billed itself as “the premier case format competition built around businesses facing sustainability challenges, while succeeding financially” (NI Dovetown website, 2012). NI participants worked in concert with the corporate partners to write the case that represented the fundamental problem faced by the corporation without exposing the specific details of the case that would reveal proprietary information. Dovetown NI participants recruited local experts to judge the case competition and prepared to host teams of NI participants from business schools around the country to compete for a \$15,000 cash prize.

Over the duration of my study, a group of 15 local NI participants organized every detail of the Dovetown NI case competition. Two major activities for NI participants to organize were to 1) find a corporate sponsor willing to work on a

vexing environmental or social issue for which the company is implicated in generating or tolerating; and 2) write two cases framing a sustainable business dilemma faced by the corporate sponsor. The year that I conducted my research, the Alpha Natural Gas sponsored the competition. Alpha was one of the nation's largest natural gas producers and had a significant presence in the state. Alpha had been recognized in many ways for their commitment to sustainability, including (a) as one of Corporate Knights' Best 50 Corporate Citizens and (b) with a Silver Class distinction by Sustainable Asset Management ("Award and Recognition, Alpha Corporation," 2011). However, they were still part of an industry steeped in conflict regarding the method of extraction of natural gas, known as "hydraulic fracturing" or "fracking" (Fjær, Holt, & Horsrud, 2008) as well as the social and environmental impact of setting up sites for extraction. Alpha worked with a NI case competition organizers to frame a useful conversation about their "license to operate" within communities across the country.

The second major organizing activity for hosting the case competition was producing the case. Experts within the discipline of business were usually responsible for creating the business case that would frame a problem of practice. However for the NI case competition, MBA students from Dovetown in conjunction with Alpha Natural Gas administrators were responsible for framing the sustainable business dilemma. The local NI participants wrote a 10-15 page document summarizing a specific business challenge related to social or environmental sustainability. The case became the primary object of inquiry that practitioners, academics, and students would refer to as they negotiate the real tensions of

changing existing business practices. It represented the real world tensions that the businesses were grappling with and provided a format for NI students to test out the validity of their ideas. The winning case solution became an exemplar of valued practices within the emerging field of practice. In 2012, two hundred NI participants signed up to compete in the case competition. The ideas from the case mobilized roughly 200 NI participants to consider the specific sustainability issues facing Alpha Natural Gas.

Once the case was written, it was distributed over email to every competitor, judge, and NI participant in Dovetown to read and consider before the distributed network of actors descended upon Dovetown to participate in the competition. At this point energy professionals, case competition organizers, and competitors were left with the problem frame produced by the organizers and worked to come up with a sustainable business solution. The case as a mediating boundary object was almost by definition contentious. People dedicated to environmental and social sustainability often questioned the parameters set by case writers, and corporate sponsors were always pushing back on NI case writers to ensure that the sustainable solution would not force them out of the competitive market in which they conducted business. The case then really did represent a condensed version of the tension that was inherent in the sustainable business movement.

In the following exchange Greg and John, two members of a four-person case competition team, discussed the moral conflict they faced when they read the final case. The NI participants had traveled from the East Coast to compete in the final round of the case competition, but they were conflicted about participating in the

competition because they questioned the way the case had been framed. The case did not leave teams to critique the practice of hydraulic fracturing, the case assumed that demand for natural gas would continue and no new regulation of would disrupt industry practices. The case took the perspective that Alpha Natural Gas wanted to set the industry standard for being the most socially and environmentally responsible company and have communities in which they extract natural gas recognize them as such. The East Coast team discussed the merits of this problem frame over lunch with my co-researcher, Fred. They described their dilemma as follows:

- Greg: I don't really know a lot about the Net Impact organization, but I'm a little surprised that they would, I guess -
- John: Go there.
- Greg: Yeah to even go there. To come up with ideas for someone to justify fracking, you know, I'm not sure how that's in line-
- John: There's some good-
- Greg: They [Alpha] do some good things, I'll give them that. But what's going on, is not good. And did they ask us how to make it better? Not really. They're asking us how to sell it.
- John: So are you familiar with the way- I mean, we all basically did a preliminary case-
- Fred: Okay
- John: in this subject. And then we come here and we give this presentation. So the preliminary case was very different. It was, 'how can this organization do what it does better?' And that made complete sense to us, we found some interesting things to recommend. So then coming here, and doing exactly as Greg said, we had some hard conversations, amongst ourselves, about how to justify it.
- Fred: I see. By- how to justify fracking? Or how to justify your participation in this case?

Greg: Yes. (laughs)

John: In the end, if we came up with something, something good, without improving environmental performance, that's not worth fifteen thousand dollars.

The case, according to Greg and John, was not in line with their idea of what sustainable business should be. They wanted to help Alpha “do what it does better”. In other words they wanted to improve the environmental performance of the company and the whole industry. The framing of the final case did not meet this standard. This compromise on the part of the case writers and Alpha caused the East Coast team to question their involvement in the practice of coming up with ideas to help a “fracking” company sell their product. The team had “some hard conversations” about whether or not they could morally justify their participation in the competition. They decided to participate but they would not come up with a solution that condoned the same business and environmental practices. They decided that their solution would not be limited to improving the image of the company without also improving the environmental performance of the industry. In the end selling the product for Alpha was not “worth” fifteen thousand dollars to compromise their ethics. The case forced the team to have “some hard conversations”, make choices, and stand behind their decision and face the consequences of those decisions. In the end they decided could not further support a practice “that is not good”. The team continued to talk about their case development, saying that they were eventually pleased with what they had come up with as a message of “don’t do bad stuff, do more good, keep doing the good you’re doing, and this is a way to make money” (Greg). Ultimately this team ended up winning the

case competition with their solution to create a transparent, regulatory structure that all natural gas companies would join and then regulate as an industry-wide effort to improve environmental practices.

The East Coast team's critique of the local case competition was similar to Virginia's critique of the case competition from the previous year. Through the case competition NI members were forced to address both market constraints of remaining competitive within an industry in order to remain in the market long enough to effect business practices. The case format mobilized people from different parts of the sustainable business movement to address the unavoidable tensions of doing work in this emerging field of practice.

As a representational production of a real world problem, the case forced students to come up with solutions for a company that often intended to use ideas generated from the competition to inform their practices. Thus when students came up with a solution to the case, they were taking an action that could potential shape practice. During the awards ceremony that took place just after the judges decided on a case winner, the academic Dean of the local business school made a speech. He suggested that the case competition was important because students were grappling with issues that "are very real for the state, very important to the state, and raise the issues of sustainability versus economic viability". Whether or not everyone within the NI case competition thought the framing of the case met their standards for sustainable business practices, the Dean reminded the participants that creating more sustainable business futures remained a challenge for the entire state. Through their interaction with the case and the problems it represented,

students were negotiating their identities as business practitioners and sustainability activists.

Some students came to terms with their participation at the margins of sustainability and business practices. Others learned through their interaction with the case that working in the natural gas industry was no longer a possible career and identity trajectory. Based on NI participants' definitions of sustainability they

For example Natalie, one of three students who wrote the Alpha case, realized through her interaction with the Alpha that she did not consider the natural gas industry to qualify as sustainable:

Natalie: Sustainability, well, I don't know, after learning all about natural gas I think I'm get- more strong believer in solar and wind energy. I think what's sustainable about natural gas is just the fact that people compare it to coal and oil, but I think that's putting yourself in a box that doesn't necessarily need to be there, um, it's cleaner burning than fossil fuels, but it's still a fossil fuel so, you haven't really changed the paradigm at all.

Natalie became involved in the problems of the case and during the interview, which took place just before the final case competition she positioned herself as a believer in solar and wind energy. In the end, Natalie implied that fossil fuels did not fall into the category of sustainability, but solar and wind energy did. Through her work on the case, Natalie drew a distinction about sustainable business that placed her interests in opposition to the efforts of Alpha Natural Gas. Sustainability, according to Natalie, required a paradigm change that the case did not represent. Moreover, when I asked her if she would ever go into that industry, Natalie said "no way". This, however, was not the stance of everyone in local NI chapter. Learning in this

distributed network did not require that students came to the same conclusions about sustainability.

In an end of year interview with another focal student, Emma I asked her to reflect back on her biggest insights from the case competition experience. Unlike Natalie, Emma saw the compromises of working on sustainable business from within the natural gas industry as a necessary practice. As we sat in a local bar to discuss her first year of business school, she explained her realizations about sustainability from class and it's connection to the case competition.

Emma: I was definitely a little bit skeptical because we had to watch *Gasland* for "Business and Society" so it felt wrong that this [Alpha Gas Company] is the company that we are dealing with for Net Impact. Like but you know the more I learned about it, and the more people talk about it, like that's still a reality of life. You can't ignore real life because it doesn't fit into what you want to be sustainable. So there's a way to make it better. I do think that there should be more of a push for renewables, but I mean people aren't going to give up energy. They're not going to give up electricity. They're going to go out and not give up going out to a bar—with lights.

(Research note: Emma takes both hands lifts them towards the ceiling of the bar where we are having this conversation and then opened her arms out to the tables full of customers eating food).

People aren't going to give that up because you know somebody halfway across the country's water is lighting on fire. It's not personal enough. Those people aren't giving up energy too. They still have their lights on. And that's horrible like I wish it—there's a part of me that wants to do better than that and I think we can if there's a bigger push for it. Then it will have been—but in the interim there still has to be something to make that part [the gas industry] better.

Emma began by referencing a recently released documentary film called *Gasland* that told the stories of people living in rural communities across America that had experienced health problems that they were linked to water contamination due to hydraulic fracturing practice. There was a well-known scene from the film where a

resident lit a match next to his kitchen faucet and the water caught fire. When Emma watched *Gasland*, she was the first to acknowledge that contaminated water was a serious problem. However she came to understand her relationship to the gas industry much differently than Natalie did. Initially, Emma questioned the NI chapter for working with business practices that contaminated drinking water to the point that it could light on fire. Through Emma's exposure to the case and by extension experts in the field of natural gas, she realized that her initial position to vilify the industry would not change the industry. In fact, it would be nearly impossible to convince enough people to boycott electricity. Natalie, however, did not view work within gas industry to be clean enough. Like Natalie, Emma suggested that wanting something to be sustainable was not enough. However she went on to position the consumers of electricity, including both of us in the process of the interview, to be complicit in perpetuating the energy problem. When Emma brought us both into the problem and with her arms, she motioned that everyone in the bar was implicated in perpetuating the problem. The problem of contaminated water did not come from the evil gas companies; it was the distributed network of consumers that continued to demand electricity without thinking about the implications. The demand for alternative ways to generate electricity was not, she argued, palpable enough to change consumer behavior—*"it's not personal enough"*. Emma came to the conclusion that the gas industry was not going away by the looks of the bar and it was a worthwhile endeavor to attempt to improve the current gas industry in addition to seeking out renewable energy sources.

In the beginning of the year Emma stated that, “it felt wrong” to work with a gas company, but by the end of her first year of business school she understood the need to make the gas industry better. As a way to illustrate the deep complexity of trying to change a system, Emma then pointed out that even the people who were suffering from contaminated water due to hydraulic fracturing “still had their lights on”. For Emma, even being in close proximity to contaminated water did not compel people to change their practices. Emma discussed how the case made her realize that the challenges of changing the energy infrastructure would not come from abstaining from use of your lights or refusing to work with an industry that has a booming demand and a desire to improve their practices. For Emma, the case made the tensions within the business of energy more palpable. Making change within business would not come from curbing consumer demand. For the gas industry to change, according to Emma, it would require consumer demands to change. This more nuanced view of the connection between issues with cleaner extraction practices in the gas industry as linked to consumer awareness and demand for change happened across time and through exposure to experts in the business and sustainability fields.

Natalie and Emily both engaged with the same case, they both remained members of the NI network, and they both took the same “Business and Society” course. However their nuanced understanding of creating sustainable change within business diverged. Like Virginia and Bradley, Natalie and Emily were in the same network of activities focused on creating more sustainable futures, but NI members from two different cohorts developed different nuanced views on the specifics of

how to make things “better”. Depending on how NI participants defined sustainable business, their understanding of how to make an impact, and their corresponding career trajectories diverged. Emma saw the work to improve the Natural Gas industry as a necessary incremental step in creating a more sustainable world, given the realities of the widespread demand for electricity from an energy grid that remained disconnected from consumer behavior. Thus Emma learned through her participation in NI that in order for the Natural Gas Industry to improve, sustainable business experts would have to engage with the industry. For Natalie, the Natural Gas Industry was not a renewable energy resource and as such it should not be considered sustainable. Working within the gas industry to improve practices was not going far enough.

The case as The Instigator brought actors from different parts of the world into the same space and exposed tensions within the sustainable business network. The case provided an adequate representation for NI participants to deal with more complexity within the network. As a representational production that also served as a boundary object within the network, the case provided material for NI participants to have timely conversation and work towards better understandings of the specific problems facing industries striving to improve sustainable business practices. The case facilitated the movement of people and ideas and drew attention to how fracking affected people differently based on their proximity to fracking practices. The case located problems in real places, not simply as a theory of sustainability located in a book in the business school. The case was about problems within the state in which many of the case competition participants lived, and Emma came to

see how natural gas extraction practices caused acute problems for some people, but demand for energy was spatially distributed across all consumers. Thus not enough people would feel the personal affects and the problem and so boycotting the industry would not be an effective way to create systemic change. The case as a tool to think with was both problematic because depending on how the case was framed, the problems and solutions might support actions that were not going far enough to create a more sustainable world. However the case also served to create a dense node of activity that temporarily reorganized actors into the same location to struggle with a contentious issue within the emerging field of sustainable business.

Andrew, The Go-Getter

The global reach of the NI network was not always apparent as students engaged with notions of sustainable business in Dovetown. However as participants explored the online offerings of the NI website and attended major NI activities, available opportunities organized the movement of people and sustainable business practices across places. One of the ways in which NI members engaged with business professionals in distant locations was through internship-driven activities. In many cases, NI participants looked for work within companies to better understand how businesses were incorporating more sustainable practices into their work. Andrew, a first year MBA student in Dovetown was particularly keen to find real-world opportunities to learn about sustainable business. I raise two examples in which Andrew leveraged the NI network to 1) fulfill an internship assignment while attending the Annual NI Conference in the Pacific Northwest, and

2) secure a summer internship in the Midwest that matched his burgeoning personal and professional interests in sustainability. Andrew worked tirelessly to establish connections with people he met for brief periods of time across distant locations within the network. For every internship or work opportunity Andrew secured, he met with ten more people to hear about the challenges of their sustainable business practices. I portray Andrew as the go-getter because he capitalized on every opportunity within the network to further his desire to find meaningful and impactful work within the emerging field of sustainable business. The combination of hard work and membership in an elite network of business professionals supported Andrew's ability to successfully navigate the network of sustainable business. Andrew was a white male who grew up in a middle class family in the Midwest. As such he looked like and shared many of the cultural practices of the majority of the business leaders in the United States. His alignment with the local NI network's values based on his training as well as his cultural experiences facilitated the ease with which he was able to succeed in this group. These many privileges were all underscored by his extensive efforts to reach out to people within the local and far reaching places within the network to secure opportunities within sustainable business.

Like many of his peers in the local NI chapter, Andrew went to business school in order to "work in a job that is meaningful to me and aligns with the difference I am trying to make in this world". In large part Andrew was looking to learn more about sustainable business, give back to his community, and secure meaningful job opportunities through the connections he made in business school.

NI became one of several places where Andrew could find meaningful opportunities to gain experience and expertise in the changing world of business. Each internship opportunity that Andrew pursued connected to his interests in the outdoors, the environment, and his sense of civic duty. Although Andrew was learning about business practices, he was clear about his own motivation to use the tools of business to make a difference in the world. Through his extra-curricular activities, Andrew worked to reimagine the social and environmental impact of conducting business.

Sitting outside of a coffee shop in the Pacific Northwest, Andrew took a quick break from the NI conference to talk with me and work on some Marketing homework. Andrew was already feeling overwhelmed by the number of possible ways to spend his time in school. He described a tension between directing his time and energy towards the administrative needs of NI and identifying internship opportunities where he could grapple with company specific sustainable business conundrums. At this early stage in the Dovetown business school program, Andrew was unclear whether his participation in NI would be the best way to both learn about sustainability and effectively contribute in the community. He explained:

Andrew: It is also whether or not you can see (NI) as a way to be effective in the community helping people making a difference in the community; and that depends on how you view your role within that. See here is another internship opportunity. [OC: Andrew was scrolling through emails as we chatted.] I shouldn't be looking at more opportunities.

Andrew was two months into business school and he had already committed to two internships. His calendar and his inbox were flooded with schoolwork, internship obligations, and NI events. During his first year of business school Andrew served on

an environmental board on campus, organized several guest speakers for NI, and maintained four different internships. The primary avenue that Andrew used to pursue concepts of sustainable business was through sustainable business internship opportunities. Each internship position related to some aspect of sustainable business. Not all of the internship opportunities came from NI, however, his interest in NI often related to pursuing new internships or conducting internship-related research through NI connections.

As I shadowed Andrew through the Annual NI Conference he attended talks, chose panels, took breaks to finish homework, and talked to other NI participants. At one point during this observation, we were sitting in the main ballroom waiting for the NI keynote to begin speaking. A fellow first year MBA student from Dovetown was with a NI participant from the Pacific Northwest approached us to say hello. Ian introduced Andrew to Gwen, a friend from college who was now working for a sportswear company in the Pacific Northwest. Andrew asked Gwen what she did within the larger company. She said she worked in sustainability. In his follow-up question, Andrew asked Gwen more specifically about her work on sustainability within the sportswear company:

Andrew: Cool and so sustainability, that's a big word. What does that mean for Aires Sportswear?

Gwen: So what my role has turned into is defining sustainability. And measure—figuring out what are you going to measure, how are we going to measure, and getting buy-in from the top, and figuring out how to integrate across the organization. So it's not really a project focus it's more of ahh integration and culture change.

Just after this exchange, the speaker quieted the ballroom and the conference officially began. This brief interaction within the larger NI conference typified some of the sense making taking place for students and professionals within the network of sustainable business. In the exchange, Andrew suggested that “sustainability is a big word” where the definition of sustainability changes. Like many other NI participants, Andrew pushed for more clarity about how the sportswear company used the idea of sustainability. When Gwen cited sustainability as her main focus within her job, it was not immediately clear to Andrew what that meant. Furthermore, in this newly developing field of practice, Gwen’s role was to define sustainability, figure out how to measure it, and get “buy-in from the top” of a major corporation. Andrew’s question to Gwen characterized the degree to which sustainable business is still emerging within businesses. Gwen’s answer revealed that both practitioners charged with creating a more sustainable company and the company that employs them was still working to define and measure sustainability. Gwen went on to explain what sustainability within business was *not*. For her company sustainability was not “a project focus” but a process of “integration and culture change”. This concept, although not through the interaction between Gwen and Andrew, would travel back to the local NI chapter in Dovetown after the conference was over.

The NI network distinguished between two kinds of sustainability: social and environmental. Over the course of Andrew’s participation in the business school and the NI network, he was gaining a more nuanced understanding of his definition of

sustainable business and his emerging identity within the field. Andrew described how his understanding of sustainable business was changing.

Andrew: The word sustainability is starting to fall in the same realm as (the term) green. Too many people have too many takes on what exactly sustainability means. But you know to me like in a nutshell I think it's important to make the distinction that sustainability doesn't just mean environmental things. A lot of people just think sustainability means environmental things and that's part of it but it's also you know the whole social side of things as well. It's the people that are involved up and down – you know that are involved in the organization, that are involved in a certain part of the world where you are extracting products. You know make sure the people cutting down the rain forest because that's the only income they have. So there's like a social side to it as well. So I guess I mean I you know in one sentence it's probably—

Molly: —It doesn't have to be one sentence.

Andrew: Making sure that I mean just making sure that you're going about extracting the resources on this earth is not um to the detriment of the future use of those resources or the people that are around it or immediately affected by it. Um and that includes like from extraction to like the end of—the end of life. I don't know.

Molly: That's great. Is that something that you learned in school or through an internship?

Andrew: I mean I thought about this a lot before I came into school. And I think that it's probably accentuated the social side of me. I think I was more focused on the environmental side of things when I originally—you know—I mean that's what I'm passionate about. So I want to be as focused on like the people aspect and I think it's really important to make sure that you are thinking about that side of it. So from there you know maybe yeah preferably focused—or not focused—but keep remembering the holistic view as I define sustainability, but it's not as everybody else does.

Andrew addressed the problem with the word sustainability, and then went on to articulate his more nuanced definition of the term. Andrew's critique mirrors Virginia's in that the term has become diluted because “too many people have too many takes on what sustainability is”. The term was floating around sports wear companies, gas companies, and business schools. Sometimes the use of the term indicated major changes within company practices, however, other times companies

and individual practitioners used the term in indiscriminant ways that could degrade the more nuanced understanding that NI participants were working to cultivate. Within this excerpt Andrew not only discusses his definition of the term, he also used this definition as a way to position himself within the field and create a more specific identity within the field. To become a sustainable business practitioner, NI participants were all working to articulate their definition of sustainable business in order to guide their current and future career activities. Andrew critiqued the definition of sustainability that did not include “the social side of things”. He went on to also critique the people within the emerging field that used this definition to guide their practices. Andrew used his definition of the term to separate his practices from other people and create an expert identity that was cognoscente of both the social and environmental aspects of the field.

I argue that these interactions at the conference and in interview are illuminating examples as to how people learn across time and locations to make sense of complex issues that do not yet have clear solutions. Dovetown students at the conference were actively pursuing ideas that perplexed them about the real issues of creating a more socially and environmentally sustainable world. Through interaction with business professionals at the conference, students were gaining a deeper understanding of the ways in which sustainability was defined within the network. The exposure to the wider network also informed future movement within the network. Andrew found an internship prospect on the NI website, which mobilized him to attend an information session for the internship at the Annual Conference. When Andrew applied and was admitted into the internship program,

he and 11 other NI participants became connected in a new node within the network to work on projects managing national parks around the country. Just as Virginia mobilized new ideas from the Annual Conference back to her work in Dovetown, Andrew was mobilized by the larger network out of Dovetown to learn about his interests in protecting and maintaining national parks.

NI participants reacted to and constructed new ideas about sustainable business practices as they moved through the conference and through the more distributed activities of the larger network. The exchange between Andrew and Gwen does not explain how learning happens in a network, but it became a kernel of an idea that was built upon throughout the year. This event should not be considered a groundbreaking conversation that changed the way Andrew thought about sustainability. In fact Andrew never cited that exchange as particularly significant in our interviews and subsequent conversations. Rather this exchange within the network was commonplace. But as students from Dovetown moved and interacted, ideas from distant times and locations from the memory of the past and notions about their future were integral to understanding how they learned and remained motivated to learn about sustainability within business. In order to organize for learning that becomes consequential for the direction of people's lives, this orchestration of moving parts that intersect with other parts of our lives and our values.

I used the relational portrait of Andrew as The Go-Getter because he capitalized on pertinent opportunities to learn more about sustainable business. He also took an active role in seeking out loose ties within the network to inform his

passions and fulfill his interest in fulfilling his civic duties. Through his active role to make connections within the network, Andrew was rerouted into distant places to pursue his interests. The network had a global reach that included the movement of ideas, but it also included embodied movement that brought people and objects into new locations. Thus the network of sustainable business drew people and ideas into Dovetown through NI participation and interest in some aspect of sustainable business. But the global reach of the network also facilitated the movement and reorganization of people, activities, and ideas into new forums in distant places and into new communities that further distributed ideas and built the trajectories of participation into new infrastructures. Virginia and Andrew both used NI to make connections. Virginia sought out “takeaway” that she could bring back to Dovetown. Andrew sought out people and activities where he could potentially participate. In Virginia’s portrait she used the network to shepherd sustainability topics into the local setting that had remained largely unexamined. She brought ideas from distant places into her work locally. In Andrew’s relational portrait his search for activities pushed him outward into new parts of the global network to pursue his interests.

Conclusion

The theme of sustainable business was an ill-defined concept that functioned as a boundary object that drew people together into the same geographic place from different communities and brought them into shared spaces to confront the tensions of changing a current discipline of practice and valued knowledge base. The same boundary object also routed people into new and dispersed places to pursue the theme of sustainable business within new communities. The term sustainability

organized people into a large and distributed network of activity; however, these moments of connection within the network did not imply a shared community of practice. The movement of objects, ideas, and people across places invited space for new kinds of practices to enter more established communities. For example Carl brought “non-financial” accounting practices to a local accounting firm through his work with NI. Virginia began to question gendered “micro inequities” taking place in the local business school. Although she did not attempt to change practices within the school, she brought ideas about “micro inequity” into her business school projects, her work with a local non-profit, and into the official record of my research project. Andrew took ideas he learned in the local NI network and the local business school classes to a summer internship in the Midwest. Although vague notion of sustainability facilitated movement across places, the network did not congeal into a shared set of sustainable business practices. NI participants defined sustainability and pursued specific passions under that heading in diverging places and communities.

The network remained distributed but facilitated movement of people and ideas across place. This is important for learning and innovation because as people returned to old communities with new ideas, experts to reference, and activities to pursue they had new methods for disrupting practices and building up new ideas in local places. The network facilitated the movement ideas and tools such that people could use them to question current practices in the local setting. For example, Sam used his new connection to sustainable business and his existing expertise in energy speculation to work within the energy industry in new capacities. He used the idea

of sustainable business to question the value of the energy speculation business. The particular sustainable business case of natural gas brought students, professors, business and environmental experts into the same conversation about the role of natural gas in the field of sustainable business practices. Because the term “sustainable business” remained ill-defined people from across industries and political ideologies were able to work in a liminal space on contentious practices.

The work to more specifically define sustainable business practices became a project for each NI participant within the emerging field of practice. Burgeoning sustainable business experts carved out their identities and future trajectories of practice through their more specific definition of sustainable business. For example, Carl came to see that sustainability could exist and should be applied to every industry and individual business. Once Carl could apply the concept of sustainability to any business and not simply specific sustainable consulting practices he could justify his future career within a tradition business setting. Andrew incorporated the “social side” of sustainability into his personal definition, and although he retained his passion for the “environmental side” of sustainability, he now thinks about both “sides” of sustainable business. These new definitions of sustainability were largely personal and became consequential for constructing new pathways within the emerging field of practice.

The tensions that arose from attempting to change established business practices created a network of problems to solve and expertise to hone. The active work to address the tension that arose from the integration of sustainability and business was both a critique of the networked activity as well a driving force that

produced a robust network of distributed activity. Sam used the term sustainability infrequently, but without hesitation. He used the term to enlist new members into the network. However once people were enlisted, Sam changed terminology. Others, once enlisted, realized that they would have to address the tension of creating more sustainable business practices with a more specific definition that would guide their practices, places of work, and trajectories of expertise. Thus taking a stand within the network meant defining the term in order to guide their practices within the network. Much of what participants learned was how to conceive of sustainable business and then begin to make decisions about what kinds of business practices were sustainable enough to merit more concerted attention and activity.

In my analytic approach, I created “relational portraits” of actors within the sustainable business actor network. These relational portraits are meant to enliven the network and explore how human actors within the network make sense of ideas and manipulate representations. Their relationship to each other as well as the concept of sustainability embroiled them in the tensions of addressing one of the most entrenched struggles of our time: the degradation of communities and the environment as we consume resources at a rate that out-paces regeneration. These relational portraits should be read together as partial portrait of networked activity. The people and their stories are always connected through their relationship to ideas and tools as the collective network seeks to disrupt and reorganize accepted practices within the world of business. The relational portraits are, of course, about the individual person or object within the network, but I chose each portrait from a larger data set of people and tools. These portraits are also meant to represent

relational patterns that I witnessed through my research. For example, Sam through his clothing, his emphasis on “not taking handouts”, and his use of business terminology took up the identity of a serious businessman. He also worked to present the local NI chapter in a similar way. There were others within the local chapter and across the larger network that also emphasized the importance of business practices within the network. Bradley, the co-leader of the local case competition worked as a diplomat from the NI network to the larger business world. He stressed the importance of NI participants presenting themselves in business attire during the NI case competition in an effort to be taken seriously by the respected business professionals participating in the event.

By definition, actors within a network can be human or non-human. I choose to represent both kinds of actors in the same category to highlight mobility as a prominent feature of learning in actor networks. Constructing innovations to change existing knowledge practices required the collective efforts people intertwined with material and representational productions in webs of established cultural and historical practice. Learning in networks happens as people work across locations to reorganize established practices and build new identity trajectories by reassembling disparate practices in new locations over time. Following how people and objects move across space allowed me to trace how knowledge was produced, made mobile, and routed through the network to organize practices. This analytic approach allowed me to highlight how key nodes of activity developed and became sites for learning within the network. The annual conference, the case competition, the internship program, and the online NI interface all became heightened nodes of

activity where NI participants grappled with the complex issues of establishing new trajectories of expertise.

Studying learning in a less “situated” model revealed how participants learned by working across temporal and spatial scales to reorganizing valued knowledge and expertise to innovate within the discipline of business. Not all practices are cultivated in situated communities of practice. This assumption becomes particularly limiting as learning theorists seek to understand how to design for innovation. Indeed when we study rapidly changing practice, we are forced to consider the connection between social-historical and ontogenetic timescales. I argue that collective organizing required distributing cognition occurring over connected relational portraits that develop in and with changing social practices. By examining the mundane, everyday practices of students working to make sense of and change traditional business practices, I made visible the work of reorganizing knowledge practices. The empirical evidence I used to examine learning towards innovation in business presented people and tools in constant motion as people vie for acknowledged expertise. To see learning across spatial scales, I attended to the work that must get done to innovate and reconstruct infrastructure, and develop expertise in an unstable field of practice. By tracking people over the duration of an academic year, I observed and analyzed how ideas and dispositions developed through NI participants’ work to negotiate new kinds of institutions, accepted practices, and identity trajectories within the world of business.

Chapter 5

Organizing for small-scale innovations in an emerging field of practice

Lave and Wenger (1991) suggested that learning “is an integral part of generative social practice in the lived in world” (p. 35). They studied learning that happened as people engaged in their everyday practices, rather than studying how learning happened within a classroom or how learning transferred from a classroom into the everyday practices of a community. To explicate their point, Lave and Wenger reviewed five ethnographic studies taking place outside of school in communities where practices were relatively stable. They presented evidence from these studies to indicate that learning and cognition are social endeavors and integral to ongoing, everyday practices within communities (Lave, 2011). These studies persuasively argued that learning is part of our everyday practices as we regenerate practices within a community. Although they theorized that practices were always changing (Lave & Wenger, 1991, 35), their empirical evidence focused on narrow trajectories of expertise in relatively stable fields of practice.

Since 1991, many researchers and practitioners have adopted situated theories of learning, but have not adequately accounted for how practices change over time (O’Connor, Allen, 2012). Nespor (1994) critiqued Lave and Wenger (1991) for theorizing learning as a bounded activity where knowledge resided almost exclusively in one situated setting. In keeping with Lave and Wenger, Nespor agreed that knowledge does not reside in the individual but is shared in situated social practices. However he also contested the bounded nature of their situated learning theory. Along with Latour (1983) and Callon (1987), Nespor suggested that

Lave and Wenger's portrayal of how knowledge circulates was undertheorized. He showed how knowledge does not reside in bounded social practice cut off from other social activities. Nespor declared that "no psychology of 'learning' will be acceptable that isn't also a political economy of knowledge" (p. 12). Lave (2011) acknowledged and shared this critique of her earlier work with Wenger. She suggested that by deemphasizing the political, historical, and economic relations involved in learning, they did not adequately account for how practices change (Lave, 2011).

How do we then conceptualize learning that adequately accounts for changing practices? Learning in this study focuses on the organizing work that needs to get done at both ends of a learning trajectory to innovate in unstable and sometimes contentious fields of practice (Dreier, 1998; Jurow & Pierce, 2011; Stevens, O'Connor, Garrison, Jocuns, & Amos, 2008). Changing institutional practices does not happen without coordinated human activity to reorganize accepted knowledge and resources (Latour, 1983; Star, 1989). Organizing collective action to reimagine communities requires attention to immediate activities that also connect to notions of collectively constructed long-term change (Packer, 2012). As people engage in collective organizing activities they make sense of disparate ideas to construct new knowledge/practices. Learning occurs, in this case, as people work to organize across temporal and social scales to create new infrastructure to support emerging expertise that are, as yet, unstable imagined futures. By widening the scope of situated learning to encompass the collective actions of humans and non-

humans, across space and time, we can see how people learn through their concerted efforts to develop new practices (Jurow, under review).

How do people construct new knowledge and practices in local settings where the infrastructure of knowledge and accompanying practices are unstable? My approach to this question was to follow study participants through a number of activities organized through a network of ideas, people, and objects. I privileged participants' mobility and collective sense-making practices to understand how ideas take hold and become consequential. Based on a review of 115 observation hours, 22 interviews, 11 half-day shadow sessions, I focus my analysis on the details of talk-in-interaction in one focal meeting that occurred just after the NI Annual Conference. This became a pivotal meeting and the object of closer analysis for four main reasons:

- 1) the meeting took place just after the NI annual conference, which was a highly active episode of movement in the network;
- 2) this was the only meeting that the local NI chapter called into session where they made sense of ideas between each other and not in reaction to an outside speaker;
- 3) three of six students referenced this meeting six months after it occurred to discuss their changing understanding of sustainability or to justify their other activities throughout the year; and
- 4) the content of conversation made visible the collective sense-making practices of the group.

Once I honed in on this meeting, I looked at the details of talk-in-interaction as participants made sense of their movement across settings through a node of distributed networks of activity (Schegloff, 1992; Star, 1989; Hall, Stevens, Torralba, 2002). Ideas that emerged through these interactions are temporally unfolding processes where participants contribute to the further progression of collectively building ideas (Goodwin). I used a distributed cognition framework to see knowledge creation unfold through talk-in-interaction (Hutchins, 1995, 2010; Hall, Wieckert, & Wright, 2010; Hall & Horn, 2012). I outlined temporally and spatially organized talk that takes place in one central meeting to see how students make sense of activities across locations within a changing field of practice. Following from the work of Hall & Horn (2012), I investigate how talk at multiple temporal scales moved back and forth across activities to make sense of incongruent practices. More specifically, I argue that constructing knowledge and practices requires that actors work back and forth across scales to organize new infrastructures for emerging trajectories of practice.

Political economies of knowledge are networks of recognized bodies of knowledge that have political and economic recognition and are supported by infrastructures that span temporal scales and productions of space (Latour, 1983; Nesper, 1994). These infrastructures that support knowledge often remain invisible, but become more visible when existing practice breakdown or work across disciplinary fields is required (Bowker & Star, 1994; Cole, Engeström, & Vasquez, 1997; Hutchins, 1995; Hall, Stevens, Torralba, 2002). This chapter is an empirical example of how people learn as they work to build new infrastructure within a

contentious field of practice. In this case, learning and organizing involved the creation of small innovations to reorganize knowledge practices and accompanying knowledge infrastructures. To see how new knowledge gets constructed through interaction I apply the microgenetic, ontogenetic, and sociogenetic definitions of temporal scales to gain specificity in my analysis (Hutchins, 1995; Hall, Wieckert, & Wright, 2010). I used this framework for analyzing how people were connecting people, places and ideas across a network. Hutchins argues that cognition is not an individual isolated endeavor, but is culturally constituted and distributed across people and ideas in everyday practices. (p. 373) Innovations are also culturally constituted processes, and we can more readily see how “small” innovations happen by using these three different levels of human cognition. Thus learning in this unstable field of practice necessarily involved weaving these three levels of activity together to make sense of emerging practices and extend these practices into more established and generalized practices.

I will define each term to explicate the analytic lens that I will use to see participants work to reorganize a political economy of knowledge. The first kind of cognitive activity involved in reorganizing infrastructures of knowledge was interactions that focus on changing a field of practice. Hutchins (1995) calls these sociogenetic interactions. These interactions involve working on the material and ideational resources to reorganize institutions and valued practices within these institutions. The second kind of cognitive activities that occur during talk-in-interaction are ontogenetic interactions (Hutchins, 1995; Hall & Horn, 2012). These interactions function to develop practitioners into fields of practice; for example in

face-to-face interactions people learn to take on ways of being and knowing that indicate fluency in business. Within situated business school meetings participants learn how to make arguments that will be acknowledged and convincing to business school faculty as well as business professionals. These skills and ways of participating bring students further into the practices of business experts.

The third kind of cognitive activities are microgenetic interactions that are always happening in conversations as people communicate and interact with other people. At the microgenetic level of analysis, interactions work to shape identities and roles within situated spaces over time. For example within face-to-face interactions people will make jokes, position others in the room using pronouns (e.g. I, you, she, we, you all, and they) to create alliances or distance others for their activities. These interactions can index distant places and times to achieve any number of communicative functions, however for this study I am particularly interested in the ways students use micro interactions to negotiate ideas and identities to create small-innovations within and across timescales. One important analytic tool that I use to see how participants negotiate new ideas within a well-established discipline of practice is the microgenetic activity of creating wiggle room. Erickson (2004) described how people create “wiggle room” within situated social spaces to broker new kinds of interaction. Wiggle room is a way for people to disrupt powerful stereotypes and ways of being positioned by others through, often sublet, improvisation within local activities. In particular he highlights how individuals disrupt powerful practices that are historically, culturally, and socially constructed and reified in everyday activities through improvisation in social

interactions (Levi-Strauss, 1962; Erickson, 2004). On a microgenetic level, the phenomenon Erickson calls bricolage is a kind of improvisation that individuals use to negotiate institutions, cultural norms, and available tools in order to disrupt hegemonic practices instantiated in local activity. According to Erickson (2004), a bricoluer is an individual who “makes use of certain materials to accomplish different purposes from those for which the materials were originally intended” (p. 166). Erickson used this term to describe actors within a setting, who are able to use available resources to work with or against powerful forces, like gentrification or racism, without having the individual power to reshape a system in which they find themselves. Microgenetic interactions can achieve immediate social ends or through repetition over time these interaction begin to enlist people into ongoing practices with specific associated identities (Wortham, 2011).

In this study I focus on interactions that work to disrupt, adapt, and make use of ideas for new purposes across time and space. Within collective organizing practices, bricolage can also lead to innovations on ontogenic and sociogenetic scales as people work to construct new knowledge and practices. In creating new trajectories of practice and new expertise, I argue that sense making across spatial and temporal scales are not discrete activities. Students overlap notions of space and time to negotiate a distributed network of practice and build new infrastructure to support the practice.

Case Study

In this chapter, I explore these ideas in the context of a group of business students working to use the tools of business to create more sustainable social and environmental futures around the world. The students in the local University were connected to a larger movement of aspiring business leaders working to utilize “the tools of business to make positive impact in the world” (NI literature, 2011). Specifically, 52 graduate business students attended Dovetown University in 2011-2012 belonged to an international business network called Net Impact (NI). The local chapter of NI was student-run with oversight from a faculty advisor. However the chapter was connected to other NI chapters across the world through a central non-profit (501C-3) organization that collected membership fees, rated the quality of chapters, and organized an annual conference. The Dovetown NI chapter had a record number of 38 MBA students attend the conference, which took place in a large city in the Pacific Northwest. The conference brought together 2500 business experts, practitioners, and students to discuss the changing world of business. This chapter is a close analysis of the student-run meeting held in Dovetown six days after the students returned from the annual NI conference. The meeting involved 18 Dovetown MBA students from the local business school all of whom attended the NI conference in the Pacific Northwest.

Current business practices are both implicated in perpetuating enduring social and environmental struggles and upheld as a necessary tool for reconstructing more sustainable futures within society. A growing number of MBA students across the country have reacted to these vexing problems by enrolling in MBA programs to learn accepted business practices and use those skills to create a

more socially and environmentally sustainable world. The NI students in Dovetown were both enrolled in learning about established business practices, while simultaneously participating in a movement to change accepted business practices. At Dovetown University the “core” business curriculum was part of an invisible infrastructure that supported these practices. Students became active participants working to change the political economy of knowledge supporting the established practices within business to consider sustainable business practices. As NI students in Dovetown made sense of the complexity of incorporating sustainability into the everyday practices of business, the curriculum that worked to support traditional business practices became visible and contested. The architecture of the curriculum became an artifact to explore and the object of innovation as the students made sense of the connections between established business practices and the emerging field of sustainable business practices.

In this multi-sited ethnography, I followed students as they moved across settings in the network of activity surrounding sustainable business. I argue that the movement across settings worked to organize learning back in Dovetown and introduced new materials, ideas, and people to leverage in the local setting in order to make sense of practices within the local university. To change established practices in the local business school, students traveled outside of Dovetown and extended their network far beyond the local setting. Upon their return to the local setting, students called a meeting to discuss what they had learned from attending the conference. This meeting became a central piece of data because through talk-in-interaction students actively worked to change the infrastructure that supports

sustainable business practices in Dovetown. The collective movement across networked activity allowed students to return to Dovetown and see the practices within the local setting differently. Thus the movement became a tool to think with during the focal meeting where students worked to change the established business practices in the local university setting.

I argue that through interaction Dovetown NI participants worked across microgenetic, ontogenetic, and sociogenetic ways of knowing to construct a small innovation that served to direct future activities for the group and create systemic change towards more sustainable business futures. Through interactions in this meeting, I highlight and analyze how students shift back and forth between dimensions of time and space to create infrastructure to support the emerging field of practice and more stable trajectories of practice for emerging experts. To show how people work within everyday practices to organize and create systemic change, I analyze: 1) how students use their movement across settings to make sense of sustainable business practices; and 2) how students weave together concepts across temporal scales to construct new knowledge and infrastructure to support sustainable business practices. Finally I will discuss how studying talk-in-interaction allows us to see how constructing sociogenetic shifts works in tandem with developing experts in an emerging field of practice.

The Argument

Movement across the country became a tool that helped students integrate their evolving vision of sustainable business into their local organizing activities. As students moved they brought with them an interest in defining and understanding how sustainability is related to everyday business practices in order to change established business practices. Indeed sustainability as a concept was an ideational boundary object that moved with the students across settings as they worked to understand how to negotiate the tensions of creating new practices within the discipline of business. Specifically, I analyze how students made sense of local practices after their experiences outside of Dovetown at the sustainable business conference.

During the post-conference meeting, student conversation moved back and forth between ideas from the conference and ideas about how to reorganize established business practices in the Dovetown business school. The conference exposed students to business experts using sustainable business practices within successful companies from around the world. Experts from other places were working to transform their existing business, business school, as well as creating organizations that were more socially and environmentally sustainable. When students returned from the conference, they were emboldened to make new kinds of claims about the changing world of business and take local action to change established business practices.

The remainder of this chapter looks at a small-innovation that occurred during the second half of this focal meeting of NI occurring a week after the students return from the NI annual conference in a city in the Pacific Northwest. Through a

close examination of talk in interaction, I show how a collective understanding of sustainable business was constructed in the meeting as students worked on developing the field of practice. Simultaneously students were developing an understanding of their emerging role within the movement. Through a definition of the direction of the field, student began to develop a collective identity as sustainable business activists within the local business school and across the community. Although these two processes necessarily go together, for analytical clarity I highlight how students move between sociogenetic and ontogenetic work in order to create a new understanding of how business and sustainability should fit together. This understanding then facilitated their developing imagination of their identities as sustainable business experts within the emerging field of practice. Finally, students begin to take active steps to reorganize the relations among people, materials, and ideas to expand the opportunities for developing this expertise within the business school. Figure 1 is a representation of the speech events that I highlight within the conversation. Each box represents speech event with the corresponding timing of talk. Each box also has a corresponding argument that fits within my analytic lens of distributed cognition working across people, timescales, and locations. The green boxes are representations of sociogenetic sense-making events and the purple boxes are representations of ontogenetic sense-making events. These sense-making activities culminate in a small-scale innovation that local NI participants revisit periodically for the duration of the data collection period.

Figure 1. Distributed cognition timeline



Identifying the problem in the local setting

The focal meeting began by discussing what students had learned at the conference to communicate the value of the conference to the faculty. In the first 30 minutes students evaluated the quality of the conference, shared experiences from the conference, and discussed the possibility of creating a sustainable business hub in Dovetown where business experts, sustainability experts, and outside businesses would join forces to tackle real-world sustainable business problems together. As the meeting progressed students worked to connect the larger issues of creating a more socially and environmentally sustainable world to local sustainability struggles back in Dovetown, both within the university and in the local business community.

Roughly 35 minutes into the 60-minute meeting, two MBA students shifted the frame of the meeting and with it, the problem for the group to address. Virginia,

a second-year, identified a tension related to building a sustainability hub in the business school, because the business school was not doing a satisfactory job of training a cohort of sustainable business practitioners. She noted that sustainability coursework within the business school had low visibility. James added to this tension by suggesting that some professors in the business school did not believe that sustainability was a viable issue within business.

Virginia: Just really quickly I just want to say that the sustainability track itself isn't really promoted very well at the school here. And that would—that would be nice. People—I guess there is a feeling that it is not gonna get you a job. You know?

James: It's almost actually demoted. I would say certainly by faculty. I don't know I feel like I've had some very clear interactions in and out of class with professors who basically scoff at sustainability. Or like I asked Brock –I love Brock, who doesn't love Brock?—after class about triple bottom line. He laughed and said, “well that's great if you're in the Dovetown bubble, but outside the bubble—”

Virginia brought out the low visibility of the sustainability track within the MBA program. To make create an opening within the talk of the meeting, Virginia used a lot of hedging practices to identify a problem for students interested in sustainable business. She initiated her idea “just really quick” and “I just wanted to” these phrases made Virginia's subsequent claim less forceful. By using the word “just”, twice in the first sentence, she ameliorated the impact of her discerning insight about the infrastructure of the local university curriculum. The “sustainability track” as a kind of organizing tool for the school and the disciplinary place of sustainability within the program was not a central component of business school curriculum. When Virginia stated that the “sustainability track” was not promoted well at the school, but she again hedged these claims by making qualifying her critique of the schools promotion of the track with “it's really” and “very well”. Virginia lessens the

impact of her claim about the sustainability track, but despite these hedges, she identified a central problem for students within the school, which was affecting their ability to incorporate sustainable business training into their day-to-day activities. Virginia made visible the local politics of sustainability within the school that did not match their recent experience of the promotion of sustainable business at the NI conference. Virginia was able to map an inconsistency about how sustainability as a concept was treated across locations between the conference and the school curriculum.

Immediately after making the claim about the sustainability track within the business school, Virginia offers a reason for this low visibility, namely, that knowing about sustainability does not necessarily lead to getting a job. In this speech turn, Virginia drew attention to the sustainable business practices in the Dovetown business school. She juxtaposed their shared experiences of sustainability at the conference with the low visibility of sustainability within the local business school. Virginia ended her opening critique of the low visibility of the sustainability track at the school with the emphasis word “here”. By using the word “here”, Virginia drew a comparison between the experiences across locations. One week ago at the conference in Stumptown, sustainable business was the focus of the networked activities. For example one of the keynote speakers at the conference, the vice president of an internationally renowned sportswear company, closed the conference with the company’s ongoing efforts to “marry values with value” and that the two could “go hand in hand” within this successful corporation. Considering the social and environmental implications of doing business as not about the

“standard pathology of risk management,” according to the vice president, the implications were about “better business”. But here—at the Dovetown business school—sustainability focused activities were not promoted.

Moving across locations allowed students to problematize accepted practices within the school and identify other forms of practice that were considered viable outside of Dovetown. Prior to Virginia’s “really quick” statement, students were talking about how to position the local business school as the center of sustainable business for the state. The talk had been about creating a sustainability hub at the business school in Dovetown. Her observation suggested that the high level of enthusiasm for this idea at the conference and within the earlier meeting conversation did not match the low profile of sustainability within the core curriculum of the business school. These incongruent practices between “here” at the business school and the conference became a place to grapple with the changing world of business and the students’ roles within that world. They worked to connect the prominent ideas about sustainable business from the conference to the messages about sustainability within the local setting.

On a microgenetic level, Virginia pointed out inconsistent practices between the Dovetown business school and the Stumptown conference. Although my study does not centrally address the ways in which critiques of sustainably practices were mediated by gender performance, the way Virginia hedged her claims was an example of a common practice among women in the group to hedge their claims in group settings about the ways in which business practices should change. This is an area for future research. Despite the hedging Virginia proposed a potential problem

for the NI group that had implications for the development of a new kind of expert as well as the further development of the field of sustainable business. The low visibility of the sustainability track in Dovetown was a more viable problem since leaving the conference where conversations about sustainable business were framed as a major part of solving social and environmental ills. Students were piecing together the mismatch in emphasis between the conference and the business school. This insight was based on a comparison of context and movement across spaces.

Virginia drew attention to the sustainability track and thought “it would be nice” if it was more visible within the school. This idea linked to the previous conversation where students talked about creating a sustainability hub in Dovetown. Virginia suggested that a more visible sustainability track would allow the school to become a more effective hub for the state. She addressed the desire to become a hub within the state with the more local issue of becoming a better-trained cadre of sustainable business practitioners. Through this comment she also points to an ontogenetic problem of low visibility of the sustainability track. Namely that highly qualified and recognizable training could improve the status of work and the effectiveness of their work within an emerging field of practice. On a sociogenetic level, Virginia identified a new problem for the group, namely that a dedication to sustainable business might not lead to future jobs for emerging practitioners in the field. The reasoning Virginia provided for the low visibility of the sustainability track was connected to the notion that knowing about sustainable business was “not gonna get you a job”. The development of practitioners in

sustainable business was leading them on a pathway into an uncertain future practice within an unstable field. The students addressed the need reorganize the material and ideational infrastructure within the Dovetown community and the larger culture of business to acknowledge the need for sustainability experts. Virginia drew attention to a personal desire to have more visibility for an existing track of courses within the business school. This was also connected to a larger problem to address with the Dovetown school because the school was one of many gatekeepers for changing the practices of future business leaders. More broadly this problem was connected to an even larger problem, which was that the demand for sustainable business experts within the workforce did not match the work that needed to get done to change business practices and ultimately create a more sustainable world.

Building on this problem, James suggested that certain members of the faculty demoted the sustainability track within the school. James posed a more incriminating problem for the group: he named a member of the faculty who demoted sustainability within business. In these speech turns the sustainability track went from unproblematic, to not very visible, to “actively demoted” by faculty who were tasked with training the future business practitioners. James took the floor of the conversation and shifted the frame of Virginia’s critique and suggested that the faculty in particular were actively discouraging students from taking the idea of sustainable business seriously. Thus the frame of the conversation moved from things students took away from the sustainable business conference to a problem that connected to their immediate and more distant futures (Goffman,

1974). James took the problem proposed by Virginia that lacked an identifiable culprit and implicated the faculty members for demoting sustainability. The problem of sustainable business became local and personal.

James recounted Brock's reaction to "triple bottom line" and, in doing so, he suggested that many members of the faculty "scoff[ed] at sustainability". Triple bottom line was a frequently used catch phrase associated with sustainable business practices. Playing on the term "bottom line" that alluded to the idea that profits—the last line in a financial statement also called earnings or net income—was the only driving force for taking action within business. The "triple bottom line" refers to the idea that "people, planet, and profit" should all have equal consideration when taking action within business. The method by which Brock was able to devalue notions of triple bottom line was by suggesting that it only carried significant in the geographically isolated "bubble" of Dovetown. According to James, the beloved faculty member—Brock—suggested that only people within the Dovetown bubble were concerned with triple bottom line practices. James portrayed Brock as further destabilizing triple bottom line by isolating the phenomenon to a local myth that only existed in Dovetown rather than existing in a social movement sweeping through the core of business practices. The faculty member could devalue sustainability because in the larger world of business (outside of the Dovetown bubble), triple bottom line business practices were of little interest or use to future business practitioners. In the next sentence, James used the anecdote with Brock to suggest that the majority of the faculty believed that triple bottom line practices only pertained to a few businesses in a Dovetown. James's portrayal of the faculty

provided a new frame to the problem posed by Virginia. According to James, the low visibility of the sustainability track within the business school was not only a problem it was actively dismissed by powerful members of the business school faculty. The notion of a Dovetown bubble devalued James's interest in sustainable business and his belief that the world of business was changing.

Placed in the context of recent activities, students had just traveled across the country for a conference where sustainable business practices were emphasized. Students witnessed leaders from major corporations discuss how they were incorporating sustainability into their businesses. For example, one of the keynote speakers the CEO of an outdoor company talked about hiring MBA students to measure their "baseline carbon footprint" and another business school graduate student helped the company install solar power onsite generation for 22 of their stores. They changed the lighting in the stores. They have employee incentives for traveling to and from work. The CEO discussed how they were measuring their energy use, carbon footprint, and waste to landfill output along with measuring profit on a monthly basis. These speeches and conversations from the conference supported the idea that the sustainable business movement was certainly alive and well outside of the "Dovetown bubble" in many other geographic locations around the world. Thus when James implicated a beloved professor for diminishing the significance of triple bottom-line business practices outside "the Dovetown bubble" it was on the heels of a contradictory set of conversations from the conference. Learning in this case can only be properly understood within the frame of recent networked activity that brought students out of the bubble to explore sustainable

business practices in new spaces. As students returned to Dovetown, they were emboldened to reframe sustainable business in the business school and beyond the Dovetown bubble. Meeting a new set of business practitioners and academics discuss the importance of sustainable business practices changed the local NI participants' frame of reference about sustainable business practices outside of Dovetown.

Movement across situated spaces through a network became one of the local NI network's collective tool to think with. Students could draw comparisons across places to reorganize their understanding of sustainable business and take action. Specifically this movement across contexts pushed students to reconcile the messages they were receiving from the local business school versus the messages they were receiving from corporate leaders and political appointees at the conference. Virginia and James identified a more specific problem for students to grapple with back home; namely the lack of emphasis on sustainable business within the business school curriculum. As the group addressed this newly framed local problem they worked across scales of space and time to do so. Virginia suggested that perhaps the sustainability track in the school was not more prominent because it may not improve future job prospects. James reiterated this claim by implicating the faculty for demoting sustainability based on the notion of relevance to business practices outside of Dovetown. Virginia and James set up a more collective and local problem that students would work to address in the next portion of the meeting. The conversation shifted from a vague ideas about creating a hub where Dovetown NI participants were consulting with local businesses to

change business practices to a more specific problem of the training students received to address the issues of sustainability in the larger business community.

Although the conference suggested that sustainability was a growing concern and cause for action within the business community, it was not clear to students or faculty members in Dovetown that jobs were readily available in this emerging field. Students spent the next portion of the conversation talking about how to get jobs in the sustainable business field when the Dovetown curriculum did not meet their training desires. Students were not interested in getting trained in sustainable business because they were under the illusion that there were more plentiful or more lucrative jobs within the emerging field of sustainable business. On the contrary, students were interested in finding sustainable business jobs because they were seeking meaning and a desire to contribute to the world in a positive manner through their work. Additionally, they were not under the illusion that these jobs would be easy to find. In the pursuit to build expertise and at the same time build demand for their expertise, NI students were realizing that part of becoming a sustainable business expert was learning how to negotiate for new forms of practices within the accepted practices of business. Virginia and James both suggested in their speech turns that faculty would take sustainable business curriculum more seriously if and when the demand for sustainable business expertise increased. The shift in conversation prompted by Virginia and James led to an organizing effort to work across situated practices and time scales to build new infrastructure within Dovetown and beyond.

Placing blame on traditional business school experts (38:35)

Referencing experiences across multiple settings, NI students drew comparisons in order to construct a trajectory of practice where sustainable business practices could thrive. Moving back and forth between school and professional settings allowed NI participants to: 1) understand the role for sustainable business practitioners within local companies; 2) create better training for the emerging cadre of experts; and 3) build demand for these kinds of experts in the local setting. In the previous excerpt, students compared their experiences in the local school setting to their experience in Stumptown. At 38:35 minutes into the meeting Nicki, a first year female NI participant, compared the quality and prestige of the training students were receiving in Dovetown to respective quality and training of Ivy League business students. Nicki compared across ontogenic practices in different locations within the country. In the following excerpt notice how Nicki takes a passive role in changing practices. At this point in the meeting she does not view herself or the NI chapter as a network capable of changing practices within the field.

Nicki: Yeah I think dragging their feet on this is just gonna end up being a very bad decision. Because because we're not going to Harvard or Yale we kind of need an edge to have a job that we actually enjoy that is exciting and rewarding and so I think that they need to start integrating it into more of our nor—like normal classes. Like I am taking supply chain management and I have no idea if sustainability is in it at all—I'm hoping... or I'm hoping I can make that happen during the class but—

Adam: We—we might even consider talking to the Dean. The Dean has been pretty receptive I would say just to MBAs in general and I think that it be a good idea to bring that up. Because it—I don't know—if it comes from a club I think it has that much more clout. And like you're saying it's one thing to kind of market us as yeah we're the sustainability MBA. But then people show up and they're like "wait what just happened?"

Nicki took a traditionally passive stance of a student who has no control over the curriculum. She used the third person to discuss “their” very bad decision to delay taking action to change the curriculum. By delaying their actions, the business school was losing the opportunity to position their students to compete for jobs in the small field of sustainable business. Nicki used the phrase “dragging their feet” to characterize the school’s reluctance to move towards a more sustainable curriculum. Nicki also introduced the idea that sustainable business should be incorporated into the “normal classes” like supply chain management. Nicki characterized the movement towards sustainable business curriculum as inevitable. However she did not portray students as actors capable of influencing changing practices. Instead she suggested that she was in a bind because the school was “dragging their feet”. She warned that the school would lose a competitive advantage by delaying their actions to change the curriculum. In this excerpt Nicki, a first year MBA student, compared the Dovetown business school to “Harvard or Yale”. Just previous to this comment, students were discussing the ways in which other business schools within the state were adjusting course work to incorporate sustainable business classes. Nicki then suggested that there was a window of time in which the business school could create a competitive edge based on changing the curriculum sooner rather than later. For Nicki and the other Dovetown students to secure enjoyable and exciting jobs, this transition would have to happen fast. Nicki importantly linked a more serious sustainability curriculum to securing jobs for students from the Dovetown business school.

The problem, as Nicki framed it, was out of her control. Using the third person plural, Nicki launches a complaint that “they need to start integrating” sustainable business practices into normal classes. In the last sentence of her speech turn Nicki suggested that she was “hoping” that she could make the course incorporate sustainability into one course within the curriculum next semester. However, she characterized her course of action as an individual effort to change the individual curriculum within one class. Nicki expressed dissatisfaction with the curriculum and took a passive role in the struggle to change curriculum by pointing out a problem without moving to create active systemic change.

Adam, a second year MBA student, modified the way Nicki framed the students’ role in the midst of creating institutional change. Just as James reframed Virginia’s claim, Adam took up Nicki’s idea and reframed it. He discussed how NI students could take action on their own behalf and attempt to create system-wide changes. Adam used of the first person plural to suggest, “we can talk ” to the Dean. He shifted the burden for action on to the students. Rather than using the third person plural to describe the necessary action that must be taken at the school, Adam placed the students in an active role in changing the curriculum. Adam positioned NI students as part of the creating the necessary changes to revise the curriculum. This shift was also a moment where new members of the local club learned how to participate more fully in the NI club. Coming together to understand the social and political infrastructure of the school operated, students could take a more active role in creating change at the school. The power in numbers would have “more clout with the Dean” where they could work to create more systemic change

rather than creating change for one student in one class at a time. Adam did not dissuade Nicki from also working to change the supply chain management class, but repositioned the scale of change that students could make within the school. Finally, Adam insinuated that the school was involved in false advertising: namely that the sustainable business reputation of the school did not match the quality of the sustainable business curriculum. By strategically using the new arrival of the business school Dean along with claims of falsely advertising the school as a business school that focuses on sustainability, Adam created an argument that students could use to take action within the school. This reframed Nicki's passive complaint into an active opportunity to work together to shift the infrastructure of the business school training to incorporate more sustainable business skills in the curriculum.

By leaving the "Dovetown bubble" and the ethos at the local business school, NI participants came back to Dovetown with examples that they could use as tools to negotiate changes in the local area. NI participants could create new "wiggle room" by comparing practices to practices that they had heard about during the conference. To contend with well-established authority figures within the Dovetown business school setting Nicki and others had schools with which to make comparisons. They also saw what other schools were doing to train their students and had new threats about how the school claimed one kind of training and delivered something different. These were all developing tactics that students could use in other contexts to convince businesses to change practices based on comparisons to other companies and other sustainable business practices.

Students involved in the Net Impact network were becoming bricoleurs moving between traditional business and the sustainable business movement. The students were learning to become sustainable business activists. Part of becoming full participants in the local NI club included looking for opportunities to take collective action. As people with relatively little power within the academic institution, the NI students looked for opportunities to make their case to change traditional business training practices. Students worked to reorganize institutional practices, while at the same time becoming trained within a more traditional business setting. Students were learning to find opportunities and then leverage plausible arguments to change the school. Through this practice they were also learning how to in create conditions under which they could practice sustainable business in their future careers.

Reframing “legitimate” business expertise

Part of creating new conditions within the business world to practice sustainable business was by changing the perspective of what legitimate business practices were and should be. The conversation built on both Nicki and Adam’s comments to reconstruct the curriculum to train new kinds of business experts. The students moved back and forth across settings and time scales to build new infrastructure within the business school and within the Dovetown business community. Rebuilding infrastructure within this meeting meant creating more sustainability content within the business school and creating new positions within businesses to address sustainable business practices. The unfolding interaction collectively built upon the notion of reforming the curriculum to train emerging

practitioners in their field of interest. Carl took the next speech turn after Adam and added a new layer for NI students to consider as they made arguments to incorporate sustainable business practices into their education. There was, according to Carl, competition for sustainable business jobs between MBAs and PhDs in Dovetown. In this example, Carl leveraged his experience talking to sustainable business consultants to build the case to change the business school curriculum. By referencing the network of sustainable business practitioners outside of the business school, Carl and James worked to both build new infrastructure for and respond to the changing world of business.

Carl: Yeah case and point. There are sustainability managers and directors and officers that are literally being hired out of business programs that have good enough sustainable business um tracks but we're not quite up in that top rung yet so if there's a local company for instance is going to be interviewing for a sustainability manager, they're going to look to ENVS PhDs, they're going to look at people in other departments, and we might be in the mix but if we don't have classes to support essentially gaining access to that position, we don't get the job. And I don't think it's that much of a leap to get that far because at this point businesses it's not an established position that someone who has been there for ten years is in line to get. It's new enough and it's more like, "Holy shit we have no idea what to do. We need someone that has the slightest idea." And if you have the slightest idea and if you can basically prove that you have the slightest idea of what to do, you get the job.

James: I think that definitely feeds back into an interaction with career connections to solicit from employers who are hiring in that space. "What do you want?" You know. "What's—what are the tools that you want to see somebody whose—you know you're hiring for this position?" Doing sort of a survey of requisites for—fer those types of positions to inform whatever course development there is which, again, I think to echo Carl, I think you don't need to do a whole lot to get there because it's a new space so.

Carl: But I mean yeah—you still need to get a little bit further than where we are now. Like I've talked to a few people in sustainability consulting companies so far that have said we need—it's almost like there are two tracks in sustainability consulting. There's the total soft and squishy side that Dovetown has tons of, but the ones that actually need help are the ones that have kind of harder technical skills and they're saying that basically our program does not provide those harder skills that qualifies for those positions.

James: I mean are they looking for an engineer?

Carl: Sometimes they are but but there are other times where like to go back to non-financial accounting. Sometimes there's a local company like Tick-Tock that—not—Tick-Tock is a bad example. But if Tick-Tock had a more legitimate mindset (laughter) they would need

someone that essentially is a business background and has the technical ability to implement an accounting system.

Students were actively working to make visible the political economy of knowledge associated with sustainable business. They reach far beyond the Dovetown bubble to gain exposure to changes in business practice, but the more distant exposure to sustainable business practices has immediate implications on the local level. Carl connected the sustainable business curriculum to gaining access to sustainable business jobs. For Carl, having the right sustainable business curriculum was like having an ID badge and created a way to get certified in the emerging field of practice. This ID badge, according to Carl, permitted access to desirable sustainable business jobs. Once students were acknowledged as qualified, they could gain access to jobs there were newly forming. The positions within companies were not “established” thus students would have access to changing the way companies considered sustainability within their businesses. As Carl described it, the new positions would not go to current employees. Companies were looking for newly trained professionals in some sort of sustainable track. It was not clear, however, that the Dovetown MBAs would be “in the mix” for these jobs. PhD students and MBA students from more prestigious schools may have better prospects. Carl compared across training settings to describe the implications of failing to create a better sustainability track within the school. The coveted positions within the sustainable business movement would pass them by because the curriculum at the business school was inadequate.

Next Carl added to the complexity of changing the curriculum that James established previously. Not only would professors need to be convinced to

incorporate sustainability into their curriculum, businesses were unclear about the direction to take in order to improve their sustainable practices. Thus businesses were unclear about the kind of expertise they were looking for when they created new positions within their company. Securing employment in these emerging positions became, according to Carl, a process of convincing companies that you “have the slightest idea” of what to do. Students wanted more expertise and were working to understand the infrastructure of the political economy of business in order to crack the code and become acknowledged within that network. They shifted stances between being a group of experts willing to guide new practices within businesses and being a group of student in need of a new kind of training. The students were individually shifting their footing back and forth between imagined positions of power within the system where they could restructure career connections or established infrastructure within businesses to imagined positions of students from a non-Ivy League school working to convince businesses that they had “the slightest idea” of what to do within the field.

In the next speech turn, James identified the career-counseling center as an existing infrastructure that already coordinated between the school of business and companies looking to hire MBAs. He made visible the ways in which the curriculum and the world of practitioners could connect to construct new knowledge and expertise within the school. The field of sustainable business was under-developed and experts were difficult to identify let alone access. The search for experts in sustainable business required more work across contexts and disciplines of study. The Career Connections Center could act as a proxy organization to develop the

quality of the curriculum reform by responding to the needs of potential employers. When James instantiates the plausible questions career counselors might ask prospective employers, James outlined the need to develop an institutionalized system of communication that would allow new knowledge to travel from the community into the business school to inform coursework and then route newly trained experts from Dovetown into new places to affect change. The Career Connections Center could broker this process to ascertain “the tools” that companies were looking for in their new employees. The constant negotiation and comparison within and across settings became central to student learning. This organizing served as concrete effort to build better sustainable business training and job creation. It also served to build a collective identity trajectory towards becoming sustainable business experts.

Students were reflectively participating in changing social structures and accepted business practices. Learning, then, was intimately tied to organizing new social futures and extending new practices into established networks of practice. In Carl’s next speech turn, he delineated a difference between two tracks of sustainability expertise. There was the “total soft and squishy side” and the “harder technical skills” of sustainable business expertise. Carl, in this case, used sustainable consultants as the experts in the field. Moving back and forth from the school curriculum to his conversations with consultants, Carl portrayed the demand for sustainability experts as a demand for technical expertise. The movement outside of the business school allowed for a comparison between the current state of the business school curriculum and a need for future progress towards expertise in

“harder skills”. James then pushed Carl to clarify what he meant by “harder technical skills”. He asked Carl, “I mean are they looking for an engineer?” There were at least two trained engineers in the room during this conversation, so this would not eliminate some of the NI students from qualifying for these jobs. Carl suggested this was possible, but gave a more specific example of where “technical” business skills would be appropriate. The local company, Tick-Tock, if they were “more legitimate” would need someone with “the technical ability to implement an accounting system”. In this example Carl referred to hard skills as a technical ability to implement a non-financial accounting system. Students often drew a distinction between hard and soft skills within sustainability as a kind of proxy for skills that would give them an “ID badge” to get acknowledged and hired by companies and skills that could measure sustainability and quantify those sustainable business practices and business skills that did not involve quantification.

There were several aspects of this speech turn that became important when trying to understand how new knowledge and innovations happen within local spaces. Firstly, Carl dismisses his example because the company would need to “have a more legitimate mindset”. This off-hand comment evoked laughter in the room, but more seriously Carl insinuated that Tick-Tock did not have a legitimate mindset because they did not think that they needed a sustainable business expert to change their accounting system. Carl, the Spokesperson, as a kind of person who was unafraid of calling businesses out for disregarding the impact that their business had on the social and environmental world in which they operate. The laughter came from the audacity of calling a very successful business that was

founded in the Dovetwon community as illegitimate. This is an example where Carl was both working on the near and the far end of the learning trajectory. On the near end of the trajectory, students would need to know non-financial accounting to obtain more technical expertise. On the far side of the learning trajectory, more companies would need to start valuing sustainable business expertise and implement non-financial accounting systems. More companies would need to change their mindset to recognize the need for non-financial accounting systems within their business. Secondly, Carl worked to specify the notion of “hard skills” within sustainable business. This example created a concrete place for students to build an imagined trajectory for sustainable business practices in the community. The movement across the school curriculum to everyday business practices that could incorporate these skills, provided students with greater shared understanding of their potential future roles within the world of business.

On a microgenetic level, Carl was the co-president of the club. He had a lot of social capital to make a joke that Tick-Tock was not legitimate because it did not incorporate sustainability into its accounting practices. At other moments in the meeting, Carl took a different stance, one where Dovetown MBA students would be scrapping to get a job anywhere within the current sustainable business field. These shifts in stance changed as the students talked across spaces and timescales. In the near term within the context of the business school, students took stances that indicated they had less power to make changes and make more desperate pleas for support. For example when Nicki discussed incorporating sustainability into her supply chain management class, she spoke from a place of very little power or

knowledge to make a compelling case to change the curriculum. However in the near term when referencing the conference context, students spoke more boldly about the inevitable changes that were taking place within business. For example when Nicki discussed the faculty “dragging their feet”, with regards to implementing better sustainability curriculum. The turn of phrase “dragging their feet” implied a kind of negligence on the part of the faculty.

These shifts in stance were, in part, spatially constructed as students moved across places and experienced other instantiations of the sustainable business movement. In this case, Nicki was the same speaker taking part in the same meeting, but she took up two different positions of relative power within the world of sustainable business. On the one hand, Nicki was trying on the identity of a powerful player within the world of sustainable business. And on the other, she positioned herself as a first year MBA student with little understanding of the standard curriculum or the extent to which sustainability would be incorporated the supply chain management class. However, to imagine and plan for new trajectories of practice within business students also worked across temporal scales to revise their potential opportunities for “exciting” and “rewarding” careers (ontogenesis) and change the way business practices address enduring social and environmental struggles facing our world (sociogenesis).

Building a small-scale innovation

In the next speech turn, the co-president guided the group back to a discussion of the “surprising or unusual topics that you guys took away from the conference that w[ere] really valuable”. Emma, a first year, responded with a

realization that came from a hallway conversation with another Dovetown NI students in between talks at the conference. As Emma was pushed to explain her realization in more detail, she drew out the concept that would turn into a small-innovation within the meeting. The idea that “sustainability is in everything” became an important distinction that guided the collective problem-solving for the group.

Emma: I didn’t go to the talk about tattoos and guns or whatever that one was but I talked to Evan who went to it and he said it was really interesting like they you know thinking about the environmental effects of those types of things that you wouldn’t normally think like oh “I need an environmentally friendly bullet.” But he was saying like with the lead based bullets—they were—wherever they ended up you know they were ruining the –leaking into the ground water and all of that. And that was like an aspect that I hadn’t thought about. Like so...

Sam: So you’re saying like—cause I was at that one too—and I tried to identify what that one was about and I was kind of like unusual

Emma: I only heard Evan’s perspective of it so—

Sam: unusual sustainability jobs er—

Emma: I mean I guess yeah

Sam: from unusual places.

Emma: I mean yeah from what, from what he told me it is basically like that sustainability is in everything.

Sam: Yeah.

Emma: And... you know so...

Sam: K. Anybody else?

Emma began with a short narrative of an exchange that she had with another Dovetown MBA student at the conference. The valuable topic that Emma chose to discuss was the “talk about tattoos and guns”. Emma embedded Evan as a speaker in the short narrative when she credited him with the idea that the tattoos and guns talk “was really interesting”. The valuable realization from this exchange, for Emma,

was the strange places where sustainable products were emerging. Emma had not contemplated the environmental effects of lead from bullets. She described her surprise that someone would actually think, “oh, I need an environmentally friendly bullet.” In this sentence, Emma invokes a different speaker from herself. This time the person was an imagined consumer of lead bullets. It had not occurred to Emma that people who designed bullets and their customers were concerned with the effects of lead bullets on ground water contamination. In this moment in which Emma embeds other speakers words, she was expanding her understanding of the identities of sustainable business practitioners and customers. Finally Emma explained that lead bullets leaking into the ground water was not an aspect of sustainable business that she had ever considered. Emma described the new idea that came from her hallway conversation at the conference, and this led to a insight that she seemed to be working out through her conversation with Sam.

Next Sam took up Emma’s narrative to dig deeper into the significance of her story. He pushed her to explain if the talk was simply about “unusual jobs” or if it carried a deeper significance. Emma interrupted to Sam to remind him that in fact, Evan she was actually sharing Evan’s perspective. She interrupted Sam to remind him that she “only heard Evan’s perspective”. In this speech turn, Emma attributed her insight to her conversation with Evan and not the actual talk on tattoos and guns. Her reluctance to author her own thinking appeared again in the last speech turn when Emma synthesized her insight through Evan, once more. Emma finished her analysis of the significance of the conversation by stating, “I mean yeah from what, from what he told me it is basically like that sustainability is in everything”. In

the next speech turn Sam redirects the conversation back to his initial question for the group. However, the idea that sustainability is in everything re-emerged in the conversation to reorganize the local NI activities going forward. This revision in Emma's understanding of sustainable business became a foundation upon which students built a plan for revising business practices across settings.

The more immediate task for NI students was to organize within "the Dovetown bubble" to change the way the business school incorporated ideas of sustainability in the curriculum. The more distant struggle for NI students was organizing to change the way the business world recognized sustainable business practices. Building the far end of the learning trajectory relied on changing the way the political economy valued sustainable business expertise. In order to construct new knowledge for an emerging group of experts, the group had to tie together ideas across locations and grapple with the inconsistencies that emerged. For example, Virginia and James worked to make sense of the messages business leaders at the conference proposed about the importance of sustainability within business versus the messages Brock and other faculty members proposed about the importance of sustainability to the broader business community. Through the interaction in the meeting, the students developed their understanding of what sustainable business practitioners need to know, and how business school training could create more competitive experts within this emerging field. In the next section, student continue to work extend and enmesh sustainable business practices further into their local network. To do so, students not only compared ideas across locations and situated practices, but also worked across temporal scales to construct

a collective course of action for the group. In the next section, I will explore how students use temporal scales to build knowledge in an emerging field of practice. These sense-making practices are not discrete. Indeed the movement back and forth across scales of time and space through their interactions was necessary to construct new practices within business.

Becoming advocates for changing individual learning trajectories

Students continued to build new infrastructure of thought and action—and with it—new identity trajectories. In *Talk and Social Theory*, Erickson (2004) discussed how people engaged in unexpected discursive practices that break from normed speech patterns can work to disrupt powerful institutions. He argued that in these cases people were not necessarily “reflectively participating” in overtly changing these institutions, but working on talk-in-interaction as a means for working on the larger problems in the world. The activity in this meeting, however, was organized within a networked activity to change the way business and concepts of sustainability interact. Thus this meeting became a place where students could openly question powerful institutional practices and try on identities of experts in order to argue for changing valued practices within business. To make sense of the infrastructure of the business school students compared their experience within the Dovetown University business school to practices they observed outside the business school context. These conversations were places where students became bricoluers working to redirect the infrastructures that guide established practices. Although some students took more active roles to change institutional practices, the group continued to guide new NI members to take action to make changes within

the school. Students were not only learning about how sustainable business practices were evolving, they were also learning how to become architects of those changes.

Part of becoming a business school student was of course learning accepted practices within business. However the NI chapter was also learning to negotiate their evolving set of valued sustainable business practices into the institutional infrastructure of the school. In the next strip of speech, students were being brought into a culture of business school activism. Two first year students were discussing the particulars of negotiating new opportunities to learn about sustainable business within their business school curriculum. Emma and Nicki (first year students) and Sam and James (second year students) discussed the content of their curricular coursework. Using this tool to think with, students discussed the potential implications of redesigning the curriculum in two different ways. Emma initiated this line of conversation by discussing the practical implications of changing the course curriculum.

Emma: Um well I think back to what Nicki was saying earlier like if we had all of these classes it'd be great but the reality is I mean even both classes combined there's like 200 of us and there's so—I mean—they can't create any more electives without you know getting rid of some. And I think that if—if we can get the teachers to integrate that into—like I'm taking marketing intelligence next semester and like if—even if there was just like one or two courses where like instead of just focusing on one aspect of marketing they focused on the green aspect of marketing. And like how you could—I don't know, I mean, cause I think that trying to create all new classes for all of this is kind of unrealistic.

James: I think that's a great point and I think, ya know, kinda getting back to your idea about putting together small groups right and getting those small groups together with professors and having conversations on "hey you know you're a marketing professor and we feel strongly about having a green marketing class. We'd be happy to work with you on you know suggestions for cases or people who we know who might be interested in coming in a speaking for that class or something like that." I mean that's, that seems like lower hanging fruit than new—

Nicki: —than new classes.

Emma: Yeah I mean cause I feel like right now I have to choose between taking sustainable classes or taking like the hard skills.

Nicki: Exactly

Emma: And you need the hard skills but

Emma: then it's like—

Nicki: That's why I feel like I'm taking [Emma and Nicki both say "supply chain" at that same time] supply chain management and I'm going to do my damn-dest to like incorporate, I don't know enough about the class not having like taken that class yet but just how I can incorporate the sustainability aspect into my learning. I guess cause it is such a—I don't know the class has been around for ages. So...

Sam: How bout this challenge to you: make that change next semester.

Nicki: Me?

Sam: Yeah.

Nicki: Okay (Multiple people laugh).

Emma: It's all on your back. We're all looking at you kid.

Sam: And anyone else who wants to. Meet with your professor beforehand and say "we want to make this change".

Emma: Actually I'd be in on that. Nicki and I'll do it.

Nicki: Power

Emma: Woohoo

In this piece of conversation students talked through various methods of organizing to change the curricula. Although this is a practical concern, students also had to understand how sustainability should interface with core business curriculum. When Emma brought up the practical problem of scheduling more sustainability classes within an already busy MBA course load, she was able to map their largely conceptual conversation from a previous interaction in the meeting onto the existing curriculum at the school. By referring to Nicki's early point about having sustainability in "normal classes", Emma began to think about how the faculty might work towards changing the business school infrastructure. She reasoned that, "they [the faculty] can't create any more electives without you know getting rid of some".

She then used this practical limitation to advocate for changing the curriculum at the school. However embedded in this practical concern of scheduling she also made a larger point the integrating sustainable business ideas into traditional business school courses also had conceptual importance. She brought up “Marketing Intelligence,” an advanced marketing course offered at the school, as an example of a class that did not incorporate sustainability, but could. Emma then provided an example of the way in which she saw “sustainability in everything” now. Specifically sustainability was or should become part of Marketing Intelligence. She explained that, “even if there was just like one or two courses where like instead of just focusing on one aspect of marketing they focused on the green aspect of marketing”. In this moment, Emma was able to articulate the sustainability was an aspect of marketing. Sustainability could become part of existing coursework, because sustainability was an aspect of every core function within business.

James added to Emma’s idea by suggesting that there could be a green marketing class that combined marketing skills with “green” marketing ideas. As a second year student, James also added force to Emma’s idea by creating operational steps to gather small groups of students together with a professor in order to change coursework. James then modeled the speech of a business student actively engaged in changing systems at the school. James created the opening to an imagined conversation where students address faculty by saying “hey you know you’re a marketing professor and we feel strongly about having a green marketing class”. In this imagined speech to a professor, James started with a casual opening and then modeled a stance toward the professor as an ally who was willing to

collaborate to create sustainable course materials for their class. He described a group of students speaking with one voice and coming together because of a strong desire to incorporate “green marketing” into class. By using “we” James established a collective group working collegially with professors to gather new course material that incorporated sustainable business concepts relevant to marketing. He then goes on to place the students on equal footing with the professor by stating that the students would use their knowledge and network of people to make, “suggestions for cases or people who we know who might be interested in coming in a speaking for that class.” This stance again placed the students on equal footing with the professor in a joint effort to improve curriculum.

Nicki reinforced the original point that new classes were not feasible nor were they necessary. Emma then built on this point by suggesting that in the current moment students were forced to choose between survey courses in sustainability or “hard skills”. In this exchange it is important to recall Emma’s previous realization that “sustainability is in everything”. From her working understanding of the relationship between sustainability and business, concepts of sustainability should not be considered separately from core business functions. In fact when Emma mentions hard skills, James and Nicki reiterated the problem that Emma identified. Nicki provided another example of a “hard skills” business course “Supply Chain Management” where she could “incorporate the sustainability aspect into my learning”. Here, Nicki discussed her individual desire to have a sustainability aspect incorporated into her education within the hard skills of business. When Sam suggested that Nicki, alone, make that change next semester, people laughed. Emma

interpreted her laughter when she joked that this could be in individual effort to make such a major change. Sam emphasized that his response was meant to imply action, but not necessarily individual. He responded, “meet with your professor beforehand and say ‘we want to make this change’”. Sam clarified his main objective in putting a challenge to Nicki she did not have to create change alone, but he was pushing her to take action. Early in the exchange James pushed the first year students to create collective groups. Later in the excerpt, Sam insinuated that these changes would not happen without initiative on the part of students—whether the change came from one student or many—NI students would need to be proactive.

By pushing students to create groups and take action to push curriculum reform, students were learning how to become activists from within the business school. In the last few exchanges Emma volunteered to join Nicki in her effort to change the supply chain management class. Nicki responded with a half joke “power” to which Emma replied “Woohoo”. This small joke seemed to punctuate this new push by second year students to take collective action. The students were not quitting business school to take part in the “Occupy Wall Street” movement with picket signs outside of corporations, but they were learning a specific tact for making institutional changes in what would be considered valuable business practices for emerging leaders in the field. There was power in this new stance towards their participation in the NI group and a consistent way to position the practices of sustainability within the business world.

Apprenticing advocates for changing individual learning trajectories

Studying changes within established infrastructure is difficult because in stable work practices infrastructure is transparent in use, and only becomes visible when work within or across communities breaks down (Star & Ruhleder, 1996; Hall, Stevens, Torralba, 2002). The NI participants I studied worked to disrupt current infrastructure to both gain new kinds of expertise and change the way business functioned within the larger context of acceptable business practices. In this section I argue that to accomplish incremental changes, that students in the NI network wove together temporal scales of activity to make sense of practices, innovate, and extend newly shared ideas about sustainable business into existing business infrastructure. In the last section Emma, Sam, Nicki, and James made sense of the idea from the conference that sustainability was not just for liberal-minded small companies in Dovetown. Instead organizations that had nothing to do with the energy grid or healthy food practices (with a direct impact on the health of the planet or people living in communities) could consider their impact on society. This work was looking at the far end of the career trajectory, where every business and business practitioner would have to consider sustainable business practice. At the near end of the career trajectory students had consider their immediate training and how to negotiate for more curricular reforms.

In the next utterance Lynn, a second year, moved from her earlier comments about long-term, systemic change within the business school to coaching Emma and Nicki about how to incorporate sustainability content into their individual business school training.

Lynn: One of the things it that I think I would mention is that the Dean has also been like pretty responsive. Just to kind of mention that be like, “hey more and more sustainability is going to become implicit in business” and for example like advanced corporate finance – It’s not covered—sustainability is not covered but I’m doing a research paper about the correlations between financial performance. But you have to go get the paper approved in advance. And I was like “I want to do something about corporate social responsibility, and like risk aversion and hurdle rates for sustainability projects.” And he totally looked at me like I was half crazy and then like I just kept on being like more and more excited about it and he was like “okay. Fine. Whatever. Go for it.”

Sam: Who was it? That was...?

Lynn: No this is my advanced corporate finance professor. And so just like opportunities like that where yeah I mean I made it implicit in my own curriculum but like for supply chain or for advanced corporate finance or for marketing just saying “Hey maybe like touch on this because it’s not—like the business model is changing and whether you like it or not if you-you know—want this program to continue to succeed it needs to (inaudible word) in some capacity outside of just like topics of sustainability.”

Lynn had argued earlier that she thought the business school curriculum needed to change, but because students did not have access to enough sustainability experience within the curriculum of the tradition business school class, Lynn coached the first year MBA students (Emma and Nicki) through the process of changing their individual opportunity to apply sustainability concepts to core practices within business. In this moment, Lynn modeled the type of sociogenetic claim that students could use to convince the Dean that sustainability was becoming increasingly relevant to all business practices. In this first claim, Lynn addressed the Dean regarding the direction of the discipline. She coached students to level with the Dean and explain that, “hey more and more sustainability is going to become implicit in business”. Addressing the Dean with “hey” communicates that in this conversation should be outside of the traditional hierarchy of the university system. Students and professors alike are on equal footing when it comes to discussing the unknown future. This remark suggested that this interaction was more of a

conversation with a peer. Although there was a clear power differential between the Dean and an MBA student, Lynn used “hey” to address the Dean. This address discursively placed the student and the Dean on equal footing when the student made the claim “that sustainability is going to become implicit in business”. This bold claim about the future direction of the field is a claim that can neither be proven nor refuted. Lynn does not model an interaction where she is soliciting the Dean’s opinion or concerned about if the Dean would agree. She was making a “pitch” just like business school students were taught to do when trying to convince an audience of a strategy for future business practices within an organization. In business, making claims about an uncertain future of a market or an industry is a necessary practice for business people seeking funding or creating strategic plans for future business operations. In this moment, Lynn was both taking up the traditional tools of business and enacting styles of argumentation taught within business school to negotiate for more sustainable practices.

The conference brought together major companies from a range of industries that were beginning to take sustainability seriously and strategically implement sustainability concepts into business practices. Lynn and the rest of the students in the room just shared an experience in Stumptown that encouraged their beliefs that sustainable business was arriving not just in Dovetown, but all over the world. From bullet manufacturers to tattoo artists, businesses that were not directly addressing sustainability through their products and services were still considering the environmental impacts of their business activities. This sociogenetic claim that the world was changing and sustainability was becoming implicit to business became

increasingly relevant as students built their imagined case to the Dean and the faculty. The sociogenetic argument that Lynn was making was that the world was changing and therefore the business school should change their strategies so that they do not get left behind.

Next Lynn coached the group on how to incorporate sustainability into their business courses. In order to do this she modeled the conversation with a professor, where again she addressed the professor and again used “hey” to level with the professor about the unknown future of the field of business. She declared that “Hey... the business model is changing and whether you like it or not.” In this moment Lynn moved out away from asking permission for new content within classes and appealed to a trend in business, that students just experienced in Stumptown. The professor was a major gatekeeper for training practitioners as they gained expertise in an emerging field. On the ontogenetic level, the students needed to address the content of the business classes provided by their professors to become new kinds of experts within the field of business. The strong assertion to the Dean about the movement of the practice of business was followed up by an example of a negotiation with a professor to improve individual student’s training to match their deeper interests within business. In this case, Lynn combined the content specific finance skills with applicable sustainable business concepts. She explained her interest in a project with the professor by stating, “I want to do something about corporate social responsibility, and like risk aversion and hurdle rates for sustainability projects”. In this moment Lynn modeled a general understanding of the “hard skills” of finance and showed how these skills could be

used to address issues of sustainability within any business. Lynn did not name an industry she would investigate in her project, which illustrated how quantitative sustainable business skills could be used to address general finance issues regardless of the industry.

Finally Lynn depicted the reaction of the professor and her subsequent negotiation skills. On the microgenetic level, Lynn described the social dynamics that micro-interactions and the use of emotion to persuade the professor to allow the sustainability finance project. The reaction of the professor, according to Lynn, was less than enthusiastic. She explained “he totally looked at me like I was half crazy,” but Lynn did not depict this as strange or problematic. In the case that Lynn presented, she characterized the professor’s less than flattering reception to her idea. Lynn positioned her ideas in the eyes of here advanced corporate finance professor as half crazy. This narrative was a kind of instruction for other students for how to negotiate sustainable content into existing business courses. Her story suggested that students would have to prepare themselves for disdainful professors when they proposed to incorporate sustainability as necessary consideration within a field of practice. The professor’s less-than-enthusiastic reaction to Lynn’s suggested project became another teaching moment for Lynn.

On a microgenetic level, Lynn described her impassioned plea for pursuing this line of inquiry within a class focused on corporate finance. The narrated conversation with her professor included the idea that convincing the professor of the importance of sustainability within advanced corporate finance was not the point of this conversation. In this case Lynn pragmatically advocated for her own

opportunity to explore the relationship between corporate finance and sustainable business practices. She could achieve this individual goal by becoming “more and more excited about it” to gain the professor’s approval to conduct an independent project. Lynn recounted the professor’s reaction as less of an agreement to work together and more of an acquiescence to her plea. She portrayed how the professor responded” ““okay. Fine. Whatever. Go for it.”” By narrating the professor’s response as reluctant, at best, she positioned him as unsympathetic to her cause, but willing to grade her paper. Specifically, Lynn suggested that rather than taking on her excitement, the professor conceded by allowing her project without sharing her enthusiasm. This stance suggested that in the short-term Lynn did not aim to change the professor’s mind. Lynn’s excitement and the professor’s subsequent reaction remained unproblematic in this narration because Lynn was coaching students to advocate for their individual interests in a business school setting that did not incorporate sustainability in the curriculum the way students were organizing to change. Here, Lynn remained focused on learning about sustainable finance topics and less focused on convincing the business world to change to become more sustainable. She was looking for more accepted tools within the traditional practices of business to make her sustainable business case.

Part of becoming a respected businessperson involved learning advanced corporate finance from the professor who did not share her view about sustainable business practices. Lynn modeled how to convince the professor to allow her to take on sustainable business concepts within the traditional finance class. Through emotional pleas, Lynn negotiated for an individual projects and construct new

knowledge practices within the traditional business discipline. Lynn worked back and forth between envisioning future trajectories of the field, building a more cohesive group of sustainable business experts, and addressing the immediate needs of students. She modeled actions that reinforced Emma's previous hunch that sustainability was in everything. Lynn finished by suggesting that this kind of negotiation was possible on an individual level, but this was just the beginning. The move to incorporate sustainability within business, according to Lynn, was inevitable. She made claims about the changing field of practice when she concluded that above all the arguments to professors should suggest that: "hey maybe like touch on this because it's not like the business model is changing and whether you like it or not if you-you know want this program to continue to succeed it needs to (inaudible word) in some capacity outside of just like topics of sustainability." For Lynn the success of the program relied on the school accurately predicting the movement of the field. It was not about what professors or students liked, it was about things that professors could not control like limited natural resources, global warming, and retaining competitive advantage. The final argument was toward the practical and competitive advantage that the school must maintain or improve upon to remain successful as an institution.

Building consensus towards developing the small-scale innovation

In this section, Dale worked to synthesize the various analogies circulating in the meeting regarding the relationship between sustainability concepts and core business functions. Dale directly followed Lynn as he worked to consolidate the conflicting ideas about the role of sustainability within business. As a second year

student, Dale agreed with Lynn that if the faculty wanted “this program to continue to succeed then the school needed to offer more a more sophisticated understanding of sustainable business than “topics of sustainability”. Dale then expounded on the themes he was hearing in the meeting:

Dale: Yeah I agree with that and it seems like there are two schools one is to get more classes that we can or like make more classes available and the other is to integrate these concepts into our existing classes—not that they’re necessarily mutually exclusive but in the interest in sort of speaking with one voice to the faculty I would definitely argue that we should try to get more into the classes that we already have. Cause I mean there isn’t real estate and sustainability as ah separate entities. They are together you know? Um I guess for me the hang up is that sustainability isn’t a track it is an umbrella concept sooo ah it seems like—it seems like it would be much better to try and to try and integrate it into what we have otherwise it creates this silo like you can choose sustainability or something else and it—

Dale identified the need to consolidate the circulating sustainable business ideas from the previous 50 minutes of the meeting. He framed two potential ways to understand sustainability and business. One frame involved creating sustainability as a “separate entity” from core business functions. In this case, the NI students could take collective action to create more specialized sustainability classes within the existing sustainability track. The other frame involved integrating sustainability into every core function within business. Dale then goes on to suggest that he would argue for the group to integrate sustainability into existing classes. Rather than using an argument of practical concerns of timing for students’ schedules, Dale stated his understanding of the way sustainability ought to function in the world of business. He argued, “there isn’t real estate and sustainability as ah separate entities. They are together you know?” In this moment Dale worked to bring the group to consensus and address the problem of the low visibility of the

sustainability track within the school. That comment brought about a conversation that built on the inconsistencies that students experienced between the conference and the everyday practices in the Dovetown business school. Improving the visibility of the sustainability track turned into a deeper problem of changing business school practices to match the changes in business that students witnessed at the conference and outside the business school core curriculum. Dale divided the ideas he was hearing in the conversation and forced the group to discuss a collective decision. Dale “argued” that the entire NI group should “speak with one voice to the faculty” in an effort to “integrate what we have” rather than creating more courses for a low visibility sustainable business track.

On a microgenetic level, Dale characterized what he had heard in the meeting. But he was also fashioning a larger argument about starting a collective kind of activism for the group in opposition to the current business school practices. On a sociogenetic level Dale invoked two different analogies for his fellow students to consider. One analogy of the changing face of sustainable business was a track; the other analogy was an umbrella. Dale suggested that the track did not match his understanding of what sustainable business was or what it ought to be. Like Emma, Dale suggested that sustainability had a role in every business function. According to Dale, sustainable business should not a belief or even an emphasis within the business curriculum, it should be incorporated into every function of business like the image of an umbrella sustainability lives above and permeates throughout all business functions. Dale then referenced a survey course offered at the school called “Sustainable Real Estate”. He gave the example, “I mean there isn’t real estate and

sustainability as separate entities". The implication for Dale was that all real estate should consider the sustainability of their projects. For example all real estate projects should consider the way developers and architects use building materials, the energy efficiency of the building, consider renewable or reusable resources, and the way new built environment would affect the existing community. Dale made a sociogenetic argument about the way he wanted business to function in the world. Moreover he made the point that the school curriculum should reflect these best practices in the way they teach all business courses.

Creating collective tactics to reorganize the discipline

Dale's comment represented another shift within the conversation. Dale not only categorized the comments he had heard, but he used these categories to take collective actions. As Dale finished, Carl had been attending sustainability meetings with faculty members as part of his role as NI co-presidents and explained that the school had been locked in a "perennial battle" over the issue of sustainable business since the 90s. He then suggested that students should not expect to simply request changes in the curriculum and see the curriculum change. Carl suggested that the NI group should create a petition and get professors to agree to change their curriculum by signing it. Dale suggested that the tone of the petition could still remain collegial, state their collective interests in sustainability and "make it positive". Nicki then proposed that changing the curriculum to integrate sustainability was not just a matter of interest, but that "this has to happen". The students came back to the idea that the Dean was new and receptive to student feedback. James then pitched his argument about the way the world was changing.

The argument to the faculty could be both “the carrot” and “the stick”. James again invoked an imagined conversation with the faculty:

James: To the extent that he is taking feedback, I think there is a huge opportunity to try to get him on board for both the carrot and the stick side of the approach. And say you know if you need an side to say “look here are the incentives faculty for you to incorporate this into the curriculum”. And here’s the stick, “like this is not, it’s not a fad. It’s not a fad it’s not going away. It’s an established part of business and that’s not the conversation anymore. And if its not the conversation anymore then you know it’s important for the Dovetown business school brand to have this be something that anyone can speak to—

Dale: Yeah

James: —intelligently in an interview”. So yeah NI may be pushing to have this be incorporated into the curriculum, but quite frankly right? it’s important to the whole

Dale: Yeah

James: class whether they want it or not to have a capacity to be able to have a conversation.

The conversation moved to a sociogenetic argument that the world was changing and the students were part of changing the practices within business. Students were not just concerned with their own futures, but ready to push the faculty to accept the changes that they saw happening in the world. James thought that certainly the faculty had incentives for changing practices, but that did not matter. Like Lynn, James thought the world was changing and that there was no point in holding tight to a standard curriculum that did not incorporate those changes. James ridiculed the notion that anyone could still think sustainability was “a fad”. The world had changed and so should the school. Every student leaving the Dovetown business school should know how to address sustainability issues within business. It was not

a matter of degree emphasis; it was a matter for the world and the school to take seriously.

Becoming collective agents for systemic change

Just before the end of the meeting Nicki posed a question to the group before. She asked:

Nicki: So to get like a general consensus on how we should approach the school in general with this is it – do we get however many MBA 12 and 13 students to sign something that says they would be interested in having sustainability incorporated into their classes? Or do we need to actually have like ahhh—I don’t know do we actually need to have some numbers on our side instead of the NI club says? And then um – and then do we take that to the Dean first?

In the minutes before the meeting closed Nicki began to take up the speech patterns associated with the collective organizing speech patterns of the second year NI members Adam and now Dale. She took the collective “we” from the group and the active approach to advocating for what she wanted within the business school rather than passively warning that the school was going to lose a competitive edge if “they” didn’t change. In these last excerpts students came to a consensus about the organizing direction of the group. They would work to integrate more concepts of sustainability into the existing curriculum and they would act in concert with other students and bring their case to the faculty and the Dean of the business school.

Summary

By leaving the “Dovetown Bubble” and gaining exposure to the larger network of sustainable business practitioners, local NI participants began to reimagine the sustainable business practices of the school. The initial suggestion that, “sustainability is in everything” was dropped, picked-up, reframed, and eventually became a small-innovation that group members used to reorganize the

local infrastructure and knowledge practices within the local business school. In addition to reorienting their understanding of the relationship between sustainability and business, the NI participants took on a collective activist disposition. As part of their developing identities as sustainable business experts, they took on a collective practice of negotiating new futures for the field of sustainable business. With a deeper and shared conception of sustainable business, students could organize their future NI related activities to change existing infrastructure within Dovetown. The practical accomplishments of knowledge construction for the NI students were necessarily distributed over activities on multiple temporal scales. In order to change knowledge representations and practices in the short-term, they had to have a clear vision and appeal to that vision to as they negotiated new trajectories within business. Through detailed and sustained talk and social interaction, students grappled with the nuances of sustainable business practices and incorporated new and shared understanding to change business training at the local level. They worked with current systems of socially constructed classifications of business to reorganize the role of sustainability within business.

Students constructed a new understanding of the relationship between sustainability and business. They also constructed a shared understanding of their identity within the school context as active proponents of the sustainable business movement. Students wanted more visibility for sustainability and articulated the stakes for themselves, the school, and the future of business if sustainability did not become more prominently considered in the business school. Their work within the

meeting involved reorganizing accepted practices to support a new network of political and economic infrastructure of sustainable business. In order to change the long-term functions of business, they had to reorganize dispositions within the business community to become “more legitimate”. Simultaneously they had to reorganize the curricular infrastructure within the local business school. Consequently, the students needed to build new pathways for learning and becoming and pieced together tools from distant locations and distant futures to broker new ideas and extend their network into new aspects of business. In this chapter I argue that organizing for new kinds of future practices for communities and for individuals requires work across temporal and spatial scales (Hall, Wieckert, & Wright, 2010; Hall & Horn, 2012).

Taking learning to be the process of organizing to become different kinds of actors in a changing field of practice we will not over simplify how knowledge practices are changed by groups of actors in socio-technical networks over time. The way students worked to understand their changing role within business related to their development as business practitioners as well as their developing relationship with the sustainable business movement. In other words, students needed to envision and create a place for their developing expertise as sustainable business experts within the changing political economy. Learning in the unstable field of practice makes visible how people must build trajectories of practice into the political economy of knowledge.

Chapter 6

Implications

My dissertation was about how MBA students engaged in a global network of sustainable business activists produced knowledge and expertise in an unstable field of practice. Research in the field of education is often focused on formal learning settings where there are stated outcomes in the form of stated knowledge and skills acquired through a method of teaching and a set of curricular elements. Students are ushered through disciplines with specific networks of activities that lead to a stable set of skills directed towards disciplinary expertise. The multiple calls for business reform, unprecedented instability in financial markets, environmental degradation and depletion of natural resources, and technological innovations has led to unstable futures within business. Business as usual is changing. Students and business professionals alike continue to reorganize people, materials, and ideas to change the practices within business. This unstable environment for learning is at the leading edge of innovations that could lead to substantial shifts within society. My project explored how learning and innovation took place within this distributed network of practice.

Participants within the Net Impact network grappled with the broad concept of sustainable business in order to create new pathways for developing expertise. Movement across distant locations and diverse business and school spaces allowed people to expand the network of people invested in sustainability issues. At the same time, people traversing across communities also worked to uphold the integrity of the concept of sustainable business in order to retain their credibility within

traditional business contexts. The NI network engaged in social practices to understand and define sustainability within the business school and mold new sustainability curriculum accordingly. In this process they produced knowledge and worked to organize spaces to extend their network deeper into institutions and further out in new places within the world of business.

First set of research questions:

What is the NI network? How do MBA students who are members of NI produce sustainable business identities through their interactions with the NI network?

The analytic approach I developed to understand how activity was organized within the network was to focus on the movement of local NI members within the local network and follow them as they participated in NI events. Following Latour (1987) and Nesper (1994), I attended to the representational and material productions that participants used to maintain, modify, and extend the network. I followed actors, both human and non-human, through networked activities to see how the production of knowledge traveled and how people took up or rejected ideas within the network. This was a people-centered, multi-sited ethnography of an actor network. Unlike many researchers who use Actor Network Theory, I privileged how people used resources within the network to become particular kinds of actors within the network that embody particular dispositions as they navigate the changing world of business. I used what I named “relation portraits” of actors within the network to give readers a sense of the key practices, people, and events of the NI

chapter and draw out the functions that allow the network to regenerate activity and hang together.

Using sustainability as a boundary concept, NI participants worked to define the term in order to build their expertise and identity within the world of business. Depending on the way in which participants made sense of the tensions that they identified between the pressure to make a profit and the desire to create a positive impact on the people and the planet, NI participants worked to build diverging expertise and repertoires of practice within the world of business. Because sustainable business was an ill-defined concept that functioned, it could capture the imagination of a wide range of people and organizations. The idea drew people together into the same geographic places from different communities and brought them into shared spaces to confront the tensions of changing a current discipline of practice and valued knowledge base. The same boundary object also routed people into new and dispersed places to pursue the theme of sustainable business within new communities.

The term sustainability organized people into a large and distributed network of activity; however, these moments of connection within the network did not imply a shared community of practice. The movement of objects, ideas, and people across places invited opportunities for new kinds of practices to enter more established communities. For example Carl brought “non-financial” accounting practices to a local accounting firm through his work with NI. Virginia began to question gendered “micro inequities” taking place in the local business school. Although she did not attempt to change practices within the school, she brought

ideas about “micro inequity” into her business school projects, her work with a local non-profit, and into the official record of my research project. Andrew took ideas he learned in the local NI network and the local business school classes to a summer internship in the Midwest. Although an indistinct notion of sustainability facilitated movement across places, the network did not set into a shared set of sustainable business practices. NI participants defined sustainability and pursued specific passions under that heading in diverging places and communities.

The importance of studying networked activity is to better understand how people learn to innovate in complex and contentious spaces where established practices are difficult to disrupt. The flows of material resources, ideas, and practices routed through the network brought new ideas, material, and people into new spaces to reimagine local places and practices. The network facilitated the movement ideas and tools such that people could use them to question current practices in the local setting. For example, Sam used his new connection to sustainable business and his existing expertise in energy speculation to work within the energy industry in new capacities. He used the idea of sustainable business to question the value of the energy speculation business. The particular sustainable business case of natural gas brought students, professors, business and environmental experts into the same conversation about the role of natural gas in the field of sustainable business practices. Because the term “sustainable business” remained ill-defined people from across industries and political ideologies were able to work in a liminal space on contentious practices.

As individuals worked to define sustainable business practices as they interacted with the network, they began to identify with particular activities within the world of business that would allow them to create change in the world. As the year went on, students with intermittent exposure to NI activities developed more nuanced understanding of the concept of sustainable business. For example in November, when Emma was grappling with the idea that “sustainability is in everything”, she did not elaborate or delineate what that meant. By the end of the year, Emma was working with a more nuanced understanding of sustainability and business. Cleaner sources of energy, for Emma were still desirable, but the short-term “reality of life” in the energy field carried more meaning for her. After the annual conference in October, Emma was exposed to more issues of sustainability through course work and through the case competition. By April, she articulated the problems of sustainability to remain important, but with the added understanding that consumption and demand for energy did not stop because there were places where water lit on fire. Depending on how NI participants defined sustainable business, their imaginations for future trajectories of practice became more specific in relationship to their changing understanding of the concept. These new definitions of sustainability became consequential for constructing new pathways within the emerging field of practice.

The active work to address the tension that arose from the integration of sustainability and business was both a critique of the networked activity as well as a driving force that reproduced and extended the network of activity. Sam used the term sustainability infrequently, but without hesitation. His use of the term became

a way to enlist new members into the network. However once people were enlisted, Sam changed terminology. Others, once enlisted realized that they would have to address the tension of creating more sustainable business practices with a more specific definition that would guide their practices, places of work, and trajectories of expertise. Thus taking a stand within the network meant defining the term in order to guide their practices within the network.

The Dovetown business school was the tie that bound the “relational portraits” together. Admission to the Dovetown business school allowed students access to the NI network. The case was created with the high profile natural gas company and having ties to the Dovetown University facilitated this relationship. The Dovetown business school was an important gatekeeper to gain access to the NI network, local companies, and business expertise. Once students had access to the business school and local businesses, they leveraged the network of sustainable business to learn and create new arguments and incorporate these ideas back in the school and the businesses where they work. Students were embodied brokers between two worlds negotiating nuanced identities as sustainable business experts. The movement across physical places facilitated learning. Motion or mobility became the tool that allowed students to explore contentious environments and then have time within other communities to reflect.

Second set of research questions:

How do people construct new knowledge and practices where the infrastructure of knowledge and accompanying practices are unstable?

How does movement across places inform sense-making activities in particular settings?

Following from the work of Hall & Horn (2012), I argued that constructing knowledge and practices required actors to work back and forth across scales to organize new infrastructures for emerging trajectories of practice. Through a close analysis of talk in interaction, I argued that small innovations were collectively constructed and led to a shared agenda for the local chapter to work towards systemic change. Simultaneously, the group built a collective identity as activists within the local school. For example, at the beginning of the meeting Nicki did not view her engagement with the network as a means for creating changes within the institution of the business school. By the end of the meeting Nicki spoke of taking action with and on behalf of the group to change local practices.

In the first analysis chapter I argued that the business school and the accompanying network of business professionals provided access for students to contemplate the idea of sustainable business. In the second analysis chapter, I argued that as students grappled with sustainability and business they built a collective identity as activists within the business school. Creating trajectories of expertise within sustainable business was inextricably tied to the ontogenetic and sociogenetic innovation. Through prolonged discourse to problem solve participants developed ideas about the future of the discipline as well as ideas about their professional trajectories in tandem.

In order to change the relationships that businesses and business schools had with sustainability, NI participants used their access to the University business

school and their ability to move across settings to negotiate new futures for themselves and others in the emerging field. This movement out of Dovetown and back again gave students inspiration and a shared point of reference outside of the business school to work on transforming the institution. The NI participants who all shared two points of reference in common (the NI Annual Conference and the Dovetown Business School) were able to identify a specific problem within the business school and through their conversation work on the specific problem and at the same time work on changing the world.

Significance

My dissertation analysis has significance for the learning sciences as it more centrally considered the social, historical, and spatial dimensions of how people develop new understandings and identities. The importance of spatiality and mobility within learning is a promising area of inquiry for learning scientists, which only a few researchers of learning have considered explicitly in their analysis (Hall & Nemirovsky, 2012; Nespor, 1997; Leander, 2006; Gutierrez, 2008; Gutierrez, Bien & Selland, 2011). Several researchers have pointed to the importance of considering movement across networks as an important dimension of learning and should inform learning design. Most studies on mobility have studied the ways in which children or marginalized groups have limited mobility and opportunities for participating in valued social practices. This study adds a critical dimension to this literature in that I focused my analysis on elite adults who have the power and position to use their mobility in and across spaces for making consequential shifts in the terrain in which they move. This provides the field with an imagination to

explore the potential for learning when study participants are highly mobile, with the ability to gain access to resources, and advocate for their curricular interests.

My analysis also has significance for business schools interested in retaining students interested in pursuing sustainable business. As students continue to explore the tensions between business and sustainability, the institution both afforded multiple opportunities for learning and constrained their inquiries through the organization of resources within the school curriculum. This study is also significant for business administrators as they seek to understand how to cultivate future business leaders with socially and environmentally responsible dispositions. The use of cases allows NI students to grapple with the tensions of creating a more sustainable world given the constraints of competitive markets and current business practices. Cases, as a tool for instigating deep thinking, could be more widely distributed through out the core curriculum to address issues like sustainability, globalization, equity, etc.

In this study I focused on interactions that work to disrupt, adapt, and make use of ideas for new purposes across time and space. Collective organizing aimed at changing the social and material futures for communities requires innovations on both the ontogenic and sociogenetic scales. As people construct new knowledge and practices to reorganize futures, they must support and attend to the imagined trajectories of the emerging field. In creating new trajectories of practice and new expertise, I argue that sense making across spatial and temporal scales are not discrete activities. Students overlap notions of space and time to negotiate a distributed network of practice and build new infrastructure to support the

practice. It is not clear that the NI network will be successful in their work to reorganize the political economy of business. The difficulty of changing networks of practice is another insight from the study.

As students worked to define sustainable business they also became more knowledgeable in the area of sustainable business. I showed that identity and knowledgeability did not function in the same way as Lave and Wenger (1991) explicated in their work on Communities of Practice. Lave and Wenger argued that the tailors learned about the organization of society implicitly through their practice of making clothes for different occasions and different types of people, however their learning took place in one location. In my project, I foreground how participants gain knowledge of the social world as they moved across space and social practices in order to navigate the tension of reorganizing resources and knowledge practices. For example more than developing skills with her hands, like the tailors, Emma developed her ideas about the work that must be done to create changes within the energy industry. Learning through hands on practice of the case competition, students in this elite network worked with their developing ideas rather than with their hands to sew pants. In this study, students learned to navigate powerful networks of producing knowledge and identity trajectories within business. This leads to a significant question for researchers of learning and business professionals: what happens to learning when you have the power to move? As researchers, when we take mobility and spatiality seriously, we see the importance of access and identity to the learning process. Students could gather ideas and work with hunches across spaces, broker new representational

technologies into institutions, and revise their learning trajectories within an institution. This mobility allowed students to broker new identities, new uses of space, and new productions of knowledge as they honed new kinds of expertise.

Implications for Methods

I followed the activities of a highly mobile network of participants as they searched for ways to leverage the traditional practices of business to create meaningful futures for themselves and communities around the world. By locating context in the networked activities of a local group of people connected to a global network, I was able to observe participants across settings as they struggled with enduring problems facing our planet. By using a methodology that highlighted movement, researchers can interrogate the kind of learning that takes place as people and resources are dynamically distributed through networks of practice. Each method of research foregrounds elements of the lived experience for people living multifaceted lives. There is a plethora of quantitative research being conducted on social networks where networks are characterized by email connections where each person is an agent without a history and each connection is distilled down to an email. Conducting research within a network where I was able to observe people in and with technology and across spaces allowed me to see how people grappled with the same tension over time and across contexts. Research that was neither tied to one setting nor limited to databases of people's interactions online allowed me to see how people interacted with ideas, material resources, and other people and took up some ideas and not others over time.

Implications for Theory

By utilizing a combination of socio-cultural theory and actor network theory, I was able to privileged learning across spaces as people interact with new ideas and resources within a distributed network. Lave and Wenger (1991) theorized learning as a relatively bounded practice that was studied in a single setting where the majority of the learning and identity formation took place. By studying learning as an ontological task, they showed how people learn in and with their daily practices that are dependent upon the context and community in which they reside. My work builds on their framework, but like Dreier (1998), I accounted for multiple contexts in which people produce practices and build up expertise. The implications for researchers interested in how learning occurs to develop expert identities, they may design research projects that center on activity across locations pertinent to building expertise.

Nespor (1994) also studied business students using a theoretical framework of actor network theory. He represented the physical space of the business school and the material and physical embodiment of business professionals as students became experts in the field of practices. However Nespor did not present business students as agents capable of reorganizing the network of practices within the discipline. By studying participants in actor networks and following them across locations, I was able to see how participants took on different positions of power (expert, novice, business person, sustainability activist) as they moved across locations. Researchers that theorize learning and identity can benefit from following people as they negotiate different contexts within their everyday lives to see how

ideas and resources are introduced, adopted, and reorganized in order to reshape networks of activity.

Implications for Practice

Based on the findings from this research, there are two areas of application for practitioners. The first area is for people designing learning spaces with access to computer technology or ability to move across locations. The second area is for people interested in designing interdisciplinary learning. The use of computer technology to support interest-driven learning online has been shown to be a particularly rich site for learning (Gee, 2007; Gee & Hayes, 2011; Ito, 2009; Gutierrez, 2012). As teachers and researchers design learning environments and leverage interest-driven networks, it will be important to also consider and combine use of technology with the creation of artifacts that have a life outside of the classroom. As students work with ideas in networks they are able to connect with distant places and play with ideas in new ways. Their ability to make ideas mobile and connect with other people within the network across locations affords new identities to enter the learning environment and new imagined trajectories to flourish in the classroom. With the influx of computer use in classrooms, students and teachers can interact with the material and ideational resources within the space to disrupt discipline specific curriculums and introduce new people, ideas, and resources that may take them places far beyond the space of the classroom.

People interested in designing interdisciplinary learning spaces should introduce representational productions that draw out major tensions between disciplines. The enduring problems introduced in the network produce new ways of

understanding and incorporated all parties within the network to become participants in the changing ontological domain. By positioning all the participants within the network in a struggle that remains unresolved within the interdisciplinary space, opportunities for small innovations can emerge. Rather than centering expertise in one field or with powerful actors within the network, the learning environment is organized for distributing expertise.

Future directions for research

How do marginalized groups negotiate knowledgeability within the sustainable business movement?

One way in which the present study might be usefully extended would be to conduct a systematic investigation of the way gender identities were leveraged to negotiate expertise in the emerging field of sustainable business. Throughout the process of coding data, there were noticeable patterns in the way participants used accepted gender disproportionate number of men within the network who were interested in sustainable energy. Similarly there were a disproportionate number of women interested in organic and natural foods. Although these differences on the surface look benign, there were other examples of discourse practices where women lessened the power of their ideas by hedging, revoicing, or abstaining from speaking within conversations in ways that diminished the authority of their ideas. Most of the people in positions of power within the local network were men. There were a few examples where men holding leadership positions within the local network dismissed women participants' requests for female t-shirt sizes, despite multiple requests or relied heavily on other men to hold positions of power within

the network. As Haraway (1992) warned, within distributed actor networks “enduring cleavages in the social order” may persist and be reproduced within networks. There was evidence in the data to suggest that a systematic investigation of “color blind” ideologies and regressive gender practices may interact with the ability to produce expert identities within the network.

How representations of hard and soft skills in relationship to expertise within the emerging field?

Another way in which this study could be extended is through a systematic investigation of the way hard and soft skills are represented and utilized within the network. Like Latour (1987) discussed the ability to measure and represent ideas through numbers allowed for knowledge to become mobile and therefore enter other parts of the network with ease. Within the data, hard skills were highly valued within the sustainable business network. Students were anxious to acquire these skills in order to become recognized as knowledgeable within the network. However it is unclear how people differentiated between hard and soft skills within the network, and why these distinctions became a major indication of expertise within the network.

How do NI participants use technology to support and expand their network?

Although I attended to the way technology catalyzed the movement of people, resources, and ideas across the network, it did not become a major focus of the study. Another way the study might be extended would be to categorize and describe the way this elite network of future sustainable business leaders leveraged

technology to reorganize material and representational productions, people, and resources within the network. There were several instances where social networking sites became a major resource that redirected physical mobility within the network. This is an important question as researchers and educators consider how to leverage technology to design spaces and networks for robust learning.

Final thoughts

Lave and Wenger (1991) proposed that learning is an integral part of everyday practices as people become experts within a field. The case studies they used to show learning were theorized as relatively stable and bounded practices. Although they pointed to options for changing practices within situated learning, their theory did not explicate how change within social practices take place. Similarly, Nespor (1994) studied learning as a networked practice. He marshaled evidence from a study learning in undergraduate physics and management, but theorized students as passive agents moving through a stable network in order to produce expertise, however he does not show them negotiating new practices. In my study, I offer a way to study people within an actor network that play an active role in reorganizing material and representational resources within a discipline. I hope this research will contribute to a nuanced view of learners as co-constructors of expertise capable of affecting ontological and epistemological change. This work does not assume that participants within a network have equal opportunities to move across contexts and produce knowledge. In part, this study is an illustration of the affordances for learning and knowledge production for elites within a network

of practice. When I am most optimistic, this work provides a case to consider how people become activists in their everyday practices capable of collectively organizing for systemic change.

REFERENCES

- Akerlof, G. & Kranton, R. (2002). "Identity and Schooling: Some Lessons for the Economics of Education". *Journal of Economic Literature* p. 1167-1201.
- Bamberg, M., de Fina, A., and Schiffrin D. Small stories as a new perspective in narrative and identity analysis", *Text & Talk* 28/3: 377-396. (eds). 2007.
- Beach, K. (1999). Consequential transitions: A sociocultural expedition beyond transfer in education. In A. Iran-Nejad, & Pearson, P. D. (Ed.), *Review of Research in History on the Borders of School Education* (24), 101-139. Washington, DC: American Educational Research Association.
- Benford & Snow (2000). Framing process and social movements: an overview and assessment. *Annual Review of Sociology*. 26, 611-639.
- Bourdieu, P. (1977). *Outline of a Theory of Practice*. New York: Cambridge University Press.
- Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgment of Taste*. Harvard University Press.
- Bowen, H. (1953). *Social Responsibilities of the Businessman*. New York: Harper.
- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press.
- Brown, J. S. (2000). *Knowledge and Organization: A Social-Practice Perspective*. Organization Science.
- Bucholtz, Mary, and Hall, K. (2005). Identity and interaction: A sociocultural linguistic approach. *Discourse Studies*, 7(4-5), 585-614.
- Buckley, J. (2011). Aspen Institute's MBA ranking reveals greater focus on teaching business & society issues in wake of financial crisis. *Aspen Institute*.
- Callon, M., Law, J., & Rip, A. (Eds.). (1986). *Mapping the dynamics of science and technology* (p. 19). London: Macmillan.
- Carrington, V. & Luke, A. (1997). Literacy and Bourdieu's sociological theory: A reframing. *Language and Education*, 11(2), 96-112.
- Carroll, A. (1999). Corporate Social Responsibility: Evolution of a Definitional Construct. *Business and Society*, 38(3).
- Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge: Harvard University Press.
- Cole, M. & Wertsch, J. (1996). *Contemporary Implications of Vygotsky and Luria*, Worcester, MA: Clark University Press.
- Davis, K. (1960). Can Business Afford to Ignore Social Responsibility? *California Management Review*. 70(2), 76.
- Davis, K. (1973). The case for and against business assumption of social responsibilities. *Academy of Management Journal*, June, pp. 312-322.
- Davidson, M. (2011, December 5). Wobbekind: Full recovery still year away. *Boulder Country Business Report* (Boulder), p. 1. De George, R. (1987). The Status of Business Ethics. *Journal of Business Ethics*. P. 201-211.
- Dreier, O. (1998). *Psychotherapy in Everyday Life*. Harvard University Press.
- Eisenhart, M. A., & Holland, D. C. (2001). Gender constructs and career commitments. *Women, science, and technology: A reader in feminist science studies*, 26.

- Eisenhart, M. (2001). Educational ethnography past, present, and future: Ideas to think with. *Educational Researcher*, 30(8), 16-27.
- Engeström, Y. & Sannino, A. (2010). Studies of expansive learning: Foundations, findings and future challenges. *Educational Research Review*, 5, 1-24.
- Erickson, F. (2004). *Talk and social theory: Ecologies of speaking and listening in everyday life*. Cambridge, England: Polity Press.
- Erickson, F. (2006). Definition and analysis of data from videotape: Some research procedures and their rationales. In J. L. Green, G. Camilli, & P. B. Elmore (Eds.), *Handbook of complementary methods in education research* (pp. 177-205). Mahwah, NJ: Erlbaum.
- Fine, M. (1991). *Framing Dropouts: Notes on the Politics of an Urban Public High School*. New York: Suny University Press.
- Foucault, M. (1969). *Archaeology of Knowledge*. New York: Vintage Books USA.
- Friedman, Milton (1963). *A Monetary History of the United States, 1867-1960*. Princeton University Press.
- Gee, J. (2007). *What video games have to teach us about learning and literacy*. New York: Palgrave Macmillan.
- Gee, J., & Hayes, E. (2011). *Language and learning in the digital age*. New York: Routledge.
- Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.
- Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. Berkeley and Los Angeles: University of California Press.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: strategies for qualitative research*. Chicago: Aldine Publishing Company.
- Goffman (1969). *The presentation of self in everyday life*. New York: Allen Lane the Perquin Press.
- Goffman (1981). *Interaction Ritual: Essays on Face-to-Face Behavior*. Anchor Books.
- Goodwin C., Goodwin M., 1996
- Gutiérrez, K., Hunter, J., & Arzubiaga, A. (2009). Re-mediating the university: Learning through sociocritical literacies. *Pedagogies: An International Journal*, 4, 1- 23.
- Gutiérrez, K & Stone, L. (2000). Synchronic and diachronic dimensions of social practice: An emerging methodology for cultural-historical perspectives on literacy learning. In C. Lee & P. Smagorinsky (Eds.), *Vygotskian Perspectives on Literacy Research: Constructing Meaning through Collaborative Inquiry*. (pp. 150-164). New York: Cambridge University Press.
- Gutiérrez, K. & Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice. *Educational Researcher*, 32 (5), 19-25.
- Gutiérrez, K., Bien, A., Selland, M., & Pierce, D. (2010). Syncretic Approaches to Studying Movement and Hybridity in Literacy Practices. *Handbook of Research on Teaching the English Language Arts*, 415.
- Gutiérrez, K. & Vossoughi, S. (2010). "Lifting off the Ground to return anew": Documenting and Designing for Equity and Transformation through Social Design Experiments, *Journal of Teacher Education*, 61(1-2), 100-117.

- Hall, R., Stevens, R., & Torralba, T. (2002). Disrupting representational infrastructure in conversations across disciplines. *Mind, Culture, and Activity*, 9(3), 179-210.
- Hall, R., Wright, K., & Wieckert, K. (2007). Interactive and historical processes of distributing statistical concepts through work organization. *Mind, Culture, and Activity*, 14(1-2), 103-127.
- Hall, R., & Horn, I. S. (2012). Talk and Conceptual Change at Work: Adequate Representation and Epistemic Stance in a Comparative Analysis of Statistical Consulting and Teacher Workgroups. *Mind, Culture, and Activity*, 19(3), 240-258.
- Hall, R., & Nemirovsky, R. (2012). Introduction to the special issue: Modalities of body engagement in mathematical activity and learning. *Journal of the Learning Sciences*, 21(2), 207-215.
- Haraway (1992). More Than You Think, Less Than There Should Be. *Praxis* 3, 1-21.
- Hawken, P., Lovins, A., Lovins, H. (1999). *Natural Capitalism. Creating the Next Industrial Revolution.*
- Holland, D., G. Fox, and V. Daro. (2008). Social movements and collective identity: A decentered, dialogic view. *Anthropological Quarterly*, 81 (1): 83-113.
- Holland, D. (2001). *Identity and Agency in Cultural Worlds.* Cambridge: Harvard University Press.
- Holland, D. & Eisenhart, M. (1990). *Educated in Romance: Women, Achievement, and College Culture.* Chicago: Chicago University Press.
- Hutchins, E. (1995). *Cognition in the Wild.* Cambridge, MA: MIT Press.
- Jones, G. M. (2011). *Trade of the Tricks: Inside the Magician's Craft.* California: University of California Press.
- Jordan & Henderson, (1995). Interaction Analysis: Foundations and Practice. *The Journal of the Learning Sciences* 4(1): 39-103.
- Jurow, A.S. (2005) Shifting engagements in figured worlds: Middle school mathematics students' participation in an architectural design project. *The Journal of the Learning Sciences*, 14(1), 35-67.
- Jurow, A.S., & Pierce, D. 1 (in press). Exploring the relations between "soul" and "role": Learning from the Courage to Lead. *Mind, Culture, and Activity*.
- Jurow, A.S. (2009). Cultivating self in the context of transformative professional development. *Journal of Teacher Education*, 60, 277-290.
- Jurow, A.S., Hall, R., & Ma, J. (2008). Expanding the disciplinary expertise of a middle school mathematics classroom: Re-contextualizing student models in conversations with visiting specialists. *The Journal of the Learning Sciences*, 17(3), 338-380.
- Korn, M. (2011 Dec. 1). Grads Do 'Good' for a Profit: Boundaries Between Nonprofits and For-Profits Blur as M.B.A.s Opt for Financial Security. *Wall Street Journal*.
- Latour (1981). *Reassembling the Social: An Introduction to Actor-Network-Theory.* Harvard University Press, Cambridge Mass., USA.
- Latour, B. (1987) *Science In Action: How to Follow Scientists and Engineers Through Society,* Harvard University Press, Cambridge Mass., USA.
- Lave, J., Wenger, E. (1991). *Situated learning: legitimate peripheral participation.* New York: Cambridge.

- Law, J. (1992). Notes on the theory of the actor-network: ordering, strategy, and heterogeneity. *Systemic Practice and Action Research*, 5(4), 379-393.
- Leander, K. & Lovvorn, J. (2006). Literacy Networks: Following the Circulation of Texts, Bodies, and Objects in the Schooling and Online Gaming of One Youth. *Cognition and Instruction* 24(3), 291-340.
- Lemke, J. (2002). Language development and identity: Multiple timescales in the social ecology of learning. *Language Acquisition and Language Socialization*, Claire Kramsch (ed.), 68-87. London, New York: Continuum.
- Marcus, G. E. (1995). Ethnography in/of the world system: The emergence of multi-sited ethnography. *Annual Review of Anthropology*. 24, 95-117.
- McDermott, R. (1995). Culture as Disability. *Anthropology and Education*, 26(3), 324-348.
- McGuire, J. W. (1963). *Business and Society*. New York, New York: McGraw-Hill.
- Meadows, D. (1999). *Leverage Points Places to Intervene in a System*. The Sustainability Institute.
- Mehan, (1979). *Learning lessons: Social organization in the classroom*. Cambridge, MA: Harvard University Press.
- Michaels, (1981). *Direct Perception*. Englewood Cliffs, NJ: Prentice-Hall Inc.
- Michel, A. & Wortham, S. (2010). *Bullish on Uncertainty: How organizational cultures transform participants*.
- Moses, M. (2002). *Embracing Race: Why we need race-conscious education policy*. New York: Teachers College Press.
- Nasir, N. S., & Hand, V. (2006). Exploring sociocultural perspectives on race, culture, and learning. *Review of Research in Education*, 76(4), 449-475.
- Nasir, N. & Cook J. (2009) *Becoming a Hurdler*. *Anthropology & Education Quarterly*, Vol. 40, Issue 1, pp.41-61.
- Nespor, J. (1997). *Tangled Up in School: Politics, Space, Bodies, and Signs in the Educational Process*. Mahwah, NJ: Lawrence Erlbaum.
- Nespor, J. (1994). *Knowledge in Motion. Space, Time and Curriculum in Undergraduate Physics and Management*. London, Falmer Press.
- Noguera, P. A., & Wing, J. Y. (Eds.). (2006). *Unfinished Business: Closing the Achievement in Our Schools*. San Francisco: Josey Bass.
- Noguera, P. & Cannella, C. (2006). *Youth Agency, Resistance, and Civic Activism: The Public Commitment to Social Justice*.
- Nygreen, K. (2006). *Reproducing or Challenging Power in the Questions We Ask and the Methods We Use: A Framework for Activist Research in Urban Education*. *Urban Review: Issues and Ideas in Public Education*, 38.
- Oakes, J., & Rogers, J. (2006). *Learning power: Organizing for education and justice*. New York: Teachers College Press.
- Ochs, E., & Capps, L. (2001). *Living Narrative: Creating Lives in Everyday Storytelling*. Cambridge, MA: Harvard University Press.
- O'Connor, K. & Allen, A. (2010). Learning as the organizing of social futures. W.R. Penuel & K. O'Connor (Eds.), *Yearbook of the National Society for the Study of Education*, 108, 1: Learning research as a human science, pp. 160-175.
- Penuel, W. R., & O'Connor, K. (Eds.) (2010). *Learning research as a human science*. National Society for the Study of Education Yearbook, 109(1).

- Orr, Julian (1996), *Talking about Machines: An Ethnography of a Modern Job*. Ithaca, NY: IRL Press.
- Ortner, S. (1984). Theory in Anthropology since the Sixties. *Comparative Studies in Society and History*, 26(1). 126-166
- Penuel, W. & Riel, M. The 'New' Science of Networks and the Challenge of School Change. *Phi Delta Kappan*. April 2007 (p. 611-615).
- Polman, J. L., and Miller, D. (2010). Changing stories: Trajectories of identification among African American youth in a science outreach apprenticeship. *American Educational Research Journal*, 47(4), 879-918.
- Porter, M., and Kramer, M. (2011). How to reinvent capitalism—and unleash a wave of innovation and growth. *Harvard Business Review*.
- Scribner, S., & Cole, M. (1973). Cognitive consequences of formal and informal education. *Science*, 82, 553-559. 57
- Senge, P. (2000). *Schools that learn: A fifth discipline fieldbook for educators, parents, and everyone who cares about education*. New York: Doubleday Currency.
- Smith, A., (1776). *The Wealth of Nations* edited by R.H. Campbell and A.S. Skinner, The Glasgow edition of the Works and Correspondence of Adam Smith, vol. 2b, pp. 47
- Smith, C. (2003). *Corporate social responsibility: not whether but how?* London Business School.
- Star, S. L. & Griesemer J. (1989). Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39, *Social Studies of Science*, 19: 387-420.
- Stetsenko, A., (2008). Collaboration and cogenerativity: On bridging the gaps separating theory-practice and cognition-emotion. *Cultural Studies of Science*.
- Stevens, R. (2000). Who counts what as math? Emergent and assigned mathematics problems in a project-based classroom. In J. Boaler (Ed.), *Multiple perspectives on mathematics teaching and learning* (pp. 105-144). New York: Elsevier.
- Teece, David J., Richard Rumelt, Giovanni Dosi and Sidney Winter (1994), "Understanding Corporate Coherence: Theory and Evidence," *Journal of Economic Behavior and Organization*, 23(1), 1-30.
- United Nations Report, 2002
- Vygotsky, L. S., (1978). *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press.
- Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Harvard University Press.
- Wertsch, J. V. (1985). *Vygotsky and the social formation of mind*. Cambridge, MA: Harvard University Press.
- Wertsch, J. V. & Penuel, W., (1995) Dynamics of Negation in the Identity Politics of Cultural Other and Cultural Self. *Culture and Psychology*. 1: 81-102.
- Wobbekind, R., Eye, K., Horvath, G., DiPersio C., Light, M. & Webb, D., (2004). *Colorado's Economic Opportunities: Today, Tomorrow, and the Future*.
- Wortham, S. (2005). *Learning Identity: The Joint Emergence of Social Identification and Academic Learning*. Cambridge: Cambridge University Press.

- Wortham, S. (2004). From good student to outcast: The emergence of a classroom identity. *Ethos*, 32(2), 164–187.
- Yamagata-Lynch, L. C. (2010). *Activity Systems Analysis Methods for Understanding Complex Learning Environments*. New York: Springer.
- York, J., Hargrave, T., Harris, J. (2011). "Cold Hard Facts: The False Dichotomy between Business and the Natural Environment." For submission to *Academy of Management Review*.