

ABSTRACT

Title of Dissertation: BEYOND ACADEMIC CAPITALISM: INNOVATION
AND ENTREPRENEURSHIP AS INSTITUTIONAL
ETHOS AT A PUBLIC RESEARCH UNIVERSITY

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The theory of academic capitalism provides a cogent explanation of the actors, organizations, and networks that initiated a shift in U.S. higher education from a “public good knowledge/learning regime” to an emerging “academic capitalist knowledge/learning regime.” In the academic capitalist knowledge/learning regime, the claims of entrepreneurs, administrators, and corporations—amidst amplified market forces—have come to supersede the claims of the public. Research thus far has not analyzed the process by which the multiple levels of higher education institutions adopt values and norms of the academic capitalist knowledge/learning regime.

Using case study methodology, this dissertation empirically examines the development and dissemination of an institutional ethos that, consistent with the theory of

academic capitalism, has attributed great importance to innovation and entrepreneurship at a public doctoral/research-intensive university in the United States between 1998 and 2013. Specifically, I am interested in explaining why this ethos was initiated and supported by university leaders and how it has been translated into incentives for faculty members and academic opportunities for undergraduate students. Therefore, this dissertation traces academic capitalism as a multi-level process at one higher education institution.

The findings demonstrate that meanings ascribed to innovation and entrepreneurship vary across the campus. However, there is a preponderance of language and examples derived from the for-profit sector. The individuals on campus instrumental in crafting the innovation and entrepreneurship ethos were central administrators, particularly presidents and provosts. The main motivations for supporting the ethos were generating revenue in the future, continuing a land-grant tradition of service to the state, and attempting to keep pace with institutional peers and garner prestige. Efforts to translate the ethos into incentives for faculty have been limited in scope and mainly cater to disciplines in sciences, engineering, and technology. However, there is clearly emphasis placed on developing the entrepreneurial mindset in undergraduate students. The implications of these incentives and academic opportunities are analyzed, suggesting possible outcomes of innovation and entrepreneurship as institutional ethos.

BEYOND ACADEMIC CAPITALISM: INNOVATION AND ENTREPRENEURSHIP
AS INSTITUTIONAL ETHOS AT A PUBLIC RESEARCH UNIVERSITY

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DEDICATION

To my mother, Kathleen McClure: the original educator who taught me how to write.

To my father, David McClure: the traveler who revealed the joys of being lost in thought.

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There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says, "Morning, boys. How's the water?" And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes, "What the hell is water?"
-David Foster Wallace

There are numerous individuals who, over the course of the last five years, have helped me to develop a better understanding of the world—in essence, to be conscious of the water. I am indebted to the scholars who have devoted themselves to a life of the mind. This dissertation is a humble contribution to the literature, building upon the foundation they laid.

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CHAPTER ONE: INTRODUCTION

Introduction

Sheila Slaughter and Gary Rhoades' (2004) theory of academic capitalism¹ provides a cogent explanation of the actors, organizations, and networks that, starting in the 1970s, initiated a shift in U.S. higher education from what they called a “public good knowledge/learning regime” to an emerging “academic capitalist knowledge/learning regime.” In the academic capitalist knowledge/learning regime, they argued, the claims of academic entrepreneurs and corporations—amidst amplified market forces—supersede the claims of the public. Profit taking and knowledge privatization are prioritized over democratic citizenship education or social justice. However, the institutional creation and transmission of values and norms that sustain this regime was conspicuously absent from the theory's elaboration, which focused upon market-based behavioral responses to external—often structural—pressures. Although these responses are vital in understanding the nature of change in higher education over the past four decades, they do not fully illustrate the means and motivations through which academic capitalist values and norms are created and subsequently transmitted to university actors.

This dissertation empirically explores one facet of these means and motivations. It critically examines the development and dissemination of an institutional ethos that, consistent with the theory of academic capitalism, attributes great importance to innovation and entrepreneurship at a public doctoral/research-intensive university in the United States. By “institutional ethos,” I mean the values that are appropriated and

¹ As I discuss later in the chapter, Sheila Slaughter and Larry Leslie (1997) first conceptualized academic capitalism as part of a four country comparative study. However, Slaughter and Rhoades (2004) noted that this initial work did not attempt to develop a theory, prompting them to undertake the subsequent volume referenced above.

cultivated by key university planners and decision-makers to coordinate and normalize the activities of faculty and undergraduate students, as well as practices and policies that perpetuate the ethos. Specifically, I am interested in explaining why this ethos was initiated and supported by university leaders (e.g., chancellor, presidents, provosts, deans, and program directors) and how it has been translated into incentives for faculty and academic opportunities for undergraduate students. Therefore, this dissertation traces academic capitalism as a multi-level process at one higher education institution.

Research on all things “entrepreneurial” in academe has been steadily growing in recent years (Mars & Metcalfe, 2009). This study departs from the burgeoning literature in several ways. First, its focus is not the behaviors of specific actors like faculty members or graduate students, nor does it concentrate on certain disciplines in science, engineering, and technology. Rather, it looks at how and why a collection of individuals across one campus developed and constituted values, norms, and practices in a certain historical moment and political-economic context. Second, this study does not stress the pursuit of money as the sole explanation for the promotion of entrepreneurship in academe, giving attention to tradition, legitimacy, prestige, and accountability as additional explanatory variables. Third, this study attempts to understand how the translation of an innovation and entrepreneurship ethos into incentives and academic opportunities strives to shape faculty members’ and undergraduate students’ conduct and subjectivities. Through this institutional case study, I explore one of the ways in which higher education reflects and (re)produces the social relations of contemporary capitalism.

In the chapter that follows, I lay the groundwork for this study. I paint in broad brushstrokes a depiction of public higher education's shifting political-economic landscape since the 1970s. This landscape is marked by two tectonic shifts: 1) higher education became inextricably linked to efforts to build a national innovation system; and 2) university education became increasingly viewed as a private good. Central to these shifts were a series of federal policies that introduced greater institutional competition for students and allowed universities to profit from their research discoveries. The aftershocks of these shifts reverberate in the present, as schools nationwide orient their missions to research, seek to control costs through technology-based solutions, cultivate new sources of income, and answer to accountability expectations, especially after the 2008 financial crises (Kerr, 2002). Slaughter and Rhoades (2004) captured many implications of public higher education's political-economic landscape in their theory of academic capitalism, the main proposition of which is introduced in this chapter.

With this background in place, I provide an overview of the dissertation's methodology, delineating its problem and purpose; scope and significance; research questions; theoretical foundations; and empirical strategy. I conclude the chapter by summarizing this discussion and reviewing the contents of the remaining chapters. Before describing public higher education's shifting political-economic landscape, I define a few key concepts that are frequently employed in the dissertation.

Key Concepts

Underlying this project is the idea that American higher education has fundamentally changed in response to political-economic conditions. These changes are not merely structural, but also trickle down and influence the lived experiences of

university actors. In order to understand the political-economic framing of this study, as well as the theory of academic capitalism, it is worth briefly discussing four paired concepts: market/marketization, privatization/corporatization, informational/knowledge-based economy, and neoliberalism/the neoliberal state. As is often the case in social scientific research, these concepts resist simple definition. Nevertheless, I provide a basic overview of each paired concept, reserving elaboration and application to subsequent sections.

The market/marketization. In higher education literature, the market is frequently construed as an actor itself. Borrowing from Clark (1983), I conceptualize the market not as an actor, but as a context of interaction within which presumed rational actors pursue self-interest. According to Gumport (2005), in higher education there are “several markets at work—not only for obtaining students, but for placing graduates, hiring and retaining faculty, obtaining research funding, establishing collaboration with industry and other organizations, maintaining endowments, sustaining and extending alumni giving and other fundraising sources” (p. 118). Lindblom (1977) conceptualized three main markets in higher education: consumer, labor, and institutional. The consumer market involves the exchange of money for desired goods and services, with consumer choice as a requisite feature. In the labor market, employees compete with their capabilities and energies for compensation. Lastly, the institutional market coordinates the way enterprises interact, with reputation or prestige as the main commodity of exchange.

It should be recognized, then, that many higher education institutions create contexts that each encourage various forms of market-based competition and the pursuit

of self-interest. In fact, the pursuit of self-interest among faculty members, specifically, promotes the type of work that signals expertise, generates prestige, and results in promotion. This provides incentive to powerfully advance the store of knowledge and, therefore, spark creative answers to demanding problems. A significant point that applies throughout the remaining chapters is that competition and self-interest in some form have long factored into aspects of the academic life and nest rather naturally within higher education's tradition of meritocracy.

It is the case that markets in higher education sometimes fail to achieve socially efficient outcomes. Individuals' pursuit of self-interest can lead to results that are inefficient and could be improved with intervention. Parents and students, for example, tend to underinvest in higher education because they focus upon the private versus social returns to receiving a degree. In response to market failures, governments intervene through public policy, usually in the form of subsidies to institutions and students (Paulsen, 2001). However, the view that market failures necessitate state intervention has been subverted over time. The market is now viewed as a solution to ineffectiveness and inefficiency produced by government bureaucracy (Morrow, 2006). A major reason that the market has been celebrated is because of neoliberalism, a political-economic doctrine whose ascendance is described below.

Consequently, many public universities have undergone marketization, defined here as a process of increasing market coordination or market interaction as state intervention has waned or transformed to extend the reaches of consumer sovereignty. Manifestations of this process are numerous and described throughout this dissertation, particularly in reviewing research on how academic entrepreneurs have capitalized on

market opportunities for private gain. Concomitantly, public universities have established closer ties with private industry in order to address funding shortfalls from state withdrawal or to display their relevance to economic competitiveness and growth. In light of marketization and greater private industry influence in academe, several scholars have observed—and others bemoaned—that higher education has undergone privatization or corporatization.

Privatization/corporatization. The American higher education system consists of public, private non-profit, and private for-profit institutions. The main difference between public and private non-profit institutions is most clearly understood by reference to governance, not funding. This is the case because, at many public institutions, the share of funding from the state has been in decline for several decades, while privately-sourced contributions (e.g., tuitions, donations, etc.) are on the rise (Selingo, 2013). Moreover, many private non-profit colleges and universities receive public tax exemptions and subsidies (Lombardi, 2006). In terms of governance, the state, county, or city controls or coordinates public institutions via a governing board appointed, at least in part, by the executive and/or legislative branch of government. By contrast, private institutions are governed by a board whose constitution and operations are largely independent of the government. As follows, private non-profit institutions are not as beholden as public institutions to state regulations or bureaucracy. Public universities must answer to state expectations regarding enrollment, credentialing, and contributions to the economy.

Recent changes in higher education have prompted several scholars to suggest that the division between non-profit and for-profit is becoming muddy, with formerly

non-profit institutions increasingly operating like for-profit enterprises (Bok, 2003; Gould, 2003; Johnstone, 1999; Kirp, 2003; Reading, 1996; Schrecker, 2010; Washburn, 2005). These scholars argue that public universities are undergoing privatization and/or corporatization. Johnstone (1999) proffered a comprehensive definition of privatization as it relates to higher education:

Privatization...refers to a process or tendency of colleges and universities (both public and private) taking on characteristics of, or operational norms associated with, private enterprises. Although the term is not a precise one..., privatization connotes a greater orientation to the students as a consumer, including the concept of the college education as a “product”; attention to image, competitor institutions and market “niches”; pricing and the enhancement of net earned revenue; and aggressive marketing. Privatization also suggests the adoption of management practices associated with private business, such as contracting out, or "outsourcing"... , aggressive labor relations and minimization of payroll expenditures, decisive decision-making and "top down" management, widespread use of audits and accountability measures, and an insistence that each unit...contribute to profitability. (p. 1)

This definition roughly equates to what Robertson and Dale (2013) usefully called “privatization *in* education,” or the introduction of market mechanisms and norms and practices from the private sector in public education. They distinguished this process from “privatization *of* education,” which refers to state liberalization of the public education sector, allowing private schools to compete against publicly financed providers.

Some scholars (e.g., Schrecker, 2010; Washburn, 2005) have focused not on the nebulous public/private dichotomy of non-profit postsecondary education, but rather the influence of corporations or corporate culture among institutions. University corporatization is covered fully in chapter two, but for the purposes of this introduction can be defined as the combination of greater private industry influence in higher education governance and the belief that universities are businesses that can benefit from practices and norms that are utilized by corporations. Both privatization and corporatization have become popular concepts in the context of political-economic conditions attendant upon public universities since the 1970s. These conditions have been described through two concepts, the knowledge-based economy and neoliberalism.

Informational/knowledge-based economy. There has been much talk recently of the need for public higher education to prepare “knowledge workers” and harness university research capacities to capitalize on the economic possibilities of information technology (Crawford, 2010; Etzkowitz, Webster, & Healey, 1998). The assumption driving this call to action is that the U.S. economy has fundamentally changed, becoming “post-industrial,” “post-Fordist,” and “knowledge-based” (Bell, 1973; Castells, 1993). There is still scholarly debate surrounding the material existence of the knowledge-based economy (e.g., Meyer, Ramirez, Frank, & Schofer, 2007), but the influence of the concept and related discourses on education policy is beyond dispute (Jessop, 2008). Indeed, there has been no shortage of monographs on the challenges and opportunities of the knowledge-based economy to higher education (Carnevale & Desrochers, 2002; Duderstadt, 2000; Temple, 2012). In the words of Temple (2012): “while the university has historically been variously seen as the producer of a highly skilled workforce, a

center of scholarship and creativity, a repository of national culture and values, and a means of social mobility... its relationship with the knowledge-based economy is recent and striking” (p. 1).

This study understands the knowledge-based economy through the pioneering work of Castells (1993), who outlined five features of what he called the “informational economy.” The first feature is that, although knowledge has always been vital in coordinating economic activities, the capacity to create and apply new knowledge increasingly dictates the pace of productivity and economic growth. Not all knowledge is valued in this arrangement, as the development of science and technology-related products and services carries the best prospects for wealth generation. Second, in the knowledge-based economy, there has been transference from material production to information management, requiring not a cheap, unskilled, and abundant labor force, but rather a smaller number of educated workers familiar with the manipulation of data, supplemented by a larger number of flexible laborers (Slaughter & Rhoades, 2004). Third, non-standardized production from horizontally networked economic organizations has replaced Fordist production. Fourth, the knowledge-based economy is global, with capital, labor, markets, and management all moving and occurring across national borders. International trade, of course, is not new, and nation states are not irrelevant, as they enforce the global economic infrastructure. Lastly, the preceding transformations in economic organization have been dependent upon the concurrent revolution in telecommunications, “transforming the material basis of our world in fewer than twenty years” (Castells, p. 19). The relevance of the knowledge-based economy to this

discussion is that it has been used to explain new market opportunities for producers of knowledge and knowledge workers, such as public universities.

Neoliberalism/the neoliberal state. These new market opportunities have been emphasized in an era marked by neoliberalism and the education policies it has inspired. Neoliberalism is a constellation of practices based on the idea that “human wellbeing can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade.” (Harvey, 2005, p. 2). Neoliberalism, to borrow from Peck (2010), has “always been about the capture and reuse of the state” (p. 9). The neoliberal state has been described at length by a number of scholars (Jessop, 1993; Ong, 2006; Peck, 2010). Jessop (1993) provided one of the most comprehensive accounts of the neoliberal state through his conceptualization of the “Schumpeterian workfare state.”

Among the core objectives of the Schumpeterian workfare state is “the subordination of social policy to the demands of labor market flexibility and structural competitiveness” (p. 9). More explicitly, the neoliberal state looks to redefine or dismantle “big government,” positioning itself in negative relation to the bureaucratic welfare state apparatus and its perceived inefficiency (Morrow, 2006). This is one reason why Jessop viewed the nation state as increasingly hollowed out, as the neoliberal state has transferred many centralized governmental powers to supranational organizations and devolved others to the local level. Such hollowing out, however, does not mean the neoliberal state is disinterested in the lives of its citizens. Ong (2006) suggested that there is an interventionist aspect to the neoliberal state. Citizens are encouraged to think of themselves as rational, self-enterprising, and free individuals “who are then induced to

self-manage according to market principles of discipline, efficiency, and competitiveness” (Ong, p. 4).

Peck (2010) contended that it is useful to study neoliberalism as a process, or as it “actually exists,” rather than an “ideational essence” (p. 9). He proposed breaking neoliberalization into two categories: “roll-back” and “roll-out.” The first category, roll-back neoliberalization, is often the first phase of the process and entails “attacks on labor unions, planning agencies, entitlement systems, and public bureaucracies, by way of the now familiar repertoire of funding cuts, organizational downsizing, market testing, and privatization” (p. 23). The administration of President Ronald Reagan in the early 1980s exemplified roll-back neoliberalization through deregulation of finance and telecommunications, cuts to federal agencies, and attacks on unionized labor. The second category, roll-out neoliberalization, is a creative process, reconstructing trade and finance regulatory regimes at the global level. Roll-out neoliberalization responds to the costs of dismembering the social safety net and disciplining those marginalized by a leaner state. It creates schemes for extending and normalizing market ideology to citizens and penalizes those who are non-compliant (Peck & Tickell, 2002). Examples of such schemes include welfare-to-work programs and school vouchers. In higher education, neoliberalism is most relevant to explaining funding cuts, escalating user fees, and marketization. The next section traces the roots of these decisions and processes.

Higher Education’s Shifting Political-Economic Landscape

A multitude of scholars have noted that unprecedented political-economic conditions have had profound effects on higher education institutions since the 1970s (Altbach, Berdahl, & Gumport, 1998; Brint, 2002; Rhoads & Torres, 2006; Schrecker,

2010; Slaughter & Leslie, 1997; Washburn, 2005). Although schools across the postsecondary sector have experienced (and co-created) these conditions, public institutions, in particular, have been challenged by them. For this reason, public universities receive the bulk of the attention in the discussion that follows. I refer to new political-economic conditions attendant upon public universities as tectonic shifts, figuratively referring to the strength and range of movements, collisions, and erosions that continue to influence institutions today.² Two shifts since the 1970s are relevant to the development of the theory of academic capitalism and, therefore, this dissertation. The first shift is that higher education became inextricably linked to efforts to build a national scientific and technological innovation system in the wake of a crisis in Fordist manufacturing and concerns over America's economic competitiveness. The second shift is that, with the rise of neoliberalism, university education became increasingly viewed as a private good, buoyed by notions of individual returns to investment in one's own human capital.

Public universities and the national innovation system. Throughout much of the postwar era, production strategies in the United States were organized around assembly-line, or Fordist, manufacturing. During this era, competitiveness and growth in real terms were based upon standardized production of material goods by vertically integrated, large scale organizations (Carnoy, Castells, Cohen, & Cardoso, 1993). For several decades, this organization of production flourished, propelling the United States to an undisputed position of economic dominance (Jessop, 2008). The state operated within and constituted this economic milieu, creating policies that projected a democratic

² This phrasing was inspired by Kerr's (2002) allusion to "shockwaves" to describe major changes to the U.S. higher education system.

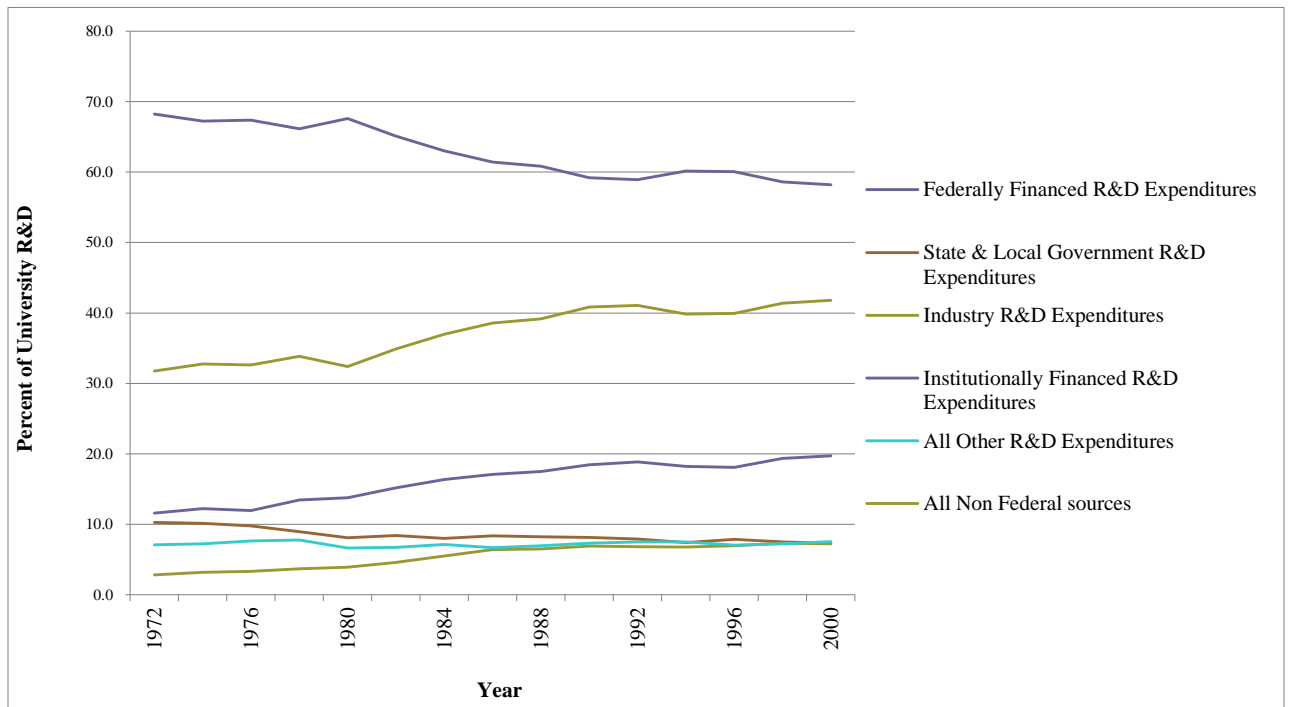
vision at the same time that it nurtured an environment suitable to socially uneven capital accumulation. The tension between this democratic vision and the inequalities inherent to capital accumulation represents what Torres (1995) called the advanced capitalist state's "legitimacy deficit" (p. 273). Both the organization of production and state objectives transformed gradually in the first decades of the postwar era, but changes accelerated in the face of fiscal crises in the 1970s. Concerns over America's competitiveness yielded initiatives to spur economic growth through a national system of innovation.

Industrialized countries experienced low growth rates in the 1970s, exacerbated by oil crises in 1973 and 1979. In the United States, unemployment and inflation steadily increased, resulting in an economic phenomenon known as "stagflation." Meanwhile, economic productivity decreased until the late 1980s (Harvey, 2005). By contrast, Japan's economy grew throughout the 1970s, and competition from Pacific Rim states encouraged markets to become increasingly global (Slaughter & Leslie, 1997). The United States fared poorly in the face of such competition, running a trade deficit for the first time in almost a century and losing shares of the world market (Cohen, 1993). Starting in the early 1980s, the U.S. government pursued a policy agenda around innovation for economic competitiveness (Slaughter & Rhoades, 2004). President Reagan launched in 1983 what became the Council of Competitiveness, which produced regular reports and provided a variety of policy recommendations to reorganize higher education, promoting investment in the "critical fields" of science, technology, engineering, and mathematics (Jessop, 2008). Additionally, the government started to support applied and entrepreneurial research (Geiger, 1993). The national innovation system was not merely a

state project, but rather involved a new contract between government, private industry, and higher education institutions.

This new contract was developed at a time when many public universities were confronting greater scrutiny from the public. In the words of Geiger (1993), many institutions in the 1970s “faced a need to articulate a fresh and compelling rationale for their basic role as guardians of advanced knowledge and rational inquiry” (p. 269). At the same time, multinational corporations turned to investment in university research related to new technologies as a response to declining shares of the world market. Within the government’s supportive policy environment, a partnership was born, such that ivory tower aloofness gave way to more collaborative research with private industry: “Economic competitiveness and technology transfer became the cornerstones of an emerging consensus on university research” (Geiger, p. 305). The proportion of university research money coming from private industry doubled between 1972 and 1990, with the greatest period of growth between 1979 and 1986 (Berman, 2007). It is worth noting, however, that the percentage of research funding from private industry still pales in comparison the percentages coming from the federal government and institutions themselves (see Figure 1).

Figure 1: Sources of Academic Research and Development Funding, 1972-2000



Source: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges

Collaboration transformed into business ventures, as public universities

“[oriented]...research toward areas relevant to industry” and “[promoted] mechanisms for conveying discoveries to industry for commercial development” (p. 305). Thus, the 1980s marked the beginning of a new relationship between public universities and private industry. It was during this decade that the majority of public research universities established intellectual property offices, research parks, and administrative infrastructure to support transfer of technology to private industry (Geiger & Sá, 2008).

America’s economy, both discursively and materially, transformed in light of technological improvements and concomitant changes in the nature of work and composition of the labor force. In a matter of two decades, the knowledge-processing functions of public universities became fundamental to their *raison d’être* (Gumport &

Snydman, 2005). The value of knowledge creation, preservation, and transmission was evaluated in terms of its contribution to economic competitiveness and growth (Etzkowitz, Webster, & Healey, 1998). In addition to bringing research products and processes to market, public universities were called upon to prepare well-educated workers and technology-intelligent consumers (Slaughter & Rhoades, 2004). The landscape of higher education shifted in such a way that public universities became key ingredients in a national scientific and technological innovation system in the eyes of corporate and political leaders, enabling myriad behavioral manifestations to take advantage of newly minted market opportunities. Codifying this political-economic shift were several policies at the federal level that fostered commercialization of research.

The most illustrative policy to this end was the 1980 Bayh-Dole Act. Prior to this landmark piece of legislation, few universities sought to patent intellectual products. With the passage of Bayh-Dole, both small businesses and universities were able to claim rights of ownership over inventions discovered with the help of federal research money.³ Faculty and the institutions that employed them were now able to see the commercial possibilities of research. One indicator of commercialization of research is the number of patents awarded to universities, which tripled between 1984 and 1994. Put another way, fewer than 100 patents were issued to universities by the 1960s, but by 1999 the total number had risen to 3,300 (Berman, 2012).

³ In 2011, the U.S. Supreme Court ruled in *Stanford v. Roche* that inventors, not institutions, have primary ownership over inventions. This has not reduced the influence of Bayh-Dole, as universities simply altered contracts and policies to ensure that their claims were legally sound. However, organizations like the American Association of University Professors have advocated on behalf of faculty intellectual property ownership.

Table 1: Indicators of Commercial Activities of U.S. Universities, 1993-2003

Indicator	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Patents awarded to all academic institutions	86	95	100	115	130	168	178	165	171	174	174
Academic start-up companies formed	NA	104	100	109	153	165	163	218	238	215	206
New academic research funding from licenses	NA	94	100	138	121	113	132	164	201	189	189
Academic equity licenses/options	NA	NA	100	114	205	212	183	299	331	377	319
Academic invention disclosures received	89	90	100	109	122	129	135	145	152	170	185
Academic new U.S. patent applications filed	84	85	100	115	154	174	205	237	244	274	304
Academic revenue-generating licenses/options	80	83	100	116	132	141	156	177	181	199	260
Academic new licenses/options executed	81	96	100	103	126	144	154	167	154	171	180

Source: National Science Board, *Science and Engineering Indicators 2006*, volume 2 (NSB 06-01A): appendix tables 5-68 and 5-69.

Subsequent policy provided the legal infrastructure for universities to partner with private industry and better protected government-industry-university ventures and consortia from antitrust litigation. In addition to intellectual property rights, federal policies also made it easier for universities to protect trademarked logos, names, and mascots. Starting in the 1990s, universities were able to copyright digital information (e.g., databases) and various services and products (e.g., courseware) that could then be traded internationally. In the words of Slaughter and Rhoades (2004), “although universities were not the focus of this legislation, they restructured to intersect the new policy thrust. Networks within universities...began developing intellectual property, technology transfer, and economic development offices, bringing their institutions into closer alignment with the new economy” (p. 56).

The rapid growth of the field of biotechnology, or the applied science of molecular biology, illustrates university efforts to intersect with new market opportunities and contribute to the national innovation system. In 1973, the discovery of techniques for splicing genes made genetic engineering possible, with wide commercial applicability,

namely in the creation of drugs. Accordingly, pharmaceutical firms were intensely interested in biotechnology research, and they invested in universities, effectively outsourcing the lengthy process of drug development (Berman, 2012). Blumenthal *et al.* (1996) found that spending on university research by biotechnology companies increased from around \$121 million in 1984 to almost \$1.5 billion in 1994—a nearly eightfold increase in real terms. Geiger (1993) observed that, if the estimate for 1984 is correct, biotechnology firms accounted for 42 percent of all industry-supported research that year. In addition to receiving money from large pharmaceutical companies, many academics with expertise in biotechnology served as consultants or created their own start-up firms. For example, in 1976 venture capitalist Robert Swanson partnered with Herbert Boyer and his laboratory at UC San Francisco, a leader in recombinant DNA research, to form Genentech. As many as 200 similar biotechnology firms were created between 1980 and 1984 (Geiger, 1993). The field of biotechnology renewed confidence in the ability of universities to translate research into products with appreciable market value, paving the way for growing public acceptance of closer academy-industry relations. Many university leaders embraced this relationship, enamored with the idea of contributing to economic vitality, supporting scientific breakthroughs that could impact many people, and redressing pressing financial problems (Geiger & Sá, 2008). These financial problems—chiefly reductions in state and local appropriations—were the result of new thinking on public good functions of higher education.

University education as a private good. The fiscal crises of the 1970s gave rise to more than a national system to stimulate innovation. It also fundamentally altered ideas about how the state should ensure productivity and, therefore, facilitate capital

accumulation. Throughout much of the postwar era, economic and social policies in the United States reflected key characteristics of the Keynesian welfare state. The objectives of the Keynesian welfare state “were to promote full employment in a relatively closed national economy through demand-side management, and to generalize norms of mass consumption through welfare rights” (Jessop, 1993, p. 9). The United States, along with many social democratic European states, embraced the belief that state power should be exercised in parallel with, or even in place of, market forces to achieve full employment, economic growth, and citizen wellbeing (Harvey, 2005). States often intervened in industry and established a variety of policies to protect minimum standards of income, nutrition, health, housing, and education (Torres, 1995). By the time the U.S. economy sputtered in the 1970s, there were deficiencies in the Keynesian welfare state’s ability to foster growth of the order expected by corporate and political leaders. One proposed solution to the problem was to enact austerity measures. When this solution failed to jumpstart the economy, discursive space was created for a different solution: neoliberalism (Harvey, 2005).

Neoliberalism was not, in fact, new when its advocates ascended to power beginning in the early 1980s. A small group of passionate economists, historians, and philosophers had gathered in Switzerland in 1947 around Friedrich von Hayek to found a society dedicated to classical liberal ideals—above all others, personal freedom (Harvey, 2005). These early neoliberals theorized that the free market was the best way to mobilize the baser elements of human nature for the benefit of all, while ardently opposing state intervention (Ong, 2004). By championing a discourse of individual freedom, neoliberals tapped into compelling democratic values, “echoing the core claim of cold war ideology:

the free market and democracy go together” (Pieterse, 2004, p. 10). Amidst the economic woes of the 1970s, well-known neoliberal academic Milton Friedman was awarded the Nobel Prize for economics in 1976, signaling a sea change in the acceptance of neoliberal doctrine. When Ronald Reagan was elected President in 1980, appointments to key political positions of neoliberal adherents paved the way for the creation of the neoliberal state (Harvey, 2005).

In the realm of education, neoliberalization frequently materializes as an array of policy prescriptions that seeks to “pass the cost of educational services to clients through user fees, [increase] the participation of the private sector in education (i.e., privatization), and [promote] decentralization of educational services” (Torres, 1995, p. 293). Public universities have not been insulated from these policy prescriptions. For example, despite evidence of positive externalities of higher education to states, between 1981 and 2001, the proportion of public university revenue provided by state and local government declined from 50 to 36 percent (Titus, 2009). The 2008 financial crises only exacerbated this trend, as evinced by Table 2. According to Selingo (2013): “For the last twenty-five years...states have been slashing higher education appropriations during each downturn in the economy and never fully restoring the money when good times returned” (p. 62).

Table 2: Changes in State Funding per Full-time Equivalent Student, 2007 versus 2013

	2007 – 2008	2012 – 2013	Change	Percent Change
State Appropriations for Higher Education	\$87,172,406,161	\$70,361,814, 675	(\$16,810,591,486)	-19.3%
FTE Enrollment at Public Colleges and Universities	10,271,685	11,471,488	1,199,803	11.7%
State Appropriations Per FTE Student	\$8,487	\$6,134	(2,353)	-27.7%

Sources: Grapevine survey; State Higher Education Executive Officers Association; Delta Cost Project.

Budget cuts have often been cited as one reason why public universities have sought private money through the commercialization of research and recruitment of full-fee paying students, including those from overseas (Slaughter & Leslie, 1997).

Because neoliberalism promotes the view that university education is a venture whose benefits are largely private, a potent belief has surfaced that responsibility for financing it belongs predominately with the individual consumer, in lieu of the government. Several federal policies operationalized this idea, thereby “marketizing” higher education finance. In 1972, the Higher Education Act of 1965 was amended so that financial aid was given directly to students, instead of institutions. What eventually became Pell Grants were essentially vouchers, and students became “partially state-subsidized consumers in quasi markets for higher education” (Slaughter & Rhoades, 2004, p. 45). In time, loans came to replace grants as the government’s preferred form of financial aid to students. While in 1975-76 loans accounted for just 20 percent of all student aid, by 2002 this percentage had escalated to 69 percent (Schrecker, 2010). The Taxpayer Relief Act, passed in 1997, created tax-sheltered college savings accounts and

penalty-free IRA withdrawals for college-related expenses. According to Slaughter & Rhoades (2004), these programs promoted competition among universities for preferred customers who use non-payment of taxes to access prestigious schools. Higher education institutions favored those who could easily repay loans or required no assistance because of tax relief.

Competition did not enhance efficiency or lower costs, but rather fueled a “positional arms race” in the system and engendered segmentation (Ehrenberg, 2000). The result has been “a virtual circle of competition in which students and institutions in the same (elite) market segments compete ever more vigorously with and for each other” (p. 44). Competition has been stoked by the development of college ranking systems, which are designed to inform consumer choice yet often do little more than encourage universities to emulate those institutions that perform well according to a small set of indicators.

Aftershocks: Implications of Tectonic Shifts among Public Universities

Public universities across the United States continue to deal with the implications of these two shifts in higher education’s political-economic landscape and the policies that codified them. It is worth discussing several of the most prominent aftershocks, as they contextualize the theory of academic capitalism and several of the theoretical propositions that inform this dissertation. These aftershocks relate to the mission, costs, revenues, accountability, and affordability of public universities.

Research and administrative expansion. The first implication is that knowledge creation has become a vital font of resources and prestige for public universities. Research that is grant-funded or in some other way generates revenue can be highly

valued, which can in turn affect the mission, spending, and personnel at institutions. Mission creep denotes an incremental organizational change and is often used in higher education research to describe when teaching-oriented universities shift their focus to research (Dubrow, Moseley, & Dustin, 2006). Shifting focus from teaching to research frequently requires redistribution of institutional resources. For instance, Morpew and Baker (2004) found that universities experiencing mission creep increased spending on institutional support and research, while decreasing expenditures on instruction. This is the case because, as research receives greater attention, public universities must hire more administrators with expertise in acquiring and managing grants (Slaughter & Rhoades, 2004).

Clotfelter (1996) found that new research universities invested in facilities and administrative staff to help secure research funding. Many public universities must also hire administrators to fulfill non-research responsibilities previously part of academic work. Massy and Zemsky (1994) captured this trend in their conceptualization of the “administrative lattice,” whereby administrative staff at colleges and universities grow as faculty expend more effort on research and less on teaching, student advising, and service to the campus. One recent area of growth in university administration is related to teaching and new technologies for instruction, such as online courses and using large quantities of data to improve pedagogies.

The academic profession and teaching quality. A second aftershock, then, is that the orientation to knowledge creation has altered the academic profession and raised questions about the quality of teaching at public universities. Slaughter and Leslie (1997) contended that the nature of academic work has changed most drastically at public

universities, where faculty that won competitive grants, developed doctoral programs, and published extensively advanced their careers. Beginning in the mid-1980s colleges and universities began to favor research output in academic promotion and tenure decisions. Faculty who excelled in their scholarship were rewarded with course buy-outs and fewer teaching demands (Schrecker, 2010). Like never before, faculty began to consider how to commercialize their intellectual products through disclosing discoveries to technology transfer offices, founding spin-off companies, or selling courseware, raising concerns over conflict of interest and commitment (Washburn, 2005). Faculty members were encouraged to develop skills in securing external funding for research projects. This represents one way being entrepreneurial in the academic profession entails more than forming companies.

The incentives surrounding research have, according to some observers, detracted from undergraduate education. Tenured and tenure-track faculty, in this view, are pulled away from teaching and are unavailable to students because of research demands. Benjamin (1998) countered the notion that tenure-track faculty are indifferent to undergraduate education, showing that, in fact, more tenure-track faculty are needed to increase student learning. Nevertheless, it is the case that many colleges and universities have come to rely upon “contingent” and “adjunct” faculty to teach courses, especially in the rapidly expanding cottage industry of professional and executive degree programs. Many non-tenure track faculty are researchers at universities, with minimal teaching obligations. As of 2012, over two-thirds of the national faculty workforce were part-time or off the tenure track, and their numbers continue to rise (Street, Maisto, Merves, & Rhoades, 2012). Research on the effects of contingent faculty is under-developed, but

some scholars associate this academic staffing trend with lower retention and graduation rates (Bettinger & Long, 2006; Ehrenberg & Zhang, 2005; Harrington & Schibik, 2004; Jaeger & Eagan, 2011). Part of the reason why contingent faculty are utilized—and why tenure-track faculty activity is under the microscope—is that public universities must increasingly demonstrate to stakeholders their commitment to productivity (often measured in degrees earned) and efficiency.

The accountability movement. A third implication of tectonic shifts in higher education’s political-economic landscape is the rise of the accountability movement. This movement initially focused on issues of resource allocation and utilization. However, towards the end of the 1980s, student outcomes dominated the accountability agenda (McGuiness, 2005). By 1994, one-third of states had a higher education performance assessment system in place, and today most states or statewide coordinating boards mandate an accountability reporting system (Leveille, 2006). Many states and statewide coordinating boards have launched initiatives to tie declining appropriations to measures of “output” performance, such as credit attainment and degree completion, “in order to ensure that taxpayer dollars yield the best possible returns” (Miao, 2012, p. 1).

Public universities have turned to new technologies as a means lowering costs and increasing productivity. One such technology receiving widespread attention is online courses capable of accommodating massive numbers of students with low overhead costs. Presently, these courses are largely free or open, explaining why they acquired the name Massive Open Online Courses (MOOCs). Some institutions have explored massive online degree programs and massive online introductory courses, scaling up previous online education initiatives to reach more “consumers.” Demands for

cost-effectiveness are not just coming from political leaders. Public universities are progressively expected to ensure affordability and returns on investment to parents and students, who economically rationalize the college choice, treating tuition payment as a business transaction wherein price is weighed against narrow measures of value.

College rankings like the one produced by *U.S. News and World Report* take advantage of this desire to maximize return on investment, even though the data on which it bases its rankings tells students more about the make-up of the in-coming class (e.g., test score and class rank) than what they might experience in the classroom (O'Meara, 2007). Research suggests that the *U.S. News* rankings shape admissions and pricing decisions at higher education institutions, making them less accessible to underprivileged groups (Meredith, 2004; Monks and Ehrenberg, 1999). Yet there is no evidence to suggest that rankings and elements of good practice in undergraduate education go hand in hand (Pike, 2004). This has not prevented the annual publication from selling 2.2 million copies of its rankings, reaching over eleven million readers per year, and profoundly influencing the decisions of university leaders.

Rising tuition and student indebtedness. A final aftershock relates to rising tuition and student indebtedness. According to the Delta Cost Project, in 2010, students paid approximately half of education and related costs, not including opportunity costs—a 15 to 18 percent increase in ten years (Desrochers & Kirshstein, 2012). Looking at this trend more broadly, Titus (2009) reported that, after adjusting for inflation, tuition at four-year public institutions increased by 75 percent between 1991 and 2004. In order to pay rising tuition expenses, many students and their families have turned to loans to finance higher education. Two-thirds of students at four-year institutions graduate with

loan debt, and the national average for indebtedness reached a record-breaking \$26,000 per student in 2012 (Institute for College Access and Success, 2012). Such figures have prompted several organizations and media outlets to suggest that higher education is confronting a student debt crisis (e.g., *The New York Times* series “Degrees of Debt,” 2012). The fact that tuition continues to rise above the rate of inflation is one reason that public universities have been inundated with criticism. Recent monographs on the state of higher education have included such damning titles as *Is College Worth It?*, and *College (Un)bound*. In response to this “unprecedented mix of external forces, [which] turned the spotlight on higher education institutions, amplified accountability demands, and raised the stakes for the very legitimacy of the enterprise in the eyes of society,” Slaughter and Rhoades (2004) developed their theory of academic capitalism (Gumport, 2005, p. 113).

Overview of the Theory of Academic Capitalism

The theory of academic capitalism began as a study of public universities in Australia, Canada, the United States, and the United Kingdom between 1970 and 1995. In *Academic Capitalism: Politics, Policies, and the Entrepreneurial University*, Slaughter and Leslie (1997) concentrated upon changes to the nature of academic labor in response to the emergence of global markets and reductions in government funding for higher education. Such external conditions “precipitated campus reactions of a resource-dependent nature,” made manifest as “faculty and institutions began to compete or increased their competition for external funds” (p. 209). It was in this initial work that Slaughter and Leslie popularized the phrase “academic capitalism,” which was chiefly designed to capture the encroaching profit motive in public postsecondary education. New money was pursued through what they called market and market-like behaviors.

Market behaviors referred to profit-oriented activities, such as patenting and collecting royalties, founding spin-off companies from research commercialization, and selling products and services. On the other hand, market-like behaviors were responses to competition for external money, including the pursuit grants and contracts, endowment funds, and student tuition and fees. The first volume of *Academic Capitalism* did not attempt to generate theory, relying instead upon pre-existing work on organizational resource dependence, or the idea that “the internal behaviors of organizational members are understood clearly only by reference to the actions of external agents” (Slaughter & Leslie, 1997, p. 68).

By contrast, in the second volume, *Academic Capitalism and the New Economy: Markets, State, and Higher Education*, Slaughter and Rhoades (2004) provided a theory dedicated to exploring academic capitalism in U.S. higher education. The crucial claim of the theory is that universities have shifted to an “academic capitalist knowledge/learning regime.” This regime “values knowledge privatization and profit taking in which institutions, inventor faculty, and corporations have claims that come before those of the public” (p. 29). Knowledge is considered a commodity whose worth is measure by its ability to flow through global markets and generate money for individuals and institutions. Slaughter and Rhoades differentiate this regime from its predecessor, the public good knowledge/learning regime, which values knowledge as a public good to which the citizenry has claims, guided by values like communalism, universality, disinterestedness, and organized skepticism. These Mertonian values privileged academic freedom and a separation between the public and private sectors. In some ways, “academic capitalism” is misleading because capitalism is not new to academe. Some

would argue, in fact, that the public good was aided by a “Darwinian model of academic meritocracy which a) built the most competitive academic system in the world and b) had the perfect ingredients for academic capitalism” (Uriagereka, personal communication, September, 2013). What Slaughter and Rhoades’ theory correctly underscores—even with its problematic name—is that the relationship has changed, eroding the degree to which the public stands as true benefactor of this model.

Other scholars (e.g., Kezar, Chambers, & Burkhardt, 2005) have similarly worried that “higher education is foregoing its role as a social institution and public role in society and is functioning increasingly as an industry.... The values undergirding this social mission include equality, service, truth, justice, community, academic freedom, and autonomy” (p. 23). Importantly, these scholars see the public good and academic capitalist knowledge/learning regimes as conflicting but, ultimately and uncomfortably, co-existing. That is, the academic capitalist knowledge/learning regime, though ascendant, has not completely replaced the public good knowledge/learning regime. Slaughter and Rhoades take a critical stance on this uneasy coexistence, warning that the benefits of the regime may fall on the population unevenly and further dilute public support for higher education.

Problem and Purpose

Slaughter and Rhoades conceptualized the academic capitalist knowledge/learning regime as comprising specific values, norms, and practices regarding the creation, application, and ownership of knowledge-based products in academe. Nevertheless, they do not fully explain means and motivations through which institutions transmit these values and norms to university actors. The assumption is that the regime is

an outcome of external conditions and not a process whose values must be constantly normalized and reinforced to secure consent and participation. The chapters of their work devoted to substantiating the theory focus on how the push of resource constraint and pull of market opportunities led faculty and departments to commercialize research or develop academic programs that generate revenue. Moreover, the theory analyzes how “the consumption versus...educational dimensions of a college education become increasingly emphasized” in response to the expectations of students whose tuition money has become increasingly vital to university operations (p. 279). By the conclusion of their text, and after reviewing subsequent research that makes use of the theory (e.g., Mars, 2006; Mars & Ginter, 2012; Mendoza, 2007; Mendoza, 2012; Metcalfe, 2004; Szelényi, 2013), a persistent question remains under-examined: how do we understand academic capitalism as a multi-level process at higher education institutions?

The purpose of this dissertation is to explore the means and motivations through which norms and values of the academic capitalist knowledge/learning regime are created and transmitted to university actors. It critically examines the development of an institutional ethos that attributes great importance to innovation and entrepreneurship at a public doctoral/research-intensive university in the United States. Accordingly, this study is interested in two sub-areas of interest. First, why was this ethos initiated and supported by university leaders? Out of a vast universe of values and norms related to knowledge, those linked to innovation and entrepreneurship were championed over public engagement, democratic citizenship, or social justice. This study seeks to explain this choice in the political-economic context of higher education today. Second, how was this ethos translated into incentives and academic programs for students and faculty? More

than a slogan, innovation and entrepreneurship has intersected with decisions about awards, promotions, and course offerings. This study is keenly interested in how the ethos has become a conduct-shaping mechanism—or an exercise of power—designed to produce particular subjectivities consistent with the present iteration of capitalism.

There are several shortcomings in the theory of academic capitalism that must be addressed in order to develop a nuanced account of how and why values and norms associated with innovation and entrepreneurship were institutionalized. First, building upon the extant literature requires moving beyond the theory's emphasis on resource dependency. The theory largely operates under the assumption that the pursuit of external money drives entrepreneurial behaviors in academe, giving little attention to alternative institutional objectives, such as legitimacy and prestige enhancement, or tradition. Second, Slaughter and Rhoades described the knowledge-based economy as a structural reality—they do not consider its symbolic and discursive elements, which illuminate the ways in which contemporary capitalism requires the construction of particular subjectivities and social practices to ensure its perpetuation (Jones, 2008). Lastly, the theory of academic capitalism does not sufficiently recognize that the knowledge-processing functions of universities affords them power in deciding what counts as knowledge—indeed, what is thinkable—in society. The exercise of this power entails developing formal means of shaping conduct that are absent in the theory of academic capitalism. I speak to each of these shortcomings in developing a more refined theoretical framework.

Scope and Significance

I narrow the scope of the study in three ways. First, in order to adequately capture specific means and motivations, I focus on a single institutional case: a doctoral/research-intensive university in the United States, hereafter referred to as Tidewater University (TU). Second, even though all university actors are subject to the values and norms of the innovation and entrepreneurship ethos, my main concerns are faculty members and undergraduate students. Third, I bound the case in a specific time period. This study is not interested in the historical evolution of faculty patenting or entrepreneurship education *per se*, which have already been extensively investigated (Katz, 2003; Kuratko, 2005; Berman, 2012), but rather the interplay of an institution's fundamental values and identity, efforts at prestige enhancement, and exercise of power within a specific context. In order to capture the innovation and entrepreneurship ethos as it developed and touched the lives of faculty members and undergraduate students, I have selected 1998-2013 as the period of study, thereby capturing two presidential administrations at TU.

Tidewater University was founded in 1856 and benefited from federal funding as a result of the Morrill Land Grant Act of 1862. Like other land-grant universities, TU built an institutional mission around accessibility and a utilitarian curriculum comprised of the "practical arts" of agriculture, mechanics, and military instruction. Over the course of the next century, Tidewater became the state's flagship public institution, receiving official recognition of this status in 1988. Today, TU teaches over 37,000 undergraduate and graduate students and employs approximately 5,000 faculty members (two-thirds of whom are non-tenure track). It boasts a half billion dollars in external research funding, complementing its \$1.7 billion operating budget. Since 1998, Tidewater has been

steadfastly striving to improve its prestige through better performance in college ranking systems. To this end, it has become more selective in admitting students, attempted to recruit and retain “star” faculty, increased its pursuit of external funding for research, and reminded stakeholders at every turn that it is a school “on the move” (O’Meara, 2007).

TU has embraced innovation and entrepreneurship as an unmistakable coordinating theme in institutional decision-making. The number of academic programs that teach an “entrepreneurial mindset” has increased, and new awards for faculty have been created for innovation and entrepreneurship. Most recently, TU announced the launch of an Institute for Innovation and Entrepreneurship to achieve the goal of exposing all students to entrepreneurial learning opportunities. Although concentrating upon a single case restricts this study’s generalizability—an issue addressed in chapter three—Tidewater provides a window into how public universities are responding to and interfacing with the challenges and opportunities of twenty-first century political-economic conditions.

Undertaking this line of research is important for at least four reasons. First, it fills a void in an expanding body of literature on all things “entrepreneurial” in academe, which to date has centered upon: faculty patenting and entrepreneurial behavior (Henderson, Jaffe, & Trajtenberg, 1998; Mendoza, Kuntz, & Berger, 2012; Owen-Smith, 2000; Powell & Owen-Smith, 2002); state-subsidized undergraduate student entrepreneurs (Mars, 2006; Mars, Slaughter, & Rhoades, 2008); graduate student socialization (Mendoza, 2007); industry-friendly and revenue-seeking academic units (Mendoza, 2012; Slaughter & Rhoades, 2004); institutional technology transfer trends (AUTM, 2012; Mowery, Nelson, Sampat, & Ziedonis, 2000); and organizational

adaptation (Clark, 1998; Clark, 2004; Christensen & Eyring, 2011). This study departs from the literature by focusing on entrepreneurship as an institutional ethos forged in the crucible of higher education's political-economic landscape. Second, this study is unique in suggesting that the translation of an ethos implicates a power dynamic, whereby institutions attempt to shape faculty member and undergraduate student conduct. Third, this study contributes to the refinement of theory, which can be subsequently applied and evaluated at other institutions. I add theoretical propositions to the theory of academic capitalism related to the discursive dimensions of the knowledge-based economy, institutional legitimacy and prestige enhancement, state control, and governmentality. Fourth, this study provides insight into the ways in which higher education institutions reflect and (re)produce the social relations of contemporary capitalism. Rather than assume that the capitalism is naturally self-reproducing, I show one of the poignant ways in which public universities teach, endorse, and, therefore, replicate the beliefs and social practices that perpetuate America's capitalist system.

Research Questions

The research questions guiding this study investigate the means and motivations through which values, norms, and practices of the academic capitalist knowledge/learning regime take shape in an institutional ethos of innovation and entrepreneurship at Tidewater University.

- *Question 1:* Through what processes did an institutional ethos of innovation and entrepreneurship develop at Tidewater University?

- *Question 2:* Why did university leaders (e.g., chancellor, presidents, provosts, deans, and program directors) initiate and support an innovation and entrepreneurship ethos?
- *Question 3:* How was an innovation and entrepreneurship ethos translated into incentives for faculty and academic opportunities for undergraduate students?

Theoretical Foundations

The theoretical framework of this study is based upon the theory of academic capitalism and its conceptualization of the academic capitalist knowledge/learning regime. However, I draw upon works from five additional theoretical perspectives to develop a set of propositions that address the aforementioned shortcomings of the theory of academic capitalism. In general, these perspectives move beyond structural or materialist theories of social phenomena and instead privilege the semiotic constitution of social reality (Berger & Luckmann, 1966). Although each of these theoretical perspectives is covered in chapter three, the following section introduces the propositions and the main ideas from which they are derived.

Firstly, scholarship on the cultural dimensions of political economy argues that the exact trajectory of capitalism depends upon the institutions, organizations, and social practices involved in its reproduction (Jessop & Sum, 2001). There are normative and symbolic projects, such as discourses of the knowledge-based economy, created to help manage conflict and coordinate the activities of individuals and institutions within the system (Jones, 2008). Public universities are implicated in determining capitalism's development and take part in perpetuating the system.

Proposition 1: Public universities align their strategic priorities with discourses of the knowledge-based economy and (re)produce the social relations of neoliberal capitalism.

Secondly, new institutionalism theorizes that it is not enough for public universities to succeed economically to survive. In order to compete in the institutional and consumer market—and garner prestige—they must establish and maintain legitimacy. Legitimacy is structured in a higher education field whose parameters are defined by the most prestigious institutions, encouraging emulation on the part of less-prestigious schools.

Proposition 2: The development and translation of an institutional ethos is influenced by perceptions of legitimacy and prestige in the higher education field.

Thirdly, in addition to legitimacy and prestige, ground-breaking work by Daniel Schugurensky (1994) revealed the twin powers of market demands and, crucially, state imperatives in directing public university operations. His heteronomous university model offers “a comprehensive account of current changes in higher education” and “encompasses a ‘commercial’ (or service) university and a ‘controlled’ (also known as ‘responsive’ or ‘accountable’) university” (2006, p. 306). This model “constitutes a new structural and globalized model of dependency to the market and subjection to the state” (p. 307). Schugurensky demonstrates the relationship between globalization and the advent of this model through a case study of the Universidad de Buenos Aires.

Proposition 3: Accompanying the marketization of public universities is increasing responsibilities to the state, creating dual external controls closely tied to globalization.

Fourthly, both sociologists and critical political economists have developed a research program around the power dynamics within neoliberalism through Foucault's concept of governmentality. Of particular interest to Foucault in generating his concept were not situations of outright domination, but instead contexts in which conduct is shaped through techniques designed to induce self-management on the part of affected individuals. This study uses governmentality to examine the mechanisms through which faculty and undergraduate student conduct is shaped and for what ultimate purposes.

Proposition 4: The translation of an institutional ethos into incentives for faculty and academic programs for undergraduate students represents a form of governmentality.

Lastly, the new sociology of knowledge stresses that social institutions do not simply respond to pre-existing environmental conditions in determining what ideas to research and teach. They simultaneously organize and validate certain bodies of knowledge over others and play an important role in deciding what is thinkable in society (Gumport, 2007). Thus, universities make entrepreneurship a valuable endeavor and body of knowledge worth knowing. At times, this means producing demand for it as an academic subject and incentivizing it as an area of faculty work when no pre-existing demand or interest existed.

Proposition 5: Public universities wield power in validating certain ways of thinking and behaving in society.

Together, these theoretical propositions construct a rubric for understanding and evaluating:

- What informed the meanings ascribed to innovation and entrepreneurship (the knowledge-based economy and neoliberal capitalism);
- Why university leaders initiated and supported values and norms associated with the academic capitalist knowledge/learning regime (resources, legitimacy/prestige, state imperatives); and
- What were the implications of translating the ethos (governmentality and the validation of social thought and behavior)

Methodology

This study employs case study as a comprehensive empirical strategy. The design of this project develops a “logical sequence that connects the empirical data to [the] study’s initial research questions” (Yin, 1994, p. 19). Consistent with case study methodology, the theoretical propositions direct attention to something that should be considered in the research and provide some idea of where to look for evidence. In fact, part of the reason why I selected a case study design is that I wanted the project to benefit from prior development of theoretical propositions to guide data collection and analysis (Yin, 1994). Additionally, case study is suited to “investigating a contemporary phenomenon within its real-life context, especially when...the boundaries between the phenomenon and the context are not clearly evident” (Yin, 1994, p. 13). Lastly, case studies are a preferred research strategy when the questions posed ask “how” or “why” something occurs as it does (Merriam, 1998). Given my interest in how and why the academic capitalist knowledge/learning regime is transmitted to actors at Tidewater University, a case study design was appropriate. The resulting research strategy was

informed by and improved due to a pilot study, as well as my positions at the university, which situate me directly in conversations surrounding entrepreneurship on campus.

The research design was divided into two stages of data collection. The first stage sought to understand the development and meanings of an innovation and entrepreneurship ethos at Tidewater University, with the goal of identifying the fundamental values cultivated and communicated by university leaders. It also sought an explanation for why university leaders initiated and supported the innovation and entrepreneurship ethos, with an eye to contextualizing strategic planning and institutional decision-making in higher education's political-economic landscape. Data in this stage came from 15 semi-structured interviews with individuals who served in strategic planning and key institutional decision-making roles at TU between 1998 and 2013, including at least one chancellor, as well as presidents, provosts, and deans of select schools and colleges. Data from documentary evidence, such as speeches, press releases, committee reports, and marketing materials was used to corroborate interview data.

The second stage explored how the institution translated this ethos into practice through incentives for faculty members and academic opportunities for undergraduate students. Of particular interest were the promotion and tenure processes, awards, courses, business model pitch competitions, and degree programs. 15 semi-structured interviews were conducted with participants knowledgeable about these incentives and academic opportunities. Participants included members of the appointment, promotion, and tenure guidelines revision task force, as well as faculty and administrators involved in the design and delivery of entrepreneurship courses and degree programs in units that directly intersect with the ethos, such as the college of engineering and school of business.

Committee reports, syllabi, and other documents were reviewed to complement and augmented interview data. Finally, interviews were conducted with faculty and staff affiliated with the new Institute for Innovation and Entrepreneurship.

The collection of multiple types of data from multiple sources was an effort to improve the credibility of findings through triangulation, or the “process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation” (Stake, 2000, p. 443). Dependability was also improved by creating a case study database and chain of evidence. The main goal of interpreting the data was analytic generalizability to assess whether the empirical results confirm the theoretical propositions. True generalizability, of course, is only possible through further assessment with additional cases. Every effort is made to clearly explain the steps followed in carrying out this research design to encourage subsequent research. By giving attention to the particularities of Tidewater University—and also considering the broader political-economic landscape—this design augurs to advance understanding of the multi-level process by which public universities transmit values and norms associated with the academic capitalist knowledge/learning regime.

Conclusion

This chapter provided a description of two tectonic shifts in higher education’s political-economic landscape that were central to the development of Slaughter and Rhoades’ (2004) theory of academic capitalism and, consequently, this study. Since the 1970s, public universities have been embroiled in the pull of opportunities created by the development of a national innovation system and the push of challenges precipitated by neoliberalism and the view of university education as a private good. Slaughter and

Rhoades recognized these challenges and opportunities, exploring in some detail behavioral responses they conceptualized as the academic capitalist knowledge/learning regime. After establishing this background, I presented the constitutive elements of the dissertation project, which critically analyzes the institutional means and motivations of transmitting norms and values associated with this regime. The study traces the development of an institutional ethos that attributes great importance to innovation and entrepreneurship and the translation of this ethos into incentives and academic opportunities. Underlying this project are theoretical propositions that suggest this ethos serves purposes beyond money-making, such as enhancing prestige and responding to state imperatives.

The remainder of the dissertation is divided into six chapters. Chapters two and three represent the literature review and study methodology, respectively. In reviewing the literature, I explore research on the role of legitimacy and prestige among higher education institutions, university corporatization, and entrepreneurship in academe. Additionally, I review the small body of literature developing around governmentality studies in higher education. The third chapter describes the research paradigm and provides further detail about the design I followed in carrying out this study. I then discuss the methods of data collection, data organization, techniques of data analysis, and ethical considerations of the project. Chapters four through six present the findings of the dissertation, with each chapter taking up one of the three research questions. In each chapter, I discuss how the findings connect to the theoretical propositions. The final chapter summarizes the arguments I proffered throughout these chapters, suggests several avenues for future research, and spells out implications for policy, theory, and practice.

CHAPTER TWO: LITERATURE REVIEW

Introduction

This study sits at the confluence of four streams of literature: institutional legitimacy and prestige enhancement, university corporatization, entrepreneurship, and governmentality studies in higher education. These four streams roughly equate to the key categories of research on which I base the background, theoretical framework, and objects of study included in this project. In the chapter that follows, I review literature from each of these streams with the goal of positioning this study within intellectual conversations surrounding the changing nature of higher education, particularly in light of the shifting political-economic landscape discussed in chapter one. The four streams are summarized in Table 3.

These streams overlap in that scholars have linked corporatization to institutional legitimization efforts and the rise of academic entrepreneurship (Gumport, 2005; Slaughter and Rhoades, 2004). I recognize these interrelationships, while treating the streams as distinct for organizational purposes. This review is based upon research in the form of books, edited volumes, journal articles, and a few works of popular media. When appropriate, I made an effort to consult literature outside the field of higher education to reflect the diversity and breadth of perspectives on the issues discussed. Importantly, this chapter is not merely designed to summarize pre-existing scholarship, but also to identify those gaps in literature this study proposes to address. The main thrust of this chapter is that a critical study of the development and translation of an institutional ethos of innovation and entrepreneurship is timely and advances our understanding and analysis of academic capitalism in U.S. higher education.

The next section explores scholarship on legitimacy and prestige enhancement in higher education. This section demonstrates that public universities are not just seeking new resource streams—they are also striving defend their practices and justify their existence in an era of unparalleled scrutiny and economic uncertainty. In the second section, I review how scholars have approached the nature of change in higher education through the lens of university corporatization. This section includes an overview of work that understands public universities as businesses in need of new models borrowed from corporate America. However, the majority of the section examines the substantial body of literature that is critical of university corporatization. I include in the latter discussion a more complete treatment of the theory of academic capitalism, as well studies that apply its constructs. The third stream of literature covered in this chapter relates to entrepreneurship. I briefly define entrepreneurship and its position in American society, particularly following the 2008 financial crisis. Then, I discuss what we know about entrepreneurship in the context of higher education, including research on entrepreneurial behaviors at the institutional and individual levels. In the final stream, I explore the limited body of scholarly work related to Foucault's concept of governmentality as applied to the higher education context.

Table 3: Summary of Four Literature Streams

Stream	Representative Literature	Relevance	Gap(s)
Legitimacy and Prestige Enhancement	Powell & DiMaggio (1991); Meyer & Rowan (1977); Gumpert (2005)	Argues that public universities are looking to defend practices and justify existence	Relationship between legitimacy and innovation and entrepreneurship
University Corporatization	Christensen & Eyring (2011); Washburn (2005); Slaughter & Rhoades (2004)	Demonstrates the origins, evolution, and debate surrounding academic capitalist norms and values; shows the strength of the theory of academic capitalism	Theory of academic capitalism has not been explored at the institutional level; no examination of how values and norms are transmitted
Entrepreneurship in Higher Education	Clark (1998); Mars & Metcalfe (2009)	Conceptualizes entrepreneurship; describes how it is manifested in academe; and efforts to train students as entrepreneurs	Institutional values and norms fostering faculty entrepreneurship; instilling an “entrepreneurial spirit” in students
Governmentality Studies in Higher Education	Burchell (1993); Mitchell (2004); Servage (2009)	Contends power is exercised when universities attempt to shape the conduct of actors; an entrepreneurial subjectivity is tied to neoliberal governmentality	Governmentality has not been adequately brought to bear on promotion of entrepreneurship in higher education

Institutional Legitimacy and Prestige Enhancement

A cursory glance at recent publications related to the state of public higher education in the United States reveals a similar conclusion: there is urgent need to “reinvent,” “re-imagine,” “rethink,” or outright “revolutionize” the system. Implicated in such conclusions is the notion that public postsecondary education is in some way broken, antiquated, or simply failing to meet 21st century needs of a globalized economy. Within the last five years alone, authors have:

- questioned the value of a college degree (Bennett & Wilezol, 2013);
- decried inefficiencies in university spending (Hacker & Dreifus, 2011);
- linked college to the maintenance of class inequalities (Armstrong & Hamilton, 2013);
- and extolled the virtues of technology, like online delivery platforms, in saving a system on the verge of self-destruction (Selingo, 2013).

As shown in the next section, in response to these critiques, greater emphasis has been placed on the need for universities to be more innovative and develop “new business models” in the face of mounting financial challenges (Christensen & Eyring, 2011). Both the Bill and Melinda Gates Foundation and the Lumina Foundation have provided hundreds of millions of dollars in grant money to reform-minded higher education organizations, usually in support of college completion initiatives, competency-based education, and financial aid reform (Parry, Field, & Supiano, 2013). Distilling key themes from this literature, there is sufficient reason to claim that public universities are in the midst of a legitimacy crisis.

Legitimacy and prestige defined. Suchman (1995) defined legitimacy as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (p. 574). Beyond perceptions of what is desirable or appropriate, legitimacy can also become a process—legitimation—“whereby an organization justifies to a peer or subordinate system its right to exist” (Maurer, 1971, p. 361). There are many reasons why organizations seek legitimacy: it improves credibility, increases comprehensibility, and helps people perceive organizations as trustworthy. These perceptions, in turn, affect

people's propensity to support certain organizations over others. Suchman identified three types of legitimacy in the organizational literature: pragmatic, moral, and cognitive. Pragmatic legitimacy involves an immediate audience inspecting organizational behavior in order to calculate the consequences on their own well-being. By contrast, moral legitimacy is not based on judgments about the practical benefits of organizational behavior, but rather if it is the right thing to do, reflecting a "prosocial logic that differs fundamentally from narrow self-interest" (p. 580). Lastly, cognitive legitimacy reflects a desire among organization participants to develop accounts that mesh with an audience's larger belief system or to portray the organization as inevitable and natural.

Legitimacy is a necessary precondition for higher education institutions to achieve prestige, which is considered one of the ways that universities convey non-price information to students and parents. According to Brewer, Gates, and Goldman (2002), prestige is always positive and demonstrates "the acquisition of things that tend to be associated with exceptionally high-quality service" (p. 28). Using the best service providers as examples, students and parents develop images of the features of prestigious institutions. "For example, it may be observed that good schools tend to have sports teams and impressive buildings with ivy-covered walls. A rule of thumb is developed that suggests that a high-quality, broad education can be obtained at institutions that have sports teams and ivy-covered walls" (p. 28). This is perhaps an oversimplified example of choice processes, but the point is that prestige provides reason for institutions to acquire what makes them look "right" (p. 29). Based upon this understanding of prestige, Brewer, Gates, and Goldman categorized three types of higher education institutions: prestigious, prestige-seeking, or reputation building. Furthermore, they identified three "prestige

generators,” namely selectivity in admitting students, sponsorship of research, and competitive sports teams. Much of the scholarly work on legitimacy and prestige used by higher education researchers falls within a line of inquiry referred to as new institutionalism (Powell & DiMaggio, 1991).

New institutionalism and higher education. In general, new institutional researchers do not conceptualize legitimacy as a strategic resource managers accumulate and expend, but instead as a set of constitutive beliefs formed in a powerfully symbolic environment. In this way, new institutional scholars stress the “collective structuration of entire fields or sectors of institutions” (Suchman, 1995, p. 576). DiMaggio and Powell (1983), for instance, contended that institutions calibrate to “a set of normative understandings for a field of organizations” that are “defined by the government, professional associations, and by other successful organizations” (Leslie & Rhoades, 1995, p. 194). DiMaggio and Powell’s contribution to this theory was to argue that, in organizations with nebulous goals and a highly professionalized staff, coercive, mimetic, and normative forces trigger emulation of the most prestigious organizations. Morphet and Huisman (2002) further explained these forms of convergence, or isomorphism:

Coercive isomorphism occurs when institutions respond to regulatory controls by organizations upon which they are dependent. *Mimetic* forces include institutions engaging in modeling the most prestigious organizations because they lack clear goals and technologies that suggest a more distinctive path. Professional networks and the communication that occurs in “invisible colleges” facilitates *normative* pressures toward homogenization. (p. 496; emphasis added)

Meyer and Rowan (1977) similarly argued that “organizations are driven to incorporate the practices and procedures defined by prevailing rationalized concepts of organizational work and institutionalized in society” (p. 340). Ceremonially adopting these practices enhances prospects for survival, irrespective of their immediate efficacy. Therefore, in the words of Gonzales (2013), “from a New Institutional perspective, organizational survival is not contingent on fiscal strategies or hard-nosed rationales but rather on the pursuit of cultural resources that signal one’s...normalness” (p. 195).

Peterson (2007) argued that higher education scholars were initially slow to take up new institutional perspectives, but interest in their concepts has expanded in the last decade. Research has utilized institutional isomorphism to account for “academic drift,” or the tendency of institutions to alter their structures and norms to resemble the most prestigious universities (Morphew, 2000; Morphew & Huisman, 2002), as well to analyze the related phenomenon of striving (Morphew & Baker, 2004; O’Meara, 2007). Striving often entails efforts to improve in college ranking systems, which represent another research area influenced by new institutional scholarship. Bastedo and Bowman (2010) found in the estimation of a structural equation model “published college rankings have a significant impact on future peer assessments, independent of changes in organizational quality and performance” (p. 165). Using institutional theory, they argued rankings are a structured form, far more powerful than a simple set of numbers, which shapes the organizational field of higher education. Furthermore, Gonzales (2013) drew upon new institutionalism to understand how faculty members make sense of their work at a striving institution. She argued that faculty used prescriptions from sources that structure the higher education field, such as already legitimized universities and ranking agencies,

to redefine their work. Gumpert and Snyderman (2002) were interested in the formal organization of academic knowledge, investigating how certain bodies of knowledge become legitimate. They maintained that universities ritualize categories of knowledge in degree programs and courses, thereby “shaping the landscape of ‘what is thinkable’” in society (p. 379). Thus far, only Gumpert (2005) has explicitly looked at the ways in which legitimacy is conferred through the adoption of values and norms associated with private industry.

In an attempt to identify the dominant legitimating logic in public higher education at a macro level, Gumpert (2005) developed a dichotomy striking similar to Slaughter and Rhoades’ (2004) conflicting knowledge/learning regimes. The two legitimating logics she developed were higher education as an industry and higher education as a social institution. Higher education as an industry, in her view, currently governs the field and “primarily views public colleges and universities as quasi-corporate entities producing a wide range of goods and services in a competitive marketplace” (p. 71). The main tasks of higher education leaders, then, are to enrich customer satisfaction, increase efficiency and flexibility, and to carefully weigh costs and benefits. There is constant pressure to make adjustments, such as scanning the environment to capitalize on a market niche or substituting technology for labor: “Doing nothing is not an option” (p. 72). The connection that Gumpert made between legitimacy and the decision to adopt private industry values and norms is relevant to one of the theoretical propositions detailed in the next chapter. This proposition underscores the importance of legitimacy and prestige in the development and translation of an institutional ethos of innovation and

entrepreneurship. However, Gumpert's scholarship provides only a small window into the substantial literature related to university corporatization.

The preceding section demonstrates that scholars have identified the important role of legitimacy and, concurrently, prestige in organizational decision-making. As new institutional scholarship contends, not all phenomena at public universities can be chalked up to rational management or revenue maximization. In an era of heightened criticism, public higher education is looking to defend its practices and seek strategies of acquiring prestige as a non-price means of conveying quality to students and parents. At the time of this writing, no research has explored how the promotion of innovation entrepreneurship at public universities across the country relates to legitimacy and prestige enhancement efforts. This is one gap in the literature addressed by the proposed study. The next section, which provides a protracted discussion of the theory of academic capitalism within a stream of literature critical of university corporatization, reveals a second gap.

University Corporatization

There is a prevalent line of thought within the literature relating public universities to for-profit firms, especially corporations. The value to this study of university corporatization literature is that it gives some sense of the origins, evolution, and debate surrounding academic capitalist values, norms, and practices. This debate is highlighted below, showing the divergent perspectives on whether university profit-seeking is a positive or negative development for higher education. Some scholarship accepts public universities acting like corporations as natural or even necessary, using private industry language and speaking of the need to develop "new business models" in

order to promote productivity, efficiency, and quality (Archibald & Feldman, 2010; Bennett & Wilezol, 2013; Flanagan, 2012; Kamenetz, 2012; Selingo, 2013; Sheets, Crawford, & Soares, 2012). Additionally, some research views corporatization as inevitable, given the new role of higher education institutions in driving innovation, forming a “triple helix” with private industry and government in the knowledge-based economy (Etzkowitz & Leydesdorff, 1997; Etzkowitz, Weber, & Healey, 1998).

On the other hand, a plethora of scholarship has been published that is highly critical of university corporatization, citing negative consequences for faculty, students, and the public at large (Bok, 2003; Giroux, 2002; Gould, 2003; Kirp, 2003; Readings, 1996; Rhoads & Torres, 2006; Schrecker, 2010; Washburn, 2005). Included in this critical perspective is the theory of academic capitalism (Slaughter & Rhoades, 2004), which builds upon the notion of resource dependency, yet augments this pre-existing theory with an additional set of constructs that demonstrates how and why internal actors are integrating public universities into new economic opportunities. This section contends that academic capitalism offers the most comprehensive approach to understanding university corporatization. However, there is a substantial gap in the theory’s elaboration that has not yet been filled by researchers who apply it in their work.

“New business models” for universities. Many economists have applied economic concepts and models originally designed for the for-profit sector to public higher education. They liken public universities to for-profit firms in the marketplace because, in their view, universities competitively translate inputs into outputs through a production process (Lewis & Dunder, 2001). The products of this process are varied, but include new knowledge and degrees conferred to students, while the inputs range from

state appropriations to human resources. Scholars have even turned to production functions as a way of determining the optimal combination of inputs at their given prices in order to achieve the best possible outputs (Hanushek, 1987; Titus, 2009). Several writers have not simply applied economic concepts and models to analyze costs and productivity in public higher education, but also have contended that the “business model” of many universities is failing and propose a variety of solutions.

These solutions are frequently derived from the experiences of corporations, including using new technologies to lower labor costs and boost productivity, diversifying revenue streams for long-term sustainability, and catering to consumer demand in order to best competitors. For example, in *Why Does College Cost So Much?*, Archibald and Feldman (2010) maintained that higher education is a service industry suffering from what economist William J. Baumol famously called “cost disease.” Its product heavily relies upon human interaction, requires a fixed period of time with the consumer, and is run by highly educated people, leading to increases in wages and costs, without an associated rise in productivity. Similarly, Bennett and Wilezol (2013), in *Is College Worth It?*, take the position that too many people are going to college and criticize federal subsidies to higher education, championing the so-called “Bennett Hypothesis”: tuitions will rise so long as federal subsidies rise. Among the solutions Bennett and Wilezol propose are encouraging students to select more marketable majors and shifting course delivery to online platforms, which is assumed to cure the “cost disease.”

Much of the literature about “new business models” for public universities is produced by think-tanks. Sheets, Crawford, and Soares (2012) at the Center for American

Progress posited that in various industries new technologies have been “used to create more simplified and more accessible solutions to customers’ problems” (p. 2). Exemplifying Gumpert’s notion of industry logic, they highlight “emerging business models” that have the potential to expand access, reduce costs, and facilitate degree completion, such as the online, competency-based Western Governors University and those of “leading for-profit institutions” (p. 2). Writing for a conference at the American Enterprise Institute, Kamenetz (2012) took inspiration from Gordon Moore at Intel Corporation, who argued that computer chips are getting better and faster because they are getting cheaper. Applying this reasoning to “the college cost problem,” Kamenetz suggested as a new direction for public higher education developing more Massive Open Online Courses (MOOCs). The online servicing of many MOOCs is managed by for-profit companies, such as Coursera and Udacity. Thus far, MOOCs have generally not been offered as part of degree programs or credentials beyond non-accredited certificates, but several observers have argued for their potential in efficient credentialing (Selingo, 2013).⁴ According to Kamenetz, without such radical change from “unsustainable economic models,” many universities may fail: “survival is not guaranteed to anyone” (p. 29). Writing for *Educause Review*, Flanagan (2012) urged college and university leaders to “not invest dollars trying to advance the existing model,” but rather learn “the tools, skills, and experience to envision, test, and implement new business models” (p. 14). In each of these pieces, the authors cited the work of Clayton Christensen, a Harvard Business School professor who developed the theory of disruptive innovation and has become a frequent commenter on higher education.

⁴ By 2014, most observers had revised their initial praise of MOOCs as a true solution to the high costs of delivering equitable and effective post-secondary education, largely due to abysmal completion data for the courses.

In the *Innovative University: Changing the DNA of Higher Education from the Inside Out*, Christensen partnered with Henry J. Eyring (2011) to pen a pathway of change for what they call “traditional universities.” Historically, traditional universities have enjoyed competitive advantages and have not considered themselves in competition with new market entrants. Given the escalating price associated with a four-year degree, however, traditional universities, according to Christensen and Eyring, are at risk of being unable to adequately respond to the disruptive innovation of online learning. Although online degree programs were initially of lower quality, Christensen and Eyring suggested that they have improved over time, and their cheaper model of delivery is forcing traditional universities to rethink operations. Drawing upon analysis of two institutions, Harvard University and Brigham Young University-Idaho, Christensen and Eyring made the case that most higher education institutions should not and cannot—financially speaking—emulate Harvard. Instead, they should be more like BYU-Idaho by blending online and face-to-face learning. In short: “the combination of online technology and the campus experience has the potential to take innovative traditional universities to new levels, allowing them not only to respond to disruptive competition but also to serve many more students with their existing resources” (p. 51).

Thus, the two themes running throughout the “new business models” literature are, firstly, an assumption that public universities and industry are virtually coterminous and, secondly, a steadfast belief in the necessity of disruptive innovation, which has come to serve as something of a buzzword in reform circles. In suggesting that public universities need new business models, all of these writers operate under the assumption that higher education institutions share some common, dysfunctional business plan to

begin with. There is little acknowledgement that emphatically referring to public universities as businesses is a recent phenomenon tied to the ascendancy of market-based ideology. A related body of research pairs higher education and private industry, not just to effect change from within institutions, but also to drive innovation in the economy at large. This literature places universities in a partnership with government and private industry, forming a “triple helix.”

The innovation triple helix. For the scholars who developed the concept of the triple helix, public universities now exist as part of a dynamic, spiraling system to drive innovation. Emerging from the fields of the sociology of science and evolutionary economics, the triple helix approach developed by Etzkowitz and Leydesdorff (1997) in *Universities and the Global Knowledge Economy: A Triple Helix of University-Industry-Government Relations*, and elaborated by Etzkowitz, Webster, and Healey (1998) in the edited volume *Capitalizing Knowledge: New Intersections of Industry and Academia*, assumes that an academic revolution is underway, making economic growth and wealth generation core functions of the university. Accordingly, rather than cite funding cuts to higher education as evidence of decay, the system should be viewed as undergoing transition. One of the hallmarks of this revolution is that “linear models of ‘demand pull’ or ‘technology push’ have been superseded by evolutionary models that analyze the developments in terms of networks” (Etzkowitz & Leydesdorff, 1997, p. 3). A non-linear, dynamic model is required to consider how technologies and institutions “co-evolve” (p. 4). While traditional models stress differentiation among and distance between universities, private industry, and government, the triple helix approach makes each of these institutions an interconnected strand of equal import.

In the triple helix approach, universities became vital to national innovation systems and “are increasingly internalizing and decentralizing intellectual property management and technology transfer activities,” taking on an “industrial penumbra” (p. 3). Industries in the triple helix approach are believed to be taking on some of the values of universities, sharing and protecting knowledge, although their often proprietary approach to knowledge creation has been hotly contested (e.g., Washburn, 2005). Lastly, government offers incentives and encourages academic institutions to go beyond performance of traditional functions and creates a policy framework that supports academy-industry partnerships. As follows, universities, industry, and government drive each other—a spiraling overlay for the shared objective of innovation.

The triple helix model can—in theory—quickly form new combinations and relationships among the strands, allowing the system to harness the “creative destruction” of innovation. These relationships are facilitated by “trilateral networks” between the strands, which provide paths for actors to collaborate. As follows, all of the actors involved must be reflexive and constantly “[adjust] their positions given institutional constraints and opportunities” (p. 159). Reflexivity is made difficult by the fact that actors within each helix operate with their own norms of communication and codes that can be confounding to outsiders. Nevertheless, “science journalists, venture capitalists, technology transfer officers, and others who have often passed through several institutional spheres in the course of their careers” come to serve as translators (p. 159). The outcome is that the triple helix approach endogenizes technological development and establishes a knowledge-based economic regime that “has made the distinction between *laissez-faire* and active state intervention obsolete” (p. 162). There is a decidedly

teleological tone to the triple helix approach: given financial constraints and the contributions of technology transfer to regional economies and university prestige, “there is likely no return to an earlier era” (Ezkowitz, Webster, & Healey, 1998, p. 16).

What unites the “new business models” and triple helix literature is a future orientation, calling for universities to innovate for greater efficiency and promote innovation outside the confines of campus for economic growth. Scholars in this stream do not question the appropriateness of applying business models to public institutions, nor is there critical reflection on what is being compromised, diluted, or lost in the quest for rapid change. Not all observers are comfortable with university corporatization, or the idea of linking public higher education with the state and private industry to innovate into the future. Indeed, a body of literature has identified university corporation as the problem—not the solution—to many of higher education’s challenges.

Corporatization and its discontents. Giroux (2002) raised several serious objections to what he saw as the pervasive influence of “corporate culture” in higher education in his article “Neoliberalism, Corporate Culture, and the Promise of Higher Education: The University as a Democratic Public Sphere.” He went on to expand upon this article, proclaiming the need to recover higher education’s public good functions from private industry interests in *Take Back Higher Education: Race, Youth, and the Crisis of Democracy in the Post-Civil Rights Era*. Giroux (2002) defined corporate culture as “an ensemble of ideological and institutional forces that functions politically and pedagogically both to govern organizational life through senior managerial control and to fashion compliant workers, depoliticized consumers, and passive citizens” (p. 429). This ensemble becomes a “model of the good life and paradigmatic sphere for

defining individual success and fulfillment” (p. 429). According to Giroux, neoliberalism is a dangerous ideology because it “[assaults] all things public, mystifies the basic contradiction between democratic values and market fundamentalism, and weakens any viable notion of political agency by offering no language capable of connecting private considerations to public issues” (p. 428). The result of corporate culture as a model, broadly speaking, is that progressive education, public morality, and active citizenship is supplanted in name of making money. Non-commodified public spheres, such as schools, compromise their role in democratic citizenship education. Consequently, democratic citizenship and individual agency are refracted into the rugged individualist entrepreneur or self-made success story—a narrative celebrating individuals who go it alone without recourse to state “hand-outs” or community solidarity (Giroux, 2004).

The public university, in the eyes of corporatization critics, represents one significant front in the battle to defend public goods from corporate culture. If public universities become corporatized, revenue generation and efficiency become central values. Giroux (2002) listed a number of problematic features of the corporatized university:

- Corporations “brand” chairs through donations and hire faculty members and shape their research program;
- Corporate CEOs sit on boards that make decisions about institutional operations and allocation of resources;
- Areas of study that do not generate money, such as those related to critical theory and socioeconomic critique, are marginalized, underfunded, or eliminated in response to “market demand”;

- Corporations censor research results from laboratories and centers they fund that are at odds with commercial interests;
- Higher education becomes less about higher learning than about acquiring human capital and getting ahead in the labor market;
- Corporate governance replaces shared governance characterized by faculty member involvement in institutional decision making;
- Knowledge becomes capital and a form of economic investment, stripped of its ethical and political considerations.

The effects of corporatization are also felt at the individual level, in the lives of both students and faculty. First, students confront a barrage of corporatized university services. For instance, bookstores are now operated by Barnes and Noble, dining halls are run by companies like Sodexo-Marriott, and student unions are occupied by McDonald's and Starbucks. Subsequently, "spaces marked as public and non-commodified now have the appearance of shopping malls" (Giroux, p. 446). The message to students is clear: to be a citizen is to be a consumer.

Many of Giroux's sentiments and critiques are echoed in Washburn's (2005) *University, Inc.: The Corporate Corruption of American Higher Education*. For example, Washburn speculated that the "growing role that commercial values have assumed in academic life" are probably no secret to most administrators, faculty, and students, "many of whom have watched their campuses take on the look and feel of shopping malls" (p. x). She likewise pinpoints market ideology as the biggest threat to academe. However, Washburn stresses several additional issues in her analysis of corporatization, the first being that university research is rarely disinterested or independent because of

industry sponsorship. In fact, she questioned if academic research poses health hazards, suggesting results are altered to suit corporate interests or blocked from publication. Additionally, in light of hearings that exposed the amount of money many top scientists at the National Institutes of Health received as consultants at pharmaceutical companies, Washburn concluded: “Today, it increasingly seems there is no branch of science that is not riddled with conflicts of interest” (p. 233). She includes several recommendations to “radically reconceive” university research commercialization, including amending the Bayh-Dole Act and establishing federal conflict of interest regulations to divorce academics from having personal financial ties to companies affected by the outcomes of their research. Although Washburn condemns the practices of many academic profiteers, she also laments the plight of humanities professors who have witnessed their departments eliminated by corporate-minded administrators and money-making from the commodification of courses. The negative effects of corporatization on faculty are numerous and reinforced in greater detail in Schrecker’s (2010) more recent critique of university corporatization.

As is clear from its title, Schrecker’s (2010) *The Lost Soul of Higher Education: Corporatization, Academic Freedom, and the End of the American University* leaves little doubt about the author’s take on corporatization. Schrecker wrote the book as “a plea to and for the faculty,” examining “the current plight of American higher education in the hope that understanding the structural and political threats it faces will help the nation’s faculties and the broader public mount a successful defense against those threats” (p. 5). Corporate-style restructuring and the adoption of corporate practices in higher education collectively represent one of two major threats to the academic community, initiating

greater commercialization of research, increased reliance upon adjunct or contingent faculty, and regular attacks on the tenure system. For Schrecker, these changes to the academic profession produced by corporatization portend a far more serious problem: the disappearance of academic freedom. Without a formal system of protections for learning and scholarship on university campuses, Schrecker suggested that conformity will reign and faculty will be subjected to retaliation for their scholarship. Indeed, the academy surrenders its critical voice and loses its ability to question the “dog-eat-dog environment that,” in the view of corporatization opponents, “pits institutions, faculty members, and students against one another in an exhausting and unwinnable struggle for resources” (p. 5).

Critics of corporatization contended that the inappropriate presence of private industry in higher education is a negative development. Furthermore, they understand and portray corporate power as unchecked, lacking self-restraint and, therefore, as a threat to the public sector and democracy. At the heart of corporatization critique, then, is the idea that private industry is the aggressor enacting harmful change to public universities, which are cast as a largely passive victim requiring defense. By contrast, Slaughter and Rhoades (2004), though certainly taking a critical perspective of university corporatization, provided a theory that does not “see the university as being...subverted by external actors” (p. 1). Rather, their theory of academic capitalism “sees groups of actors—faculty, students, administrators, and academic professionals—as using a variety of state resources to create new circuits of knowledge that link higher education institutions to the new economy” (p. 1). Their comprehensive account of university corporatization has been applied in several studies. The theory of academic capitalism

serves as the theoretical anchor for this project, but there is a gap in the theory that literature has not yet filled.

Revisiting the theory of academic capitalism. In *Academic Capitalism and the New Economy: Markets, State, and Higher Education*, Slaughter and Rhoades built upon the concept of resource dependency, which postulates that where organizations receive their revenue has bearing on how they behave. Pfeffer & Salancik (1978) first theorized resource dependency, arguing that external sources of funding exert enormous influence over organizational decision making. Furthermore, they held that “the internal behaviors of organizational members are understood clearly only by reference to the actions of external agents” (Slaughter & Leslie, 1997, p. 68). When applied to public universities, resource dependency theory suggests that organizations answer to, and often come to structurally resemble, their funders. Using resource dependency as a conceptual foundation, Slaughter and Rhoades (2004) drew upon the scholarship of Michel Foucault, Horace Mann, and Manuel Castells to create the theory of academic capitalism, which:

focuses on networks—new circuits of knowledge, interstitial organizational emergence, networks that intermediate between [the] public and private sectors, extended managerial capacity—that link institutions as well as faculty, academic professionals and students to the new economy. New investment, marketing and consumption behaviors on the part of members of the university community also link them to the new economy. (p. 15)

One of the assumptions on which the theory hinges is that universities cannot be separated from a global economy that treats knowledge—which is often technologized and/or digitized—as a raw material that can be owned, marketed, and sold. The

knowledge-based economy, they maintain, was constructed through a partnership with industry and the neoliberal state, whose initiatives aimed at privatization, commercialization, deregulation, and reregulation were at times indirectly or directly endorsed by higher education leaders. Consequently, “autonomy, the preferred but perhaps always fictive position of universities with regard to capital and the state, becomes less possible” (p. 15).

Slaughter and Rhoades (2004) developed four theoretical constructs for the theory of academic capitalism: 1) new circuits of knowledge, 2) interstitial organizational emergence, 3) intermediating networks, and 4) extended managerial capacity. New circuits of knowledge refers to the idea that research and teaching are no longer bound by traditional scholarly circles or platforms. There are now patent officials and industry representatives judging the value of research, outside organizations like *U.S. News and World Report* assessing institutions, and online course delivery platforms funded by venture capitalists and philanthropists. Interstitial organizational emergence captures the creation of units within universities to manage activities related to revenue generation, such as technology licensing offices and fund-raising offices. Intermediating networks bring together the public, non-profit, and private sectors through organizations (e.g., the Business Higher Education Forum and the League for Innovation) to solve common problems. Lastly, extended managerial capacity refers to universities sanctioning administrators’ engagement with the market through patenting and licensing technology to corporations in return for royalties. As a result, many managers played the role of venture capitalist, leveraging institutional—even state—resources to bring particular ideas to market. Through these constructs, the theory of academic capitalism brings to the

fore the work's chief claim: that universities have shifted to an "academic capitalist knowledge/learning regime," which "values knowledge privatization and profit taking in which institutions, inventor faculty, and corporations have claims that come before those of the public" (p. 29).

The theory of academic capitalism acknowledges the positive economic possibilities of collaboration between public universities, private industry, and the state. However, it does not depict this relationship as natural law governing innovation and propelling growth. The theory remains critical of the academic capitalist knowledge/learning regime, yet, unlike other corporatization critics, Slaughter and Rhoades underscored the role of universities in encouraging the increased presence of private money and interests. Rather than focus on abstract biological metaphors, the theory of academic capitalism also highlights the activities of individuals—students, faculty, and administrators—in promoting corporatization and, of particular relevance to this chapter, undertaking entrepreneurial activities. At the same time, the theory captures in its four theoretical constructs the multitude of actors involved in the relationship. Public universities, private industry, and the government are not assumed to be equal partners in the relationship, as the theory of academic capitalism highlights competition for scarce resources and power as all three sides respond to new political-economic conditions. The utility of the theory in helping to understand the nature of change in higher education is perhaps best evinced by the number of researchers who have applied it to their own work.

Applications of academic capitalism. The first study to apply the theory was conducted by Metcalfe (2004), a student of Slaughter and Rhoades, who developed a

theoretical model of intermediating organizations. The model was tested in a mixed methods study to analyze higher education associations and their links to corporations, which proved to be substantial. The case study portion showed that organizations are actively pursuing connections with the state, industry, and higher education. Mars (2006) used the theory of academic capitalism to study entrepreneurship centers at two public universities. One of the key findings of the study was that many students were capitalizing on state resources for personal gain, effectively becoming “state-subsidized student entrepreneurs.” Mars, Slaughter, and Rhoades (2008) built upon this concept and—of central importance to this study—demonstrated that an entrepreneurial learning environment is part of the academic capitalist knowledge/learning regime. Moreover, they reinforced the idea that students can be active agents in the regime, “recognizing and leveraging the entrepreneurial environment, infrastructures, and resources of their university to their private, commercial advantage” (p. 664).

Mendoza (2007) examined graduate student socialization as opposed to undergraduate students in light of academic capitalism. Based on her case study, graduate students held positive views of their departments’ interaction with industry. Despite corporate sponsorship, “socialization to the academic profession maintains the core structure of Mertonian values” (p. 90). Mendoza (2012) followed this line of inquiry by looking at faculty in a department that is within “Pasteur’s quadrant,” where research is use-inspired and develops new technologies. She found that their work is still “shaped by the traditional cannons of the... profession of academic freedom, the quest for knowledge and understanding, free dissemination of knowledge, and education” (p. 44). In this and other work, Mendoza argued that academic capitalism is not universally manifested and

must be understood in its particular disciplinary and institutional contexts. Szelényi (2013) similarly explored the socialization of graduate students, with a particular focus on the meaning of money in the training of science and engineering doctoral students. Based upon interviews with 48 graduate students and 22 faculty, she found that “an important focus of doctoral student socialization...involved efforts to train the next generation of scientists and engineers to embrace the academic capitalist, market-driven culture increasingly characterizing academic life” (p. 289). However, it should be noted that this process of socialization was hotly contested by some students and faculty members.

Although the theory of academic capitalism provided a useful analytical lens for a number of studies that inform my inquiry, several gaps in the literature remain. First, most of the studies applying the theory have focused on faculty members, graduate students, and specific academic units, rather than the instantiation of academic capitalist values and norms at the institutional level. Second, money is still the principal prism through which researchers conceptualize motivations for engaging in academic capitalist activities—with the exception of Szelényi’s (2013) discussion of the symbolic value of money, they do not explore the possible rationales of legitimacy and prestige enhancement. Third, apart from Mendoza’s (2007) and Szelényi’s (2013) studies of graduate student socialization, the transmission of values and norms of the academic capitalist knowledge/learning regime to university actors, including undergraduate students and faculty members, is an understudied area. Lastly, most scholars have accepted the theory of academic capitalism without attempting to improve upon it. This study proposes to address these gaps and the theory’s deficiencies through analysis of the

development and translation of an institutional ethos of innovation and entrepreneurship. As follows, the proposed project builds upon a rapidly increasing stream of literature related to entrepreneurship in the context of higher education.

Entrepreneurship in Higher Education

If public universities are constructing—and operating within—an academic capitalist knowledge/learning regime, entrepreneurship is both a guiding value and vital mechanism in the pursuit of cost recovery mechanisms and new money.

Entrepreneurship, however, is not universally understood, carrying a variety of context-dependent meanings. This section provides a working definition of entrepreneurship in the context of higher education based upon classic scholarship on the subject. It also positions entrepreneurship within American society, arguing that, since the 2008 financial crises, the concept has flourished in everything from popular culture to government efforts aimed at economic growth and competitiveness. Much of the section is given to analyzing research on entrepreneurship in higher education, beginning with a review of the “entrepreneurial university” and proceeding to entrepreneurial activities on the part of faculty and students. This review of research includes a growing number of studies related to teaching entrepreneurship and measuring entrepreneurial competencies among students. The result of this analysis is that research on entrepreneurship in academe is growing and presently represents a hot topic in the field. However, it is also in its infancy, and uncharted waters of research remain in order to understand the nature of change in higher education.

Understanding and contextualizing entrepreneurship. According to Joseph Schumpeter, the entrepreneur is the agent that connects invention and innovation, where

“invention is the first occurrence of an idea for a new product or process, while innovation is the first attempt to carry it out in practice” (Fagerberg, 2005, p. 4). Schumpeter (1934, 1950) provided an often cited conceptualization of entrepreneurship in his theory of economic development, which posited that efficiency and growth in a free market capitalist system requires disturbance to reallocate physical, financial, human, and social capital. Thus, the entrepreneur thrives in uncertain environments and “disrupts the cyclical economic equilibrium that encourages stagnation over expansion” (Mars & Metcalfe, 2009, p. 12). In his conceptualization, Schumpeter stressed redistribution of resources and alteration of practices to create profit. Breaking the status quo and spurring wealth generation through innovation requires that the entrepreneur assumes some economic and social risk. Lounsbury and Gynn (2001) suggested that cultures of entrepreneurship develop with norms that support risk-taking, and entrepreneurs often concoct stories of success—both true and mythical—to assuage investor fears. Storytelling demonstrates that the work of the entrepreneur is not merely technical or economic, but also social.

However, risk-taking does not mean that entrepreneurship is unplanned or unsystematic. Firstly, many entrepreneurs look for ways to minimize risk by making use of business incubators, entrepreneurial training centers, or subsidized research centers, which provide assistance in carrying out an invention in practice and sometimes even assume some of the initial cost of the venture. Additionally, as Drucker (1993) noted, the reallocation of resources inherent to entrepreneurship, though initially disruptive, fundamentally reshapes economic conditions. It is perhaps for this reason that Schultz (1980), best known for his work on human capital theory, emphasized that

entrepreneurship was less about disruption than about the process of re-introducing equilibrium after destabilization occurs. In this process, entrepreneurship represents a constant variable in the circular flow of production in a free market economy.

Mars and Metcalfe (2009) captured many of these features in their definition of entrepreneurship in the context of higher education, which is the meaning preferred in when the concept appears in subsequent sections: “we define entrepreneurship as those activities that combine *risk, innovation, and opportunity*” among both institutions and individuals, “particularly in times of uncertain resources,” with the intent of generating wealth (p. 4; emphasis added). Thus, it is important to note that entrepreneurship in higher education is the process of taking an idea to the market for exchange, but also about the recognition of opportunity, reflecting what some term an “entrepreneurial mindset” (Higdon, 2005). Although this project centers on entrepreneurial values and norms as an expression of the academic capitalist knowledge/learning regime, it is worth noting that the attention given to entrepreneurship extends beyond the walls of campus; it is weaved into the American social fabric.

The United States is in the midst of an entrepreneurial moment, evident in popular culture as much as governmental initiatives. In print media, Walter Isaacson’s biography of Steve Jobs, the co-founder of Apple, Inc. and an icon of innovation was a *New York Times* bestseller in 2011. In the same year, Eric Ries published with much anticipation his book *The Lean Startup: How Today’s Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, which sold 90,000 copies and was named one of Amazon’s best business books of the year. Ries’ methodology encourages experimentation, customer feedback, and iterative design, instead of elaborate planning

or intuitive decision-making. Most Recently, LinkedIn co-founder Reid Hoffman offered *The Startup of You: Adapt to the Future, Invest in Yourself, and Transform Your Career*, whose publisher description offers what might be the manifesto for the age:

In a world where wages are virtually stagnant, creative destruction is rocking every industry, global competition for jobs is fierce, and job security is a thing of the past, we're all on our own when it comes to our careers. In the face of such uncertainty, the key to success is to think and act like an entrepreneur: to be nimble and self-reliant, to be innovative, and to know how to network and stand out from the crowd.

Hence, the entrepreneurial moment is not merely about starting new businesses, but also thinking and acting like an entrepreneur.

In television, budding entrepreneurs can learn lessons watching ABC's *Shark Tank*, which features a panel of investors ("sharks") who offer capital to contestants based upon their business pitch in exchange for partial ownership of the company. In 2012, *Shark Tank* was the most watched Friday night television program in the country, averaging seven million viewers per episode. The History Channel took advantage of the entrepreneurial moment, running a four-part "docudrama" titled *The Men Who Built America*. In addition to lionizing historical industrial magnates like Cornelius Vanderbilt, John D. Rockefeller, and Andrew Carnegie, the series also included running commentary from present-day entrepreneurs on persistence, taking risks, and out-thinking competitors. On the big screen, F. Scott Fitzgerald's *The Great Gatsby* was adapted to film for the fourth time. While the tale of Jay Gatsby, a millionaire who made his fortune through questionable means, is not about entrepreneurship, its relevance to the moment was not

lost on critics and journalists. Nick Gillespie (2013) of the libertarian magazine *Reason* intoned that, regardless of the film's success, *Gatsby* "is the great American novel of the ways in which free markets... overturn established order and recreate the world through what Joseph Schumpeter called 'creative destruction'" (p. 3).

The U.S. government has actively supported entrepreneurship, motivated by census data showing that startup companies have been the primary source of job growth in the economy over the preceding thirty years (Haltiwanger, Jarmin, & Miranda, 2008; Markovich, 2012). Job creation became a central concern to the government after the 2008 financial crisis, when real estate pricing plunged and major financial institutions teetered on the brink of total collapse. Unemployment soared to 10.1 percent in 2009 as the United States entered a prolonged period of economic recession. In 2012, Congress passed the Jumpstart Our Business Startups (JOBS) Act in order to reduce regulations on young, growing companies from making an initial public offering to investors and to legalize crowdfunding, or the solicitation of a large number of unaccredited investors (Markovich, 2012). Beyond legislation, in 2010 former Secretary of State Hilary Clinton established the Global Entrepreneurship Program and, together with the U.S. Agency for International Development, launched an online toolkit to help country partners share research and best practices related to facilitating the business startup process. According to a Department of State media note, "entrepreneurship is important to the United States," which "is uniquely placed to support and assist entrepreneurship overseas because of its expertise and entrepreneurial culture." Entrepreneurship in higher education grew in tandem with these governmental initiatives and messages from popular culture. However, references to the entrepreneurial university predate this recent blossoming of the concept,

as reformers sought language to capture what they believed to be solutions to academe's challenges.

The entrepreneurial university. Institutional change-oriented activities and survival mechanisms in times of financial uncertainty gave rise to the notion of the entrepreneurial university. Although several scholars have employed this language (e.g., Etzkowitz, Webster, & Healey, 1998; Slaughter & Leslie, 1994), Clark (1998) presented the most detailed characterization of the entrepreneurial university. Using case studies of universities in England, Scotland, the Netherlands, Finland, and Sweden, Clark (1998) developed a set of concepts to understand how a few "proactive" higher education organizations successfully changed the way they operated in the midst of the dramatic financial challenges of the 1980s and 1990s. Clark (2004) classified his concepts as "transforming elements" and "sustaining dynamics," which, though combined uniquely in each institution, point to the emergence of entrepreneurial culture in each and provide a taxonomy for assessing trends at institutions in a variety of contexts.

The first element of the entrepreneurial university is that these institutions diversify their funding base to promote self-reliance and create discretionary income. Secondly, entrepreneurial universities are neither overly centralized nor decentralized—they "introduce professionalized clusters of change-oriented administrators at all levels," or a bureaucracy "steering the core" through a set of rationales and overarching beliefs—in other words, an ethos (p. 359). Thirdly, entrepreneurial universities are not overburdened with traditional, disciplinary-bound units, but rather feature many interdisciplinary and transdisciplinary research centers that specialize in new modes of thought. The periphery of the entrepreneurial university is populated by professional

education programs, extension offices, distance education centers, and other units that build external relationships. Fourthly, so-called “heartland” departments that are open to change and attract faculty, students, and resource providers, generally in the sciences and technology, lead the entrepreneurial university, while those less open to change may fail to survive. The final element of entrepreneurial universities is intensity—the force with which it pursues a future-looking agenda. Clark (2004) concluded rather fatalistically as a result of this analysis: “The study of modern academic entrepreneurialism teaches, and teaches well, that, one by one, as the twenty-first century unfolds, universities will largely get what they deserve. The lucky ones will have built the institutional habits of change” (p. 368).

Clark’s definition of the entrepreneurial university has been applied to various institutions as a way of explaining and, at times, celebrating the nature of their change. This is especially true of scholars examining European universities. For example, Kristensen (1999) chronicled the entrepreneurial activities of the Copenhagen Business School in Denmark; Schutte (1999) charted the University of Twente’s change from a regional teaching university into a national research university and its incipient entrepreneurial activities in the Netherlands; and Pawlowski (2001) argued that the Higher School of Business-National Louis University in Poland had transformed from a business school to an entrepreneurial university and “a blueprint for the regeneration of higher education in Poland” (p. 427). Volkmann (2004) observed that:

the United states followed by the United Kingdom and the Netherlands in Europe are pioneers in the introduction of entrepreneurship as an academic field of teaching and research. However, other west European countries such as Belgium

and Germany are catching up at high speed. Thus, at the beginning of the twenty-first century, entrepreneurship is becoming an important academic discipline in the United States, but also in Europe. (p. 185)

The creation of new academic programs and research fields in the United States is one of several manifestations of the entrepreneurial university.

Entrepreneurial activities in the academy. A number of researchers have attempted to describe and analyze the activities of faculty and students combining risk, innovation, and market opportunity at universities to generate wealth in times of uncertain resources. With a few exceptions, (e.g., Slaughter & Rhoades, 2004), much of the literature related to faculty focuses on entrepreneurial activities in the applied sciences, such as medicine and biotechnology (Powell & Owen-Smith, 1998; Owen-Smith & Powell, 2003), as well as factors that contribute to faculty involvement in technology transfer (Owen-Smith & Powell, 2001; Renault, 2006) and its measurement at the institutional level (AUTM, 2012; Colyvas & Powell, 2009). Student entrepreneurship is comparatively understudied, with most research advocating the spread and improvement of entrepreneurship training and a small number of scholars exploring the motivations, expressions, and implications of student entrepreneurialism (Mars, 2006; Mars, Slaughter, & Rhoades, 2008). Reviewing this body of literature, it is clear that research on entrepreneurship at universities is in its infancy, whether at private or public institutions, and there are several gaps in knowledge, specifically related to the normative dimensions of academic entrepreneurship and entrepreneurial behaviors among students.

Faculty entrepreneurial activities. As part of their theorization of academic capitalism, Slaughter & Rhoades (2004) conducted thirty-eight semi-structured

interviews with faculty, largely at research universities, who had interacted with industry in the previous five years. Their sample reflected some of the demographic patterns of the academic entrepreneur: the majority of interviewees were male, tenured, white, and leaders in their departments (engineering, science, and medicine). Based upon these interviews, Slaughter and Rhoades identified three areas of conflict related to the academic capitalist knowledge/learning regime: publishing versus patenting, access versus secrecy in relation to consulting work, and contested ownership over intellectual property in the creation of spin-off companies. The authors found that, when facing powerful market incentives, “professors responded by straddling both worlds, retaining a place in the university community but also assuming the role of (state-subsidized) entrepreneurs who were sometimes consultants, officials, or even presidents of their own companies” (p. 129). Recognizing that these findings have been challenged (e.g., Mendoza, 2012), the academic capitalist dimensions of these areas of conflict—patenting and forming spin-off companies, in particular—provide an organizational schema to discuss literature on faculty entrepreneurial activities.

Patenting is the most researched faculty entrepreneurial activity, with empirical studies of frequency, motivation, and consequences. According to Slaughter and Rhoades (2004), whereas in the past only industry scientists patented and professors published their research, many of the faculty they interviewed believed in the value of patenting in addition to publishing. In fact, 60 percent of the faculty interviewed held a patent. Zusman (1999) calculated that, as a result of the Bayh-Dole Act, the number of patents awarded to academic institutions between 1984 and 1994 tripled (Berman, 2012). Although patents were not always sold or licensed to companies for royalties, there is a

clear relationship between the uptick in patenting activity and revenues institutions collected from intellectual property licenses. When the Association of University Technology Managers surveyed universities in 1991, it found that licensing revenues totaled \$123 million—this figure would reach 2.5 billion dollars by 2011 (AUTM, 2012). “While questions remained about how to best manage patenting, the practice itself had become firmly established by the end of the decade. If the passage of Bayh-Dole and the institutionalization of the technology transfer office [had not] clinched the deal, the revenues that were finally starting to be generated by patents would have” (Berman, p. 114).

Questions surround both the management and efficient production of patents from inventor faculty and also—more fundamentally—why faculty patent. Berman (2012) argued that “the increased entrepreneurialism of bioscience faculty meant that they were becoming attuned to the commercial value of their work and the possibility of patenting” (p. 113). This value is exemplified in a number of noteworthy patent successes. For instance Stanley Cohen and Herbert Boyer’s DNA recombination method resulted in a patent awarded to Stanford University and the University of California, which would ultimately bring in license revenues in excess of \$250 million. Several studies have been conducted to empirically answer the question “Why patent?” with two common explanations: 1) financial incentives for and personal beliefs of faculty and 2) institutional policies and procedures. Owen-Smith and Powell (2001) interviewed 68 faculty and licensing professionals at two research universities. They found that incentives to patent varied between physical and life scientists, with physical scientists generally improving upon existing products and processes and expecting little personal

gain. On the other hand, life scientists, who usually develop therapeutic compounds or medical devices, expect to make money from patent royalties, favor exclusive licensing arrangements, and defend intellectual property. These perceived personal benefits of disclosing a discovery to university officials is then weighed against the costs of interacting with licensing professionals and dealing with campus interstitial organizations, namely technology transfer offices. Finally, Owen-Smith and Powell suggested that patenting activity among faculty is enhanced when academic and commercial rewards are linked. That is, apart from making money, faculty are also motivated by the prospect of receiving tenure or being further promoted.

Renault (2006), though corroborating the finding that faculty were more likely to patent when institutions provided financial incentives through revenue sharing policies, determined through interviews with 98 professors in science and engineering departments at 12 southeastern universities that “personal beliefs about the appropriate role of universities in commercializing technology are the single most important predictor of their actual behavior” (p. 237). Using a Likert scale to determine attitudes about academic capitalism and Mertonian values, Renault found that for each one point increase on the academic capitalism scale he developed, a professor is approximately 60 percent more likely to collaborate with industry, 63 percent more likely to patent their research, and 407 percent more likely to start a spin-off company. Yet this does not mean “the newer norm of academic capitalism is universally embraced,” and the persistence of Mertonian values in light of often steadfast support of technology transfer at the institutional level is noteworthy (p. 237). Part of reason that faculty attitudes toward patenting varies is that there are concerns among many about the consequences of

entrepreneurial activities in the academy. Research on the consequences of academic entrepreneurship has identified a set of frequent issues related to tenure and promotion, the true benefits of patenting, distraction from other job responsibilities, and changes to epistemology and research ethics (Stein, 2004).

Holbrook and Dahl (2004) observed that faculty receive conflicting messages about promotion expectations because the job now includes many activities, such as innovation and entrepreneurship, which have not been added to traditional areas subject to review (e.g., research, teaching, and service). They suggested that junior faculty are unlikely to engage in patenting if it does not count towards tenure, but optimistically noted that North Carolina State University and Ohio State University, among many others, have revised promotion and tenure guidelines to reward patenting. They caution, nevertheless, that “it would be destructive to academic values to grant promotion and tenure based on licensing revenue, industry contracts, or start-up participation alone” (p. 98). Although many researchers point to the billions of dollars in licensing income to universities, Thursby and Thursby (2004) contended that this figure is misleading, as licensing tends to be concentrated in a few institutions (e.g., MIT, Caltech, Stanford) and very few licenses generated revenue. To borrow from Stein (2004), “Rarely do universities have the financial or staff resources to market the patents aggressively, so most of them languish in offices of technology transfer. Only a very few universities have ever made substantial dollars from patents held by faculty,” meaning many institutions spend more on technology transfer offices than they receive in royalty income (p. 7; see also Washburn, 2005). Stein additionally expressed concern that if faculty spend much of their time generating income and fringe benefits, they spend less time with students or in

the classroom: “To survive in today’s academic setting, scientists must go where the money is, which means that they cannot take chances on...spending too much time with their students or participating in other outside activities” (p. 4). Slaughter and Leslie (1994) wondered whether academic entrepreneurship reshaped epistemologies of science and argued that “[faculty] began to see commercial application as inevitable, sometimes as intrinsic, to their inquiry” and “did not see basic and applied as dichotomies or see a broad or deep chasm between the two” (p. 184). Finally, Guston (2004) suggested the need to create a center for responsible innovation to evaluate the ethics of faculty involvement in entrepreneurial activities, and Krinsky (2004) reinforced the idea of creating guidelines to separate publicly funded knowledge producers and stakeholders who have financial interest in their research.

The creation of spin-off companies or start-up ventures is one of the least studied areas of faculty entrepreneurship. Although faculty do not factor prominently in his study, Shane (2004) produced one of the only accounts of the university spin-off company phenomenon. Drawing on data from the Association of University Technology Managers, he reported that 3,376 university spin-offs were founded in the United States between 1980 and 2000. Similarly, in the United Kingdom, many universities formed technology transfer offices in the late 1990s, and 554 spin-off companies were created between 1996 and 2001. Although the number of firms founded is modest in both countries, university spin-offs tend to be successful: several billion dollar companies are university spin-offs, and university spin-offs, on average, are more likely to go public. Since the 1980s, a growing share of patent licensing is going to these firms, rather than universities themselves, although it is not uncommon for institutions to hold equity in

companies established and operated thanks to university resources. Because of the increasing economic importance of university spin-offs and their revenue-generating potential, “many institutions focus significant attention on...licensees of university intellectual property by establishing incubators, venture capital funds, business plan competitions and support systems to help entrepreneurs to start new companies” (Shane, p. 2). Faculty participation in spin-off companies they help found includes research and patenting contributions, recruiting talented graduate students for employment, assuming leadership responsibilities, sitting on oversight boards, and owning stock.

The formation of spin-off companies and its consequences on the academic profession constitute one gap in the literature on entrepreneurial activities by faculty. Research on patenting has proliferated, perhaps due to the quantifiable nature and availability of data, yet other areas of faculty entrepreneurial activities, including research on consulting, has stagnated. Moreover, there is a dearth of scholarship related to entrepreneurship outside the fields of applied sciences. Although it is possible that entrepreneurial activities among faculty in the arts and humanities is less widespread than in science and technology disciplines, Slaughter and Rhoades (2004) pointed to the existence of several “new economy products” whose creation and sale are not bound by disciplinary borders, such as educational materials (lecture notes, syllabi), curricula, video lectures, and course management software. These products are increasingly being seen as intellectual property, much like scientific discoveries, and are similarly commodified. Finally, it is worth noting that most research reviewed above positioned faculty entrepreneurship as a peripheral happening whose presence on university campuses, nonetheless, was growing exponentially and creeping into the core of the

academy. Thus, more research is needed at the institution level to understand how norms associated with entrepreneurship have developed to foster faculty venture creation, what tensions and oppositions have developed against such institutionalization, and what the cultural dimensions of entrepreneurship reveal about the public good functions of universities.

Student entrepreneurial activities. Student entrepreneurial activities are remarkably understudied compared to those of faculty, perhaps because efforts to encourage student entrepreneurship during their time on campus are a recent development at many public universities. The aforementioned study by Mars (2006) is one of the few scholarly works that focuses on student entrepreneurship, concluding that two entrepreneurship education centers located in public universities “served as a nexus between the university and the private marketplace in ways promoting the emergence of state-subsidized student entrepreneurs” (p. 143). Mars, Slaughter, and Rhoades (2008) followed-up on the concept of a state-subsidized student entrepreneur, believing that “student entrepreneurship is an emerging phenomenon characterized, like faculty entrepreneurship, by opportunities for market activity, particularly in science and technology fields that are close to the market” (p. 638). As a result of their analysis, the authors developed a conceptual framework to account for differing entrepreneurial agency among students based upon access to university resources like office space, information technology, ability to consult with experts, and social capital. The implications of student entrepreneurship, according to their study, are three-fold. First, students are unmistakably involved in the muddling of the division between private industry and public universities. Second, students in disciplines favored by the

knowledge-based economy are more privileged as entrepreneurs than their peers. Third, student entrepreneurship presents the possibility of new relationships with faculty business partners, disturbing traditional role definitions. Much of the literature that involves students is not about entrepreneurial activities, but rather how to teach students to become entrepreneurs and how to assess the outcomes of this training.

The first college-level course in entrepreneurship was offered to 188 MBA students at Harvard University in 1947 (Katz, 2003). The idea spread from Harvard to other institutions, but the diffusion was initially slow: according to one survey, only sixteen institutions were teaching entrepreneurship courses in 1970 (Vesper, 1993). Within the past three decades, however, entrepreneurship courses have proliferated, and a new course of study in higher education has emerged. The Kauffman Center for Entrepreneurial Leadership (2000) reported that “entrepreneurship education has grown dramatically, as reflected in the increased student enrollment, formal entrepreneurship centers, intercollegiate business plan competitions, new entrepreneurship curricula and programs, and endowed chairs and professorships” (p. 6). In the words of Katz (2003), an “American infrastructure” for entrepreneurship training has been erected, consisting of more than 2,200 courses at 1,600 institutions. In Canada, Menzie (2004) reported growth rates for entrepreneurship course offerings of 444 percent at the undergraduate level. Katz (2004) found in a survey that the number of entrepreneurship-related chairs increased from 237 in 1999 to 406 in 2003. One additional indicator of the expansion of entrepreneurship as a field of research is the fact that no fewer than forty-four entrepreneurship refereed journals had been created as of 2003 (Katz, 2003). Kuratko (2005) proposed that this growth in entrepreneurship as a field of research and course of

study would have been more rapid were it not checked by a number of challenges, including the low number of quality articles published in too many journals, the lack of qualified PhDs to teach courses, and the “academia vs. business incongruence” (Kuratko, 2005, p. 589). Whereas three decades ago it may have been non-existent, there has recently been an efflorescence of efforts to teach the next generation skills, knowledge, and values related to entrepreneurship.

In terms of curricular content, students in entrepreneurship academic programs tend to complete course work in financing new ventures, marketing innovations, intellectual property management, new product development, entrepreneurial law, business negotiations, and characteristics that define the entrepreneurial personality (Mars & Metcalfe, 2009; Solomon, Duffy, & Tarabishy, 2002). Courses draw upon a variety of sources of information, including textbooks, how-to guides, government publications, conference proceedings, and biographies of innovators (Kuratko, 2005). A common feature of entrepreneurship education is participation in business model or plan competitions, where teams of students attempt to win start-up money to fund their fledgling ventures. Such competitions typically allow students to network with industry experts and gain experience pitching ideas to investors (Mars & Metcalfe, 2009). Opportunities are created for students to meet with entrepreneurship mentors, interview experts, and go on field trips to nearby firms (Kuratko, 2005). Not all entrepreneurship education, then, is relegated to classroom activities, and universities have sought ways to integrate experiential entrepreneurial learning through simulations and living-learning programs. Rasmussen and Sørheim (2005) argued that traditional, individual-centered instruction in entrepreneurship should be replaced with an action-oriented approach,

where students work on teams and actually form new ventures. Yet even after incorporation of experiential learning opportunities, some have argued there is need to improve existing curricula and pedagogy.

Gibb (2002), for instance, argued that unresolved issues remain in entrepreneurship pedagogy, leading him to conclude that “the correct place for entrepreneurship and enterprise in the higher education sector may lie outside the business school” (p. 259). This is the case because business schools are corporate in culture and focus upon venture management, business model planning, and high-growth companies. Gibb recommended that universities create independent centers that draw from a wide range of disciplines “to distance the ‘subject’ from its heroic ideology and association with business and market liberalization philosophy” (p. 259). Fiet (2000) reviewed eighteen entrepreneurship course syllabi and found that many courses lack theoretical rigor. The teaching of entrepreneurship, he argued, should be theory-driven and not descriptive, which requires the identification—with student approval—of competencies to be mastered. Focusing on the development of competencies has been a recent focus in assessing the success of entrepreneurship training, deviating from measures like the number of businesses created. The Organization for Economic Cooperation and Development (OECD) (2009) authored a study that called for more evaluation of entrepreneurship training based on “softer” outcomes, such as shifts in attitude. Several studies have sought to demonstrate whether entrepreneurship training has a meaningful impact on student interests, intentions, and self-efficacy. Lee, Chang, and Lim (2005) compared the influence of entrepreneurship education on American and Korean students’ interest in and intention to create new ventures, suggesting that the

effects are greater among Korean students, where the entrepreneurial culture “is still in the embryonic stage of development” (p. 41). Additionally, Peterman and Kennedy (2003) used a pre-test-post-test control group design to evaluate an entrepreneurship education program in Australia and found that the program increased students’ perception of the desirability and feasibility of starting a new company, especially for those who previously had limited exposure to entrepreneurship. Empirical studies on the outcomes of entrepreneurship training are few in number, but are likely to increase as the field continues to grow (Alberti, Sciascia, & Poli, 2004).

One of the organizations responsible for encouraging the expansion of entrepreneurial training in general, and cross-disciplinary entrepreneurial studies in particular, is the Ewing Marion Kauffman Foundation. As the self-described largest non-profit enterprise in the world dedicated to entrepreneurship, the Kauffman Foundation represents a perfect example of an intermediating network, bridging private industry interests and public educational institutions. The central Kauffman initiative at the tertiary level is called Kauffman Campuses. Beginning in 2003, the initiative awarded \$5 million to each of eight institutions “to make entrepreneurship education available across their campuses, enabling any student, regardless of field of study, to access entrepreneurial training.” Another six campuses were selected to participate in 2006, with the ultimate goal of producing a “culture of entrepreneurship” through matching funds from the institution. In addition to Kauffman Campuses, the foundation publishes periodic research on the state of entrepreneurship education in the United States. A recent report on higher education contended that, because “the nation’s ability to prosper and to thrive in an increasingly knowledge-based global society and economy” depends on a

well-educated population, “entrepreneurship and college education are inextricably bound” (p. 4).

The extant literature on student entrepreneurship raises more questions than it answers. Indeed, the frontier of research on higher education’s entrepreneurial turn appears to be shifting from faculty patenting to the domain of students. Future research may address how entrepreneurship education affects student conceptions of the mission of public universities and the use of knowledge. It is possible that a select number of students see a college education as a platform to start a business, and not an opportunity to intellectually develop. Furthermore, subsequent studies are needed to understand how, in the words of the Kauffman Foundation, campuses “instill the spirit and skills of entrepreneurial studies.” That is, what are the values, norms, and incentives through which a culture of entrepreneurship is institutionalized on public university campuses? Similarly, do the values and norms that are transmitted amount to a celebration of entrepreneurship, disallowing the expression of skepticism or critique of market forces in solving major problems? A final gap in research on student entrepreneurship relates to questions of power and privilege distribution. If it is, indeed, the case that students in science and technology fields are better positioned to receive resources that enable entrepreneurial activities, are students studying disciplines less integrated in the market marginalized or ineligible for resources and rewards? Such questions surrounding how, precisely, entrepreneurship becomes enshrined in modes of thought and factors into campus power dynamics resonates strongly with scholarship on governmentality.

Governmentality Studies in Higher Education

Governmentality is an under-utilized concept in higher education literature, despite its relevance to understanding how certain ideas become internalized among university actors. Underlying this section is the notion that public universities wield and exercise power when they attempt to shape the conduct of actors. Scholars (e.g., Mitchell, 2006; Servage 2009) have positioned initiatives to promote an enterprise-oriented subjectivity, or entrepreneurial self, among faculty and students in higher education as confirmation of a neoliberal governmentality in public higher education. This study would be one of the few in existence that meaningfully applies the concept of governmentality to U.S. higher education and specifically ties it to the promotion of innovation and entrepreneurship at a public doctoral/research-intensive university.

The concept of governmentality is the brainchild of French philosopher Michel Foucault, who stated that the core objective of his vast body of scholarship was “to create a history of the different modes by which, in our culture, human beings are made subjects” (1994, p. 326). Foucault was keenly interested in relations of power and a concept of government that is broader than the reach of the state (Mitchell, 2006). Governmentality concerns itself with “government in its widest sense as the structuring of the possible field of action by others” (Peters, 1996, p. 83). In other words, it “is a framework for analysis that begins with the observation that governance is a very widespread phenomenon, in no way confined to the sphere of the state, but something that goes on whenever individuals and groups seek to shape their own conduct or the conduct of others” (Walters, 2012, p. 11). Thus, to study governmentality, according to Sobe (2012), is to examine how techniques of governing are enshrined in modes of

thought, encouraging people to self-regulate or self-govern according to a set of rationalities. For Foucault, governmentality provided a means of understanding how power is exercised in the neoliberal state, where the “principle for regulating and limiting governmental activity must be determined by reference to artificially arranged or contrived forms of the free, entrepreneurial and competitive conduct of economic-rational individuals” (Burchell, 1993, p. 271). He focused the discursive structuration of a market-based system of reason based upon the idea of *Homo economicus*, or the assumption that all people are self-interested individuals (Peters, 1996). The concept of governmentality, and more specifically neoliberal governmentality, has become increasingly popular among social science scholars since the 1990s (Walters, 2012). However, its use in educational research, especially at the postsecondary level, is limited. Several scholars have built the concept into titles and subtitles, but failed to effectively incorporate it in their analyses.

One example of this latter argument is Miller’s (2003) attempt to show how the history of U.S. universities “is characterized by an expansion of governmentality, in the sense of research undertaken for the public weal, and teaching that reaches into the lives of the populace to train it in self-regulation” (p. 898). In reality, the article says very little about governmentality, aside from a few references to “transferring the cost of running schools away from governments and toward students, who are regarded more and more as consumers who must manage their own lives, and invest in their own human capital” (p. 901). The same is true of Olssen and Peters’ (2005) “Neoliberalism, Higher Education, and the Knowledge Economy,” which has a section on “neoliberal governmentality and higher education” that says more about neoliberalism than

governmentality. Its main argument with regards to governmentality is that power is exercised through principal-agent lines of command, which insert a hierarchical mode of authority by which market and state pressures are instituted among faculty. Thus, the academic profession is increasingly subject to a “particular pattern of power” established on contract, “which in turn is premised upon a need for compliance, monitoring, and accountability organized in a management line” (p. 325). More sophisticated and elaborate analyses using the concept of governmentality have been crafted, although their point of reference is not solely the United States.

Looking at both Canada and the United States, Servage (2009) argued that a scholarship of teaching and learning movement is taking place at North American universities. This movement seeks to improve pedagogy at the post-secondary level and that college teaching itself should be an object of research, inquiry, and peer review. For Servage, this movement took shape in a context of neoliberalism in higher education, giving rise to “new public management” practices, which “includes fostering competition...in the interests of efficiency, as well as forms of monitoring and of appraising the organization and its workers to hold them accountable” (p. 31). Using the concept of governmentality, Servage shows how new public management combined with discourses of lifelong learning due the precariousness of work. People came to conduct themselves within these discourses, constructing a subjectivity of “self-as-entrepreneur,” legitimizing “a declining role for government and business in social welfare” (p. 33). Through her analysis, she demonstrates that the scholarship of teaching and learning movement constrains teachers and learners to choose and evaluate their actions based on

economic return, and “thus come to regard themselves as ‘entrepreneurs’ of their own work and learning” (p. 35).

Mitchell (2004) uses neoliberal governmentality to frame her analysis of policies of the Education and Culture Directorate of the European Commission. Her contention is that policies aimed at immigrants are “oriented towards the formation of mobile, flexible, and self-governing European laborers and less oriented towards an institutionalized affirmation of civic awareness or the importance of respect for and valuation of individual and group difference” (p. 391). These two studies represent some of the few efforts to add empirical support to the concept of governmentality in higher education. There is thus much room for contribution to this stream, as Mitchell noted: “With respect to the provision of empirical data it is neoliberalism as seen through the lens of governmentality that is most commonly under-researched” (p. 389). The present study, therefore, intends to add empirical weight to the theoretical conversations surrounding governmentality in higher education.

Conclusion

This chapter attempted to map out four streams of literature relevant to this study: institutional legitimacy and prestige enhancement, university corporatization, entrepreneurship, and governmentality studies in higher education. It discussed how higher education institutions calibrate their structures and behaviors based upon a field that sets the parameters of appropriateness and normalcy. Such efforts to enhance legitimacy are designed to ensure that public universities remain comprehensible and retain the trust of supporters. This has become all the more important at a time when observers are questioning the practices and future existence of many institutions. One of

the ways that public universities responded to increased scrutiny and economic volatility was to translate research into economically viable products and, therefore, contribute to economic growth and competitiveness. Some theorists bemoaned the growing intimacy between private industry and public postsecondary institutions, arguing that corporatization corrupts the academy. Others, however, saw higher education as an industry itself, in desperate need of “new business models.” However, this chapter agrees with Slaughter and Rhoades (2004) that the nature of change in higher education can be best understood through the theory of academic capitalism. Academic entrepreneurs participate in networks that, due to the global knowledge-based economy and neoliberal state, prioritize profit-making in higher education. The third stream of literature exemplified the various ways in which faculty and students act as entrepreneurs in the context of higher education. Additionally, it illustrated how higher education institutions are ever more interested in training a new generation of Americans equipped with an “entrepreneurial mindset.” Such efforts to regulate conduct in ways that promote the “entrepreneurial self” embody what some scholars refer to as neoliberal governmentality. These scholars contend that higher education institutions are implicated in efforts to enshrine mobility, flexibility, lifelong learning, and entrepreneurship as modes of thought in faculty and students, such that they come to self-regulate in ways deemed compatible with contemporary capitalism.

Several gaps in the literature came to light in the preceding sections that justify the proposed study. First, many studies have explored how the search for new sources of revenue have triggered marketization, private industry influence, and entrepreneurialism in academe. However, little empirical research moves beyond resources to examine the

ways in which public universities, in the midst of unparalleled criticism and economic recession, adopt an institutional ethos that builds or maintains legitimacy and prestige. Second, most scholars who have applied the theory of academic capitalism to explain phenomena in higher education have not attempted to improve it. Furthermore, only a few studies have analyzed how norms and values of the academic capitalist knowledge/learning regime are transmitted to university actors, with most focusing on graduate student socialization. Literature on academic entrepreneurship has tended to focus on faculty patenting and business creation, as well as institutional technology transfer. Studies of entrepreneurship at the institutional level were virtually absent in this review, and there is a void in research with respect to the institutionalization of entrepreneurial values and norms through conduct-shaping mechanisms. This means that the proposed project would be one of the few studies that utilizes the concept of governmentality to understand the translation of an institutional ethos constructed around “innovation and entrepreneurship” within a particular historical and temporal context.

CHAPTER THREE: METHODOLOGY

Introduction

This chapter explains how I approached empirically answering the research questions posed in the introduction. It is, in many ways, the roadmap I followed in carrying out a project that contributes to understanding of how and why a public research university transmits values and norms of the academic capitalist knowledge/learning regime. Writing in their *Handbook of Qualitative Research*, Denzin and Lincoln (2000) reasoned that “the situated researcher approaches the world with a set of ideas, a framework (theory, ontology) that specifies a set of questions (epistemology) that he or she then examines in specific ways (methodology, analysis)” (p. 18). This quote effectively synthesizes their five phases of qualitative research, which I use to guide my discussion of this study’s research design and organize the remainder of the chapter.

Phase one describes how I am situated as a researcher and the experiences that led me to these issues, culminating in a restatement of the purpose and research questions. In this section, I also provide a more developed explanation of institutional ethos. The second phase is dedicated to detailing my interpretive paradigm, focusing on the ontology, epistemology, and methodology of the study. Phase three is given to working through the research design, bridging the interpretive paradigm and empirical materials. This section covers the data collection stages, sites, and types of data collected. I describe in some detail the interview participants and documents that informed the arguments offered in chapters four through six. The final two phases illuminate how I analyzed and presented data.

Phase One: The Researcher

This section represents a deliberative attempt to demonstrate reflexivity and show the ways in which I am situated in the proposed study. This means that I try to reveal at the outset my voice as a researcher and recognize my limitations as a human instrument of data collection. An essential premise of this section is that values influence the inquiry process through the choice of what to objects to study, selection of an interpretive paradigm, use of theories to develop a framework, and so on (Denzin & Lincoln, 2000). I enter this project cognizant of those values. I am deeply invested in public higher education, having for the better part of seven years studied and worked professionally at the doctoral/research-intensive university that forms the institutional case: Tidewater University (TU).

I came to TU in 2007 in order to pursue my master's degree, during which time I worked part-time in residential programming. Upon completion of my degree, I stayed at Tidewater to work full-time as a staff member in international affairs and soon began doctoral studies. In my time at TU, I have had the opportunity to directly experience university life from a variety of vantage points. For example, I lived in a residence hall, taught courses for engineering students, directed a short-term study abroad program, lived with a Greek-letter organization, volunteered at the business school, served on the faculty affairs committee of the university senate, and worked in the office of the provost. These experiences informed the study by providing real-life examples of the ways in which public higher education has responded to financial stresses and challenges to legitimacy. Furthermore, these experiences allowed me to understand the complexity of the case and access information to enhance the richness and depth of the study.

The decision to pursue a dissertation related to academic capitalism and, more specifically, institutional attempts to foster innovation and entrepreneurship, came by way of a constellation of micro-events. I took note of several business model pitch competitions—where students present their ideas to a group of mentors-cum-investors—happening in various colleges on campus early in my years as a student at TU. At the same time, I could not help but peruse popular print media that claimed to address higher education’s problems through the ideas of “educational entrepreneurs,” who are purportedly re-inventing postsecondary learning through online platforms and market-based reforms (Selingo, 2013, p. xi). Working in the office of the provost, I heard mention of entrepreneurship in meetings related to revisions to the promotion and tenure guidelines. Meanwhile, the president issued a press release as I was developing this dissertation topic to announce that a new Institute for Innovation and Entrepreneurship would soon launch in order to ensure that all 37,000 students receive exposure to entrepreneurship training. Although the true influence of this Institute remains to be seen, the timing of this press release was fortuitous, and it galvanized my belief in the importance of this topic.

Given that several of entrepreneurship initiatives began as the United States faced an economic recession and employment crisis, my mind gravitated to sociological theories of university change. It seemed as though TU was operating in concert with a host of external forces championing the entrepreneur and condemning public higher education’s perceived inefficiency and ineffectiveness. These observations were only magnified as I continued to study comparative education policy from a critical perspective. Through critical scholarship, I was able to draw links between the

entrepreneurial trend at TU and efforts in many advanced capitalist states to educate a particulate type of person—at equal turns mobile, flexible, and enterprising—for purposes of economic competitiveness (Jessop, 2008). Similarly, I saw connections between corporate influence in U.S. higher education and forms of education privatization globally. I became sensitive to the use of language that equated public universities and businesses and labeled students as consumers, especially at TU.

In addition to being a higher education professional, I am also a student of the political economy of education. “Political economy” is chiefly designed to convey “an interdisciplinary social scientific approach that studies the interaction between democratic politics and market relations” (Morrow, 2006, p. xx). Often, political economy is skeptical of the notion that self-regulating market processes inherently or necessarily serve public interests. With this in mind, studies from a critical political economy perspective aim to “provide empirical evidence and theoretical arguments for showing how, when, and with what consequences the use of market mechanisms are utilized in problematic ways to guide public policies” (Morrow, 2006, p. xx). Historically, critical political economy has not been applied to U.S. higher education to the same degree as it has been to lower levels of education, epitomized in studies of socioeconomic and cultural reproduction (Bowles & Gintis, 1976; Apple, 1982). This is largely because of the relative autonomy from government intervention of higher education institutions compared to primary and secondary schools. I see this project as an opportunity to inform the conversation surrounding public higher education’s present and future.

Inspiring action, whether in terms of institutional transformation or social transformation, is a vital goal of undertaking this research. This means not merely thinking of ways to promote positive transformation in public higher education, but also recognizing what should be protected from change and giving thought to what might be lost in the fervor for reform. Therefore, I approach this study not as a disinterested, objective observer, but rather as someone intimately familiar with, and embedded within, the higher education landscape whose changes I attempt to chronicle in the pages that follow.

Restatement of purpose. The purpose of this study is to critically examine the development of an institutional ethos that attributes great importance to innovation and entrepreneurship at a public doctoral/research-intensive university in the United States. Accordingly, this study is interested in three sub-areas of interest. First, how did the ethos develop and what are its fundamental values? This question allows me to assess the status of the ethos and its meanings. Second, why was this ethos initiated and supported by university leaders? Out of a vast universe of values and norms related to knowledge transmission, those linked to innovation and entrepreneurship were championed over public engagement, democratic citizenship, or social justice. This study seeks to explain this choice in the political-economic context of higher education today. Third, how was this ethos translated into incentives for faculty members and academic opportunities for undergraduate students? More than a slogan, the twin notion of innovation and entrepreneurship has entered conversations related to promotion and tenure, as well as academic programming. This study is keenly interested in how this ethos become a conduct-shaping mechanism—or an exercise of power—designed to (re)produce a set of

social relations in keeping with capitalism today. In this way, I approach academic capitalism as a process that affects multiple levels of one institution over time.

Restatement of research questions. The research questions guiding this study investigate the means and motivations through which values and norms of the academic capitalist knowledge/learning regime are institutionalized and transmitted to university actors.

- *Question 1:* Through what processes did an institutional ethos of innovation and entrepreneurship develop at Tidewater University?
- *Question 2:* Why did university leaders (e.g., chancellor, presidents, provosts, deans, and program directors) initiate and support an innovation and entrepreneurship ethos?
- *Question 3:* How was an innovation and entrepreneurship ethos translated into incentives for faculty members and academic opportunities for undergraduate students?

On institutional ethos. The common denominator of these three questions is the concept of institutional ethos. According to Kezar (2007), ethos is the “fundamental character or spirit of a culture,” which “connects individuals to a group; it expresses a particular group’s values and ideology in a way that creates an emotional connection” (p. 13). The core themes of a campus’ ethos give consistency to the experience of students, staff, and faculty, and the ideology must be constantly reinforced: “Because an ethos does not develop on its own, educators must tend their institution’s ethos on an ongoing basis and consistently work to align policies and practices with it” (Kezar, p. 14). Thus, it is important to note that implicated in the development and transmission of an institutional

ethos is a combination of values, norms, and sustaining practices. With this in mind, I define institutional ethos as the values that are appropriated and cultivated by key university planners and decision-makers to coordinate and normalize the activities of faculty and undergraduate students to some desired end. An ethos is transmitted and sustained through purposeful policies and practices.

In Kezar's scholarship on institutional ethos, interviewees at several schools revealed the mechanisms through which an ethos was maintained and enhanced. These mechanisms included creating a shared understanding of the ethos through retreats, strategic meetings, official departmental communiques, and regular conversations. After a shared understanding is reached, an institutional ethos was developed through co-creation, or "an ongoing willingness on the part of campus community members to perpetuate the ethos" (p. 17). A third mechanism was anticipatory socialization, which entails communicating the ethos to campus community members before they even arrive on campus through mailings and promotional materials. Finally, institutional ethos was sustained through relationship building so that there was transference to new members of the community and periodic refreshment of core themes. This study is keenly interested in these mechanisms, especially the development of the ethos and the co-creation of its accepted meanings. It intends to highlight the ways in which an ethos is transmitted to university actors through various mechanisms.

Phase Two: Interpretive Paradigm

The construction of the research questions was informed by a "net of epistemological and ontological premises," or an interpretive paradigm (Denzin & Lincoln, 2000, p 19). There are at least four interpretive paradigms common in scholarly

research: positivist and post-positivist, constructivist, critical, and feminist. This study most closely aligns with the constructivist paradigm, meaning it reflects and represents a relativist ontology, interpretive epistemology, and naturalistic/hermeneutic set of methodological procedures (Denzin & Lincoln, 2000). Each of these components of a constructivist paradigm is treated in turn below.

The basic question of ontology asks: what is the nature of reality? For modernists, reality is single, it is “out there,” and it can be approached through methods so long as there is minimal (or no) “human contamination of its comprehension” (Lincoln & Guba, 2000, p. 176). By contrast, this study takes the view that reality is relative, meaning it is constructed from community consensus regarding what is “real” and meaningful, giving rise to many local instantiations. Epistemology is fundamentally about the relationship between knowledge and the knower. Knowledge in this study is taken to be the product of human agents, and it acknowledges the knower’s subjective experiences and intersubjective relations in shaping what counts as truth. Because “knowledge of the social (as opposed to physical) world resides in meaning-making mechanisms of the social, mental, and linguistic worlds that individuals inhabit, knowledge “cannot be separate from the knower, but rather is rooted in his or her mental and linguistic designations of that world” (Lincoln & Guba, p. 176). Thus, it is impossible to understand a society outside of its cultural and linguistic categories, and knowledge must in some measure be infused with values. Lastly, the methodology of this paradigm prefers to study the phenomenon as it naturally occurs. Its methods draw heavily upon observation and the interpretation of texts, whether verbal or nonverbal.

Case study inquiry. These methods common to a constructivist paradigm are often employed in a comprehensive strategy for empirical inquiry known as case study. This is the strategy I employed in this project. Case study has a long genealogy in the history of scholarly research, although many researchers doing case study have called it by another name (Stake, 2000). Like ethnography, case study is both an empirical strategy and end product of the research process (Merriam, 1998). The initial incarnations of this strategy arose out of a desire to understand and explain particularly complex social problems. It has proved adept in circumstances when “how” or “why” questions are posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon in its natural setting (Yin, 1994). Additionally, as Merriam (1998) noted, case study is a suitable design when, like this study, the researcher is interested in the processes by which something happens (e.g., transmission of norms and values).

Although much can be inferred about case study from its name, Yin (1994) offered a multi-part definition:

1. A case study is an empirical inquiry that:
 - investigates a contemporary phenomenon within its real-life context, especially when...
 - the boundaries between the phenomenon and context are not clearly evident
2. Case study inquiry:
 - copes with a technically distinctive situation in which there will be many more variables of interest than data points, and as one result...

-relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result...

-benefits from the prior development of theoretical propositions to guide data collection and analysis. (p. 13)

Yin noted that the development of theoretical propositions prior to data collection is one way that case study departs from ethnography or grounded theory. Developing theoretical propositions helps to direct attention to issues in the literature that have not been resolved, while also informing the researcher of where to look for relevant evidence. Furthermore, theoretical propositions give some sense of the level at which the findings of the case study are generalizable. This project constitutes what Stake (2000) called an instrumental (versus intrinsic) case study and Merriam (1998) labeled an interpretive case study. In general, this category of case study is used “to illustrate, support, or challenge theoretical assumptions held prior to the data gathering” (Merriam, 1998, p. 38). It pursues as one criterion of quality analytical—as opposed to scientific or statistical—generalization. Yin (1994) described analytical generalizability as when “a previously developed theory is used as a template with which to compare the empirical results of the case study” (p. 31). The case is thus designed to “provide insight into an issue or redraw a generalization” (Stake, 2000, p. 437).

According to Stake (2000), focusing too intently on theorizing or generalizability can detract from the value of examining the particularities of the case itself. In fact, for several researchers the focus of case study should not be theory, but rather understanding the case as a bounded, integrated system (Merriam, 1998; Stake, 1995). Stake (2000) suggested that case study is not a methodological choice, but instead a choice of what to

study. He argued in favor of investigating a single case, which may well exist as simply one instance in a whole class of cases: “maybe we cannot understand this case without knowing about others; but while we are studying it, our meager resources are concentrated on trying to understand *its* complexities” (p. 436). I take the position that balance between underscoring particularities and searching for generalizability must be struck, such that the case’s unique history, identity, and operations within several contexts can be brought to light in ways that foster broader inference, or transferability, on the part of readers.

I attempt to strike this balance through the development of theoretical propositions and following Stake’s (2000) recommendation to include information about the nature of the case and its historical background. This project looks at a single case for two reasons Yin (1994) raised. First, it can illuminate whether the theoretical propositions I developed are correct or whether others might be more relevant. Second, there is value in selecting a single case if the researcher has rare accessibility to observe and analyze the particularities of phenomenon in question. As previously mentioned, my intimacy with the university and work at the office of the provost provides me with unique access to data.

Why Tidewater University? This is a case study of a public doctoral/research-intensive university. Its parameters are not limited to a single department or group of people. Rather, it looks at how and why an entire institution developed values, norms, and practices in a certain historical moment and political-economic context, with the goal of coordinating a wide range of activities and achieving desired ends. Familiarity is one reason why Tidewater University was selected as the site of the study. Nevertheless,

beyond matters of proximity and convenience, TU is representative of a population of doctoral/research-intensive public universities in the land grant tradition. Tidewater University has embraced innovation and entrepreneurship as an unmistakable coordinating theme in institutional decision-making. These two words grace the cover of campus publications and adorn advertising billboards that extoll the virtues of “fearless thinking” in “sparkling quantum advances” and “launching daring ventures.” Tidewater is not unique in its desire to encourage innovation and entrepreneurship. Thus, the case that constitutes this dissertation was not selected because it is entirely unique or drastically at odds with prevailing policies and practices in U.S. higher education. Rather, it is reflective of a trend and, therefore, is appropriate for beginning to empirically explore the theoretical propositions detailed below. That being said, TU was selected, in part, because efforts to promote innovation and entrepreneurship are not restricted to certain programs or areas of campus—the emphasis has been placed on innovation and entrepreneurship across the entire institution, making it suitable for an institutional case study.

I bound the case in several ways in order to clarify the question: What is this a case of? One of the ways in which the case is bounded is to identify it as an institutional case made up of a public research institution in the U.S. postsecondary system. A second way that I bound the case is to determine a specific time period within which to examine the institutional ethos. While endeavoring to remain focused on a contemporary phenomenon, I also seek to acknowledge the fact that many of the leaders instrumental in the development and transmission of TU’s institutional ethos have since moved on (but are still accessible for interviewing). With this in mind, I limit the period of inquiry to

between 1998 and 2013. This period captures the inception of many of the entrepreneurship initiatives at TU. In this way, the case becomes “a specific, complex, functioning thing” in order to facilitate “holistic description and explanation” (Merriam, 1998, p. 29).

Limitations of the study. There are several limitations to consider when interpreting the findings of this dissertation. As previously noted, the research design does not empirically substantiate generalization beyond the case and its relationship with the theoretical propositions guiding the study. Even though TU’s efforts to promote innovation and entrepreneurship are consistent with programmatic and strategic trends across American postsecondary education, it is important to recognize that this case study stands alone and should be read as a rich example, not as a representative sample of all public research universities. The fact that the institutional case is a public university—more specifically, a public research university—should also be acknowledged, as the missions of these institutions may be strikingly different than those at other institutions.

Another limitation of the study that should be considered is that interviews were largely conducted with individuals familiar with and involved in campus entrepreneurship. There are certainly exceptions to this pattern, but the overall picture of the case could be skewed because of a lack of interviews with individuals who are less active in this space. In particular, the arguments presented in later chapters could have been strengthened by additional interviews with faculty members representing more disciplines. It is possible that my research design, which favors interviews with high level administrators, biases my data in ways that over-emphasize the importance of these individuals in the development of the institutional ethos. However, I believed it was

crucial to interview central administrators based upon the findings of prior research, which indicates the increasing power of these positions on many campuses (Stromquist, 2013). There is one glaring omission in the interview data, as I was not able to interview the university's top administrator for innovation and entrepreneurship. This was not due to a lack of effort—the individual simply could not find time to meet.

Theoretical framework. The theoretical framework of this study is based upon the theory of academic capitalism and its conceptualization of the academic capitalist knowledge/learning regime. As described at length in other sections, the norms and values of this regime center upon:

- viewing public universities as intricately bound to the private sector to address funding shortfalls and capitalize on market opportunities;
- treating knowledge as a raw material and academic research products as commodities that can be owned, marketed, and sold;
- pursuing external money and profit as core university functions;
- cultivating faculty entrepreneurship and training students as entrepreneurs as part of an orientation to economic relevance and growth in the knowledge-based economy. (Slaughter & Rhoades, 2004)

However, I draw upon works from five additional theoretical perspectives to develop a set of propositions that address shortcomings of the theory of academic capitalism. These theoretical perspectives are cultural dimensions of political economy, new institutionalism, the heteronomous model of university change, governmentality, and the new sociology of knowledge. In general, these perspectives move beyond structural or materialist theories of social phenomena and instead privilege the semiotic constitution of

social reality (Berger & Luckmann, 1966). As follows, these propositions foreground symbolic projects public universities undertake for strategic purposes, consistent with the “cultural turn” in social science research, and they pay closer attention to power dynamics in the academic capitalist knowledge/learning regime.

Cultural political economy of education. The first theoretical proposition is inspired by emerging scholarship on the cultural dimensions of the political economy of education. Although its name is convoluted, and its methods remain rather abstract, cultural political economy offers two important ideas for this study. First, it problematizes the knowledge-based economy as a material reality. Meyer, Ramirez, Frank, and Schofer (2007), for instance, argued that “the much-heralded ‘knowledge society’ is more important and realistic as a set of assumptions and *cultural* claims than it is as an actual depiction of a mundane social order” (p. 204; emphasis added). Thus, they referred to the knowledge-based economy as a coordinating myth for educational institutions. Similarly, Jessop (2008) conceptualized the knowledge-based economy as the “hegemonic economic imaginary of the current stage of capitalism—locating this in relation to the crisis of the main forms of economic growth in the post-war period” (p. 34).

By economic imaginary, Jessop suggested that the knowledge-based economy is discursively constituted, particularly by organizations like the World Bank and OECD, and materially reproduced. According to Mulderrig (2008) the knowledge-based economy discourses, as they relate to education, focus upon performance, competitiveness, and skills for economic growth and social cohesion. Higher education institutions are positioned as key sites of translating knowledge-based economy

discourses into policies related to accountability, incentives, and curricula. What I take from this first idea is that public universities may not be responding to true economic exigencies, but rather appropriating the language of powerful institutions to coordinate activities, including the preparation of individuals well-suited to the demands of the capitalist system.

The second idea of cultural political economy hinges upon a key assumption: the capitalist system is not naturally self-reproducing (Jones, 2008). It relies upon particular social relations and institutions to determine its trajectory and ensure its perpetuation. This is where the “cultural” enters the conversation in a meaningful way. The “economic” is not separate and distinct from the “political” or “cultural,” despite years of disciplinary distancing of the three areas. This argument indicates that the economy is no less symbolic than culture and no less concerned with power than politics. In this way, the economy is always partially political and cultural, consisting of values and practices that are shared, communicated, and enforced. Thus, when public universities orient their activities to contribute to economic growth, more is at stake than simple transactions of goods and services for money. They become institutions implicated in capitalism’s cultural project, serving as vital players in the reproduction of social relations that help to maintain the system and guide its development.

As Mars, Slaughter, and Rhoades (2008) poignantly suggested in their article on entrepreneurship training, the education of students as entrepreneurs amounts to the socialization of young capitalists, not because they necessarily start companies but because they learn to think in an entrepreneurial way. These two ideas are still being actively refined by scholars, but their application to this study resulted in the following

theoretical proposition. *Proposition 1: Public universities align their activities with discourses of the knowledge-based economy and (re)produce the social relations of capitalism.*

New institutionalism. One question flows naturally from the preceding discussion. Why does public higher education validate entrepreneurship as a body of knowledge and coordinate its activities to serve economic growth and competitiveness? The traditional response has revolved around money: the push of funding cuts and pull of market opportunities for new knowledge has produced changes to public higher education explained in the second chapter. However, I find this response lacking. For example, we do not have a clear picture of how much money institutions actually make from academic capitalist activities relative to their costs. Some information, such as revenue from licensing patents, is often readily available, but this is just one part of entrepreneurial activities. Information on spending related to technology transfer, research commercialization, and entrepreneurship education is harder to find, may not be publicized, or may not reach decision-makers. As such, it is difficult to determine the cost-effectiveness or profitability of academic capitalist activities, meaning money alone may not be the only or most important axis of decision-making.

Therefore, I propose an additional explanatory variable based on the theoretical perspective of new institutionalism. New institutionalism theorizes that not all organizational behavior is efficacious. Some practices are rationalized in an organizational field and institutionalized in society. Moreover, new institutionalism contends that it is not enough for public universities to succeed economically to survive. In order to compete in the institutional and consumer market—and garner prestige—they

must establish and maintain legitimacy. Legitimation is enacted within a cultural framework of institutional fields (e.g., education, publishing, healthcare, etc.) defined by the government, professional associations, and the most prestigious schools (Leslie & Rhoades, 1995).

For the purposes of this project, new institutionalism suggests that entrepreneurship may not be required for public universities to achieve their core functions. Instead, the decision to develop an institutional ethos that attributes great importance to innovation and entrepreneurship, and to translate this ethos into incentives and academic opportunities, may be a strategy to accumulate resources that signal normalness or being “cutting edge.” The logic at the heart of this perspective is that public higher education institutions, particularly in an era of intense scrutiny, are looking to see what the government, professional organizations, and prestigious universities say they *should* be doing in order to survive and thrive. If the institutional field is prioritizing innovation and peer institutions are developing entrepreneurship incentives and academic programs, public university leaders are apt to adopt these priorities and practices in order to keep pace. The effect of this sensitivity to legitimacy is convergence around certain practices of prestigious institutions. *Proposition 2: The development and translation of an institutional ethos is influenced by perceptions of legitimacy and prestige in the higher education field.*

The heteronomous model of university change. In 1994, Daniel Schugurensky developed a comprehensive model of university change to guide his analysis of the Universidad de Buenos Aires. Using Slaughter and Leslie’s (1997) initial work on academic capitalism as a starting point, Schugurensky subsequently argued that

the service university is a necessary but insufficient concept to provide a comprehensive descriptor of the nature of the changes [to higher education]. From my perspective, by focusing on the relationships between the universities and the market, the concept of the [entrepreneurial] university tacitly overlooks the new relationship between the university and the state. (2006, p. 306)

The model he developed is based upon heteronomy, or “subjection to external controls and impositions—that is, subordination to the law or domination of another” (p. 306).

Thus, two forces are responsible for the heteronomous university: market demands *and* state imperatives. Schugurensky detailed these forces in his 10 C’s of the heteronomous university (see Table 4).

Table 4: Schugurensky's (2006) 10 C's of the Heteronomous University

Commercial University	Controlled University
Cultivation of private and foreign universities	Cutbacks
Customer fees	Conditional funding
Client-oriented programs	Coordination (collaboration and competition)
Cooperation with business	
Corporate rationality	
Casualization of labor	
Contracting out	

The two-part heteronomous model of university change describes features of a university that is both commercial and controlled. The commercial side of the heteronomous university, according to Schugurensky, “consists of a privatization package based on a combination of policy instruments, including the proliferation and strengthening of private institutions, entrepreneurial management, and a multiplicity of cost-recovering mechanisms” (p. 306). The commercial university encompasses the first seven C’s, as listed in table four. Crucially, the heteronomous university is not simply the

product of a reoriented relationship between higher education the market; it is also directly shaped by state control. Hence, the controlled university “is characterized by decreased funding as well as conditional funding” (p. 306). One of the unique aspects of the heteronomous model of university change is that it was developed in reference to universities outside the United States, principally in Latin America. Accordingly, Schugurensky makes clear that the forces driving university change are inherently linked to globalization.

Schugurensky developed four caveats when applying the heteronomous model of university change. First, it is certainly the case that universities have been influenced by the state and private interests in the past. What is different in the present is that this

globalized model of dependency to the market and subjection to the state... goes beyond the classic control of a specific institution by a businessperson through endowments or donations and beyond conjunctural infringements on institutional autonomy by the government in a particular university or nation-state. (p. 307)

Second, the heteronomous model does not suggest that institutions completely surrender autonomy, but rather that the space of decision-making is reduced by external logics.

Third, the heteronomous model is an abstraction and should not justify overlooking the specific context in which it is applied. Lastly, the transition to the heteronomous model often triggers opposition from those with alternative visions of the university.

Acknowledging these caveats, Schugurensky’s work inspired a third theoretical proposition that incorporates the role of the state. *Proposition 3: Accompanying the marketization of public universities is increasing responsibilities to the state, creating dual external controls closely tied to globalization.*

Governmentality. The fourth theoretical proposition takes as a starting point the notion that public universities wield power in deciding what is thinkable in society. Decisions about how to exercise this power are made in concert with prevailing ideas about economic relevance and legitimacy in public higher education. However, the distinctive contribution of governmentality scholars is in theorizing how this power is exercised at the micro-level and affects the lived experience of individuals. Foucault's concept governmentality maintains that governance is "something that goes on whenever individuals and groups seek to shape their own conduct or the conduct of others" (Walters, 2012, p. 11). Of particular interest to Foucault in generating his concept was not situations of outright domination or coercion, but instead contexts in which people have liberty to maneuver within a space that is subject to rationalities and techniques of governing. These contexts certainly include educational institutions like public universities. Therefore, governmentality reveals how university actors are made into particular kinds of *subjects*, incorporating values and norms into their modes of thought in ways that benefit the institution and other powered interests.

Public universities do not compel faculty to research specific topics or force them to turn their discoveries into sellable products. Furthermore, students have great liberty in choosing what to study, where to live, and how to spend their free time. Yet there are undeniable efforts to shape faculty and students' conduct on campuses. For example, the professional lives of faculty are shaped by the tenure and promotion process, which assigns differential weights to scholarly activities and sets parameters for effectiveness in the professoriate. Higher education institutions also design pathways for students by creating and marketing academic programs and instituting scholarship programs in

knowledge areas that lead to employment. At no point do faculty or students directly surrender their freedom; they have the option of ignoring tenure criteria and selecting any number of academic programs to pursue. However, they are induced to self-manage or put their current or future livelihoods at risk. *Proposition 4: The translation of an institutional ethos into incentives for faculty members and academic opportunities for undergraduate students represents a form of governmentality.*

The new sociology of knowledge. The new sociology of knowledge “is part of a larger movement in social science generally, distinguished by a turn away from materialist theories or theories of social structure, and a turn... focused on the ways a society’s multifarious meanings are communicated and reproduced” (McCarthy, 1996, p. 22). Previously, sociologists of knowledge—Karl Mannheim chief among them—argued that knowledge is socially determined. Marxist have long assumed this to be true, basing their analyses on the notion that people’s beliefs and idea systems are shaped by predominant forms of social organization (e.g., classes). In this line of thought, as the social structure changes so, too, does the salience of certain ideas (McCarthy, 1996). The problem with social determinism, according to new sociologists of knowledge, is that it does not account for the now pervasive contention that social reality does not exist in its own right, but rather is semiotically produced and communicated. Consequently, knowledge is not a mere reflection of some pre-existing social structure—it is a signifying system through which social order is made manifest, or *constructed*. The new sociology of knowledge, therefore, asks: “What kinds of symbols and knowledges are used and by whom? How are they produced and disseminated? What do they teach? How are they linked to strategies of action and opportunity? Attention is given to the

production of knowledge” and, crucially, the power that accompanies such production (McCarthy, p. 24).

I agree with Gumpert (2007) that the new sociology of knowledge provides unique insights into the functioning of higher education institutions. Drawing upon the work of Clark (1983), Gumpert maintained that much of higher education research is preoccupied with the people-processing functions of universities: students undergo development, increase their human capital, and seek upward mobility through earning credentials. By contrast, Clark underscored the knowledge-processing functions of universities: “Knowledge materials, and advanced ones at that, are at the core of any higher education system's purposes and essence. This holds true throughout history and across societies” (1983, p. 13). Universities wield power as central locations where knowledge is processed:

As educational institutions in general evolve, they develop categories of knowledge and thereby determine that certain types of knowledge exist and are authoritative. They also define categories of persons privileged to possess the bodies of knowledge and to exercise the authority that comes from knowledge. Education structures, in effect, are a theory of knowledge, in that they help define what currently counts as knowledge. (p. 26)

The idea that universities themselves are a theory of knowledge constitutes one lens through which change in higher education can be viewed and understood. It raises fundamental questions about what bodies of knowledge public universities produce, teach, and link to opportunities.

The new sociology of knowledge is relevant to this study because it stresses that public universities do not simply respond to pre-existing environmental conditions in determining what ideas to research and teach. They simultaneously organize and validate certain bodies of knowledge over others and play an important role in deciding what is thinkable: “Higher education is seen as a major social institution that, among other things, defines areas of expertise that are worthwhile to society, behaviors that are appropriate among precollege youth for competitive admission, [and] parameters for creating new knowledge through research” (Gumport, 2007, p. 350).

One concrete example of how public universities endorse certain bodies of knowledge is in deciding which academic programs to fund and which to cut. Historically, higher education institutions have fulfilled a dual role of preserving and developing new knowledge, and their preferred approach was simply to add new academic programs to those already in existence (Gumport & Snyderman, 2002). Now, however, fiscal constraints have rendered purely additive approaches impossible, requiring that difficult choices be made. The decision to fund academic programs in entrepreneurship, for example, instead of classics makes a statement about what knowledge is judged valuable and shapes how people define problems and develop solutions. These insights yield the fifth theoretical proposition. *Proposition 5: Public universities wield power in validating certain ways of thinking and being in society through its knowledge-processing functions.*

Phase Three: Research Design

The research design for this study consisted of two overlapping stages of data collection at four main sites within Tidewater University (see Table 5). Although I strive

to differentiate data collection and sites in the two stages, analysis and presentation of findings drew on data in a more fluid manner to effectively answer the research questions. Case study seeks to provide a “thick” description of the phenomenon of interest, which typically means it assembles multiple types of data through several methods of collection (Merriam, 1998). According to Yin (1994), there are six sources of evidence in case study inquiry: documentary evidence, archival records, interviews, direct observation, participant-observation, and physical artifacts. In this design, I made use of documentary evidence, semi-structured interviews, and direct observation. Interviews provided the largest share of data, and I conducted a total of 30 semi-structured interviews with 31 individuals. The goal of data collection was to follow one of Yin’s (1994) principles of case study data collection, triangulation, which Stake (2000) defined as the “process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation” (p. 443).

Table 5: Data Collection Stages and Sites

Stage	Data Type	Site(s)
1. The Institutional Ethos and Its Meanings Why University Leaders Initiated and Supported the Ethos	Interviews Documentary Evidence	Offices of key decision-makers
2. Translating the Ethos into Incentives and Academic Programs	Interviews Documentary Evidence Direct Observation	APT task force members and meetings Institute for Innovation and Entrepreneurship Colleges of business and engineering

Stage one: development of and explanations for the ethos. The first stage of the research design was dedicated to understanding the development of an innovation and entrepreneurship ethos at Tidewater University. This stage included collecting data to ascertain the fundamental values appropriated and cultivated by university leaders; identify the key individuals who played a role in its development; discover the mechanisms by which this ethos was communicated to university actors; and, in general, highlight its various meanings. Additionally, stage one aimed to collect data concerning why university leaders initiated and supported an innovation and entrepreneurship ethos. Of particular interest in this stage was understanding the motivations for adopting and means for disseminating values and norms associated with the academic capitalist knowledge/learning regime, such as knowledge privatization, profit-taking, and research commercialization. Close attention was paid in this stage to how university leaders talk about innovation and entrepreneurship with respect to higher education's political-economic landscape, taking specific note of references to the knowledge-based economy. Attention was also paid to any mention of peer institutions or the development of market niche. Data in this stage came from 15 semi-structured or semi-standardized interviews with individuals who served in strategic planning and institutional decision-making roles at TU between 1998 and 2013, including at least one chancellor, as well as presidents, provosts, deans, and program directors. Table 6 provides a list of stage one interview participants. All interview participants were assigned pseudonyms in order to protect their anonymity.

Accessibility was one of the challenges of interviewing university leaders. However, my access to many of these individuals was facilitated by my work in the

office of the provost. Still, the availability of some individuals for interviews was somewhat brief, as noted in Table 6 below. I had contact with several university leaders through meetings for which I was present, and I was able to regularly and persistently work with their administrative assistants. Of course, this did not guarantee I was able to interview all key decision-makers for this study. For example, I was not able to interview the newly named associate vice president for innovation and entrepreneurship. Beyond questions of accessibility, the challenges of interviewing elites necessitated consideration.

Hochschild (2009) defined elite interviewing as “discussions with people who are chosen because of who they are or what positions they occupy. That is, by ‘elite’ I do not necessarily mean someone of high social, economic, or political standing; the term indicates a person who is chosen by name or position for a particular reason” (p. 1). Dexter (1970) noted that elite interviewing is a specific type of interview focused on specialized knowledge whose protocols differ from other types. For one thing, elite interviewing required that I know as much as possible about the context and participant as possible beforehand to avoid wasting their time. It also required steering the participant to answer the question without recourse to strategic rhetoric or politicking. Lastly, I had to avoid the temptation of capitalize on participants’ specialized knowledge by simply asking them to answer my research questions. In the words of Hochschild: “Few interview subjects think in the ways that social scientists think, so posing one’s own analytic puzzle to the subject usually just elicits...stares and silence or stammers” (p. 3). In this way, I tried to create enough space in the interview process to allow the participant to teach me what they think the problem, question, or situation at hand truly is

(Kezar, 2003). These strategies complemented those designed to promote successful data collection through interviewing more generally.

Table 6: List of Stage One Interviewees

Name	Position	Years of Term	Int. Length
1. Kenneth Hofbauer	Chancellor of the State University System	2002 – Present	41 minutes
2. William Pierson	Former president	1998 – 2010	57 minutes
3. Nancy Martin	Former provost	2011 – 2013	47 minutes
4. Nicholas Johnson	Research executive	2011 – Present	60 minutes
5. Tony Christensen	Research executive	2013 – Present	44 minutes
6. Amy Curtis	Former president of senate; Professor in humanities	2011 – Present	39 minutes
7. Travis Campbell-Green	Academic executive	2013 – Present	49 minutes
8. Vanessa Trevali	Dean of college	2004 – Present	46 minutes
9. T. Y. Patel	Academic executive	2010 – Present	50 minutes
10. Francis Brenner	Program director	2011 – Present	43 minutes
11. Dorothy Winters	Budget executive	2012 – Present	35 minutes
12. Carol Hawthorne	Admissions executive	2001 – Present	28 minutes
13. Don Roberts	Dean of college	2009 – Present	60 minutes
14. Wes Smith	Dean of college	2012 – Present	59 minutes
15. Bradley McDowell	Program director	2013 – Present	25 minutes

Interviews constitute a vital method of data collection in this study and, consequently, care was given to ensure that they were properly conducted. According to Berg (1995) semi-structured or semi-standardized interviews involve the “implementation of a number of predetermined questions and/or special topics,” which are asked in a systematic order (p. 33). However, the researcher is expected to digress and probe answers. Using a standardized set of questions requires that they be worded in a way that is familiar to participants and consistent with their education or socio-economic level. As a way of drawing out the most complete story, interview questions were divided into four categories: essential questions, extra questions, throw-away questions, and probing

questions. The former category were those most central to the study, designed to glean specific information, while extra questions closely resembled essential questions with slightly different wording to check for reliability of responses. Throw away questions could be discarded if they jeopardized the asking of questions central to the study. Probing questions were developed in the moment in order to seek clarification or elaboration of a response. Lastly, I did not use double-barreled or affectively worded questions.

As previously noted, 15 semi-structured interviews were conducted for stage one. Interview participants tended to be part of the university's central administration, reporting directly to either the president or provost. 13 of the 15 interview participants were formerly full-time faculty members, and many of them retained appointments in their respective academic departments. It should be noted that the term of appointment for many interview participants does not accurately reflect how long many of them have been employed at Tidewater. Indeed, over half of the interview participants had worked at the university for over 25 years. Interviews lasted between 25 minutes and an hour, with an average interview length of 45 minutes. All interviews were conducted individually, either over the phone or in-person at the interview participants' offices. All interviews were digitally recorded, uploaded to cloud-based storage, and transcribed using computer software. I took notes during interviews to capture significant non-verbal moments in the interview. Additionally, I wrote a short two to three paragraph memo after each interview to keep track of trends as a way of tailoring subsequent rounds of interviewing or other data collection. Appendix A features the interview protocol for stage one.

Aside from interviews, data for stage one also came from a limited selection of documentary evidence. The reason for collecting documentary evidence was to corroborate and augment interview data. Although a plethora of documents speak to innovation and entrepreneurship at TU, only certain sources were consulted in order to ensure in-depth interpretation and avoid unnecessary data hoarding. Specific sources of documentary evidence included publicly available speeches and other writings from the aforementioned university leaders, press releases, promotional literature, and newsletters. Such material culture presents its own challenges of interpretation for the researcher. It must be interpreted without necessarily the benefit of indigenous commentary (Hodder, 2000). To ensure effective interpretation, documentary evidence must be read with reference to various contexts of production and consumption. One way to confirm the interpretation of documentary evidence is to check hypotheses against accepted theories inside and outside the discipline. Moreover, coherence aids in confirming interpretations, which entails checking that the arguments do not contradict one another and conclusions follow from their premises (Hodder, 2000). Thus, documents were closely interpreted in light of the theoretical framework and hypotheses were checked against interview data. Through such means, I sought in stage one to answer research questions one and two, developing an understanding of TU's institutional ethos and how it developed, as well as identifying the reasons why the ethos was initiated and supported.

Summary of Stage One Data Collection

- 15 semi-structured interviews with individuals who served in strategic planning and institutional decision-making roles at TU between 1998 and 2013, including at least one chancellor, as well as presidents, vice presidents, provosts, associate provosts, deans, and program directors.

- Documentary evidence, including publicly available speeches and other writings from the aforementioned university leaders, the university's strategic plan and follow-up reports, relevant articles from the faculty and staff newsletter, press releases, and program brochures.

Stage two: translating the ethos into incentives and academic opportunities.

The second stage of data collection presented more difficulties than the first. Because I was interested in determining how an institutional ethos has been translated into incentives for faculty members and academic opportunities for undergraduate students, there was no clear limit on the number of objects of study or data collection sites. Thus, the picture drawn from data of how the ethos is translated was inherently partial. In order to approximate a holistic sense of the case and capture key themes in areas heavily involved in innovation and entrepreneurship, I selected three sites of data collection: 1) the joint provost/university senate task force on guidelines for faculty promotion and tenure; 2) the colleges of business and engineering; and 3) the Institute for Innovation and Entrepreneurship. These sites offer a window into the ways in which Tidewater shaped faculty and undergraduate student conduct. As follows, I completed a second round of interviews, collected additional documentary evidence, and engaged in direct observation.

More specifically, this stage entailed a total of 15 semi-structured interviews with 16 administrators, faculty members, and undergraduate students.⁵ Interviews lasted between 30 and 62 minutes, with an average length of 43 minutes. As Table 7 indicates below, I interviewed three faculty members who were involved in the promotion and

⁵ One interview included 2 students, hence the discrepancy between the number of interviews and the number of interviewees.

tenure guidelines task force, which is currently in the process of revising university guidelines for promotion and tenure with specific instructions to consider inclusion of innovation and entrepreneurship. Additionally, I conducted four interviews with individuals affiliated with the college of engineering, including three entrepreneurship program directors and two undergraduate students who manage a startup incubator on campus. Three of the interviews were with entrepreneurship program directors and faculty in the college of business, as well as two organizers of business model pitch competitions who work closely with the college of business. Lastly, I interviewed two new staff members in the Institute for Innovation and Entrepreneurship and the president of a student-run “social venture” housed in the offices of the Institute. Interviews were again digitally recorded, securely stored, and transcribed. As was the case in stage one, I took notes during the interviews and wrote short memos following each interview.

Beyond interviews, I collected relevant documentary evidence of proceedings of the promotion and tenure guidelines task force, particularly the task force charge and final report. Documentary evidence for this stage, moreover, included course syllabi, state system policies, university policies, course catalogues, award announcements, and strategic plans. The final data collected during stage two came from observation of the promotion and tenure guidelines task force meetings and the fieldnotes written during the meetings. This data was used to corroborate my interpretation of interview data and documentary evidence related to the work of the task force.

Table 7: List of Stage Two Interviewees

Name	Title	Site/Sponsor	Int. Length
1. Lee Nguyen	Professor in Sciences	P&T Task Force	62 minutes
2. Flora Harter	Professor in Humanities	P&T Task Force	37 minutes
3. Tonya Aydan	Faculty Ombuds Officer	P&T Task Force	32 minutes
4. Tom Park	Director, Tidewater Technology Enterprise Collaborative	College of Engineering	51 minutes
5. Craig Elgin	Director, Honors Entrepreneurship House	College of Engineering	57 minutes
6. Keith Meyers	Director, Crandall Entrepreneurs Program	College of Engineering	55 minutes
7. Student 1	Undergraduate Student, Startup Incubator	College of Engineering	34 minutes
8. Student 2	Undergraduate Student, Startup Incubator	College of Engineering	34 minutes
9. Christine Neilson	Director, Prince Entrepreneurship Center	College of Business	37 minutes
10. Danielle Ramirez	Director, Center for Social Innovation	College of Business	36 minutes
11. Mathias Gruber	Lecturer	College of Business	53 minutes
12. Steven Walker	Staff person	College of Social Sciences/College of Business	40 minutes
13. Courtney Foster	Staff person	School of Public Policy/College of Business	30 minutes
14. Samantha Stone	Development Officer	Institute for Innovation and Entrepreneurship	44 minutes
15. Brianne Loring	Lecturer	Institute for Innovation and Entrepreneurship	30 minutes
16. Nate Gallagher	Undergraduate Student	Institute for Innovation and Entrepreneurship	48 minutes

Observation represents one of the fundamental methods of data collection in the social sciences, and is vital even in research designs structured around interviews.

Whereas in the past distance was placed between the researcher and people, today observation is thought to be more of a “*dialogue* between researchers and those whose culture/societies are being described” (Angrosino & Mays de Perez, 2000, p. 675). It is

through fieldnotes that observations and lived experience are translated into text for purposes of description and analysis. Fieldnotes represent “accounts *describing* experiences and observations that the research has made while participating in an intense and involved manner” (Emerson, Fretz, & Shaw, 1995, p. 5). The inscription of observation into text involves perception and interpretation, as it is not possible to perfectly capture what happened. In order to increase the likelihood of a rich interpretation of observation, I made use of jottings, or brief written records of impressions through key words and phrases (Emerson, Fretz, & Shaw, 1995). With the help of jottings, I made every effort to immediately write up fieldnotes after leaving the observation setting to take advantage of the freshness of recollections.

The objective in stage two was to shed light on how university actors operationalized the innovation and entrepreneurship ethos, incorporating it into the core functions of the university. Additionally, I sought to understand the ways in which the conduct of faculty and undergraduate students is shaped through incentives and academic programs. Underlying this effort is the question: what kind of faculty member or undergraduate student is being cultivated at an institution that is actively promoting and building an identity around innovation and entrepreneurship? Thus, stage two took up the third research question.

Summary of Stage Two Data Collection

- 15 semi-structured interviews with members of the promotion and tenure guidelines task force; Institute for Innovation and Entrepreneurship; as well as faculty and staff in the colleges of business and engineering.
- Documentary evidence in the form of task force proceedings, reports, and course syllabi.

- Direct observation of task force meetings.

Throughout the two stages of data collection, several themes were pursued and given particular attention. One of these themes is how various participants define and understand entrepreneurship and its relation to the values of the university. The second theme is reasons provided by participants to explain the promotion and importance of entrepreneurship in campus activities. Included in this theme was any mention of resources, revenues, peer institutions, and challenges to the operations of public postsecondary institutions. The final theme of interest is efforts on the part of university leaders to encourage faculty members and undergraduate students to think and behave in certain ways through the creation of incentives and sanctioning of knowledge via academic programming.

Phase Four: Data Organization and Analysis

Yin (1994) maintained that analysis of case study evidence is one of the least developed and most difficult aspects of the strategy. “Unlike statistical analysis, there are few fixed formulas or cookbook recipes to guide the novice... Instead, much depends on an investigator’s own style of rigorous thinking, along with the sufficient presentation of evidence and careful consideration of alternative explanations” (p. 102-3). Data was organized into a database that includes: fieldnotes, documentary evidence, interview transcripts, and memos. The strategy for data analysis, drawing upon Yin (1994), was to closely read in light of the theoretical propositions that led to the case study. These propositions help to decide which data merited attention and which could be ignored. I agree with Edwards (2013) that data analysis in qualitative research is an iterative process and that techniques are often utilized concurrently. Additionally, data analysis involves

both induction and deduction, raising data to a higher level of abstraction, while attempting to forge and verify theory.

The main goal of data analysis was to pattern match (Yin, 1994). This means that I looked for patterns in the data and compared these to the theoretical propositions. This task sought to discover convergence and divergence between data and theory. However, identifying patterns, taking note of convergence, and, ultimately, making conclusions required a rigorous, systematic approach to analysis. I made use of Miles and Huberman's (1994) three-part approach, consisting of: 1) data reduction; 2) data display; and 3) drawing/verifying conclusions.

Data reduction. According to Miles and Huberman (1994), the reduction process happens throughout data analysis. Initially, reduction takes shape in editing and segmenting texts so that they can be easily read. In later stages, the most important means of data reduction is coding. Coding is the process of assigning tags, names, or labels to chunks of data (Punch, 2009). Ryan and Bernard (2000) usefully listed at least three steps in coding: sampling, building codebooks, and marking texts for drawing conclusions. Sampling refers to choosing the corpus of texts being analyzed and determining the unit of analysis (word, phrase, sentence, etc.). In this study, the texts being analyzed included documentary evidence, interview transcripts, and fieldnotes. I elected to use phrases and sentences as the unit of analysis in order to avoid over-decontextualizing the data. Before developing a codebook, I used descriptive or in-vivo codes to get a feel for the data (Miles & Huberman, 1994). I then deductively built a codebook with the help of existing literature and the theoretical propositions (Ryan & Bernard, 2000). Coding was not

limited to a single round. Rather, I coded the entire set of data each time I sought answers to the research questions.

During the coding process, I wrote up initial ideas in order to pinpoint relationships between codes (Miles & Huberman, 1994; Strauss & Corbin, 1990). Miles and Huberman (1994) called this a memo:

A memo is the theorizing write-up of ideas about codes and their relationships as they strike the analyst while coding...it can be a sentence, a paragraph or a few pages...it exhausts the analyst's momentary ideation based on data with perhaps a little conceptual elaboration. (p. 72)

I used several notebooks to memo, which proved to be the most important means of organizing my ideas. Memos formed the building blocks of the outlines from which I wrote chapters four through six, which present the main findings of data analysis.

Displaying data. The second part of the data analysis approach I took is displaying the data. Data displays help to organize and summarize the often voluminous amount of data, even in segmented form. The main display techniques I employed was a critical events timeline. According to Miles and Huberman (1994) a critical events timeline chronologically orders events and the actors involved in them. It typically includes only the most important events that are relevant to the case. A critical events timeline is useful because it can illustrate the moments in which data points cluster around particular events or actors, suggesting the need for further analysis to understand the importance of that moment to the case (Edwards, 2013).

Drawing conclusions. The drawing of final conclusions in qualitative research happens only after a prolonged conversation with the data. This final part of the data

analysis approach was only possible once the data had been reduced and organized in displays, although many conclusions arose from earlier stages of analysis via memos (Punch, 2009). An important step in drawing conclusions was also to consider rival explanations and show that the patterns do not substantiate such claims. For the purposes of this study, conclusions were intended to be answers or explanations to the “how” and “why” research questions posed at the outset of this chapter. By following this iterative process, which allows for both inductive and deductive reasoning, I attempted to develop a set of explanations for the advent of innovation and entrepreneurship as a guiding ethos at TU. The explanations that are proffered are, by design, tentative because they are based on a single case. However, they suggest a possible line of inquiry for additional research.

Quality dimensions. Denzin and Lincoln (2000), in describing the constructivist paradigm, indicated that qualitative researchers use as criteria of quality terms such as credibility, transferability, dependability, confirmability, and authenticity, in lieu of the validity or objectivity conceptualizations common in positivist paradigms. Credibility is the constructivist equivalent of validity, and Mertens (2005) defined it as correspondence between what participants say in the course of data collection and how their responses are interpreted and portrayed by the researcher. As previously noted, the best means of improving the credibility of a case study is through triangulation. Beyond triangulation, I increased the credibility of this study by sharing my data analysis and explanations with a peer and sharing interpretations with select interview participants for feedback.

I consider the next two criteria of quality—transferability and dependability—to be linked. Because analytical generalization is an important goal underpinning this study,

transferability and dependability are concepts I took seriously. Transferability is effectively concerned with the extent to which explanations can be applied in other situations, which is an essential step in achieving true analytical generalization (Mertens, 2005). The ability to make such inferences is left to the reader based upon the strength of the case study write-up and the detail provided. Analytical generalization is only possible through replication. Therefore, dependability, or being transparent and clear in explaining the data and its collection, organization, and analysis, is essential so that other researchers can make judgments about the appropriateness of the research design in addressing the questions at hand. One means through which I enhance dependability was to construct a case study database (Yin, 1994).

The last two criteria of quality are confirmability and authenticity. In many ways, the need for confirmability goes without saying—it should be a requirement in any research design that claims are based upon empirical materials. The tactics I used to ensure confirmability were to cite pieces of data and, when appropriate, make frequent use of direct quotations from participants to support my conclusions. Secondly, borrowing from Yin (1994), I intended to expose the logic by which I arrived at conclusions through a chain of evidence (e.g., “text excerpts led to these themes, which were related to other themes, and yielded the following conclusions”). Authenticity asks whether the researcher considered and reported all evidence and considered several viewpoints in constructing their interpretation. Authenticity should not be confused with objectivity, which is purposefully abandoned in constructivist paradigms. Instead, it calls on the researcher to be balanced and diligently report data that conflicts with theoretical propositions or contradicts conclusions. The criterion of authenticity means that I must

remain true to the data, even if it means refuting my scholarly inclinations and theoretical propositions.

In the end, one of the most important dimensions of quality I used to evaluate this study is derived from a question posed by Lincoln and Guba (2000): “Are these findings sufficiently authentic that I may trust myself in acting on their implications? More to the point, would I feel sufficiently secure about these findings to construct social policy or legislation based on them?” (p. 178). Recognizing that no research design can deliver absolute truth, I was motivated by the desire to trigger action based on this project, which demanded rigorous application of the aforementioned methods and constant reflection on credibility, transferability, dependability, confirmability, and authenticity.

Counter-evidence. In this design, I also gave thought to what might disprove my theoretical propositions. For example, data that would raise significant questions with respect to the theory of academic capitalism would de-emphasize the influence of administrators and, in general, the upper tier of university leadership in initiating and supporting the innovation and entrepreneurship ethos. That is, if data points to the role of student or faculty member demand, signaling that innovation and entrepreneurship “bubbled up” as important values and practices, my theoretical foundation of this study would require revision. A similar rethinking would be occasioned by the strong presence of social good, instead of money, as a motivation for entrepreneurial activities. For instance, if interview participants resoundingly pointed to the desire to serve humanity through entrepreneurship and not generate revenue, academic capitalist explanations would be weakened. Looking at the first proposition, the applicability of cultural political economy would be reduced if university leaders at Tidewater paid little attention to the

knowledge-based economy as a justification for their practices and if there was not an effort to instrumentalize the education of students to serve economic growth and capital accumulation.

With regard to the second theoretical proposition, derived from new institutionalism, counter evidence that would require alternative explanations includes interview participants disregarding the influence of rankings or institutional peers and even indicating signs of indifference to prestigious institutions in determining organizational values, norms, and practices. One type of counter evidence related to the third theoretical proposition on the heteronomous model of university change would be clear signs that market forces alone condition public universities, resulting in numerous commercial manifestations. The absence of the state's role in innovation and entrepreneurship would undermine the usefulness of this theoretical proposition.

Governmentality, the subject of the fourth theoretical proposition, would be difficult to confirm if TU showed no interest in shaping the conduct of faculty members and undergraduate students. If entrepreneurship was not translated into incentives on campus, and if the entrepreneurial mindset had only a minor part to play in this case study, governmentality would be less germane. Lastly, counter evidence for the fifth proposition would center on Tidewater taking a rather localist view of its operations. That is, it would be difficult to argue the fifth proposition if evidence demonstrated that TU did not believe its decisions affected the dispositions and behaviors of society writ large. Although this counter evidence is difficult to ascertain because it is often predicated on absence, I nevertheless remained sensitive to data that refuted my thinking.

Ethics. Most qualitative researchers interact with and, at times, are members in the communities they study. As such, they are inherently intrusive and involved in the lives of interview participants. This description certainly applied to me, as a researcher deeply situated in the case I investigated. There were both rich opportunities for data collection in this arrangement, as well as scenarios fraught with possibilities for harm. Beyond adhering to the basic premise of “do-no-harm” research, I implemented several steps to ensure the study is ethical. First, I guaranteed that participants (not informants) take part in interviews voluntarily, following the rules of informed consent. To this end, an application was submitted to my university’s institutional review board (IRB), which required the development of an informed consent form for all research involving human subjects. All participants signed an informed consent form, which were electronically stored. The informed consent form explains the study and seeks to demystify its purpose and methodology. It specifically asks if participants agree to being digitally recorded. Moreover, the consent form clearly states that confidentiality will be maintained at all times.

Confidentiality was especially important in this study because I interviewed university leaders, many of whom must answer to various stakeholders and constituents, including the state legislature. One of the ways in which I maintain confidentiality was to assign the institution a pseudonym and, when possible, give generic names to programs and departments so that readers cannot identify participants. Furthermore, all of the participants were given a pseudonym, and their true identities were only accessible through the original interview transcriptions, which were saved on a password-protected cloud storage program. The general idea is that the participants were able to freely

express themselves without fear of their opinions being used against them. I then made every effort to conceal the identities of participants to help build trust and ensure that conducting this study improves higher education without compromising the livelihoods of those who helped me. Finally, it is worth noting that an ethical commitment to action permeates this study. Thus, part of what makes this project ethical is that is designed to inform decision-makers and truly make a difference in deciding what public higher education should look like in the coming years.

Conclusion

This chapter explains my roadmap for empirically answering the research questions of this dissertation. These questions were developed based upon an interpretive paradigm anchored in constructivism. Based upon the process and explanation-oriented nature of the research questions, I selected case study as a comprehensive research strategy. I outlined in this chapter my rationale for conducting a single institutional case study of Tidewater University and its development and translation of an institutional ethos that centers on innovation and entrepreneurship. Data collection methods aligned with case study inquiry and included finding relevant documentary evidence, interviewing university actors, and directly observing sites where innovation and entrepreneurship are translated into incentives and academic opportunities for faculty members and undergraduate students. This chapter also provided a detailed discussion of the techniques through which I analyzed the data, as well as the various means through which the quality of my explanations were achieved.

CHAPTER FOUR: MEANINGS AND DEVELOPMENT OF THE ETHOS

Every president comes in and wants to make a mark in some way. I think this is [our president's] thing. This the flag he wants to put in the ground.
-Staff person

Who doesn't like innovation and entrepreneurship? Translating it from a buzzword into something actionable is kind of the difficulty.
-Research executive

Introduction

This chapter addresses the first research question: through what processes did the innovation and entrepreneurship ethos develop at Tidewater University? As I collected data, it became clear that this question ultimately entailed two tasks, which informed the organization of the chapter. The first task was to better understand the nature of the ethos and its status at TU. I employ interview data and select documentary evidence to present the meanings of innovation and entrepreneurship and how these concepts are understood by various actors at Tidewater. With this foundation, I shed light on several core values that underlie the ethos, consistent with the definition of institutional ethos elaborated in previous chapters. Analysis reveals that disparity in the meanings ascribed to innovation and entrepreneurship, as the ethos continues to undergo development. Moreover, conceptualizations rely upon a preponderance of language and examples taken from the for-profit sector. Despite efforts to conceptualize entrepreneurship as a process and mindset that are applicable to the non-profit sector and to government, meanings showed a bias towards consumer product formation and company building as intended outcomes. In the end, this chapter argues that the ethos remains a project under construction, receiving real investment. However, its future is rather tenuous.

The second task was to pinpoint through interview data the principal sites in which these meanings of innovation and entrepreneurship are being crafted, as well as where on campus the underlying values are commonly communicated. I group these sites by their administrative homes, yielding three groups: the college of engineering, the college of business, and the offices of the president and provost. The origin of a few illuminating sites within each group is treated in turn, attempting to demonstrate an approximate chronology of development covering several years, primarily between 1998 and 2013. Entrepreneurial programs and initiatives were spearheaded by a surprisingly small group of individuals, and I highlight those people who were frequently mentioned in interviews as instrumental in championing the emerging innovation and entrepreneurship ethos.

Upon closer examination of the findings, it becomes apparent that sites responsible for helping to create and perpetuate the ethos are concentrated in the colleges of business and engineering. Recently, central administrative offices have also contributed to the campus-wide promotion of the ethos, transforming it into an institutional priority and marketing campaign under the slogan “Fearless Thinking.” Many new programs in this campus-wide orientation reflect a trend towards teaching entrepreneurship to undergraduate students. Just as important as where the ethos is found is where it is absent. The humanities are on the margins of the ethos, based upon its intended outcomes. Perhaps the most striking theme that emerged from the data is that the ethos can largely be traced back to the ambitions of administrators, many of whom are engineers by training and profession. Although there is a desire to make innovation and entrepreneurship a signature feature of Tidewater, there has been little buy-in from

faculty members writ large. Accordingly, this chapter argues that the ethos has been a top-down initiative that was devised centrally and not through popular will or mechanisms of shared governance.

The remainder of the chapter is divided into two sections, one for each of the aforementioned tasks. The first section charts the meanings and values that comprise the innovation and entrepreneurship ethos, while the second section chronicles the development of the ethos based upon the places and people that brought it into existence. At the conclusion of the chapter, I discuss how the findings relate to the theoretical propositions elaborated in chapter three. Although this chapter mainly serves as context and a launching point for answering the remaining two research questions, the findings speak to theory, especially the theory of academic capitalism. In particular, this chapter shows Tidewater's treatment of knowledge as a raw material and exemplifies constructs of the theory, such as interstitial organizational emergence. The next section begins by revisiting the definition of institutional ethos I developed, before proceeding on to meanings of innovation and entrepreneurship.

Nature and Status of the Ethos

Revisiting institutional ethos. For the purposes of this dissertation, I build upon Kezar's (2007) work to define institutional ethos as the values that are appropriated and cultivated by key university planners and decision-makers to coordinate and normalize the activities of faculty and undergraduate students to some desired end. An ethos serves as a philosophy that guides the construction of institutional identity. While it emerges gradually, it seeks to be pervasive and lasting, finding sustenance through purposeful policies and reinforcing practices. The idea is that an institutional ethos is an expression

of a particular group's values and is often intended to provide consistency to the experience of students, faculty, and staff. Importantly, an ethos resembles ideology in that it must be regularly reinforced, and the institution's policies and practices must align with it. This chapter centers upon what, precisely, the innovation and entrepreneurship ethos is and which individuals labored to bring it to fruition as an expression of certain values about knowledge production and the mission of the university in the 21st century. The question of how the ethos has been translated for the purposes of reinforcement—as well as the implications of these efforts—is left to later chapters. Interview participants and documentary evidence provided an array of meanings of innovation and entrepreneurship, which show the contours of the ethos and allow for the distillation of the values as they are crafted and circulated at Tidewater University.

Meanings of innovation. This subsection demonstrates that innovation proved to be a contentious concept among interview participants, and the few concrete conceptualizations displayed a diversity of viewpoints. Some interview participants understood innovation only in connection with or comparison to entrepreneurship, as if it had no meaning by itself. For a few faculty members, innovation was a source of contempt because they believed their entire careers had been predicated on being innovative and, therefore, the elevation of the concept to a “buzzword” undermined their longstanding contributions to the advancement of knowledge. Perhaps the only pattern that emerged in the meanings of innovation was that it was attached to entrepreneurship for strategic purposes. The process of attaching innovation to entrepreneurship clouded the concept's meaning, in the eyes of some interview participants, rendering it either more commercialized or bordering on empty rhetoric. Furthermore, there was general

consensus that innovation is inherent to universities and the academic profession, yet entrepreneurship was a recent development. Some mention was made of innovation in teaching or instruction, often accompanied by discussion of online delivery platforms, resulting in strong reactions from a few interview participants.

One of the basic meanings of innovation came from Tidewater's president between 1998 and 2010, William Pierson. For Pierson, a former professor of mechanical engineering, "the essence of innovation is successful implementation, usually new implementation." He eschewed what he called the "narrow boxes" in which people place innovation, explaining: "When someone says, I'm going to be an innovator, that person's idea of innovation might be very narrow. It means they might create new widgets of some kind. That could be an innovation, but it's not the essence of innovation." As a way of further clarifying his understanding, Pierson contrasted innovation with invention, the essence of which "is the realization of ideas." Don Roberts, a dean of one of the colleges since 2009, similarly distinguished innovation from invention. "Anybody can invent anything. You and I can sit here and argue about some problem, and you and I can each come up with an idea, but neither one might sell." Thus, in Roberts' view, innovation was about "the process of turning something into value." He summarized his conceptualization as follows: "Innovation in my sense is more than invention. It is about the process that makes some software product or other product valuable, affordable, reliable, and that some customer wants to purchase it." Roberts' approach to innovation is unique in that it closely resembled many other interview participants' description of entrepreneurship. In this way, Roberts' comments introduce an important finding that repeats in this chapter: there is a wide range of understandings regarding innovation and

entrepreneurship, vacillating between broad, abstract meanings and meanings clearly grounding the concepts in the world of free market enterprise.

In many instances, interview participants conflated innovation and entrepreneurship, or used the concepts interchangeably. To some degree, this conflation is attributable to what many saw as the strategic linking of innovation and entrepreneurship, such that the two concepts were considered an indissoluble pair. There was a pervasive belief that university leaders consciously linked the two in order to make entrepreneurship more palatable. Keith Meyers, who has managed an entrepreneurship-themed living-learning program since 2004, reflected:

I think we tend to add innovation to make it more acceptable to certain schools and certain faculty...for fear that entrepreneurship might be viewed as synonymous with a for-profit venture exclusively. So, there is the need to try and title things and promote things, while entrepreneurship alone would arguably fit the bill.

In this way, innovation was attached to entrepreneurship to make it seem “larger than a for-profit venture.” One professor in the sciences, who works part-time directing faculty leadership initiatives for Tidewater, traced the decision to pair innovation and entrepreneurship back to the office of the president and board of trustees:

I don't know why the administration chose to pair innovation and entrepreneurship. Well, it might have come from [the trustees] in their guidelines about what ought to be considered in tenure cases. I think they had the phrase.... I'm not sure where it came from. It came from above my pay grade.

Although several interview participants likewise believed that the choice to pair

innovation and entrepreneurship came from highest levels of university leadership, there was no record pointing to a particular moment when the decision was made. I revisit the role of key university planners and decision-makers in initiating and supporting entrepreneurship programs later in the chapter.

Among a small number of interview participants, the pairing of innovation and entrepreneurship made perfect sense. The director of the college of engineering's entrepreneurship center, the Tidewater Technology Enterprise Collaborative (TTEC), explicated: "For us [engineers], innovation always leads to entrepreneurship." Yet, he acknowledged that "there's lots of parts of campus where innovation is not a precursor to entrepreneurship. You know, in the school of dance [innovation] is a different thing." On the other hand, several interview participants took issue with the pairing of innovation and entrepreneurship. Keith Meyers believed that "there's lots of entrepreneurial ventures that are not innovative, and I think the bulk of them are...service based things. They add value and they're significant and meaningful, but I have a hard time saying they're highly creative." When asked what connotation came to mind when innovation and entrepreneurship were used in tandem, an academic executive replied: "It's that connotation that is attached to entrepreneurship, that people should be out there somehow creating businesses and making money. I think that gives innovation a shaded meaning. Einstein was very innovative. I doubt he ever thought about making money." The desire to separate innovation from entrepreneurship emerged emphatically among those who saw innovation as inherent to academe.

At least two interview participants expressed contempt at the prevailing campus usage of innovation. "I actually think talking about the phrase innovation and

entrepreneurship is very misleading” opined Lee Nguyen, professor in the sciences, because it “in some sense demeans what people are doing by saying it’s not innovative unless they’re entrepreneurial.” He continued, “By my definition of innovation, all the research we do is innovation. Sometimes it’s interpreted much more narrowly, but all research is plowing new ground, discovering new things, new interpretations.” Avoiding the term innovation was a preference shared by former provost Nancy Martin, who served in that role between 2011 and 2013. Martin made clear her feelings regarding innovation: “I really dislike that term because innovation has been something we’ve always done. I consider innovation knowledge creation—new ways of doing things. So, I don’t like that term.” Nicholas Johnson, a research executive, was not convinced that all faculty work is innovative, but he articulated that there are “some faddish aspects” to TU’s recent adoption of the term. In his words, “most faculty think they’re innovative, so that’s a buzzword that’s sort of vacuous at some level.” “Buzzword” was a common way of describing both innovation and entrepreneurship throughout the interviews.

Two faculty members in the humanities noted that “innovation and entrepreneurship” were popular in higher education media, but they still had little understanding of what was meant by the concepts. Amy Curtis remarked: “Innovation and entrepreneurship are buzzwords... They’re all over *The Chronicle of Higher Education*. I was chair of the campus senate last year, which meant that I met a lot of trustees, and these are words that drip off their tongues.” Her time on the senate and the frequent presence of innovation left her asking many questions. “As a scholar and thinker who has chosen a lifetime of responsibility to also be a teacher, I want to know, what do you really mean? It’s like, what in the hell do we mean by this anyway?” Another

professor in the humanities called the frequent use of innovation “puzzling” and resigned herself to the possibility that “trying to figure out what it means is sort of pointless because there’s really nothing there. It’s just something that administrators have to put on their resumes so they can say, ‘Oh, I was innovative.’” Innovation as an enduring feature of academe was placed in stark contrast with entrepreneurship, which was viewed by several participants as a more recent development in response to financial challenges. One of the few ways in which innovation was decoupled from entrepreneurship was in reference to teaching, in which case it was often tied to online delivery platforms that were thought to reduce the costs of instruction

Without a single interview question related to online means of instruction, it is worth noting that online and blended learning, which combines online and classroom-based teaching, were mentioned in no less than one-third of the interviews. In many cases, online delivery platforms like massive open online courses and blended courses were cited as examples of innovation at Tidewater. According to Nicholas Johnson, “Online education [is] another example of something that’s going on in parallel with this, which is an example of innovation in a sense.” For Amy Curtis, thinking about how technologies can improve teaching is “the kind of innovation and entrepreneurship that I’m more interested in.” Her colleague in the humanities, however, took a more cynical view of the relationship between innovation and teaching after serving on a committee dedicated to online and blended learning. “It was a provost commission,” she recalled, “and there was a lot of rhetoric about innovation, which, much of it, in my opinion, was completely misguided.” Specifically, she took issue with what she believed was the desire among administrators to bolster their own records:

There were a lot of high level administrators on that committee, and sometimes they get carried away with this idea of innovation...and they want to put some type of innovation on their CV.... But [the committee] was weighted toward something that was innovative, not toward finding what was best.

Her chief concern was finding what was best for undergraduate student learning, as she did not agree that innovation should mean focusing upon “how we can save money on educating [students] by putting them in front of a computer.” Accordingly, the virtue of online learning was “not helping students learn more or better. It’s just innovative.” Like innovation itself, online delivery platforms, as examples of innovation in teaching and instruction, generated mixed responses, with more negative views coming from faculty members.

The preceding discussion of the meanings behind innovation raised several points that merit reiteration, as they support the chapter’s central arguments. The first point is that innovation was not universally conceptualized or understood. Far from being a concept that helps to create an emotional connection, as Kezar (2007) argued in her work on institutional ethos, some faculty viewed innovation with contempt and as a rhetorical device that compromised the tradition of pushing the frontiers of knowledge at a public research university. Interestingly, distaste with the use of innovation was not limited to faculty members in the humanities, as one of the strongest critiques came from two faculty members in the hard sciences and engineering. Such contempt does signal the existence of some common meanings of the concepts, even if there is no universal conceptualization. Concomitantly, interview data uncovered a lack of buy-in with respect to how the term innovation was employed at TU. There is an unmistakable sense in the

data that innovation was tacked onto entrepreneurship by top-level administrators and trumpeted by trustees. These points are given fuller expression in the next subsection, which explores in some depth the meanings of entrepreneurship.

Meanings of entrepreneurship. The meanings of entrepreneurship offered by interview participants were more numerous than those of innovation; however, similar themes emerged. For purposes of structure and clarity, the meanings of entrepreneurship are presented in three clusters: entrepreneurship as a process, entrepreneurship as a mindset, and entrepreneurship as an ecosystem. This subsection examines each of these clusters, as well as the outcomes of entrepreneurship, as identified by interview participants. The most common outcome that emerged during interviews was the creation of value, typically through a product that could be sold or the development of a company. Although there was frequent mention of social entrepreneurship, its presence was less pronounced than traditional entrepreneurship and often amounted to an afterthought. Language and examples from the for-profit sector dominated conceptualizations of entrepreneurship, and the models of entrepreneurial success were almost exclusively derived from corporations, many of them technology-based. I present several of the most common meanings of entrepreneurship in Table 8. This table illustrates some the aforementioned clusters and their attendant features, such as scarcity, scalability, and sustainability. It also underscores the pervasive use of “value creation” as a catch-all phrase to explain entrepreneurship.

As a result of analyzing the meanings of both innovation and entrepreneurship, I was able to extract five values that constitute the innovation and entrepreneurship ethos at Tidewater University: 1) innovation and entrepreneurship are pertinent to all academic

disciplines and any type of organization; 2) innovation and entrepreneurship are a means to problem-solving in the 21st century; 3) innovation and entrepreneurship produce greater impact than traditional forms of research; 4) innovation and entrepreneurship make for a more efficient institution; and 5) innovation and entrepreneurship befits this generation of university students. However, there was hesitance on the part of interview participants as to whether these values had truly been incorporated into TU's core values. Despite obvious recognition that many parts of campus were trying to make innovation and entrepreneurship Tidewater's ethos, some saw it as a passing fad or marketing scheme.

Table 8: Common Meanings of Entrepreneurship

Interview Participant	Meaning
Mathias Gruber, lecturer of entrepreneurship	Entrepreneurship is the rise of opportunity independent of resource dependency. So it's about innovation and about finding opportunity and nurturing growth out of opportunity.
Craig Elgin, director of Honors Entrepreneurship House (2010-present)	The way I really look at entrepreneurship is somebody that's going to be doing something innovative in a sustainable business manner. And finding a way to scale that.
Keith Meyers, director of entrepreneurship living-learning program (2004-present)	I think for me it's working to start something new with scarce resources that has some sustainable value.
Christine Neilson, director of Prince Entrepreneurship Center (2010-present)	Entrepreneurship is a mindset as well as a process. It is a way of thinking about solving problems and a way of uniquely using resources to solve them.
William Pierson, former president (1998-2010)	The essence of entrepreneurship is value creation. Could be economic value, social value.
Nicholas Johnson, research executive (2011-present)	Entrepreneurs are those who are not constrained by the resources currently under their control, and they're willing to accept a risk to establish a new and sustainable enterprise, where the value created exceeds

	the value consumed.
Travis Campbell-Green, academic executive (2013-present)	Innovation has such a wide range of meanings that it could apply to almost anyone at the university, maybe everyone...Entrepreneurship...really does seem to be more connected with a profit motive.
Nancy Martin, former provost (2011-2013)	Entrepreneurship, that's a new concept because that's the idea of creating commercial businesses, or there's social entrepreneurship, but nonetheless it's organizing people around an idea, a product, a concept...an activity that produces revenue.

Among the interview participants were those with intimate knowledge of entrepreneurship, including four who taught courses on the topic. One of the common features of their conceptualizations of entrepreneurship was that it was a process that starts with an idea and ends with a product or service that meets two key criteria: scalability and sustainability in an environment of resource scarcity. Keith Meyers discussed how “scarce resources dictates a lot of the curriculum and a lot of the programming” in the entrepreneurship living-learning program he directs. Because his program focuses on startups, he explained that recognizing scarce resources is crucial: “It’s easy for a big company to launch 20 products and figure out which 5 work and ditch the rest... For a startup, you might have one [product] and it might raise or sink the company if that one doesn’t work. I think that’s where scarce resources comes into play.” For this reason, several interview participants stressed that either the initial idea driving the entrepreneurial process or the process itself should be resource independent or uniquely leverage the resources available. This is one reason why entrepreneurship has been so closely associated with online technology firms. As one academic executive

explained, “information technology is extraordinarily low-capital.... If you’re bright, you can teach yourself the language, get access to a computer, make an app, and then you can be like that kid in England and make a zillion dollars.” Beyond addressing resource scarcity, the entrepreneurial process should, according to this conceptualization, involve scalability.

Scalability refers to the ability to increase revenues while marginal costs decrease with each unit sale. The example of scalability one interviewee provided went like this: “The way I talk to my [students] about it is we don’t want you to create the flower shop; we want you create either a chain of flower shops or FTD.” Lastly, the conceptualization of entrepreneurship as a process hinged upon sustainability, not in terms of environmental impact, but rather in terms of making money. Danielle Ramirez, director of the Center for Social Innovation, listed as one of the goals of the entrepreneurial process: “economic sustainability or viability. It’s the pursuit of profits in many ways.” The centrality of generating enough income to sustain the enterprise was a point of conflict that emerged in the data. A few interview participants argued that entrepreneurship is not about making money. In his role as a research executive, Nicholas Johnson frequently told people that “money can become important as an intermediate phase between value that’s in your head...and the greater value you create.... So, it’s not about the money” by itself. On the other hand, one dean saw money as a defining part of what separates entrepreneurs from inventors. For example, he distinguished the Wright brothers from Lockheed and Martin, who were the real entrepreneurs because they had a business model and made money: “That was amazing to me. It doesn’t take anything away from the Wright brothers and their contribution. It’s a great contribution to society,

but they didn't make any money off of it." Thus, meanings of entrepreneurship as a process were based upon taking an idea to the marketplace and selling it for money. The examples, like FTD and Lockheed Martin, were derived largely from the for-profit sector.

While conceptualizations of entrepreneurship as a mindset were often less contingent upon business creation, the infusion of language and examples from the for-profit sector were still manifest. Christine Neilson, director of the Prince Entrepreneurship Center, defined entrepreneurship as both a process and a mindset. "The way I see entrepreneurship playing a role in higher education," she explained, "is not just about venture creation, but about an entrepreneurial thinking and mindset," which is characterized by opportunity recognition. One lecturer of entrepreneurship reinforced this idea, saying entrepreneurship is "a perspective on innovation and an ability to create new things and to view opportunities that do not depend on resources." He continued, "The entrepreneurial mindset idea is, at the most basic, opportunity recognition." Opportunity recognition consisted of an awareness of problems and issues, as well as an appreciation of the market and what customers want and will buy. In the words of Danielle Ramirez, "What we're saying is we want to get to the underlying causes of problems...so we don't have to point to solutions from government and non-profits.... The social entrepreneur asks what the underlying issues are. Can we build businesses around that?" Accordingly, the entrepreneurial mindset is grounded in recognizing opportunities, with an eye to seizing opportunity through the creation of a business.

Not all interview participants viewed the entrepreneurial mindset as a positive development. For example, a program director noted that the entrepreneurial mindset is

“this identification that the people that matter are the people that make change. And the people that make change have been identified in this view with the people who seize on opportunities in the marketplace.” He saw this mindset as one symptom of “worshipping of success in the marketplace that is going on and is probably unhealthy.” Although at the time of the interview he did not think teaching the entrepreneurial mindset was a major problem, he worried that Tidewater was becoming “a trade school,” as opposed to “a place where the market has failed and ideas have to be nurtured outside the capitalist world.” Nevertheless, his voice of alarm was outnumbered by those who believed that the entrepreneurial mindset was useful in a wide range of settings. In general, the opinion of interview participants was that more entrepreneurial thinking was needed across Tidewater’s campus. Danielle Ramirez summarized the intended reach of the entrepreneurial mindset for many interview participants:

We should still have those programs for students who are going to launch their businesses. Those true entrepreneurs on campus. But more broadly, this context of critical thinking, or entrepreneurial thinking, I think we should offer that in every major. It applies in every field.

A point was made to include the arts in humanities, as one dean here exemplifies:

This is very important training for the arts because people in dance and music need to figure out how to make a living out of those professions. So, to be able to...run a business, or be innovative with that, that’s a favor to the arts to teach students these skills.

Additional dimensions of the entrepreneurial mindset are addressed in chapter seven as part of a more detailed treatment of the implications of the innovation and entrepreneurship ethos for students and the role of the university in shaping their conduct.

The final meaning of entrepreneurship that was it was not simply the actions of a certain type of person and it was not encapsulated in a single program or set of policies. Rather, entrepreneurship was based upon and fed into an ecosystem. According to another director of an entrepreneurship living-learning program, “There’s this whole ecosystem, which is a word they like to use around this campus.” Two interview participants indicated that there were thriving entrepreneurial ecosystems in the colleges of engineering and business, foreshadowing one of the findings presented in section two. The dean of the college of engineering, as an example, related about when he first heard about entrepreneurship on campus: “I knew that there was an infrastructure, an ecosystem if I can use that term, that was available to engineering students, faculty, and staff.” Christine Neilson, director of the Prince Entrepreneurship Center, described the entrepreneurship ecosystem at Tidewater:

I think [TU] has a very strong ecosystem, and we’re doing a better job now of connecting the dots. So, if you’re a student or faculty or researcher and you have an idea, there’s resources for you to start that, get mentors who give you feedback along the way. Or if you are working in a lab and you have a technology you want to commercialize, we have resources for that, too. A lot of those resources are over at TTEC in the engineering college.

TTEC’s director suggested that the ecosystem at Tidewater is especially developed, providing “end-to-end” support, which makes it unique. He noted that other institutions,

such as Stanford University and Massachusetts Institute of Technology (MIT), do not need to have an end-to-end ecosystem because they are located within robust innovation hubs in the Boston and San Francisco areas. Comparison to MIT and Stanford were widespread, as shown in the next chapter.

Whether entrepreneurship was conceived as a process, mindset, or ecosystem, the intended outcomes were comparable. Perhaps the most frequently employed phrase among interview participants in relation to entrepreneurial outcomes was the creation of value. The value created was not considered only in monetary terms, and there was a clear desire to anchor entrepreneurship in the language of “value creation” as opposed to launching businesses or making money. When Nicholas Johnson defined entrepreneurship as establishing a new enterprise where the value created exceeds the value consumed, he was quick to point out: “I didn’t say anything about technology. I didn’t say anything money. I didn’t say anything about business. It’s about creating value that improves the wealth of nations.” Yet, when talking about faculty work, he characterized entrepreneurship as “getting your stuff out into the corporate environment by any means necessary.” Thus, if it is not about companies, it is at least linking research to the corporate world. Additionally, with respect to patenting intellectual property, Johnson was unequivocal: “Just filing a patent doesn’t do enough. You really have to have somebody who is motivated to go to the other side and...who is willing to figure out what is the business plan.” In almost every interview, even those in which the outcome of entrepreneurship was simplified to value creation, there was mention made of students and faculty receiving assistance to launch a company.

Two entrepreneurship center directors discussed how business creation was not the metric they used to evaluate Tidewater's entrepreneurial efforts. Christine Neilson of the Prince Entrepreneurship Center related: "[job creation] is not the metric that we use. The [state higher education system] tracks the number of companies coming out of or spun out from university research... We really track the people." However, publications from the center tell a different story. One flier, modeled after a napkin on which a novel idea is scribbled, describes the Prince Center's impact in a list: "75 plus companies started, more than \$25 million plus raised, 20,000 students inspired, hundreds of jobs created...and counting." TTEC in the college of engineering was less apprehensive about using business creation as a metric of success. They produce annual impact reports, and the 2011 report detailed that TTEC created 7,053 jobs since 1985 and graduated three major companies from its incubator, two of which sold for over \$1 billion. Startups, in particular, receive an extraordinary amount of attention in documents. One entrepreneurship lecturer conceded, "One of the biggest challenges is we're fixated on the idea that entrepreneurship is about startups. Some of the biggest problems are improving existing institutions, and this is particularly true in the social sector." Amidst refrains like "it's not about starting a company," the examples of entrepreneurship success were almost exclusively for-profit technology firms. The most common examples of entrepreneurship success offered by interview participants were a mixture of large social media firms, especially Facebook and Twitter, and Tidewater alumni who launched noteworthy businesses, including a high-end athletic apparel company and an internet search website now worth close to \$300 billion. One interview participant

referred to the glamour of technology-based startups as the “Mark Zuckerberg effect,” an allusion to the founder of Facebook.

Near the conclusion of at least three interviews, participants sought to call attention to the social benefit or good that is also an outcome of entrepreneurship. Former president William Pierson, for one, challenged the idea that entrepreneurship is driven by narrow economic interest: “There are a lot of social entrepreneurs. There are a lot of organizations that founded themselves on social entrepreneurship. They provided resources to build up societies and communities and so on.” The director of development for the Institute for Innovation and Entrepreneurship, Samantha Stone, said the current president’s message “doesn’t say this is about starting companies. This is about creating benefit, whether societal or economic, or starting companies, or whatever it is, the societal benefit is very important.” As evidence of the important role played by social entrepreneurship in the conversation, interview participants pointed either to a student-run “social venture,” which I discuss in chapter six, or the Center for Social Innovation. The center’s director, Danielle Ramirez, observed that social impact is “probably tacked on” to discussions of entrepreneurship because people had not been sufficiently educated. “I think we’re ready for that conversation,” she reflected, “it’s just we haven’t had it at that level yet.”

Despite some awareness of the current president’s messaging that entrepreneurship must include social good, a professor in the sciences recalled: “I haven’t heard a lot of discussion from high levels of the university about social entrepreneurship.... I don’t think that’s what they mean. I think they mean forming companies.” This was one of several ways in which faculty members believed their views

on entrepreneurship to be at odds with the way that administrators understood the concept. Still, a few interview participants cautioned not to interpret “business” too strictly. As one business model competition organizer put it, “When we say ‘business,’ that applies to non-profits. It applies to community service organizations.” This was not the only moment in an interview when non-profit organizations, including universities, were equated with businesses. The principles of entrepreneurship were believed by many to be universally applicable, even if organizations with a social mission were by and large eclipsed by other examples.

Values underlying the ethos. I distilled five values of the innovation and entrepreneurship ethos based upon how interview participants described their understandings of these two concepts. The first of the five values is that innovation and entrepreneurship essentially has no boundaries, and it is useful to all campus constituents and units, regardless of discipline or organizational mission. Although I show in the next section that the origins of entrepreneurship at TU can be traced back to the colleges of engineering and business, the ethos revolves around the assumption that all students benefit by being exposed to entrepreneurial thinking, all fields of study can be enhanced by the inclusion of entrepreneurship, and all campus units can better ensure their future by being entrepreneurial. Consequently, this value reflects the desire to make innovation and entrepreneurship a key component of Tidewater’s culture campus-wide. In the words of Don Roberts, a college dean: “We are trying to transplant that culture to the whole university.”

One manifestation of this effort is modules in design thinking, which are produced by the Institute for Innovation and Entrepreneurship and implemented in a

variety of courses, including several offered by honors programs. One dean called these modules “a very big deal” because “you’re then getting to students as freshmen and sophomores.” In the message announcing the Institute for Innovation and Entrepreneurship, Tidewater’s current provost said the goal was to “develop a culture of innovation and entrepreneurship across all colleges and curriculum.” A few proponents of this idea went so far as to suggest that there be an innovation and entrepreneurship requirement in the general education curriculum, which one dean rejected, preferring instead “an abundance of different kinds of opportunities for students to engage with this.”

The second value was that, in the face of seemingly intractable social, political, and economic problems in the 21st century, innovation and entrepreneurship is seen as a highly effective means of problem-solving. Complementing this value of the problem-solving potential of entrepreneurship was a lack of faith in the ability of government, social institutions, or faculty to function properly or provide solutions. Danielle Ramirez of the Center for Social Innovation succinctly captured this lack of faith:

Professors are not equipped to give [students] the tools that they need to become problem solvers. And to go to a de facto answer that we need policy change...realistically, the days of us being able to do broad, sweeping policy changes are probably over.

There is little recognition of the tensions contained within this value, including the possible ineffectiveness of consumer products or startup firms to solve complex problems. Although Danielle Ramirez admitted that the product focus of the ethos is a

fair critique, she linked it to the fact that “we talk particularly in tech entrepreneurship about gadgets and things like that.”

Throughout the lionization of innovation and entrepreneurship at Tidewater, it is not clear students are taught that there is no app to address growing income inequality or racism. In fact, one of the more arresting aspects of this value is that it does not consider the darker consequences possible in entrepreneurship—that entrepreneurship may create social problems, not solve them. As an example, a professor of computer and electrical engineering recounted that two faculty members who recently won a state award for entrepreneurship formed a company through the TTEC incubator. The primary client for their battery technology is a tobacco company who plans to use it in their electronic cigarettes.

Redefining impact as it relates to research is the third value underlying the innovation and entrepreneurship ethos. One dean explained that basic research is still important, but

in general...universities are spending a lot more time figuring out how we can see the direct impact of this research. How can we transfer the technology? How can we make that easy for faculty to do? It may even be profitable for them.

At the heart of this value is the idea that research that is not translated into a business venture or, at minimum, does not have some type of external value is not impactful. In the words of Nicholas Johnson in the division of research: “If the impact [of faculty research] is only in a vague, academic sense, that’s not really impacting people.” Instead, he advanced the notion that “you have impact when your neighbors know that somehow you have improved their life without you having to tell them.” Sometimes external value

is interpreted to mean external money, especially obtaining grant money to support research. Some interview participants took issue with this, suggesting that not all ideas are appreciated in their time, nor are all ideas popular in a way that garners external money. A professor in the humanities bemoaned that the university increasingly asked the program to support itself financially, “which has meant that the funding tail has sometimes been wagging the research dog. And that’s a problem.” She noted that Galileo’s ideas were certainly impactful, yet “Galileo would have had a lot of problems getting funding at certain points in his career.” This has not diminished pressure for faculty at TU to think about the value of their work based upon these new definitions of impact. In fact, several faculty members remarked that the primary way in which they understand entrepreneurship relates to securing grants to fund their research. None of the faculty members interviewed for this dissertation expressed a desire to be entrepreneurial through the formation of a company or other commercial venture.

The fourth value is that innovation and entrepreneurship is not just designed for individuals; it is necessary for Tidewater as an organization. The chancellor of the state university system, Reuben Hofbauer, explained: “This whole notion of being entrepreneurial and innovative transcends the entire university, not just the academic side of things, but also the administrative side.” A college dean linked such administrative entrepreneurship to credibility and competitiveness: “I think we’re not credible if we’re telling students to go off and do this and we’re not doing it ourselves, and we can’t compete as a university unless we are more entrepreneurial.” Examples of how the university as an organization was seeking to be more innovative and entrepreneurial included developing large purchasing agreements to lower operational costs and

launching degree programs that generated profit for academic units, such as professional master's degrees. One dean cited the creation of a cybersecurity program funded by \$1.1 million grant from defense contractor Northrop Grumman as a byproduct of organizational entrepreneurship and "the positive aspects of aligning with business." Nicholas Johnson believed that, because of this value, Tidewater was "able to adapt and evolve and become less dependent and more entrepreneurial...in a sense be more like a private university in terms of our business model." Therefore, a crucial value of the ethos was that, as an institution, TU needed to be innovative and entrepreneurial, which generally amounted to reducing costs and seeking new revenue streams.

The final value that surfaced was that innovation and entrepreneurship fit this generation of students and spoke to the type of student Tidewater attracts. Students at TU were frequently described as "scrappy," referring to their persistence to overcome obstacles. The director of development for entrepreneurship programs commented that "I've always felt like this was a very entrepreneurial campus. The profile of the student on this campus is very persistent...scrappy, we sometimes call [Tidewater] students. That persona for being an entrepreneur is there." This generation of students, some argued, does not want to "sit in a lecture for an hour and to have this talking head on the stage. They want [it to be] interactive." Additionally, this generation of students was said to be more interested in the interdisciplinary and collaborative nature of entrepreneurship. Rather than sit in a class and listen to a professor talk about problems, they were characterized as wanting to develop solutions and were accustomed to immediate results. Thus, innovation and entrepreneurship is congruent with how this generation of students prefers to think and work. The director of TTEC observed that entrepreneurship is "all

the rage with students.” However, the extent to which the popularity of entrepreneurship among students sparked the creation of initiatives is arguable and explored in the next chapter. Even among those who acknowledged that entrepreneurship fits this generation of students also realized that student interests change, implying a degree of impermanence to the ethos.

Status of the ethos. As a closing to this section, I examine whether the values underlying the innovation and entrepreneurship ethos have truly found traction at Tidewater. Many interview participants believed that innovation and entrepreneurship were developing into institutional values. One dean believed that innovation and entrepreneurship “has emerged over time as a really important value for the university as a whole.” However, as values, innovation and entrepreneurship paled in comparison to references to excellence in teaching, access for students of the state, and the production of knowledge. Among several interview participants, there was reason to believe the project of constructing this ethos was incomplete. For instance, an academic executive, when asked if innovation and entrepreneurship were fundamental values of Tidewater, responded:

I think you’d know if we weren’t talking about it all the time. The fact that we talk about it all the time means it isn’t, right? So, I think you’ll know when it’s not a special thing. When you don’t have minors in it and you don’t have special courses in it.

This view is at odds with the notion that an institutional ethos, particularly one still in formation, requires constant reinforcement, explaining its strong presence in conversations and curriculum. Nicholas Johnson forecasted that “it’s becoming [a

value]. . . . Has it been adapted by the faculty as sort of an axiomatic thing? I think not quite yet.” He saw the incorporation of innovation and entrepreneurship as institutional values as subject to the “ecclesiastical pace” at which change takes place at a university.

Some interview participants believed it was possible that the push for innovation and entrepreneurship on campus could “die out,” or constituted a passing fad that would be replaced by something else in a few years. One interview participant assumed that innovation and entrepreneurship was a marketing ploy that would one day be replaced by something else that resonated with consumers. The notion that innovation and entrepreneurship was a passing fad was met by skepticism by many who saw this as an irreversible progression. In the words of Chancellor Hofbauer: “It’s become so infused in the policies and practices and expectations of institutions. . . . It’s inconceivable to me that this could ever be reversed or in that sense be a fad. We’re in an endless evolution in this regard, and the university, I think, will forever be a primary resource and catalyst for these changes.” Despite efforts to spread innovation and entrepreneurship campus-wide and inculcate the aforementioned values, questions remain about the place of the ethos in the future. For this reason, I argue that the status of the innovation and entrepreneurship ethos remains far from guaranteed. The next section traces the development of innovation and entrepreneurship from its origins in the colleges of engineering and business to an institutional priority and marketing campaign, highlighting in the process those campus actors who are championing the ethos.

Origins and Champions of the Ethos

Innovation and entrepreneurship were unquestionably happening at Tidewater University before there was any such ethos—even one still under construction—of which

to speak. This section illustrates the initial administrative sponsors of entrepreneurship in the colleges of engineering and business and the processes by which this largely peripheral activity in 1998 become an emerging institutional ethos by 2013. Central to these processes are the ambitions of a core group of central administrators, and this section reveals the role of several individuals whose names came up often during the course of interviews. In addition to demonstrating that the ethos was a top-level initiative, this section shows that the campus-wide promotion of innovation and entrepreneurship became increasingly interested in undergraduate education as a primary sphere of influence. Moreover, it illustrates that not all parts of campus felt included in the ethos, and there was substantial concern that the humanities were going to be left behind as a result of Tidewater's new orientation.

Table 9: Critical Events Timeline

Year	Event
1981	Patent committee formed in legal office
1984	Tidewater Technology Enterprise Collaborative (TTEC) founded
1986	Prince Entrepreneurship Center
1998	William Pierson assumes presidency
2000	Crandall Entrepreneurs Program founded
2001	Vincent Chin becomes provost
2006	Transfer student entrepreneurship program founded
2006	Bull's-Eye Cup business model pitch competition launched
2007	TU research park established
2007	Omar Nuri becomes provost

2009	Center for Social Innovation founded
2010	Honors Entrepreneurship House founded
2010	Henry Pryor assumes presidency
2011	Vision for Innovation and Entrepreneurship at Tidewater committee convened
2012	TideVentures launched
2012	Board of Trustees amends P&T policy
2013	Institute for Innovation and Entrepreneurship founded
2013	Request for proposals for Fearless Thinking blended/online courses
2013	P&T guidelines revision task force initiated
2014	Proposed entrepreneurship minor

Sites where the ethos developed. In 1998, entrepreneurship at TU was relegated to two centers on campus: the Prince Entrepreneurship Center (the Prince Center) and the Tidewater Technology Enterprise Collaborative (TTEC). Several new initiatives were launched from or under the auspices of these centers, particularly to expose more undergraduate students to entrepreneurship and related learning opportunities. I begin this subsection by chronicling the origins of the two centers and a few of the illuminative programs that were established. Starting in 2010, when current president Henry Pryor began his presidency, entrepreneurship was married to innovation and together made into a signature priority at TU, resulting in the creation of the Institute for Innovation and Entrepreneurship and a marketing campaign around the slogan “Fearless Thinking.” I show that these initiatives were housed in the offices of the president and provost, not academic colleges, and reflect an increasing interest in teaching entrepreneurship. As a result of the findings presented in this subsection, I contend that the influence of original administrative homes of entrepreneurship remains strong, while other areas of campus,

namely the humanities, are relegated to the margins in terms of involvement. The campus-wide spread of innovation and entrepreneurship can be linked to a core group of administrators, whose role in the development is described in the following subsection.

The college of engineering. The college of engineering has the longest history of entrepreneurship at Tidewater, and interview participants frequently acknowledged this history. In 1984, two former Navy researchers established a research center with “the vision that building companies is something that the college of engineering should do,” according to its current director, Tom Park. This vision was partially in response to what the co-founders saw as a problem at TU. Park explained:

This campus has something called OTT [the Office of Technology Transfer].

They collect invention disclosures, they patent a few things if a case could be made, and then they find people to license things to. That’s a necessary thing to do, but it doesn’t build companies.... So there was this missing piece, and this was the venture creation piece, and that’s what [the center] grew into.

The OTT began as a patent committee organized by the legal affairs office after the passage of the Bayh-Dole Act. Tony Christensen, an early staffer in the legal office and current research executive, remembered, “In the early days of Bayh-Dole, everybody thought everybody was going to be making a ton of money” off of patenting research. The committee turned into an office dedicated to managing faculty inventions with the help of a venture capital firm. University Technology Corporation offered Tidewater \$500,000 to establish the office, in exchange for a cut of any royalties. The firm eventually went bankrupt because many of the offices it helped establish were not lucrative enough. The college of engineering sought to fill a need for technology startups,

instead of technology licensing. The center it created eventually was called the Tidewater Technology Enterprise Collaborative (TTEC).

The first two programs in TTEC, however, were less about technology startups than serving existing companies in the state. One of the programs, for example, was a technology extension service, described by a TTEC brochure as “providing critical solutions to help [state] manufacturers grow and become more competitive.” Tony Christensen described the program as “an outreach to manufacturers kind of modeled on the cooperative extension service” in the college of agriculture. It would help manufacturers become more efficient, “just like our cooperative extension agents would go out and teach farmers how to be more efficient.” Soon thereafter, in 1987, TTEC began a separate program to “provide funding for research projects connecting...companies with [Tidewater] faculty to develop technology-based products, services or training.” Since its inception, the program has helped over 400 companies receive funding from the state to subsidize expensive research projects needed to improve their products or services. From these modest beginnings, TTEC continued to grow. Its director related that “TTEC has added programs over twenty-five years. In fact, TTEC is kind of a catch-all for a lot of programs that either nobody wanted or knew how to do or were failing at other places within the university.” At times, he claimed, “TTEC was the only one that said we’ll do it and proposed to do it.” There are now as many as sixteen programs housed within TTEC, including a technology startup incubator and venture accelerator (see Table 8 below). The entrepreneurship “catch-all” employs approximately fifty full-time equivalent staff people and researchers. This makes TTEC “five-times bigger than all of the rest of everything else on campus combined” in terms of budget and

personnel. The mission of TTEC now includes three areas: “educate the next generation of technology entrepreneurs, create successful technology ventures, and connect...companies with university resources to help them succeed.” I turn now to the area of education and reveal the origins of two programs created in TTEC during the 1998-2013 period.

Table 10: TTEC's "Entrepreneurship/Innovation Ecosystem"

Educate	Create	Connect
Crandall Entrepreneurs Program	Technology Business Incubator	Industry Partnerships Program
Honors Entrepreneurship House	Venture Accelerator	International Incubator
Transfer Entrepreneurs	Startup Company Lab	Biotechnology Research and Education Program
Minor in Technology Entrepreneurship	Entrepreneur Office House	Intellectual Property Legal Resource Center
Entrepreneurship Courses	\$75K Business Plan Competition	Manufacturing Assistance Program
	Startup Boot Camp	

Source: TTEC *Impact: 2011* report

In 2000, TTEC launched the Crandall Entrepreneurs Program for undergraduate students of all majors in their final years of study. The idea for the program came from Vincent Chin, a professor of computer and electrical engineering who, at the time, was dean of the graduate school and became provost for the years 2001 to 2007. According to a former director of the Crandall Program, “[Chin] had come over to the...incubator for the graduation of one of those incubator companies. And he saw students and faculty and everyone in the room and looked around and said, ‘Wouldn’t it be great if we could just put students in a dorm and let them start companies?’” He pitched the idea to an alumnus of the computer and electrical engineering department, Theodore Crandall, who had started a string of successful telecommunications companies and moved to Silicon Valley. Crandall agreed to fund the program with a ten-year, \$2.5 million gift. Thus, the

Crandall Program owes its existence to an administrator partnering with a wealthy donor. This set-up would be repeated in 2006, when a real estate mogul approached TTEC to start a similar program for community college transfer students.

The Crandall Program was housed in TTEC because both the donor and the administrator responsible for its creation were from the college of engineering, with ties to the same department. The first director, who was initially a staff person in the department of computer and electrical engineering, called the program a “true startup,” with no formal curriculum of which to speak. They recruited an initial class of sixty students and hosted a few events, usually around guest speakers. Over time, they officially decided to make the program residential, placing it in a new on-campus apartment complex. Additionally, they enacted a credit-based curriculum for the program. Impact reports proudly state that the Crandall Program has produced two companies in the magazine *Inc.*'s list of the nation's fastest growing firms. Another point of pride, according to the report, is the fact that 24 other programs based on the Crandall Program have been established at other universities. So successful was the Crandall Program that it inspired the creation of a spin-off program for underclassmen at Tidewater. In 2009, Chin's successor as provost, Omar Nuri, who similarly came from the department of computer and electrical engineering and left Tidewater to become president of another university after his term as provost, sent out a call for proposals for new living-learning programs. TTEC turned in a proposal, and it was accepted and named a new honors house to attract in-coming students to the university.

In a press release about the Honors Entrepreneurship House from 2010, TTEC's associate director for entrepreneurship education said the program “builds upon the

award-winning [Crandall Entrepreneurship Program] for juniors and seniors.” The director of the honors program recounted that the selection of entrepreneurship as the theme was decided by the provost: “I had nothing to do with the beginning [of the program]. I didn’t choose it. I didn’t negotiate the terms. I didn’t pick the director.” In his recollection, the program “came from the provost’s office as a task, with funding.” Thus, he felt he and his staff “had no voice in saying it was a priority,” but concluded about the program: “Would I have picked it? Maybe not. Looking back now, four years later, it’s a smashing success with students.” These two programs exemplify recurrent themes that support the main arguments of this chapter. First, the origins of the program reflect the decisive influence of administrators and, in particular, individuals with connection to the department of computer and electrical engineering. Second, the programs were educational in nature and designed to be open to undergraduate students from all disciplines, demonstrating the increasing desire to make entrepreneurship education a campus-wide offering. Nevertheless, both programs remain squarely under the administrative umbrella of TTEC in the college of engineering with little to no engagement with other academic colleges. The idea that entrepreneurship existed in silos with minimal communication and collaboration was a frequent remark made during interviews. The next subsection foregrounds the other primary silo, the college of business, after which I discuss attempts on the part of the offices of the president and provost to bridge the gap between the two colleges and further expand innovation and entrepreneurship at TU.

The college of business. Like its counterpart across campus, the college of business traces its history in entrepreneurship to the mid-1980s. In 1986, then dean of the

college, Rick Truman, set out to establish an entrepreneurship center. He partnered with Jamison Prince, a wealthy investor who was a college of business student before leaving Tidewater to work on Wall Street. In the words of Christine Neilson, the current director of the center, Dean Truman “really felt like entrepreneurship belonged in academic institutions,” and as a result of his work, established at TU one of the nation’s first entrepreneurship centers. The Prince Entrepreneurship Center evolved over time in terms of its mission and offerings. Neilson explained: “The [Prince] Center is always changing on what the offerings are. Sometimes it’s been more research focused, sometimes very MBA focused.” Recently, they have sought to shift from a focus on company formation to “this kind of community feeling.” Referencing the “ecosystem,” Neilson positioned the Prince Center “at the center of the students, local entrepreneurs, faculty members, investors, advisors, other organizations. We’re really a match-making platform in a lot of ways.” One of the center’s major programs is an angel investor network, where “a wealthy individual who has exited from usually a technology company...who likes to making investments in early stage companies” is introduced to local companies seeking capital. The service, explicated Neilson, consisted of “looking at companies from around the region...that we think may be most appealing to our investors. Then we really coach the companies on how to present, give them feedback on their business, things like that.” In addition to entrepreneurship courses and a startup academy for student ventures, the Prince Center is known as Tidewater’s main convener of business model pitch competitions.

Twice annually, the Prince Center sponsors its Pitch Price competitions, which provide \$3,500 in startup funding to fledgling student businesses. Prior to the

competition, students are encouraged to attend one of the Innovation Sessions held each Friday in the Center's offices. Students can hone their ideas, meet with entrepreneurs, and practice their pitch at these sessions. The biggest competition the center manages is called the Bull's-Eye Cup, which brings student companies from around the country to Tidewater in order to compete for over \$70,000 and access to in-person advising from a wealthy alumnus turned entrepreneur. The Bull's-Eye Cup takes place in a massive auditorium and garners national media attention. Because of its expertise in organizing competitions, other units on campus have looked to the Prince Center for guidance and assistance. For example, the college of social sciences began its own business model pitch competition in 2012, and it works with the Prince Center to deliver practice sessions with student contestants. From 1998 until 2010, entrepreneurship activities at Tidewater could chiefly be found within either the Prince Center or TTEC. Most interview participants pointed to these centers as the where entrepreneurship began at Tidewater, and many suggested that the two fought for ownership over entrepreneurship until it became an institutional priority during the administration of Henry Pryor.

The colleges of business and engineering are regularly cited as places where entrepreneurship began at Tidewater, and their influence over how the concept is understood and takes shape is patent. Don Roberts, a dean at TU, stated: "innovation and entrepreneurship started off in the business school and landed in the engineering school roughly about the same time, about twenty-five to thirty years ago." Samantha Stone of the Institute for Innovation and Entrepreneurship likewise noted that "there was a time on campus when there were these two anchors and nothing else." Many interview participants referred to these sites as "pockets" where entrepreneurship was happening at

Tidewater and would continue to grow, irrespective of any campus-wide push. However, they noted these “silos” were not always in conversation with and sometimes competed against one another. As the director of the entrepreneurship honors house told it:

It’s been a little bit of a challenge fitting [the program] in with the colleges on campus and some of the faculties because it’s been a stepchild to the traditional vertical disciplines.... Where does [entrepreneurship] sit and who gets to own it? You know the fight between engineering and business, and it’s not just on this campus.

TTEC and the Prince Center did not see there being a conflict. The directors of both programs said that they serve different functions on campus, with TTEC focusing on technology-based startups and the Prince Center working more closely with undergraduate students. Still, the perceived gulf separating these two sites on campus was used as a pretext for more centralized involvement on the part of the offices of the president and provost. Former president William Pierson put it this way:

The fact of the matter is, for 25 years, you’ve had both the [TTEC and Prince programs], and they were actually working against their own best interest because they were almost struggling to see who was going to be the most important one. So that was one of the big goals of the whole plan was to bring those guys together.

The plan he mentioned was to create an Institute for Innovation and Entrepreneurship, and it was developed in direct response to the strategic priorities of President Henry Pryor.

The offices of the president and provost. On April 28, 2011, Henry Pryor was inaugurated as 33rd president of Tidewater University, although he had served in the role since fall of 2010. In his inaugural address, Pryor listed “innovation and entrepreneurship” the second strategic priority of his administration, just behind student opportunity and achievement and in front of internationalization. Quoting his address, Pryor decreed: “The vision is to make innovation and entrepreneurship an integral part of our academic culture; to expand curricular and co-curricular opportunities; to accelerate the commercialization of ideas; to make the University a catalyst for economic vitality in [the region].” A landmark initiative to achieve this vision was the creation of the Institute for Innovation and Entrepreneurship, described as “a one-stop concierge service” that “will coordinate under one umbrella the many idea-generation and venture-creation activities on campus.” Pryor attributed the idea for the Institute to former president William Pierson, who Pryor tasked with chairing a committee regarding the “Vision for Innovation and Entrepreneurship at Tidewater University” the fall after his inauguration. The recommendations of this committee informed the creation of the Institute and other initiatives to make innovation and entrepreneurship a standout feature of the campus.

The committee consisted of William Pierson, the vice president of industry relations, and twelve other individuals, many of them coming from the private sector. In the committee’s final report, the necessity of making innovation and entrepreneurship a strategic priority was framed as follows:

A public research university’s mission today must embrace a contagious culture of innovation and entrepreneurship to prepare the way to solution of...critical problems. Every function of the University can benefit from innovative thinking

whether it stems from administrative operation, research, teaching, service or creating value from ideas. Innovative thinking must be nurtured in every member of our community and introduced to all students early in their studies.

Recognizing that the colleges of business and engineering would seek to retain control of their programs, the committee noted that some “IE activities will be targeted to a single unit,” while “other IE services are needed by the entire campus.” The Institute for Innovation and Entrepreneurship would address this latter need, becoming the “public point-of-contact for IE at the university” and “balancing nationally competitive and comprehensive educational programs and the creation of initiatives of commercial value.” The Institute would be headed by a renowned director that reports to the president and “lead a first-of-its-kind, campus wide program that will become [Tidewater University’s] signature design of a 21st century university model for inspiring innovation and entrepreneurship.” After the creation of the Institute, the committee recommended introducing the vision to the university community.

Henry Pryor followed many, though not all, of the committee’s recommendations. Administratively, the committee called for as many as five assistant directors, and it suggested that the Office of Technology Transfer be moved to the new Institute. To date, neither recommendation came to fruition. The OTT became part of a parallel initiative coming from the state legislature to merge Tidewater and another campus in the state system that is home to professional schools, like dentistry and medicine. In the end, the merger did not happen, but a new entity was formed, known as TideVentures, to spur greater technology commercialization from collaborative research. The technology transfer offices at both campuses joined together and reported to the director of

Tide Ventures. Nevertheless, Pryor did appoint a well-known figure as director of the Institute, Michael Briggs, who was formerly the director of TTEC. In the press release for the institute, Briggs' statement closely matched the committee report: "The goal of the [Institute] is to ignite the entrepreneurial spirit throughout campus. We will build on the strong foundation of innovation that already exists and foster new collaborations that leverage diverse strengths." Pryor decided to house the Institute in the office of the provost, which invested some money to complement the nearly \$2 million coming from the state. This decision was noted by several interview participants as a sign of the importance of innovation and entrepreneurship on campus. "The [Institute] is different," remarked Samantha Stone, "We are now bringing it into the academic curriculum. This [Institute] is out of the provost's office, where the academic curriculum is designed. So that's our differentiator, and what's going to make this unlike anything else." As follows, the implication is that being under the auspices of the office of the provost means that the Institute will be integrated into the curriculum and serve as a "central hub" for campus.

The vision for innovation and entrepreneurship became more widely publicized than any of Pryor's other strategic priorities. In fact, it became the basis for a new marketing campaign around the slogan "Fearless Thinking." Visitors to campus are now greeted by references to "Fearless Thinking" at every turn. Banners attached to light poles lining campus streets showcase faculty and students who exemplify fearless thinking. The magazine which the office of university relations produces came out with an entire issue on "How to Be Fearless," featuring essays from six notable alumni and coaches. An admissions executive, Carol Hawthorne, indicated that all of the materials they produce interface with this marketing campaign. In fact, the application to attend

Tidewater now includes an essay on how applicants are innovative and entrepreneurial. Accordingly, there are efforts to communicate the place of innovation and entrepreneurship before students arrive on campus, demonstrating the anticipatory socialization Kezar (2007) found to be a mechanism in the creation of an institutional ethos.

Increasing interest in teaching entrepreneurship. The trajectory of innovation and entrepreneurship at TU can be characterized as an increasing interest in teaching undergraduate students about entrepreneurship, as opposed to actual entrepreneurial activity in the form of technology transfer, partnering with industry, and launching startups. When Tony Christensen described his early work with the OTT and the start of TTEC, he joked that these efforts were “before [entrepreneurship] was cool.” At that time, he related, Tidewater “didn’t focus on student entrepreneurship...we were focused on two things. One, getting more technology from faculty and then partnering with industry.” Only later were students factored into entrepreneurship programming. The reasoning behind this trajectory is examined in the next chapter. Nevertheless, it is worth noting that several interview participants separated what one person called “hard” and “soft” entrepreneurship. Hard entrepreneurship consisted of the work being done to license technologies, incubate new firms, and translate faculty research in commercializable products. By contrast, soft entrepreneurship was the domain of the Institute for Innovation and Entrepreneurship and other largely educational centers. Of the two types of entrepreneurship, there was a pervasive belief that hard entrepreneurship would continue to thrive into the future, while soft entrepreneurship may be more temporal. One of Tidewater’s budget executives stated this as follows: “One can imagine

in five or ten years that [education] piece will have just gone by the wayside. But in five or ten years, it is unlikely that we still won't be trying to generate revenue.”

Sites on the margins of the ethos. As “Fearless Thinking” became ubiquitous on campus, there were sites that remained on the margins of the conversation surrounding innovation and entrepreneurship. The colleges of business and engineering have, for the most part, enthusiastically embraced the ethos, and many interview participants pointed to the increased collaboration between the Prince Center and TTEC as evidence of the desire to propel innovation and entrepreneurship out of its traditional silos in order to reach more faculty and students. Still, an inveterate concern was that some colleges were going to be left behind. A program director asked, “what are the opportunity costs of all of this? I think when we talk about opportunities for entrepreneurship, it seems like we’re saying, if you’re interested in learning Virgil, or thinking about what it means to be happy, you’re not going to make any money, you’re a loser.” Disciplines that do not intersect with the market are “not being talked about. And it’s not being made attractive to the student whose trying to figure out” what to study. In particular, it was noted that the humanities are not as involved in Tidewater’s innovation and entrepreneurship activities.

Amy Curtis, professor in the humanities, recalled that “a couple of people that I’ve talked to have voiced concern that in this environment, the humanities are going to get left behind.” While she acknowledged that “this anxiety about the humanities is not new,” there is a feeling among some of her colleagues that Tidewater is “becoming a very elite trade school.” She clarified that the humanities are partly to blame for not talking about their worth, but ended by saying: “I don’t want to sound like Pollyanna. There are

problems. More corporatized we've become. And more fixated on money, making the humanities look weaker." Another professor in the humanities expressed exclusion from the conversation more concretely: "In my observation, the push of these things is completely irrelevant. I've never heard it come up in a department meeting." More generally, one interview participant voiced concern not just for the humanities, but for the future of liberal arts education. She recalled that "it used to be that a well-educated person was someone who not only developed critical thinking skills, but was also enormously embedded in the history of the culture, and I don't know that we can afford to lose that." In her estimation, the promotion of innovation and entrepreneurship threatened the liberal arts. "This was a product of liberal arts education, that you were educated for life.... And that means that you have art, music, and a love of literature and all of those things that enrich one's life." There was a clear sense among many of the interview participants that the Tidewater University guided by an ethos of innovation and entrepreneurship created some parts of campus that were winners and others that were losers.

Champions of the ethos. Most interviews included a question about when participants remembered first hearing about innovation and entrepreneurship as they went about their lives on campus. Interestingly, many of them associated it with periods corresponding to the administrations of a core group of university leaders. More specifically, there were four administrators whose names were frequently mentioned as being instrumental in the promotion of innovation and entrepreneurship. Two administrators served as president, William Pierson and Henry Pryor, and two served as provost, Vincent Chin and Omar Nuri. Three out of the four administrators were

engineers, and two of them rose up the ranks from the department of computer and electrical engineering. At the same time, a theme in the interview data was that the decision to make innovation and entrepreneurship an institutional priority did not arise in response to a groundswell of faculty demand or support. The choice of innovation and entrepreneurship as institutional ethos was made in centralized offices in top-down fashion.

Former provost Nancy Martin responded when asked about her first experiences with innovation and entrepreneurship: “Our previous president, [William Pierson], was very keen on this concept. He was an engineer, and it’s logical that he would have seen the assistance to business and the growth of business as integral to what they do.” After Pierson, Martin noted, current president Henry Pryor “came in and took up that idea and continued to develop it. So, it’s been a continuum, but he [Pryor] certainly is very interested in this particular aspect.” A former associate provost for faculty similarly voiced the opinion that innovation and entrepreneurship “had a lot to do with the president of the university. So I think it came under [Pierson], who was an engineer and also understood that the landscape was changing. And then, of course, you’ve got it particularly under the new president who thinks a great deal about it. In fact, for him, it’s sort of the centerpiece of what he thinks the university should do.” Some interview participants put forth the view that Pierson laid the groundwork for Pryor, who is now seeing the positive outcomes of his predecessor’s labor. For example, Don Roberts in the college of engineering explained, “It took five years to move that inertia when [President Pierson] was saying this stuff, and then [President Pryor] is going to be the one who gets to actually execute it. [Pierson] started it, and now [Pryor] gets to see it fully realized.”

However, there was a sense that President Pryor has pushed innovation and entrepreneurship more than Pierson.

Many interview participants observed that Pryor mentions innovation and entrepreneurship in all of his speeches, representing, to borrow from one dean, a “central piece his vision for the university, no question about it.” This vision, it was remarked, has “trickled down.” Several interview participants noted that resources are being committed to translate the ethos into programs. This worried one interview participant, as it encouraged well-intentioned but under-informed people to try and embrace the vision: “Once you put funding behind it and a mandate, you have a lot of people entering a field who don’t have knowledge about it.” The exact amount of funding is not clear or readily available, but Travel Campbell-Green suggested that the resources devoted to it are still modest, “less than one percent” of the operational budget. For one dean, Vanessa Trevali, the president’s vision represented more of an obligation than a vision:

This is how the university works. The president announces this is one of his priorities. A couple of times in passing, never anything director with an email, but simply in passing President [Pryor] has turned to me over the last couple of years and said, ‘You are going to help me get this done.’ But if he hadn’t said that, I would have understood that to be the case.

While the trend has clearly been one of increasing emphasis under the current administration, interview data points to William Pierson and Henry Pryor as the two most critical champions of the ethos.

While the influence of these two administrators proved to be most significant to many interview participants, two provosts were also referenced on a regular basis:

Vincent Chin and Omar Nuri. One of the Tidewater's chief budget officers, Dorothy Winters, recounted how, in a period of rising costs and falling state appropriations, these two provosts encourage academic units to be entrepreneurial. "I would say it began with provost [Chin]," she reflected, "and it certainly continued with provost Nuri. It was this directive to go forth and be fruitful, be creative, be entrepreneurial, create streams of revenue to help you do what you need to do." As a result, many units started professional master's degrees with "mixed results," meaning some, such as those in engineering, geographic information systems, and finance, were lucrative while others were not. In addition to this directive, Chin and Nuri were mentioned frequently because of their role in helping to launch new programs related to innovation and entrepreneurship, including the Crandall Entrepreneurs Program and the Honors Entrepreneurship House. An academic executive for faculty stated that Nuri "saw the world that way, in all respects" and believed entrepreneurship to be a good way "to optimize resources." Both Chin and Nuri were products of engineering departments, and the place of engineers in central administrative positions was not lost on many interview participants. Nicholas Johnson argued that "if you look around the country, engineers have a tendency to rise to the top administratively." At Tidewater, in particular, he opined, "If you go back, except for president Pryor, all of the senior administrators at this university for the past thirty years have been scientists or engineers." The implication is that not only is the innovation and entrepreneurship ethos attributed to a core group of administrators, but that the values of these administrators hold as a result of their academic training and professional lives have inordinate sway over the rest of campus.

Interview data points to the fact that the promotion of innovation and entrepreneurship at Tidewater has come from a small number of voices. One professor in the sciences asserted, “I don’t think there’s been any effort at all to get buy-in from the chairs [of the various departments] as far as I know.... It feels very top down. Extremely top down.” William Pierson admitted that “it’s fair to say it was not a groundswell of interest from students and faculty members. It was well established on the campus in the business school and in engineering. And the rest of campus sort of looked at it as a province of the business school and engineering.” Yet, he defended his drive to make innovation and entrepreneurship a campus-wide priority by saying that, once he started talking about it, “people were very jacked by the whole thing.” Nicholas Johnson explained the lack of support from faculty by claiming that they largely “ignore a lot of the stuff that goes on at the university and go about their business.” However, data suggests an alternate reason why faculty members have not supported innovation and entrepreneurship as Tidewater’s ethos: they are not sure it is moving the university in the right direction. A professor in the sciences illustrated this sentiment: “I think the emphasis is too strong. Just the way it sounds to people is that everybody needs to be doing this, and we’re not even clear what this is, but it sounds like it has to do with money.... I do fear that there’s too much emphasis on it.” Hence, the champions of the ethos, according to interview participants, were central administrators, many of them engineers by training and profession. At no point during data collection was the view expressed that the ethos came by way of popular demand or with ample buy-in from faculty members.

Connecting Emerging Developments to Theory

The preceding two sections, which together provide a snapshot of the origins of the innovation and entrepreneurship ethos at Tidewater University, support several of the theoretical propositions elaborated in chapter three. At a basic level, the values of the ethos align with key elements of Slaughter and Rhoades' theory of academic capitalism. The norms and values of the academic capitalist knowledge/learning regime include treating knowledge as a raw material and academic research products as commodities that can be owned, marketed, and sold. The same value is apparent in the innovation and entrepreneurship ethos, whereby the impact of research is defined in terms of its external value and problems are frequently believed to be solved through the creation of products and businesses. Additionally, the academic capitalist knowledge/learning regime views public universities as businesses that link with corporations to address funding shortfalls and capitalize on market opportunities. Interview data unmistakably confirmed that Tidewater's ethos valorized administrative entrepreneurship, which typically meant reducing costs and seeking revenue streams. Lastly, the academic capitalist knowledge/learning regime placed a premium on cultivating faculty entrepreneurship and training students as entrepreneurs as part of an orientation to economic relevance and growth in the knowledge-based economy. The innovation and entrepreneurship ethos, perhaps above all other values, promoted the idea that all campus constituents should embrace entrepreneurial thinking and incorporate it into their lives. As follows, Tidewater's institutional ethos is a mirror to the academic capitalist knowledge/learning regime, providing evidence to support Slaughter and Rhoades' core claim regarding the nature of change in public higher education.

One of the theory of academic capitalism's constructs is also highlighted in this chapter: interstitial organizational emergence. This construct refers to the creation of units within universities to manage activities related to revenue generation, such as technology licensing offices. The birth of several units, such as the Office of Technology Transfer, TideVentures, and TTEC, clearly exemplify this construct. Although the next chapter examines the effectiveness of these units in generating revenue, their role is "boundary spanning, bringing universities, corporations, and the state closer together" for the purposes of creating income and spurring economic development (Slaughter & Rhoades, 2004, p. 23). Moreover, a critical argument of this chapter was that the ethos was a top-down initiative coming from central administrators. According to Slaughter and Rhoades, university presidents, as heads of wealthy institutions that produce knowledge, have become more important actors in the new economy. This chapter demonstrates that "presidents are now often called university CEOs, indicating that they have management powers similar to corporate CEOs. Colleges and universities could not engage in academic capitalism without the involvement of university presidents" (p. 207). Without Tidewater's two most recent presidents, innovation and entrepreneurship may not have become an institutional priority and target of investment.

Beyond the theory of academic capitalism, this chapter elaborated one other theoretical proposition, derived from the new sociology of knowledge. The fifth theoretical proposition contends that public universities wield power in validating certain ways of thinking and being in society through its knowledge-processing functions. In this way, the structures that are built around categories of thought comprise a theory of knowledge that has the potential to powerfully shape society. This chapter illustrated the

rise of many new programs to teach and promote entrepreneurship—as a process and way of thinking—based upon the value that 21st century problems cannot be solved through policymaking, social institutions, or intellectuals. Rather, these programs endorsed entrepreneurship and, by extension, taking ideas to the marketplace, as the best means of effecting change and solving intractable issues. At the same time, interview participants noted that certain bodies of knowledge were made less attractive or were overlooked, such as the humanities, because they do not intersect with the market and do not offer the same prospects for wealth generation. Tidewater University essentially made a statement about what knowledge is valuable and sought to shape both how actors defined problems and looked to provide solutions. As a result, TU is not simply responding to pre-existing environmental conditions. It is also contributing to the creation and perpetuation of a social order, in this case free market capitalism.

Conclusion

This chapter fulfilled two tasks in response to the first research question, which asked: through what processes did the innovation and entrepreneurship ethos develop at Tidewater University? The first task entailed better understanding the ethos itself and the extent to which it had been incorporated into the fundamental values of the institution. I showed through interview data and documentary evidence that innovation is commonly understood only in connection with entrepreneurship, and many interview participants took issue with how the concept is employed. Entrepreneurship was typically conceptualized as a process, mindset, and ecosystem. The thread running through all of these conceptualizations was the preponderance of language and examples taken from the for-profit sector. There was a bias towards the creation of consumer products and

company formation as the intended outcomes of entrepreneurship, while social entrepreneurship was a mere afterthought. Through analysis of these conceptualizations of innovation and entrepreneurship, I culled five values through which the innovation and entrepreneurship ethos is expressed:

- innovation and entrepreneurship are pertinent to all academic disciplines and any type of organization;
- innovation and entrepreneurship are a means to problem-solving in the 21st century;
- innovation and entrepreneurship produce greater impact than traditional forms of research;
- innovation and entrepreneurship applies to the administration of the university;
- innovation and entrepreneurship befits this generation of university students.

Although interview participants unequivocally stated that administrators at Tidewater were trying to make innovation and entrepreneurship institutional values, questions were raised about whether these ideas truly have traction. Many interview participants suggested that innovation and entrepreneurship may be more of a passing fad or marketing scheme than constitute core university values. Consequently, I argued in this chapter that the ethos is a project under construction whose future is uncertain.

In the second part of the chapter, I viewed the task as uncovering the sites out of which the ethos grew, and those university actors who were instrumental in its emergence. Interview data displayed a pattern of development, such that entrepreneurship began in the colleges of engineering and business in the mid-1980s. New programs, most of them educational in nature and targeting undergraduate students, were launched within

these administrative homes, often by deans in collaboration with a donor. However, the role of the offices of the president and provost grew over time, and currently many of the initiatives, including the Institute for Innovation and Entrepreneurship, is managed centrally. This process of centralization indicates another important finding of this chapter, which is that the ethos was initiated by administrators, especially presidents and provosts. Several interview participants noted that there was little buy-in from faculty and that the thrust to associate TU with all things innovative and entrepreneurial came from top down. The assumption seems to be that it is the place of the president to establish the institution's priorities, and, presently, there have been no opportunities for forums or mechanisms of shared governance to provide feedback. This is all the more striking, given that many interview participants did not believe innovation and entrepreneurship were the appropriate basis for guiding Tidewater's future endeavors. I maintain in this chapter that the innovation and entrepreneurship ethos came from top-level decision making and signals the growing power of central administration in university governance.

The next chapter shifts from exploring the nature and status of the ethos to understanding the motivations for adopting it. In particular, I look at how university leaders understand higher education's political economic landscape and the specific challenges that Tidewater confronts. Several rationales are examined in some detail, including the theory of academic capitalism's persistent claim that entrepreneurship is intricately linked to the search for new sources of revenue for the institution. As the next chapter demonstrates, revenues from entrepreneurship represent a dream deferred, making room for alternate explanations for why, out of a vast universe of possible values, TU has selected innovation and entrepreneurship as its institutional ethos.

CHAPTER FIVE: EXPLANATIONS FOR THE ETHOS

Everything that's happening here is basically happening around the country. Every higher education thing you pick up and read, it's the same story. We're in a bit of a crisis right now, and we've probably gotten ourselves there.

-Budget executive

My speculation would be that, in the mind of whoever came up with this, innovation is related to invention, and entrepreneurship you could see as relating to the land-grant mission—translating things that happen on campus into things that are good for society.

-Professor in the sciences

Introduction

Applying their theory of academic capitalism, Slaughter and Rhoades (2004) would posit that the decision to initiate and support an institutional ethos built around innovation and entrepreneurship is a manifestation of the academic capitalist knowledge/learning regime. This regime, they argue, developed largely due to the push of declining state funding for higher education and the pull of opportunities in the marketplace to locate new revenue streams. In this way, the explanation for why university leaders selected innovation and entrepreneurship, out of a vast array of ideas to strategically guide the institution, centers upon shifting resource dependencies—the substantial loss of government-based resources on one hand and the increasing pursuit of private, external resources on the other. As this chapter demonstrates, however, resources constitute but one piece of the myriad motivations driving the innovation and entrepreneurship ethos at Tidewater University. The purpose of this chapter is to answer the second research question: why did university leaders initiate and support the innovation and entrepreneurship ethos? The individuals that were interviewed for this dissertation clearly situated this decision within a dynamic political-economic environment, characterized by structural and symbolic challenges.

The first part of this chapter is dedicated to developing a complete portrayal of higher education's political-economic context, as it is understood by a cadre of Tidewater's leaders, which in this study consists of program directors, deans, associate provosts, provosts, vice presidents, presidents, and the chancellor of the state university system. Framing this first section is an illuminative text, *The Post-Land Grant University*, which was based upon a 1981 grant-funded report on TU done at the request of the president at that time. Many of the conditions attendant upon higher education described in this text from the early 1980s are reflected in the views of interview participants in the present. Chief among the political-economic factors mentioned by university leaders are transformations in the American economy associated with globalization, particularly the perceived advent of the knowledge-based economy and the role of the university within it.

Additional factors that were regularly mentioned as influential in shaping the institutional ethos were: 1) government disinvestment in higher education; 2) elevated accountability expectations from the state; 3) increasing critique of the value of a college degree; 4) heightened institutional competition; and 5) intensifying student-consumer demands. Consequently, the political-economic environment in which university leaders position Tidewater bears some resemblance to two core features of Slaughter and Rhoades' theorization: the new economy and the neoliberal state. However, I contend that the presence of other factors yields a more abundant set of challenges to which university leaders believe they are responding in crafting and promoting the innovation and entrepreneurship ethos. These factors suggest gaps in the theory of academic capitalism related to the management of accountability expectations, the legacy of state

service, and the pursuit of legitimacy and prestige. In the second part of this chapter, I present explanations for the innovation and entrepreneurship ethos that emerged during interviews. Four explanations are presented and evaluated: the search for new sources of revenue, the influence of the university's land-grant heritage, the pressures of keeping pace in a competitive higher education field, and the desire to attain and attract faculty members and undergraduate students.

This chapter makes a case for refining the theory of academic capitalism and provides evidence confirming the validity of several of the theoretical propositions developed in chapter three. Specifically, interview data brings Schugurensky's (1994) heteronomous university model to fruition, providing rich detail of the twin forces of commercialization and state control. Connections can also be drawn between the interview data and perceptions of what garners legitimacy and prestige in the higher education field, such as contributing to economic growth and incubating the next Google or Gatorade. In the last part of the chapter, I attempt to further develop these emerging links to theory, thereby showing the ways in which the institutional case informs wider conversations regarding the nature of change in U.S. higher education. Like chapter four, I divide the majority of the chapter's content into two sections, one devoted to the political-economic context and the other exploring explanations of the ethos.

Perceptions of the Political-Economic Environment

The post-land grant university? In the summer of 1979, Tidewater's then president asked Malcolm Moos, a political scientist and former president of the University of Minnesota, to direct a strategic planning study funded by a \$190,000 grant from the Carnegie Corporation. A major reason for commissioning the study was to

“devise strategies that would enable the University to achieve new economies and greater productivity for the hard times ahead” (p. v). The result of the two-year effort was a report and subsequent book titled *The Post-Land Grant University* (Moos, 1981). This book cannot be readily found on administrator bookcases, instead finding refuge deep in TU’s library. However, its relevance to this dissertation cannot be disputed. Its first chapter begins by asking, “What does it mean to be a state university in America in the 1980s?” (p. 2). The answers, it boldly declared, “are imbedded in the history of state universities and land-grant colleges and in the new tasks imposed upon public universities by contemporary conditions” (p. 2). The conditions of which it speaks include “the changing American economy,” especially the “sudden slowing of [its] century-old economic growth and the decline in the nation’s position as the world’s dominant economic power” (p. 15) They also include demographic shifts, such that Moos claimed “the United States is becoming an increasingly geriatric society” (p. 57).

One of the most significant upheavals affecting higher education was “the emerging information society,” marked by drastic innovations in the “assembling, exchange, and dissemination of information”—activities that lie at the heart of the university enterprise (p. 23). Lastly, a chapter is devoted to regulations thrust upon universities, referring in particular to “growing demands for centralized, detailed budgeting systems,” which are described as “controls that leach the quality and creativity of universities.” According to Moos, “the nation cannot afford laissez-faire higher education. Some coordination and cooperation to provide order...is essential” (p. 31). However, he underscored that autonomy should be prioritized because it has led to the development of high quality institutions. In response to these and other conditions, the

study concluded that it was necessary for Tidewater and similar universities to maintain “old land-grant themes, but with an updated approach” and also revive “a few old land-grant themes that have been allowed to atrophy, but which need renewed attention” (p. 11).

Despite the passing of some 30 years since the publication of *The Post-Land Grant University*, the conditions it describes are strikingly similar to the political-economic context in which Tidewater operates, according to the leaders who participated in this study. This section chronicles their responses to a series of questions related to the wider environment in which TU is situated and the main challenges it confronts.

As was true at the outset of the 1980s, university leaders almost unanimously noted that the American economy had changed in ways that redefined the role of the university and its knowledge production capacity in society. Furthermore, there was a pervasive belief that the financial “model”—as it was termed by interview participants—of the university was in crisis, in large measure because of government disinvestment in higher education and, at the same time, ever-increasing state expectations and reporting demands with respect to what the university accomplishes with those diminishing funds. Over the course of 1998 to 2013, university leaders believed that competition had augmented in tandem with the institution’s improved reputation, and this competition included using amenities to cater to what were perceived as ascending student-consumer demands. The question of resources, of course, permeates many of these features of the political-economic context, especially with respect to the university’s relationship with the state. However, as interview data shows, the picture that emerges is more complicated than the pursuit of new revenue streams to account for shortfalls.

The jobs are not coming back: the changing American economy. Many interview participants believed that the U.S. economy was undergoing dramatic transformation, the dimensions of which directly bear upon the future of their institution. The common thread weaving these dimensions together is globalization, as evinced by the perceived ascension of the knowledge-based economy, the loss of manufacturing jobs, and the need to rediscover America's comparative advantage in global trade through innovation. The notion of the knowledge-based economy was one of the most frequent ways of describing economic change. One program director suggested, "We're fairly clearly twenty years into some new version of an industrial revolution with information technology." This revolution, according to Travis Campbell-Green, is predicated on the idea that "to a larger extent than ever before...jobs and the economy [are] based on new knowledge, you know, new industries." The implications of the transition to a knowledge-based economy for universities were believed to be profound. In the words of the Don Roberts, a dean of one of the colleges, Tidewater's role in the "human capital business" is emphasized in a budding knowledge-based economy:

People have figured out that the future of the next economy is a knowledge-based economy, and the only way to get there is that you take your talent, you educate it, and you educate it in the best facilities with some of the best people and you tell them to innovate.

While "economic workforce development" was also frequently mentioned by Chancellor Hofbauer, he agreed with Bill Gates' more general assessment of the new role of the university in society: "I remember a talk Bill Gates gave once somewhere where he said, 'There's no example of an active, vibrant knowledge economy that doesn't have at its

center a strong university.’ It just doesn’t exist. I think he’s right about that.” What the knowledge-based economy symbolized for many interview participants was the death knell of American manufacturing and the need to prepare TU graduates for jobs of the future.

The economic shift underway was often described in terms of phases, and the phase preceding the rise of information/knowledge was based upon manufacturing. “In the beginning, it was all agrarian and farm sciences and that kind of stuff,” Keith Meyers, the director of an entrepreneurship living-learning program, explained, “and then it became manufacturing and then it became, to some extent, knowledge and information and IT and things like that.” Whereas “30 years ago the driver of the American economy was making cars, sort of production line manufacturing,” now the “nature of the American economy and what drives it has moved much closer to what universities do,” observed Chancellor Hofbauer. Consequently, the security that came with employment opportunities at firms associated with this phase is a relic of the past. Former provost Nancy Martin remarked, “[many] of the kinds of jobs that we had here have gone, they’ve gone overseas.” When asked to explain further, she captured well what many interview participants believed with respect to jobs and the economy:

At one point, in the 1950s let’s say, everybody got out, all they wanted to do was go into some safe little net of a large corporation where benefits [were available] and [workers] would be protected with a pension. Well, that’s gone! That’s just not an opportunity. So, students today coming out, the world out there is much less safe. There are no safety nets, there’s no place you can go.... We want our

students to be able to go out and deal in this world, and to think creatively and not be afraid to start something new, to change jobs.

Therefore, with the shift from manufacturing to the knowledge-based economy, there was a clear desire to prepare students for uncertainty and risk. Several interview participants predicted that students would need to be ready to change jobs frequently, in what Tony Christensen characterized as “free agency kind of employment.” In fact, there may not be jobs waiting for students when they graduate, requiring them to innovate and create their own job. As another research executive proclaimed: “Everyone needs to learn to make a job, not take a job. That’s increasingly going to be the future.”

Innovation was perceived as necessary not only to create jobs, but also to ensure America’s comparative advantage in global trade. There was a persistent belief among interview participants that, in the face of declining national competitiveness, the United States needed to concentrate on what it does better than any other country: innovate. Travis Campbell-Green explained this idea as follows: “If you don’t have a price advantage in labor like China or Vietnam or India, and you don’t have a resource advantage, what is your advantage? It’s got to be innovation. It’s got to be the creation and utilization of new knowledge.” The reason that innovating in the use of knowledge was seen as a comparative advantage was because of America’s universities. Don Roberts exemplified this advantage: “Fortunately, the biggest thing we have is our higher education system. Of the top 100 universities, probably sixty are from the United States.” Still, he commented, countries like Israel and South Korea have also “figured it out,” meaning “you can never rest on our laurels.” An academic executive, T. Y. Patel, among other interview participants, attributed America’s excellent higher education system to

immigration policies in the United States, which have allowed “literally thousands upon thousands of brains to converge here.” In this way, the logic of many university leaders is that the economy has changed in ways that prioritize knowledge-based goods over manufactured goods. Therefore, America’s comparative advantage lies in its universities and their ability to spur innovation through the production and application of new knowledge.

The attention university leaders paid to the position of the United States in a global system of trade and fears related to declining national competitiveness reveals the extent to which the political-economic environment is shaped by global interconnections. Only a few interview participants explicitly stated that Tidewater viewed itself in a global versus national context, but the changes to the economy that they saw as a central pressure guiding their work are not unique to the United States. The perceived shift to a knowledge-based economy amongst interview participants, for example, demonstrates the ways in which universities are enmeshed in discourses of globalization and concomitant flows of ideas about how to best bolster economic growth.

Cross-cutting this treatment of economic transformation in America was the theme of mutual benefit: the knowledge-based economy benefited from universities, and universities benefited from the notion of an economy whose prized capital is stored in the brains of its best, often university-based, thinkers. Hence, universities and the people leading them have a vested interest in promoting the knowledge-based economy, displaying their role in perpetuating discourses surrounding the importance of innovation and the disappearance of manufacturing. For this reason, the story of economic change told by university leaders concentrated upon advanced technology and training students

in “fields of the future” like cybersecurity and bioengineering. Simply put, universities are seen as more vital in an economy that relies upon advanced knowledge products than an economy that needs large numbers of semi-skilled workers in the manufacturing sector. It is possible university leaders saw in the knowledge-based economy a discourse that helped justify funding their institution and could stem the decades-long hemorrhage in state appropriations.

The red threat: government disinvestment in higher education. Diversifying funding sources, or rethinking the university’s beleaguered financial “model,” was a common refrain during interviews with academic executives. When this model was mentioned, it almost always referred to how the university paid for its various functions and the share of the total coming from public versus private sources. Nicholas Johnson shared that TU is “developing a more diverse funding model,” by trying to become less reliant upon the federal government for research funding and state appropriations for its operational budget. This creates some unease in certain parts of the university “because when you try to diversify, you don’t know exactly which of the new parts of the portfolio are actually going to succeed.” For Tony Christensen, diversification was an imperative: “We *have* to diversify our funding sources. There’s no other option.” This imperative was largely due to cuts in state funding, which, in the words of one dean, prompted Tidewater to “start building our own new financial model, so we would provide a high quality experience for every undergraduate and at the same time be able to support the infrastructure.” For virtually all interview participants, there was a sense that state funding had declined, and in the eyes of some the drop was precipitous. However, there

was recognition that Tidewater had fared better than universities in states where cuts were even more severe.

Interview participants were acutely aware of the fact that state appropriations had been in decline for many years. Some interview participants emphasized a general decline in state funding, and others conveyed that the share of the university's budget from the state had declined only as other revenue sources—like grant money—increased. For example, Travis Campbell-Green, who had spent over twenty years at the university, reported:

One thing that I'm told but have less personal experience with is that state support for higher education has decreased quite dramatically over the years. So, maybe when I came, much more than half of the budget was provided by the state. In fact, I think it was about half. And now that's about twenty percent.

Nicholas Johnson was of the opinion that cuts in state funding have been “pretty minimal” and that “[state] money has actually gone up, it's just that the rest of our business has grown.” Former president William Pierson and one of TU's budget executives, Dorothy Winters, clarified the trends in state funding for the university. Pierson reflected that during his administration, from 1998 to 2010, there “was a continuation of the downslide of public [government] support for universities.” He noted that “state support in one way was very generous; that is, the facilities support, which comes out of a capital budget in the state...was well supported, but the operating budget was not well supported.” I asked Dorothy Winters whether the reductions in state support have been in absolute terms or relative to the growth of other sources of revenue. She responded: “it's a little bit of both to be honest with you. So, relative to this growing

research budget and so forth, the state share has gone down a little, and then it is through several years of basically a frozen budget with costs going up...the whole numbers declined a bit.” In recent years, decreases in funding have been at both the state and federal levels.

During his state of the campus address for the academic year 2012-13, President Pryor called uncertainty surrounding the federal government’s budget this generation’s “red threat.” As entitlement programs increase the national debt, Tidewater and other research universities must deal with reductions in available federal grant money. This is acutely troubling for TU, which, according to Nicholas Johnson, has become dependent on money from the federal government: “About eighty percent of the grant money that comes into this university comes from the federal government. That’s particularly high, compared to other institutions, because we’ve adapted to the environment that we’re in, in this federal enclave here.” Likening Tidewater’s reliance on federal money to “a single industry economy,” Johnson argued the university needs to prepare for an unstable future and even harness opportunities that arise in that uncertainty because “a crisis is a terrible thing to waste.” It is not just research projects that are affected by reduced availability of federal funding. The university’s operating budget is indirectly bolstered by research grants, which currently have a “tax rate” of 52 percent. Thus, 52 cents of every research grant dollar goes to the institution. As Dorothy Winters related, “[T]hat’s a very important revenue stream, and we’re starting to see that decline because there’s less grant money out there right now.” Although many university leaders felt fortunate that Tidewater was in a better situation than universities in states that have drastically cut appropriations to higher education, the environment was characterized as one of

dwindling resources from traditional fonts of support. The alarm caused by this trend suggests that dependence upon state resources is alive and well at TU.

Many of the views of university leaders are consistent with those of leaders across the country. In a 2014 survey of 342 chief academic officers at colleges and universities nationwide, *Inside Higher Education* reported that, even though 91 percent believed their institution was “academically healthy,” just 11 percent thought that the financial situation had improved in the last year. Less than a quarter of survey respondents felt as though the economic crises that began in 2008 were effectively over at their institution. As a result of this situation, 71 percent of chief academic officers predicted they would cut under-performing academic programs this year, and 60 percent said they will be looking into dismissing under-performing faculty. In general, then, survey respondents are “continuing to emphasize a variety of cost cutting practices to maximize their budgets and streamline operations,” not only by evaluation programs and faculty, but also by collaborating with other institutions (87 percent) and expanding online programs (80 percent) (p. 10). Efforts at reducing costs and increasing collaboration at Tidewater are not simply byproducts of the budget—they are also expected and, in some cases, demanded by the state.

Elevated accountability expectations from the state. In response to reduced state appropriations, interview participants remarked that peer institutions simply raised tuition. That was not an option for Tidewater between 2007 and 2010. Don Roberts recalled, “We had a governor who wanted to reduce costs for higher education and therefore make it affordable for...students, which I think has been a noble endeavor.” Even though costs increased, the governor mandated that tuition be frozen, leaving

university leaders feeling especially hamstrung. As Chancellor Hofbauer put it: “One of the...challenges we’ve faced in the state is we’ve had a political structure that has been very resistant to tuition increases and for understandable reasons. The good news is that we haven’t lost the money that other states have, but in return for that we’ve had to accept some restrictions on the rate of increase in tuition.” This meant that Tidewater had to pursue greater efficiencies and private money, remarked William Pierson: “[the university] just buckled down, reduced services and is more thinly staffed in places, so you have fewer staff, staff work harder. [We] tried to raise private money to support programs and services.” The tuition freeze, for Pierson, necessitated that the university be more entrepreneurial in its operations. At the same time, the state also elevated accountability expectations and added to the university’s responsibilities. In this way, the state looked to exert greater control over the university.

William Pierson elucidated that “what’s happened is a combination of increasing regulations and increasing responsibilities given to higher education for activities outside basic teaching and research, which have taken more and more revenues away.” Several interview participants brought up that there is more state oversight than in the past, requiring myriad reporting mechanisms on everything from faculty activities and performance to graduation rates and the number of startup companies. It was the case that many interview participants did not object to accountability requirements. As one academic executive observed: “we have to have good oversight; any good democracy should have that. But we have to be very careful as to what constitutes good oversight.” His worry, which was echoed by several other university leaders, was that, in the process of “informatizing everything” to meet state accountability expectations, there was the risk

of “throwing the baby out with the bathwater,” meaning that the university might surrender the autonomy and creativity that made it “one of the most successful enterprises in the history of humankind.” Additionally, state accountability expectations were sometimes viewed as costly. Another academic executive claimed that at a nearby institution, the “cost of compliance with state regulations and rules” exceeds the amount of funding it receives from the state.

One of the responsibilities that was not new but received renewed emphasis in recent years contributing to the state’s economic development agenda. In the view of former provost Nancy Martin: “I think today we are expected to do much more. Maybe it’s just the...state that we’re in, but within our state certainly we’re looked upon for economic development, not only through bringing in research dollars...but also to stimulate the economy through our knowledge transfer into businesses.” This expectation became more pronounced during economic hardship. “When things go bad in the economy, which has happened more and more frequently it seems, the state looks over at the university and says, ‘What are you going to do about it?’” In addition to contributing to economic development, Tidewater must ensure that no more than a quarter of its incoming students are out-of-state, a requirement which the dean for undergraduate studies believed is not imposed on other public universities. Furthermore, Chancellor Hofbauer mentioned the state’s “very ambitious goal” for the university system of “having fifty-five percent of the adult population with a two or four-year degree”—a goal which has not been accompanied by additional resources. These responsibilities signal the state’s clear recognition that higher education is important to meet social and economic goals.

However, this recognition co-exists with critique of how universities operate and the relevance of what they teach.

Increasing critique of the costs and value of a college degree. A small but perceptible element of the political-economic context raised by several interview participants was that, like never before, higher education's cost and value was subject to critique by some observers.⁶ This critique was often baffling to university leaders. Travis Campbell-Green indicated that there has been increasing criticism of higher education, mainly with respect to cost, which he felt "just puzzled by." In his eyes, America's universities "have been tremendously productive...by any measure." Although costs have been rising, he believed that tuition at Tidewater was still affordable and "just from a cost-benefit point of view, your return on investment is definitely worth it." Though criticism was not completely unwarranted, he questioned whether moneyed interests were behind the scrutiny: "There certainly is a business aspect of this. Venture capital isn't pouring money in for no reason, so I think some people must see an opportunity to make a lot of money by offering a degree a lot cheaper. So, that might be one source of the criticism of traditional university education." The interest in disrupting the higher education market among venture capitalists indicates that its value and remains strong from an investment standpoint. However, some university leaders suggested that there is a current of critique that questions the importance of a college education at all.

One dean acknowledged that she has heard talk of the irrelevance of higher education. She dismissed the notion that a college degree is not necessary: "There are some people who think you don't need a college education. I think a whole lot of us

⁶ However, it should be noted that, even amidst critique, the importance of higher education for America's economic future has been stressed by many politicians, resulting in initiatives to increase access, retention, and graduation.

know that you do.” However, she was more sympathetic towards the opinion that a residential college experience can be complemented by online alternatives. “I think the other side of [the critique] is people who have started to conclude you can buy your education online. Stay in your own room at home. You don’t need to have this building, those beautiful grounds, all that stuff. There’s a conversation there.” This was not, she emphasized, a prevalent opinion at Tidewater, where students and their parents “value education in a community.” When she asked students on her undergraduate advisory council whether they would prefer living-learning programs or online-based learning communities, “They all said in unison, ‘living-learning programs’ Our students are still there, valuing the residential experience. Even as we’re moving to do more things online, when we surveyed our students last year, they resisted it.” Consequently, although she was aware of critique surrounding higher education, this dean indicated that undergraduate students at the university desired a residential college experience.

For one interviewee, the critique of higher education concentrated on the entire enterprise and its reason for being. In her 42 years at Tidewater, former provost Nancy Martin witnessed a remarkable amount of change. One change she found particularly disheartening was “how negative society is towards universities.” She recalled visiting her home state of Texas several years ago and was surprised by the opinions there:

I opened the local newspaper, and there was an editorial about how useless higher education was. Instead of funding universities, we should just be giving every high school graduate \$5,000 and telling them to go out and make a business. I was just stunned because it’s so foreign to everything that I think. How could someone believe that that would be the future? I couldn’t understand it.

Martin's story was unique in the interview data and does not seem reflective of a trend. However, it demonstrates the sense, repeated among others, that higher education is under siege. "We really have to justify our existence," she noted, "in ways that we never did before." She traced some of the recent critique to the increasingly widespread idea that a college degree is an entitlement or simply "a commodity—with an end," by which she meant "education for itself is not as valuable as education for a job. And we have never been job training." Rather, she was motivated each day by the conviction that her work "trains you for a life of learning" that "raises your general knowledge about how the world operates because we believe that's the underpinnings of a great democracy." Martin was not alone in picking up on the influence of student-consumer purchasing power as state funding declined and tuition dollars became vital to Tidewater's operations.

The field of play: heightened institutional competition. Amidst critique of the value of higher education, university leaders resoundingly conveyed that Tidewater was a star among public universities whose rise could be mapped back to the presidency of William Pierson. Using "excellence" as his guiding principle, Pierson set out in 1998 to "help the university understand what an important place it is" and "change the university's perception of itself." This entailed immediately changing the university's peer group because "it compared itself against places that weren't research universities at all." Thus, Pierson required that "every request [he] saw be benchmarked against great places." He referred to this tactic as "establishing the bar," explaining, "Excellent places establish a bar that's probably higher than you are, and that should be the bar you're striving for—that sets the goal." In the view of Travis Campbell-Green, these efforts

were beneficial, as Tidewater “has improved significantly, especially in undergraduate education.” When he came to the institution, he remembered it being not very selective, but “it’s become a lot more selective.” Moreover, research became more heavily emphasized. Nancy Martin noted that while “research was always important because university faculty are expected to have a life of the mind,” the emphasis “was not as extensively on research as it is today.” A former academic executive described this process as “living up to the label of being a research one university.” The increasing stress on research was intended to signal and bolster the university’s improving reputation, thereby helping it to secure more grants. As one college dean understood it, Tidewater has been responding to current challenges “by being as aggressive as possible to build up our research reputation so we can keep the grant money coming in.” These efforts have undoubtedly resulted in more prestige, as evinced by better rankings, and heightened competition.

The consequences of Tidewater’s striving for prestige since the administration of William Pierson have been clear to one dean. She explained:

With [Pierson] especially, about 15 years ago, the university just really put the steam on in terms of raising standards and doing all sorts of things to raise the rankings. It’s very important work that was done to move [Tidewater] into the upper ranks, and we became a top twenty public research [university]. That’s a very special group to be in.

Accompanying this privileged status, nonetheless, is the presence of constant competition. “It’s very competitive to try and stay in the top twenty,” the dean continued, “It takes a lot of things to be very competitive.” Another dean agreed with this

assessment, remarking that higher education “has become more and more competitive,” which has “translated into...competition for faculty, for infrastructure, and so on.” As the university’s rankings have improved, it has entered a new echelon of institutions. This means, according to one dean, that “if you’re ranked with other universities at the top, all the things that put them at the top you’re competing for—the competition is very tough.” In order to remain competitive, many interview participants relied upon peer comparison.

The university leaders I interviewed all confided that they spent significant time determining what peer institutions are doing in a variety of areas. Chancellor Hofbauer summarized the sentiments expressed by many interview participants: “Institutions have goals they’re supposed to achieve on graduation rates, research funding, economic development, patents, licenses, startups, major awards for faculty, rankings. So, yes, we’re constantly benchmarking performance...against national peers.” Competition, in some respects, was viewed as part and parcel of higher education, producing Nobel laureates and breakthroughs in science unparalleled in other systems. One of the more interesting developments was that competition among institutions has transformed due to alliances. An academic executive remarked:

in the old days, it was just competition. You just moved your pieces hoping that you made the right moves and that you were better than competitors. What I have observed...is that now, of course, competition won’t go away, but there are also these new alliances. And our joining the [major athletic conference] is a good example of that.⁷

⁷ In 2013, President Pryor and Chancellor Hobauer announced the Tidewater would be leaving the athletic conference it helped establish and to which it claimed membership for nearly 60 years. As a result of the move, Tidewater was forced to pay an exit fee of over \$50 million.

Attracting and retaining a shrinking pool of talented, tuition-paying students was one of the primary areas of competition, according to university leaders.

Purchasing power: intensifying student-consumer demands. Prior to my interview with her, Dorothy Winters attended a conference for university budget officers. She related that “in terms of national demographics of college-aged students, we will bottom out in 2014, and then we will start to see a slight improvement in 2015.” Even then, the students coming to universities will be non-traditional: “they’re far more likely to be first generation, low-income, underrepresented. So, those kids will come, in a sense, much needier. They’ll need more financial aid, they’ll need more support.” Competition for more “traditional,” high-achieving students has become fierce, as they are an increasingly crucial component in Tidewater’s reputation-seeking and financial models. It is through the provision of services—amenities, as they are sometimes called—that Tidewater and other public universities have sought to attract these students. Former president William Pierson explained this as follows:

The students also demand a lot of services now, which they didn’t before probably because they didn’t think they could get them before... But now, the process of identifying places that will give good services is a major part of the students’ process of selecting a university to go to. They all go for their tour, they tour the laboratories, they speak to the students, speak to the faculty, and see what kind of gym they’ve got. All this stuff goes on, which is really a way of looking at, well, what is this university giving to me? ... So, in effect, as universities have responded in wanting to be attractive to better students, they’ve then provided services that the students are demanding in order to come.

The services that Pierson listed were athletic facilities, student unions, and luxury residence halls. Escalating costs associated with these amenities, over time, created what Pierson called “a train wreck that you couldn’t get off of.” He elaborated, “universities want to recruit good students, students want to go to places that serve their needs, understandably so. Even though you can see that this is going in a bad direction...there’s not much you can do about it unless you just drop out entirely.”

Part of the reason that Tidewater sought to respond to student demands is that students were paying more for their education and, consequently, expecting more out of their experience. As one dean commented: “the administrative infrastructure has translated into the need for higher tuition revenues, and that has translated into higher expectations of the students.” Nancy Martin confirmed that “students expect more. You write an email as a student to a faculty member, you expect it to be answered, right? We used to have office hours, now we’re on call 24/7.” She linked these expectations to a shift in thinking, such that a college education was considered a private good. “The idea of being a public good and, therefore, worthy of public funds just because we educated large numbers of undergraduates,” she claimed, “is no longer a value so clearly held outside the university.” Instead, “many people in the larger world see [higher education] as a commodity... You pay your money, pull the knob, out comes an education. It’s not a process, it’s a candy bar.” Like Nancy Martin, an academic executive was displeased with the view that higher education is a commodity whose returns are primarily private. He noticed “a general change in philosophy” that students should pay more for tuition “because [they] are the beneficiaries of the education,” which he considered “a pretty narrow view of the role of higher education in society.” Still, he recognized that the

reality of the university's situation was that it received fewer funds from the state yet wanted to continue its trajectory of improved reputation, which, in turn, incurred higher costs for the institution, necessitating a greater reliance upon tuition dollars and the student-consumer expectations that came with them.

Although there have certainly been changes in higher education's political-economic context since the publication of the *Post-Land Grant University*, university leaders echoed many of the challenges outlined in the report. In this way, it is important to note that the environment in which Tidewater operates did not recently or quickly materialize. Instead, it is tied to trends that began in the late 1970s and early 1980s. The viewpoints of university leaders detailed above support the framing of Slaughter and Rhoades' (2004) theory of academic capitalism. More specifically, the steadfast belief in economic change away from assembly-line manufacturing and towards the capitalization of knowledge products through innovations in information technology aligns with Slaughter and Rhoades' conceptualization of the new economy. This economic assemblage owes its existence, in part, to the neoliberal state, which in the theory of academic capitalism led to initiatives aimed at the roll-back of state support, rising user fees, and new forms of regulation that compromise institutional autonomy. Nevertheless, based upon interview data collected for this dissertation, I argue that the theory of academic capitalism failed to sufficiently take into account the mechanisms of control and continued dependency that university leaders believed to define the relationship between Tidewater and the government. Somewhat paradoxically, there was a clear sense that the university's obligations to the state had increased even as its public funding had decreased. As a slave to many masters, Tidewater inevitably sought ways to meet these

obligations lest it lose more state support, all the while seeking to maintain its position in a highly competitive race. I demonstrate in the next section that innovation and entrepreneurship at Tidewater was not simply about shifting resource dependencies, but also about the *idea* of fulfilling a tradition of institutional public service.

Another point that is under-emphasized in the theory of academic capitalism is that the search for new resources is not, in the end, about those resources, but rather how those resources are put to use in the never-ending quest for greater prestige. Thus, while it is true that many of the factors giving shape to the context in which university leaders position Tidewater ultimately derive from the question of resources, placing too much stress on revenue can eclipse other motivations for adopting the innovation and entrepreneurship ethos. Giving fuller consideration to factors like accountability, tradition, and prestige reveals that the encroaching profit motive at the heart of the theory of academic capitalism is not the sole explanation for the innovation and entrepreneurship ethos.

Beyond Money: Explanations for the Ethos

In the previous chapter, I showed that, for many interview participants, entrepreneurship in an academic setting like TU was “not about the money.” In the case of the ethos, this is not entirely true nor completely false. The motivation for initiating and supporting an ethos that attributes great importance to innovation and entrepreneurship is about money. However, it is not exclusively about money, and presently, the generation of net revenue from entrepreneurship remains more of an aspiration than a reality. In this second part of the chapter, I examine four explanations for the innovation and entrepreneurship ethos, beginning with the search for new

resources. Building upon significant factors of the political-economic environment, I show how the ethos relates to a duty and desire to serve the state as part of a land-grant tradition. Furthermore, I articulate the role of innovation and entrepreneurship in Tidewater's jockeying for position in a competitive higher education field, highlighting the role of legitimacy and prestige in creating the ethos. These three explanations, I contend, are the most important in understanding the adoption of the ethos, far outweighing a fourth explanation: that innovation and entrepreneurship is necessary to make TU attractive to undergraduate students and faculty members. The interview data on which this treatment of motivations is based supports several of the theoretical propositions offered in previous chapters, giving reason to not wholesale reject the theory of academic capitalism, but rather refine it.

Striking it big? Revenues and entrepreneurship. Developing new revenue streams—or, diversifying the university's funding portfolio—was one explanation for the innovation and entrepreneurship ethos that emerged throughout interviews with university leaders. In the early days of entrepreneurship on campus, following the passage of the Bayh-Dole Act in 1980, there was the expectation that universities would make a great deal of money from licensing technology to the private sector. Tidewater has learned since the creation of its office of technology transfer that this dream has not come to fruition. "If you look at the data," explained Tony Christensen, "there are only ten or fifteen universities in the United States making a lot of money. Almost all of them are from some sort of drug or pharmaceutical.... And then there's everyone else." The director of TideVentures, Bradley McDowell, similarly noted that "probably ten percent of universities out there do bring in fairly substantial sums of money—over \$10 million a

year—in licensing revenues.” Both individuals said Tidewater was among the institutions not making substantial money from technology transfer activities. Dorothy Winters reported that the only revenue she saw coming into university coffers from entrepreneurship was the creation of professional degree programs that “basically charge what the market will bear,” yielding around \$60 million in total annual revenue for their academic units. This money remains in the hands of the units, unless the president intervenes.

In the area of technology licensing and startups, TTEC director Tom Park confided that the idea of revenue tied to entrepreneurship programs is “a tough one.”

This is not a clear answer.... We’re [TTEC] revenue neutral, if that. What we bring in, we spend. I’ve got fifty people to keep employed; all the money goes to keep them employed.... So, it’s not like we’re turning a profit here.”

The vice president for industry relations more optimistically suggested that the university “makes a little bit more than [it] spends.” However, the director of TideVentures was less sanguine in response to the assertion that the university was making money on technology transfer efforts. He went so far as to say that the notion of entrepreneurship activities being revenue neutral was “a generous portrayal right now.” Currently, the university

spends more money on tech transfer than it brings in..., which is the case of most universities.... Between [the two campuses in TideVentures] we brought in about \$2.5 million dollars from tech transfer activities, direct licensing revenues, and reimbursement of patent expenses, those types of things. That’s not including

research funding we've brought in. So, that is actually less money than we spend on tech transfer right now.

When the full range of activities related to entrepreneurship is considered, there is clear reason to argue that profit-taking is difficult. Apart from the costs of protecting intellectual property, there are numerous costs related to the faculty and staff who run entrepreneurship programs and teach courses. Tidewater generally does not see any direct revenues from fostering student entrepreneurship, as it does not lay claim to student intellectual property, provided the student is not a university employee. One staff member indicated that this may be a purposeful strategy to secure donations from successful graduates turned entrepreneurs down the road:

From a development standpoint, it has been shown that giving that support upfront, both financial and in regards to resources, yields more for the university later. You have...potentially successful entrepreneurs who are more emotionally indebted to the university for what assistance and support that they've gotten than financially indebted.

Even though entrepreneurship has not yet produced much in the way of revenues, there is still the hope of money, whether it is made directly or indirectly, in the future.

Indeed, the initiation and support of innovation and entrepreneurship is motivated by a hope to strike it big—to enable the commercial development of a faculty invention that produces large sums of money for the institution. As the director for TTEC asserted, the university “certainly would like to generate revenues,” and their “goal is in the next five years to really break through so that we are in a position where we're bringing back to the university more money than we're spending.” Dorothy Winters intimated that “it'll

be very disappointing if in three to five years we don't see that this is starting to produce." It is important to note that revenues may come to fruition in the future, which still provides a vital motive for the ethos. The university is searching for an equivalent to Gatorade, which has resulted in over \$150 million in royalty payments to the University of Florida. She commented, "Everybody wants something to get invented that will create this significant stream of money. But that's a real long shot. We've certainly seen some modest success and we hope to see more." Recognizing the odds of striking it big were not favorable, the organizer of a business model pitch competition, nevertheless, gave voice to the main thrust of the revenue rationalization: "the overwhelming majority of these startups are not going to explode to Facebook or Twitter proportions, but some are and, much like the lotto, the sentiment is if you don't play, you can't win."

Thus, after thirty years of spending money in the hopes of one day making money, it seems unlikely that the rise of the innovation and entrepreneurship ethos can be explained by a profit-seeking motive alone. Of course, the pursuit of new resources is involved in the decision to initiate and support the ethos, but when net revenues remain "a twinkle in our eye," as Dorothy Winters put it, questions surface related to the centrality of money. This argument is strengthened by the political-economic context which university leaders described. When asked whether Tidewater benefited from making innovation and entrepreneurship a strategic priority, William Pierson admonished: "Well, wait a minute. How does the university benefit? The university is not here to benefit. The university is here to *serve*."

The land-grant legacy: serving the present through recourse to the past.

Innovation and entrepreneurship seems a remarkably future-oriented ethos for a

university, intricately bound to a narrative of pushing the frontiers of knowledge in the name of progress. Newness permeates the conceptualizations of innovation and entrepreneurship in the previous chapter, yet explanations for why these concepts have become so important at Tidewater were grounded in a particular part of the university's past. That is, innovation and entrepreneurship were believed by many interviewees to be manifestations of the university's identity as a land-grant institution and, crucially, what this identity means for TU's role in society. Many university leaders drew a line from the innovation and entrepreneurship ethos on campus to a re-invigorated tradition of serving the state and nation.

Chancellor Hofbauer, when asked what the guiding values of Tidewater were, began by emphasizing that "as a land-grant university, it is service to the needs of the state and our nation." Passed in 1862, the Morrill Land Grant Act established a prolonged relationship with states that incentivized the sale of underutilized Western lands for educational purposes. The proceeds from land sales were designed to fund advanced education in the "practical arts" of agriculture, mechanics, mining, and military tactics—the so-called "A&M" fields (Thelin, 2004). The legacy of the Morrill Act was the idea that reconstructing and unifying a nation torn apart by civil war required federal support for "the accessible state college and university, characterized by a curriculum that was broad and utilitarian" (Thelin, p. 76). Such investment by the federal government in higher education became a pattern throughout the twentieth century. "In the name of state building, national leaders tapped higher education" to spur economic growth and "shape citizens' political commitments" (Loss, 2012, p. 3). The logic of many university leaders was that, because Tidewater owes its existence to federal policy and continued state

funding, it has an obligation to serve state and national interests. As one professor in the sciences remarked, a “core value [of the university], partly because of the background as a land-grant institution, is serve to the state and society in general.” The service of which most interview participants spoke principally dealt with economic growth and job creation as part of a 21st century reboot of the land-grant legacy.

Much like Malcolm Moos in his report at the outset of the 1980s, Don Roberts asked during his interview, after “150 plus years, what is the new mission of the land-grant institution?” His answer: “it looks like it’s moving towards economic development and innovation and entrepreneurship. That’s where our president wants to move and that’s where a lot of presidents are trying to move for public land-grants.” Roberts called this the president’s “new land-grant mission,” or what the dean for undergraduate studies called President Pryor’s concept of “the land-grant university of the 21st century.”

But not all interview participants were so sure that Tidewater’s land-grant legacy mattered much in the present. Having just returned from a meeting of other academic administrators in Tidewater’s new athletic conference, a professor in the sciences observed that the idea of the land-grant university is “not as important [at TU] as at some land-grant institutions.” He concluded, “I don’t sense that that is something that is embraced generally by the faculty.” Even more skeptically, Travis Campbell-Green called allusions to Tidewater’s land-grant history “a distraction.” Aside from the extreme decline in agriculture in the state, he remembered that

there’s been a lot of talk about how the new vision for a land-grant...is diffusion of knowledge more generally. But that’s just a way of using this historical artifact and justifying what you should be doing anyway. There are lots of institutions that

aren't land-grant universities that are trying just as hard in the innovation and entrepreneurship and technology transfer front. So, I think it's just a marketing thing to say this is what it means to be a new land grant.

In other words, framing innovation and entrepreneurship as an extension of Tidewater's land-grant pedigree serves a symbolic purpose.

Higher education historian John Thelin (2004) has argued, "Colleges and universities are historical institutions. They may suffer amnesia or may have selective recall, but ultimately heritage is the lifeblood of our campuses" (p. xiii). I maintain that this heritage is, in fact, a novel cultural product, following Kershenblatt-Gimblett's (1998) observation that "heritage produces something new in the present with recourse to the past" (p. 149). Efforts to repurpose the land-grant mission represent precisely this process of producing heritage. Innovation and entrepreneurship as they are made manifest at Tidewater are a far cry from the mainstays of the original land-grant mission. It is difficult to draw similarities between instruction in agriculture and mining for military cadets and cultivating biotechnology firms or developing the next highly lucrative social media application. However, by suggesting that innovation and entrepreneurship are connected to this glorified past—by trying to seamlessly transform A&M into I&E—university leaders ensure that the cause is painted in a thick veneer of legitimacy. As Hobsbawn and Ranger (1983) first theorized, traditions that develop to express heritage, many of them invented, often serve such symbolic purposes as legitimation and socialization. In this way, referencing Tidewater's land-grant legacy in the same breath as innovation and entrepreneurship constitutes an effort to render the ethos into acceptable

values and its activities into rituals. Despite its unequivocal future orientation, the innovation and entrepreneurship ethos is explained through references to a usable past.

At the same time that this symbolic project is enacted, interview data showed that university leaders held a deep commitment to serving the state and nation. Irrespective of discourse related to Tidewater's repurposed land-grant identity, many interviewees saw themselves as public servants and the university as "an instrument of society...here to serve society," to borrow from William Pierson. One research executive underscored Tidewater's status as a "public corporation" and not a state agency "like the department of motor vehicles." Still, he believed, "we have an obligation to the state. And a lot of our economic development programs and a lot of our tech transfer programs are focused on growing and trying to retain companies in [the state]." Although generating revenue is an aspiration, the director of TideVentures intimated that "first and foremost [the goal] is to have a positive impact on the economy." The state, he observed, was "much less focused on creating a revenue stream for the university" than investing in the university to promote economic development and the creation of jobs. This line of thought resonated with one dean, who remarked, "you tend to see that a little more at state universities, where they think, 'What can we do for our state? How can we propel the growth of the economy? How can we promote social justice?'" For Amy Curtis, professor in the humanities, serving the state was important, even though it provided less funding to the university than in the past: "We see ourselves as public servants.... And I really do believe in trying to contribute to the common wealth...so, I take our service to the state very seriously." When I pushed the chancellor to describe expectations from the state, he replied:

Just a nuance, you said, “pressure from the state to do,” and, of course, to some extent there is pressure from the state, but I also think this is internally driven. We are in the public university system...and we’re supposed to be attentive to and addressing the needs of the state.

As this line of thought goes, what the state and society more broadly needs is innovation and entrepreneurship. According to William Pierson, “to not do it is almost criminal because essentially it relegates us to a declining future as a society.”

Evidence of the desire to serve the state can be found in the data collected by university offices, as well as the board of trustees. In addition to revenue, TideVentures, for example, tracked the number of companies it helped establish in the state and number of jobs created. Its director explained, “Ultimately, we want successful startup companies. So, we don’t want to just create startup companies for the sake of creating them, but having more [state-based] startup companies coming out of the university would be another key metric.” However, these were not the only metrics collected with respect to entrepreneurship. There was a concerted effort to collect data that would be submitted to publications that rank universities, such as *The Princeton Review*. Consequently, ascribing the innovation and entrepreneurship ethos only to the search for resources or the duty-cum-desire to serve the state would be inadequate. A third motivation is to compete with other institutions who are involved in the entrepreneurship “game,” as it was frequently called.

A player in the game: keeping pace in the institutional field. There were recurring statements during interviews signaling that university leaders were aware that Tidewater was not unique in promoting innovation and entrepreneurship. More than a

benevolent effort to serve the needs of society, innovation and entrepreneurship was seen as a point of comparison and vector of competition with peer institutions. As is frequently the case with institutional striving, the universities often used for purposes of comparison were among the most prestigious in the nation: Stanford University and the Massachusetts Institute of Technology (MIT). Therefore, one of the motivations of the innovation and entrepreneurship ethos was to be a player in the game and, in so doing, garner the legitimacy and prestige that comes with operating and appearing like highly regarded institutions. The success of competitive positioning through innovation and entrepreneurship was the subject of some debate, with some believing Tidewater to be ahead of the curve and others questioning whether it should turn its opportunistic sights elsewhere.

When the Institute for Innovation and Entrepreneurship was launched in 2013, one of its first activities was to compile a packet for publications that rank universities based on their entrepreneurship offerings, including *The Princeton Review* and *Entrepreneur Magazine*. As one staff member recalled, “The [Institute] was put in charge of aggregating all of this information for each and every one of the schools and colleges at [Tidewater] to try and get a full spectrum picture of what’s going on here.” The resultant twenty-two page packet lists entrepreneurship courses, entrepreneurship/innovation competitions, clubs and organizations, as well as distinguishing and non-traditional features of entrepreneurship on campus. In the 2013 rankings, this placed Tidewater among the top twenty schools in the country for undergraduate entrepreneurship experiences. Many interview participants were aware of this ranking, and there were indications it would be used to guide future planning and

efforts to improve performance. For instance, Samantha Stone, the Institute's director of development, related, "What we found in our latest rankings is that we're number fifteen in the country in undergraduate...entrepreneurship. We're number two in out of the classroom experiences." Further developing these out of the classroom experiences were believed to be what would differentiate Tidewater and allow it to out-compete other institutions. In fact, expanding course offerings and even developing an entrepreneurship major were viewed as essential to "get to the next level in the rankings." The institution par excellence was Babson College, a private business school ranked first in the country for entrepreneurship. As the director of an entrepreneurship living-learning program bluntly averred: "We're not a Babson." Despite being remarkably different institutions, Babson College, as one top-ranked school, set a standard toward which Tidewater strived.

Beyond rankings for undergraduate entrepreneurship opportunities, university leaders also engaged in institutional comparison relative to technology transfer. The two institutions that were frequently cited in conversations about technology transfer were Stanford and MIT. In the eyes of TTEC director Tom Park, Stanford and MIT "are the gold standard in entrepreneurship history." This history, according to Nicholas Johnson, stretches back to 1937, when David Packard and William Hewlett, with encouragement from their professor, launched what would become Hewlett-Packard from their garage. "Twenty years later, [Hewlett and Packard] donated a big building back to Stanford. So, Stanford was in this game of innovation and entrepreneurship before anyone else was, and to some extent MIT as well." Part of the reason that Stanford and MIT were the "gold standard" was that they were making money as a result of their entrepreneurial activities.

Tom Park related that Tidewater collected equity from companies that participates in its incubator, but “it never cashes it in for anything.” By contrast, “if you’re Stanford or MIT, that equity stream has paid off in some cases,” largely because they have staff to manage it. However, Travis Campbell-Green ventured, “Even for the most successful universities, for MIT and Stanford, [entrepreneurship] is still a pretty small fraction of their revenue.” What sets these schools apart is “the prestige. I’m sure a lot of people go to Stanford because they know a lot of successful entrepreneurs came out of” the university.

Acknowledging the strength of the programs at Stanford and MIT, several interview participants admitted that Tidewater was not in the same league. For Keith Meyers, director of one of the entrepreneurship living-learning programs, it was simply too early for comparison: “I think it’s a bit immature to look at a Stanford or an MIT and try to replicate things when the ecosystem that they’re in and the ecosystem you’re in are very different.” Similarly, the Institute for Innovation and Entrepreneurship’s director of development flatly stated, “[Tidewater]...is not MIT and Stanford.” Still, she was proud that “our reputation has grown exponentially just from this entrepreneurship,” and one of the university’s programs “was getting attention from Stanford, MIT, and places that you always aspire to.” At the pinnacle of the institutional field were Stanford and MIT, two institutions that were in many ways far ahead of TU yet still guiding lights and objects of emulation.

Tidewater did not want to get left behind as other institutions in its comparative gaze began to develop entrepreneurship programs. “[Tidewater] was late in getting into this game,” said one dean. “Many universities preceded us. There are big innovation and

entrepreneurship initiatives all over the country. We had not made this move, and in doing it, President [Pryor] wanted us to catch up very fast.” The feeling of being behind other institutions was shared by Nicholas Johnson, who opined: “we’re coming in a little late to the game;” however, the university was still ahead of “others that haven’t gotten there yet.” For Chancellor Hofbauer, the amount of recent attention Tidewater has given innovation and entrepreneurship could help it compete. “Being so explicit about it could be a competitive advantage. In some ways, [Tidewater] is...an early mover in that regard, by putting some much attention and focus” on innovation and entrepreneurship. At the same time, several interview participants believed that, because virtually all schools were trying to stimulate entrepreneurship in some way, several university leaders wondered if this was truly a space where TU could shine. As an academic executive put it:

I worry that we were sort of late to the game. That we noticed something that other universities, especially Stanford, were doing and doing well.... And I think that some universities are going to be very successful at it, especially the more commercial aspects of it.... Are we going to be one of them? I don’t know.

There is potential for Tidewater “to be so much better than anyone else in this space,” said Danielle Ramirez, but it means doing more to enable faculty. The risk is that Tidewater is “going to look like every other university because there is not a single university that I have looked at that does not talk about entrepreneurship and innovation as an important pillar.... This is not a truly competitive positioning.” Thus, complementing the search for future sources of revenue and service to the state, an important explanation for the ethos was striving to keep pace within an institutional field intensifying its engagement with innovation and entrepreneurship.

In this sense, “the game” was not about a final destination or outcome, but rather seeking a position among a roster of highly-regarded peers because of the prestige derived from association. The worry was that Tidewater would not be considered among other top-ranked research universities or sacrifice reputation by not competing for a strong position when it comes to entrepreneurship. One dean adeptly understood innovation and entrepreneurship in these terms:

When we talk about reputation and rankings, ultimately it is the prestige factor that we think is important. You know, we don't want to trip over ourselves just for a ranking, as that makes no sense. But rankings are, or prestige more generally, is fundamentally important to any institution because we are a knowledge-based business or organization, and we're nothing if we don't have the best students and the best faculty.

For some university leaders, failing to play the game compromised Tidewater's ability to attract and retain faculty members and students.

Responding to student and faculty demand. The final explanation provided for why university leaders initiated and supported the innovation and entrepreneurship ethos was that students and faculty members expected, or even demanded, it. Therefore, the development of programs and decision to promote innovation and entrepreneurship was responsive in nature, as university leaders sought to attract and retain the talented students and faculty members that sustained its reputation. Analysis of interview data demonstrates that this motivation was not nearly as significant as the previous three. Apart from the fact that it was less frequently mentioned during interviews, data raises questions about the claim that innovation and entrepreneurship were necessary to attract

and retain faculty and students. I conclude this section by detailing both the claim and the questions surrounding it, before connecting the arguments of this chapter to the theoretical propositions. The sum of the evidence supporting the theoretical propositions suggests the need to refine the theory of academic capitalism to account for additional factors in the decision at Tidewater and many other institutions to push innovation and entrepreneurship as strategic priorities.

Starting first with student demand, several interview participants suggested that entrepreneurship is popular with students. Tom Park, the director of TTEC, claimed “it’s a popular thing to do right now. It is of interest to a lot of students. They want to be entrepreneurs.” The associate director of Tidewater’s center for philanthropy likewise believed that “students are really craving the ability to have these skills. They want to go out and start their own initiative, or to make an immediate impact.” As a result of increased interest, in fact, TTEC was in the process of doubling the size of its incubator for student startups. One dean went so far as to say that “it’s a generation of students which is different from mine in terms of how people learn, how people interact, the speed with which they both learn and want to implement things, and so if we don’t provide education in entrepreneurship, I think we’ll be less attractive to students.” It is difficult to ascertain if admissions would be adversely affected by not offering entrepreneurial opportunities. An admissions executive claimed that only small pockets of students in her experience expressed interest in entrepreneurial opportunities: “It’s certainly not the case for the majority, but there are some students who have already had some success with their own entrepreneurial ambitions who are looking and pushing for more of that.”

It is true that entrepreneurship programs have been popular with students once they arrive on campus. One program director reported that their entrepreneurship living-learning program “typically has way too many students who want in compared to the number of seats.” Furthermore, two entrepreneurship center directors stressed that they developed social entrepreneurship courses and programs specifically because their students told them they were interested in the content. Another interview participant, however, cautioned that the success of entrepreneurship programs must be put into proper perspective. In terms of student participation in courses, for instance, he estimated that only six to seven percent of the undergraduate student population took an entrepreneurship course in the past year. Thus, it may be the case that innovation and entrepreneurship are important in attracting and retaining students, but the programs currently engage a small numbers of students—small enough to question the extent to which university leaders were responding to student demand as they selected innovation and entrepreneurship to guide the institution.

The same argument about recruiting students was likewise proffered for faculty members. According to the director of TideVentures, providing resources for technology transfer is an important factor in a faculty member’s decision to join the university and remain there:

Increasingly, great faculty or good teachers and researchers and leaders in their field also want to be entrepreneurs. So to bring those people in, and keep them at the university, having a strong tech transfer office actually becomes part of what faculty evaluate when they decide whether or not to come to [Tidewater] and stay

here.... It becomes part of what a leading research university needs to do to attract the best faculty and students.

After suggesting that TU makes little to no net revenue from its entrepreneurship activities, a research executive said, “You may ask why do we do it? Well, I mean, because faculty expect it. It’s a service. Young faculty want to start their own company.” As was true with student demand, the claim that faculty expect resources to help them launch a company is questionable. Although self-interest is certainly present in faculty careers and often leads to a high degree of productivity, professors are not professionally rewarded for entrepreneurial self-interest, unless it means securing grants. The next chapter chronicles efforts to change this at Tidewater. It is sometimes the case that faculty are not interested in entrepreneurship, nor motivated by the prospect of material wealth. While it is likely that faculty in certain disciplines expect some university services to help translate their research to industry, such expectations do not sufficiently explain the decision to initiate and support a campus-wide ethos that revolves around innovation and entrepreneurship. Accordingly, I argue that student and faculty demand, though perhaps a small consideration in crafting the ethos, was not among the driving forces behind its inception and dissemination.

This dissertation began, in part, to better understand the motivations through which academic capitalist norms and values, such as those comprising Tidewater’s innovation and entrepreneurship ethos, are created and transmitted to university actors. University leaders confirmed three explanatory variables underlying the ethos, which collectively may help to provide a comprehensive view of university change. First, as Slaughter and Rhoades presciently concluded, the public resources on which many

universities depend have eroded, and a new regime related to the uses of knowledge has surfaced as new dependences take root. Interview data shows an increasing hope that entrepreneurship will result in substantial revenue through technology transfer or through attracting entrepreneurially-minded students who will one day give back to their alma matter. Additionally, the ethos was selected to purposefully interface with a land-grant tradition of serving state and society. This demonstrates that one motivation for initiating and supporting innovation and entrepreneurship was not just to guide TU into the future, but also to harness the legitimacy that comes with linking to a useable past. Like tradition, prestige represented another important non-monetary currency in the decision to promote innovation and entrepreneurship. As university leaders noted, most universities were involved in the innovation and entrepreneurship “game,” and Tidewater’s decision to participate was partially based upon a desire to “keep up with the Stanfords.” Being the only public research university not trying to be innovative and entrepreneurial seemed like too risky of an option. Thus, Tidewater decided that if it was going to be a player, it was going to be a major player, turning innovation and entrepreneurship into an institutional ethos that colored virtually many facets of life on campus, from research to curriculum development to instruction.

Connecting Emerging Developments to Theory

The main contribution of this chapter was to provide a set of answers to the question: why, out of a vast universe of possible concepts, did Tidewater’s leadership make innovation and entrepreneurship its guiding principles and foundation for an institutional ethos? The environment in which university leaders positioned TU was viewed as rife with a mounting set of challenges that are both structural and symbolic.

They grappled not only with the question of how to pay for a high-quality university, but also what it *meant* to be a public, land-grant institution in an era rich in equal parts expectations and critique. In many ways, interview participants gave voice to some of the structural changes to higher education since the late 1970s that precipitated the theory of academic capitalism and its constructs. There is little doubt that at Tidewater, in the face of reductions in state appropriations, concerns about the stability of federal grant money, and elevated competition for tuition from students, innovation and entrepreneurship was seen as a possible revenue source. The market, faculty inventors, and corporate financiers can seemingly become more important than the state or the public good in this quest for resource independence. Nevertheless, this chapter revealed that other motivations are at play, thereby providing empirical evidence of several theoretical propositions regarding the nature of change in higher education.

One means of understanding the adoption of innovation and entrepreneurship as institutional ethos is Schugurensky's (1994, 2006) heteronomous model of university change. Whereas autonomy is the "quality or state of being independent, free, and self-directed," heteronomy refers to "subjection to external controls—subordination to the law or domination of another" (p. 306). The heteronomous university results from a combination of two seemingly contradictory dimensions: the globalization of free-market capitalism and state interventionism. Importantly, change in the direction of this model is not a "smooth, linear, and consensual process welcomed by all" (p. 307). This chapter uncovered many aspects of the heteronomous university model at work at Tidewater. On the commercial side of the heteronomous university, interview participants pointed to the rise of client-oriented academic programs and heightened reliance upon "customer fees"

in the form of tuition that is decreasingly subsidized by state appropriations. Talk of the need to diversify the university's portfolio, the pursuit of cost recovery mechanisms, and catering to student-consumer demand is evidence of corporate rationality, which is also part of the change Schugurensky tied to market demands conditioning universities. However, trends cannot be solely attributed to competition in the marketplace. There is also a strong dynamic of state control, occasioned by cutbacks in funding, appropriations with conditions attached, and institutional coordination to improve state-wide collaboration and competition. As Tidewater became more commercialized, it also navigated an increasing set of responsibilities to the state. The tone of interview participants was not always that of a willing partner with the state. Indeed, at times responsibilities to the state were sometimes seen as mandates imposed from above and beyond, with little recognition of the organizational complexity of a research university or the services it already provided.

Although university leaders understood the need for accountability and many welcomed the role of the university in serving the state's economy, there was still some tension that emerged over commercialization and control. It was not the case that interview participants believed TU had wholesale sacrificed its autonomy, but data supported the feeling that "space is being reduced by external powers increasingly capable of imposing their own logic and interests" and that the university "is losing capacity to promote the common good or even to pursue knowledge and truth in an autonomous way" (p. 302). One prominent worry voiced by interview participants was that Tidewater was becoming a service university, where workplace and professional training based on the needs of the state supersedes critical thinking. In addition,

contributing to economic growth and striving for relevance is equated with service to society—a conflation that, according to Schugurensky, is not infrequent in neoliberal discourse. As follows, the traditional research university becomes transformed by a market-based utilitarianism and “research and teaching are re-oriented towards a dynamic relationship with industry and the job market” (Schugurensky, 1994, p. 34).

Whereas much scholarship has argued that this reorientation reflects the privatization of higher education, based upon the data collected for this dissertation, I agree with Schugurensky that it is necessary to pay close attention to the role the state has taken as an evaluator and regulator, not just a passive funder. Therefore, consistent with the third theoretical proposition, interview data supports the claim that values and norms of the academic capitalist knowledge/learning regime, like those expressed in Tidewater’s institutional ethos, can only be partially explained by an increasing reliance upon external, private resources. The state’s reach has expanded and its grip has tightened, leading TU’s leadership to respond accordingly.

It is worth considering how the heteronomous university is packaged at TU. Schugurensky contended that underlying the model based on the twin burdens of commercialization and control is the need to address real social and financial pressures. However, support for the model requires appealing to a variety of constituents, often through rhetorical exercises. References to Tidewater’s land-grant legacy constitute an effort to package the ways in which the university is responding to commercialization and control as part of an acceptable and relatively non-controversial tradition. Innovation and entrepreneurship become a natural extension of the university’s history as a public institution made possible through government grants. What is often lost in this packaging

is the fact that the state is no longer upholding its end of the contract. That is, the university continues to serve the state, despite decades of declining appropriations. Some interview participants suggested that this is the case because, regardless of how much money the state provides, the university's identity is predicated on service to the state. Alternatively, Tidewater could be desperately attempting to reverse its fortunes by showing the state how vital the institution is to its future, based upon discourses of the knowledge-based economy. The question that remains is how long university leadership is willing to base a central element of its strategy on contributing to the state without receiving additional resources. In time, Tidewater's land-grant heritage could be de-emphasized as the university comes to terms with its demanding relationship with the state and seeks greater autonomy.

Another important theoretical question posed by this chapter is what else the university may receive in the way of organizational benefits from innovation and entrepreneurship, aside from the prospect of making money. If it is the case that many universities, including Tidewater, make little to no net revenue as a result of entrepreneurship, there is reason to explore motivations to complement the aspirational pursuit of profit. The theoretical framing of this dissertation offered another explanation from scholarship on new institutionalism. An important feature of new institutionalism is that there is convergence around certain behaviors and ideas of successful institutions, yielding a cultural script defined by the government, professional associations, and—of critical importance to this study—the most prestigious institutions. Thus, Tidewater is part of a competitive institutional field wherein practices are rationalized and, subsequently, institutionalized in society. These practices are not necessarily efficacious

from an organizational perspective, but rather help to legitimize institutions and garner prestige through emulation of successful cases. There was much evidence in the preceding discussion to suggest that innovation and entrepreneurship were practices that had become valuable in the institutional field and generated legitimacy amidst heightened scrutiny of higher education. The decision to support and initiate an institutional ethos that attributes great importance to innovation and entrepreneurship is, according to interview data, influenced by perceptions of legitimacy and prestige in the higher education field, thereby lending weight to the second theoretical proposition.

The clearest example of this influence is apparent in how sensitive university leaders were to the entrepreneurial activities of other institutions, collectively referred to as “the game.” Playing the game meant keeping pace with institutional peers and using as points of comparison and emulation those that seemed to be at the top of the competition. In this case, Stanford and MIT were the most prestigious institutions identified, and their interest and investment in innovation and entrepreneurship defined what was appropriate and worthwhile for those institutions like Tidewater striving for relevance. Performance is measured through ranking systems, and interview data demonstrated that university leaders spent a great deal of time thinking about how to improve in rankings, both for the institution as a whole and for its entrepreneurship programs. In the long run, it is possible that innovation and entrepreneurship will be organizationally efficacious for Tidewater. Administratively, the university may become more efficient and effective, and improvements in reputation signaled by rising in the ranks may produce more grant money and similar resources. The idea of innovation and entrepreneurship may be particularly attractive to parents of college-going students, who view it as prestigious or a

pathway to employment for their children. Nonetheless, these possible outcomes were not mentioned during interviews as often as Tidewater simply entering the field and whether it did so before or after other universities. In other words, playing the game was more important than its ultimate results. Even if the innovation and entrepreneurship ethos generates no net revenue for TU at present, it was seen as symbolically worthwhile for the institution to become meaningfully involved.

This chapter illustrates the ways in which responding to state expectations, both by law and by tradition, and striving for legitimacy and prestige were additional rationales behind the innovation and entrepreneurship ethos at Tidewater. In developing and translating the ethos, university leaders often mentioned the knowledge-based economy as one of the exigencies to which they were responding. It remains unclear in the data whether the knowledge-based economy is, as Slaughter and Rhoades assumed, a structural reality or a discourse designed to coordinate educational institutions in ways that amplify their contributions to economic growth. Interview data did not verify whether the knowledge-based economy is “more important and realistic as a set of assumptions and culture claims than it is as an actual depiction of the mundane social order” (Meyer, Ramirez, Frank, and Schofer, 2007, p. 204). However, it certainly confirmed that university leaders appropriated language of the knowledge-based economy, as suggested by the second theoretical proposition. By developing strategic priorities and even academic programs with the belief that U.S. competitiveness and economic growth in the future depends upon the creation and application of new knowledge, Tidewater may be helping to move the knowledge-based economy from coordinating myth to structural reality.

Conclusion

While the previous chapter was devoted to the development of the innovation and entrepreneurship ethos, the purpose of this chapter was to explain why university leaders initiated and supported it as a strategic priority. In providing a set of rationales for the ethos, university leaders shed light on a multitude of challenges presently affecting the operations of the university. These challenges indicate that there are gaps in the theory of academic capitalism, notably related to the significance of state service and the role of legitimacy and prestige. In total, this chapter presented six factors in higher education's political-economic landscape that intersect with the decision to make innovation and entrepreneurship an institutional ethos, several of which stem from processes of globalization⁸:

- Dramatic transformations in the American economy including the perceived advent of the knowledge-based economy, disappearance of manufacturing jobs, and the need to rediscover the country's comparative advantage in global trade through innovation.
- Government disinvestment in higher education at both the state and federal levels.
- Elevated expectations from state in terms of the university's contribution to economic development and reporting how the university is making use of public funds.
- Increasing critique of the cost and value of a college degree.
- Heightened institutional competition and constant comparison to peers.

⁸ It should also be noted that the political-economic environment I described closely resembles a neoliberalist approach to the economy and public policy.

- Intensifying student-consumer demands as tuition became an increasingly important revenue stream for the institution.

As a consequence of this political-economic environment, many university leaders echoed the question raised by Malcolm Moos in his 1981 study of Tidewater: what is the role of the land-grant university in today's challenging circumstances? The response was that the university needed to be innovative and entrepreneurial, but for reasons that extend beyond resources. By placing so much stress on resource dependence, the theory of academic capitalism does not account for the full range of challenges implicated in university leaders' decision-making process. Therefore, I argue that a more comprehensive consideration of higher education's political-economic context warrants a refinement of the theory of academic capitalism.

More specifically, this chapter detailed four explanations for the innovation and entrepreneurship ethos. The search for new revenue streams was undoubtedly part of the conversation, even though at the time of writing, none of Tidewater's entrepreneurial activities had yielded substantial money for the institution. In the midst of heightened competition and intense scrutiny of higher education, I argued that symbolic forms of currency in higher education, such as tradition and prestige, are of vital importance. Interview data presented in this chapter demonstrated that the decision to initiate and support the innovation and entrepreneurship ethos was linked to a land-grant tradition of serving the state. I suggested that this legacy was a novel cultural product, repurposing the past to address the needs of the present. A third significant explanation for the ethos was attempting to increase legitimacy and, by extension, prestige in a higher education field where innovation and entrepreneurship are vectors of competition. This trio of

motivations—the hope of future income, the tradition of state service, and the pursuit of prestige—were most commonly used to justify the choice of innovation and entrepreneurship over other strategic priorities. Indeed, these three explanations were far more convincing than a less frequently cited fourth motivation, which was the desire to attract and retain faculty and students. Interview data failed to adequately substantiate this rationale and raised several questions about its validity.

Chapter six shifts the discussion from explaining Tidewater's institutional ethos to delving further into the third question, which centers upon how the ethos was translated into incentives for faculty and academic opportunities for undergraduate students. In this chapter, I explore the extent to which the innovation and entrepreneurship ethos has so far affected the way faculty members go about their work and are rewarded at TU. Additionally, I investigate how the creation of academic opportunities around innovation and entrepreneurship is shaping the subjectivities of students and for what eventual purpose. In this way, I attempt to flesh out one of the ways in which higher education institutions reflect and reproduce the social relations of the current capitalist system.

CHAPTER SIX: TRANSLATING THE ETHOS INTO INCENTIVES AND OPPORTUNITIES

Honestly, there's not a lot that can be done at the president's or provost's level that's going to make the faculty do anything. I think it's really more about how we make it more attractive or more enticing to start...courses or other entrepreneurial activities.

-Entrepreneurship program director

The university definitely sugar coats [entrepreneurship]... You have to be able to say that 9 out of 10 of you will not have a business... For every Steve Jobs, there's a million people that fail, that lost all their money, that went bankrupt. And we need to tell those stories just as much as the success stories.

-Student manager of a startup incubator

Introduction

A vital element of an institutional ethos, as it is defined in this dissertation, is the utilization of values to coordinate and normalize the activities of constituents to some desired end. In this chapter, I examine efforts on the part of university leaders to encourage faculty members and undergraduate students to think and behave as entrepreneurs through the creation of incentives and sanctioning of knowledge via academic opportunities. Accordingly, my interest lies not only in how the ethos is translated into conduct-shaping mechanisms, but also in determining what the ultimate objective is of such measures. Importantly, the data collected for this study does not adequately illuminate the extent to which values of the innovation and entrepreneurship ethos have been internalized by actors at Tidewater. However, it does show numerous efforts to make the ethos manifest in the lives of faculty members and undergraduate students. There is reason to argue, based on the evidence presented below, that the attempted transmission of the ethos has a greater effect on students and the subjectivities they develop in college than faculty members and the academic profession.

In part one of the chapter, I provide an account of attempts to incorporate the innovation and entrepreneurship ethos into the university's faculty reward structure. More specifically, I explore two mechanisms of translating the ethos: expanding the criteria for promotion and tenure (P&T) and creating awards related to innovation and entrepreneurship. I begin by discussing the criteria on which faculty members are evaluated, based upon current policies at Tidewater and interview data. A few interview participants—most of whom are involved in academic entrepreneurship—indicated a desire to see entrepreneurship included as an activity that is rewarded in promotion decisions. In fact, the provost and university senate jointly convened a task force to revise the guidelines for P&T at TU and included specific instructions to consider ways of recognizing innovation and entrepreneurship. I shed light on the work of this task force using data from interviews, observation, and documents produced by committee members. Furthermore, I identify the creation of awards related to innovation and entrepreneurship, demonstrating that they currently cater to faculty in the science and technology field. In the end, I argue that efforts to translate the ethos into incentives for faculty members have not drastically altered their thinking or behavior about what comprises professorial success. Nevertheless, data pointed to several issues connected to even minimally encouraging academic entrepreneurship at Tidewater.

Part two of the chapter shifts to undergraduate students and the development of academic opportunities that reflect Tidewater's push for innovation and entrepreneurship. Building upon my treatment of the entrepreneurial mindset in chapter four, I use interview data and course syllabi to recount the skills and knowledge students are encouraged to master and acquire. These patterns of thinking and behavior are structured

and normalized through a variety of academic programs, many of them newly offered, including courses, modules in design thinking, business model pitch competitions, and minor degree programs. Although many of these programs are voluntary, interview participants were interested in including innovation and entrepreneurship in the general education curriculum. I argue that the desire to increase entrepreneurial learning opportunities, in keeping with the president's strategic priority, overshadowed consideration of the possible pitfalls. In particular, I look at four issues that emerged from the data related to how the entrepreneurial mindset is taught to undergraduate students: 1) an under-appreciation of the high probability of failure; 2) a fostering of a prize-based culture; 3) a celebration of team versus individual thinking; and 4) a lack of training in ethics. Given the cultural cache of entrepreneurship and celebrity status of entrepreneurs, these academic programs have the potential to sway college student subjectivities in potentially harmful ways, which I demonstrate through the case of one student-launched "social venture."

At the end of the chapter, I relate these emerging findings on the translation of the ethos to theory on governmentality outlined in proposition four and the extent to which the university has become a transmission locale for the social relations of contemporary capitalism. In other words, I consider whether the transmission of entrepreneurial values is perhaps the ultimate expression of the deepening relationship between universities and the preparation of neoliberal capitalists, which serves to reproduce the system's hegemony. Because the ethos remains a project under construction, these connections are by necessity tentative, and its findings will require further evaluation with empirical evidence. This does not detract from the insights gleaned from data, but rather provides a

doorway to future research. The next section introduces the two mechanisms by which the innovation and entrepreneurship ethos is translated into incentives for faculty members, before discussing both the traditional criteria of P&T and beliefs surrounding potential alterations that reward innovation and entrepreneurship.

Faculty Incentives Related to Innovation and Entrepreneurship

The translation of an institutional ethos at a complex organization like Tidewater takes shape in myriad ways. In this part of the chapter, I approximate a holistic view of how the ethos is translated and what it means for faculty members by focusing on a few indicative objects of study and sites of data collection. In the realm of faculty incentives, I concentrate upon changes to the university's promotion and tenure (P&T) criteria. Much of this section centers upon the work of a task force charged with revising the P&T guidelines at TU. Analysis of data shows that entrepreneurship was a source of confusion and some discomfort in task force deliberations, and its role in the tenure and promotion process was recognized but made rather minimal in the committee's final recommendations. I also briefly highlight the creation of a small number of awards for faculty members related to innovation and entrepreneurship and illustrate the work of two faculty members who were honored for launching a company based upon their research. Although efforts to incentivize academic entrepreneurship are patent at the university, I contend that these efforts do little to disrupt the prevailing principles linked to faculty success. Nevertheless, attempts to turn the ethos into incentives are not without implications, three of which I consider in this part of the chapter: the need for clear policies on conflicts of interest and commitment, redefined expectations of academic success, and the further development of a two-class faculty hierarchy.

The fourth leg: expanding promotion and tenure criteria. According to policy established by the Board of Trustees, promotion to a tenured faculty rank within the state university system is based upon three criteria: “1) teaching effectiveness, including student advising; 2) research, scholarship, and, in appropriate areas, creative activities or other activities that result in the generation and application of intellectual property through technology transfer; and 3) relevant service to the community, profession, and institution” (Policies and Procedures of the Board of Trustees, II.1.00, p. 9). The inclusion of the phrase “generation and application of intellectual property through technology transfer” was recently added to this policy. Chancellor Hofbauer characterized the policy change as “pretty straightforward” because it “encourages faculty to use their talents to generate new ideas that have value to society.” Although he believed some faculty members have been “engaged in this type of activity before,” he concluded that “it’s beneficial to the university and the state if we stimulate even more activity in this regard..., and the kind of activity people have in mind is creating intellectual property that has some economic value or value to the quality of life in the state or America.” Each institution in the system must ensure that their P&T policies are consistent with this change. Former provost Nancy Martin recalled the policy change being less than straightforward: “There was a lot of discussion. It took months and months, maybe half a year to get the wording correct. Once the wording was correct, it didn’t require it; it just said it could be recognized.” Tidewater’s P&T policy included no such language, simply referring to “performance in research, scholarship, and creative activity” as one of three criteria for tenure.

These three criteria were described as the pillars of the academic profession, which was sometimes figuratively called a “three-legged stool.” Tony Christensen equated these three pillars to “the university’s traditional roles” of teaching, research, and service. In the view of Nicholas Johnson, these three pillars represented the “status quo ante” of the academic profession: “If you look at the tenure criteria, look at the promotion criteria, it says you have to research, you have to be able to teach, and you have to do service.” These three legs of the stool were not equally emphasized. That is, each department and college was able to set its own specific tenure criteria and how much weight should be assigned to research, teaching, and service, respectively. However, in general at Tidewater, the prevailing custom was to place the most weight on research, followed by teaching and then service when it came to tenure decisions. Teaching has become an increasingly important part of the P&T review process, as one professor related: “I do think [Tidewater] has moved forward a little bit on the teaching.... The provost before the current one, [Nancy Martin], actually kind of put out the message that you really had to have good teaching for promotion and tenure.” Still, this increasing emphasis on a strong teaching record has not unseated “research and reputation and getting grants and stuff” as the top criterion. Service and research were the two pillars that interview participants believed could be enhanced by entrepreneurship. At the same time, some advocates of academic entrepreneurship believed entrepreneurship should constitute its own pillar.

“The third role,” Tony Christensen explained of the university, “was always called service, but no one knew what that meant.” With respect to faculty work, in particular, Nicholas Johnson asked, “Do you know what service often means? Not service

in a practical sense. It's service to program committees for academic conferences In other words, it's service to the priesthood, not to the people." Whereas Tony Christensen suggested that service had slowly been replaced by entrepreneurship and economic development as core roles of the university, Nicholas Johnson opined that it was becoming a fourth pillar of the academic profession. "We're in the process of modifying our tenure criteria to add a fourth thing; that is, the commercialization of technology." These two university leaders were joined by others who believed that the P&T review process needed to recognize entrepreneurship. For example, the director of the Tidewater Technology Enterprise Collaborative (TTEC), Tom Park, argued, "There is no mechanism in place by which faculty can actually get brownie points for doing this. If you want them to do it, find a way to reward them for it." He elaborated this point, saying, "In today's system, [faculty] aren't penalized for it, but they're not rewarded. It doesn't help you get full professor that you formed a company on the side." Park believed that this recognition should absolutely happen and was optimistic it would because "there is talk that it should change." This "talk" is a reference to a promotion and tenure guidelines task force convened jointly by the university senate and provost. The make-up of this committee was more reflective of the diverse viewpoints on campus, and their deliberations demonstrated less comfort with the place of entrepreneurship in P&T decision processes than these three advocates.

Despite Nicholas Johnson's perception that Tidewater "was in the process of modifying" tenure criteria, the charge of the P&T guidelines task force was, strictly speaking, to "review the [Tidewater University] guidelines for Appointment, Promotion, and Tenure." Although the purview of the committee did not exclude policy changes, the

policies on which P&T criteria are based amounted to less of a concern than the structure of review processes. Among the fourteen items the committee was asked to assess in the charge document was:

how varying facets of scholarly activity such as innovation and entrepreneurship (including social entrepreneurship), application of intellectual property through technology transfer, interdisciplinary/collaborative research, and the application of research to solve existing problems in society, should be evaluated as part of the [P&T] review process.

The committee consisted of associate and full professors representing almost all of the colleges at Tidewater, many of whom had extensive experience serving on promotion committees at various levels. It also included the director of the university senate to advise procedural matters and employees of the office of faculty affairs. The issue of whether and how to recognize innovation and entrepreneurship fell to a subcommittee headed by a professor in the sciences, Lee Nguyen. Subcommittees were similarly formed for other content areas mentioned in the task force charge, with the goal of determining what present policy at the university was, what was happening at peer institutions regarding the issue at hand, and what changes were recommended to the guidelines. Each subcommittee wrote a report and had time during meetings to present their findings and recommendations, which were then discussed by the entire committee.

Prior to the innovation and entrepreneurship subcommittee's presentation, the entire task force met with Nicholas Johnson to clarify what was meant by "innovation" and "entrepreneurship." During previous meetings of the task force, several committee members, including one humanist and one scientist, expressed that they did not

understand these concepts or how they might relate to P&T. One member of the committee, a professor in the humanities, reflected that until this meeting with Nicholas Johnson, she “would have thought that it’s about making money.” However, as a result of hearing Johnson’s definition of entrepreneurship (see page 156), she learned “entrepreneurship can be a variety of things, and in some ways, it might be moving toward something productive and kind of breaking down a monolithic model of what research means.” When I interviewed the chair of the innovation and entrepreneurship subcommittee, he confided that “you see how very strong faculty across the campus feel when they get together and they hear innovation and entrepreneurship.” I asked what they feel, and Nguyen suggested:

I don’t know that you’re going to see too much about innovation in the guidelines. That’s my guess. You may see entrepreneurship, you might see engaged research. And so far, where the discussion seems to be going is that these types of things can support a tenure case if you have publications in high quality research It’s not going to substitute the traditional things.

These sentiments were reflected in the subcommittee’s report and presentation, and the deliberations over the report signaled discomfort around entrepreneurship in academe.

In preparation for the subcommittee’s report and presentation, the chair sought out the state system’s policy on entrepreneurship as it relates to P&T. It was determined that the policy only referenced technology transfer as part of the research criterion, as noted above. This language was not directly adopted by the subcommittee. Instead, they recommended that the P&T guidelines be changed as follows:

Full recognition in the tenure process should be given to the broad range of entrepreneurial, public engagement, and creative activities in which faculty engage. These activities may enhance the academic merit of the candidate in any of the categories listed above. As with all other activities of teaching, service, and research, scholarship, and artistic creativity, there should be no intellectual compromises. These activities should be rigorously evaluated for high quality and distinction.

This language was designed to address several of the concerns raised during task force meetings. The report noted that, despite speaking with Nicholas Johnson, “there was not agreement about the definition of entrepreneurship.” Moreover, the report averred that entrepreneurial activities should enhance the three main pillars of P&T, not constitute a fourth pillar. In other words, entrepreneurial activities could represent just one piece of evidence in a faculty member’s record within the categories of research, teaching, and service. A few committee members, and one professor in the social sciences, in particular, were concerned that faculty members who formed companies spent too much time growing their businesses and not enough time in other areas of the job. In response to this concern, the report suggested that “entrepreneurial activities should in all instances be consistent with [TU] policies on conflict of interest and conflict of commitment.” Lastly, some committee members expressed worry that there were few concrete indicators of entrepreneurship, and those that existed, such as patents, were not subject to peer review. Indeed, some committee members felt that the decision to award a patent was sometimes made according to potential for commercial success and the availability of money, not academic excellence. Consequently, the report maintained that

entrepreneurial activities should “be evaluated based upon the unit’s criteria for excellence, innovation, significance, and impact.” In sum, entrepreneurship should enhance a promotion and tenure case, but it should not by itself be a criterion.

The entrepreneurship subcommittee’s report will form but one section in a larger document presented to the university senate, and, in the end, it merely lists recommendations for the provost to consider. Interpreting the deliberations of committee members and analyzing the subcommittee report, there is reason to believe the recommended language around innovation and entrepreneurship signifies a concession. The committee was charged with addressing whether and how innovation and entrepreneurship should be recognized in the P&T review process, and it was included in the deliberations for this reason. The overarching principle the subcommittee pursued was to broaden the scholarship that could be recognized as part of P&T, such as digital media and publicly-engaged research. Widening the umbrella to include newly emerging forms of scholarship and under-appreciated types of research was of recurring interest to committee members, while several individuals acknowledged that innovation and entrepreneurship would not have been talked about were it not part of the task force charge. Therefore, the attention afforded to innovation and entrepreneurship in the P&T guidelines task force is minimal. Efforts to incentivize innovation and entrepreneurship and incorporate values of the ethos through expanding P&T criteria did little to disrupt the prevailing notions of success in the academic profession. In other words, for the P&T guidelines task force, the “stool” that symbolized professorial success remained purposefully three-legged.

Faculty awards for innovation and entrepreneurship. At least two awards were created—or newly renamed—in the past several years to honor faculty members who are deemed innovative and entrepreneurial. The first award is conferred by the Board of Trustees and was formerly called the Award for Efficiency and Effectiveness. In 2012, the award was renamed to the Award for Innovation, with two categories: Academic Transformation or Administrative Transformation. The former award goes to a faculty member who "improved teaching with minimum cost savings of \$10,000," and the latter award recognizes "improved effectiveness and efficiency resulting in minimum cost savings of \$10,000." The winner of each award receives a plaque and a monetary gift of \$1,000. One of the faculty members that Tidewater nominated for this distinction was an engineer who taught a series of courses on energy audits. This experiential course required that students undertake a final project in which they conduct an energy audit of a campus office. Based upon this course and project, TU's office of information technology approached the faculty member to do a similar audit of their database facilities. As a result of the analysis he did with students, he recommended changes that could save the university hundreds of thousands of dollars in energy costs. Therefore, from the perspective of the Board of Trustees and state university system, the type of innovation they would like to see from faculty members involves saving their institutions money.

A year after the renaming of the Award for Efficiency and Effectiveness, the state university system announced the winners of the inaugural Board of Trustees Entrepreneur of the Year Award. This award we created to support the fulfillment of one of the objectives outlined in the Board's "Strategic Plan 2020," namely the creation of 325 new companies in ten years. Among the first winners of the award in 2013 were two

professors of computer and electrical engineering, who with \$20,000 from a business plan competition launched a company around their thin film batteries. The company now employs fifteen scientists and engineers and provides internships to over a dozen TU undergraduate students. In a press release for the award, a member of the Board of Trustees stated, “We are delighted to recognize these three outstanding entrepreneurs. Their innovative work, and the establishment of this annual event, reflects so well on the opportunities before us as the [state university system] makes technology commercialization a priority throughout our institutions.” If faculty innovation was equated with cost savings according to the Board of Trustees, faculty entrepreneurship was linked to technology commercialization and launching a company. These two awards are not the only ones for which Tidewater faculty are eligible that recognizes innovation and entrepreneurship. However, they both garner press attention and carry distinction. The question that remains is whether these awards truly incentivize faculty members and whether they apply equally to faculty members of all disciplines.

It is possible that many faculty—and the departments in which they work—are not aware of these awards or write them off because their scholarship will never result in substantial cost savings or easily commercializable knowledge. In this way, the creation of awards related to innovation and entrepreneurship intersects with only a small subsection of faculty at TU, namely those in the sciences, technology, and engineering. Among those that are eligible, it is possible that the prestige associated with awards will sufficiently motivate them to begin thinking about how to be more innovative and entrepreneurial. As Nicholas Johnson intoned, “faculty are not intrinsically interested in making money.” For this reason, he argued that the university must adjust its reward

structure in ways that allow faculty members to advance their careers by engaging in entrepreneurship. The development of such incentives creates an environment in which faculty self-interest can be harnessed to the benefit of the university and state. Nicholas Johnson put this idea in rather Darwinian terms: “That’s a stimulating environment, to have to hunt a little bit for your food.” It should be noted, nonetheless, that the awards for innovation and entrepreneurship were recently created and are few in number. Hence, even if they help faculty attain prestige or aid in career advancement, these incentives are currently limited in terms of impact.

Tidewater is making a concerted effort to translate the innovation and entrepreneurship ethos into incentives for faculty members. Some interview participants related that they were aware that university leaders wanted them to be more innovative and entrepreneurial. The current faculty ombudsperson observed, “I think there’s a push to do this, and it takes time to build it and recognize it.” Similarly, Amy Curtis, a professor in the humanities, reflected, “Yeah, we’re encouraged to be innovative and entrepreneurial. And, you know, go out and get grant money or raise money somehow for some project.” This comment raises an important point, which is that, while many faculty members feel pressure to be innovative and entrepreneurial, the meanings of the concepts in practice vary by field. For Curtis, being innovative and entrepreneurial refers to securing grant money more so than starting a company. Nicholas Johnson clarified that the expectation was not that all faculty become entrepreneurs “because if ten percent of faculty were to go off and start business, the whole academic enterprise would collapse.” However, he suggested that the university wants them doing more commercialization of their research than at present.

The development of incentives on the part of the Board of Trustees and university leaders may be in response to the perception that faculty are unwilling to take risks. Nicholas Johnson claimed: “Professors tend to be very risk averse. They think they’re innovative, but they tend not to be entrepreneurial by nature because they always conformed to the system coming up.” Because these incentives do not drastically alter the criteria on which faculty are promoted and speak to only certain forms of scholarship, I argue that the translation of the ethos has at present affected only those faculty members whose disciplines supported entrepreneurship or whose graduate socialization was amenable to entrepreneurship will continue pursue the commercial opportunities of their research. Additionally, some faculty, motivated by the desire to financially benefit, will engage in entrepreneurship. Nevertheless, it will be an activity of a small number of individuals. In the words of Lee Nguyen: “I’m smart enough to know that it’s not going to be case that huge numbers of faculty are going to start forming companies. It’s just not going to happen. The administration can say whatever it wants. I don’t think that we’re going to have that much of that going on percentage-wise.”

Implications of Faculty Incentives

Although incentives for faculty members may only mobilize those in certain disciplines to become entrepreneurs or continue their entrepreneurial ventures, efforts to translate the ethos yield several implications the merit further consideration. The first implication is that, regardless of the number of faculty members who decide to pursue entrepreneurship and the disciplines they represent, the university may need to revisit its policies on conflict of interest and conflict of commitment. Several interview participants indicated that there was some concern that Tidewater’s policies to ensure that faculty are

committed to the responsibilities for which they were hired and are free from undue corporate influence are not widely disseminated nor adequately clear. Chancellor Hofbauer acknowledged:

It's a huge issue. No question about it. There's an upside to this, but there's also a dark side. A lot of...faculty have gotten into difficulties that have compromised the integrity of institutions. So, part in parcel with this kind of policy is there have to be rigorous policies on conflict of interest and conflict of commitment, and they have to be adhered to.

According to Lee Nguyen, there are “significant barriers” to forming companies “that have to do with conflict of interest and conflict of commitment that are not well formulated or understood.” For one academic executive, such dark sides of entrepreneurship stand out most in her memory: “When I heard about [entrepreneurship], it was more as a problem rather than as a mission.” She elaborated on this idea, recalling, “So, you have somebody who's going out, particularly in the college of engineering, and they're doing startup companies. Should they be doing this? How much time should they be giving to that?” These questions, and the challenges posed in answering them, prompted an academic executive for faculty to organize an informal group to examine policies around faculty conflict of interest and commitment.

The work of this group was viewed as especially important to Lee Nguyen. During his time as chair, he remembered that “there was a tendency by some faculty to play it a little fast and loose with the students.... And I saw situations where it was clear that the students' publications were being delayed because the student was working with a faculty member's company.” Furthermore, he related incidents of finding ways around

rules preventing faculty members from securing grants for research that benefited their company. He looked to guidance from MIT and Stanford on how they handle such situations, but in the end decided “the university could be a lot clearer...about what’s okay, what’s not okay, what actually protects the faculty member.” An academic executive for faculty hoped that the group would provide such clarity: “the reason that I put together [the group] is that I didn’t want to give ad hoc answers. What I’m finding is that it is very difficult to come up with agreed upon conditions.” In attempting to “play catch up with our own individuals [faculty members],” Tidewater was not unlike other institutions: “the problem is even more severe in some of our peers.... It is not like anybody else has a much better answer.” The group’s draft report begins by suggesting that “present-day higher education faces a tension,” consisting of “increasing demand and incentive for faculty to be innovative and entrepreneurial” and the need as a public university to reflect “transparency and accountability and traditional academic values.” Much like the point I make here regarding conflicts of interest and commitment, the report declared that such tensions “need not be negative if they are recognized, understood and managed.”

A second implication is that, by simply mentioning innovation and entrepreneurship in conjunction with promotion and tenure, university leaders send a message to faculty members that it is expected of them. One of the themes that emerged during the deliberations of the P&T guidelines task force is that “folklore” frequently reigns over and above policy documents when it comes to faculty understanding of what is required of them to attain tenure. Lee Nguyen voiced this issue as follows: “when faculty hear this thing about innovation and entrepreneurship in the tenure process, the

first gut reaction of a lot of people is, ‘Does that mean it’s required? Everybody has to do it?’ Indeed, his foremost concern was that “if you start pushing this so much, new assistant professors might think they should start forming companies.” In his opinion, that is “the worst thing that could happen...in terms of their getting tenure.” Although he reiterated that the task force “is going to be sure to say that’s not the message,” he cautioned that “it’s a problem with initiatives from the highest levels; it sort of feels like the rest of what people are doing is maybe not so important.” The fact that the ethos has so far received limited buy-in from faculty implies that there is not much folklore surrounding entrepreneurship, outside of those disciplines where it is already customary to include it in P&T review materials. It remains possible, however, that attaching innovation and entrepreneurship to conversations about the future of tenure sends messages to faculty members about what constitutes academic attainment at the university.

The final implication connects to an argument proffered in chapter four, which posited that the innovation and entrepreneurship ethos was crafted and most widely circulated in the colleges of business and engineering, to the exclusion of other parts of campus, mainly the humanities. The translation of the ethos into incentives thus far continues to favor faculty members in certain disciplines, where it is easier to commercialize research or achieve according to extant indicators of entrepreneurship, such as patents. The faculty ombudsperson succinctly made this point in a series of questions: “There is the issue of, okay, there’s entrepreneurship and innovation as we’ve defined it. What does that do to disciplines where that’s not central to what they do? And is that going to create some kind of two-tier system, which is where people in arts and

humanities are very concerned.” It is possible that faculty in the arts and humanities already feel as though there is a hierarchy of value at the university, dominated by the sciences and engineering. For instance, one professor in the humanities explained Tidewater, “as at all research universities, [follows] a science model. Even if it includes the humanities, it’s still modeled on science.” While the three pillars of the academic profession and the vast majority of faculty awards are inclusive of scholars coming from all disciplines, that same sense of inclusivity does not seem to apply to incentives based upon innovation and entrepreneurship. The letter of the law certainly indicates that they are designed for all faculty, but in spirit they seem to cater to a select few.

The preceding paragraphs sought to reveal how the innovation and entrepreneurship ethos was translated into incentives for faculty. Although certainly not an exhaustive treatment of faculty reward systems, two mechanisms were examined: changes to P&T criteria and the creation of awards related to innovation and entrepreneurship. Underlying this discussion was the proposition that such incentives possess the capacity to shape faculty conduct—that is, how they work as academic professionals and knowledge workers at the university. Analysis of the data demonstrates that, at least so far, incentives for faculty members related to entrepreneurship are not remarkably strong and do little to sway faculty thinking and behavior regarding what comprises professorial success. It remains to be seen whether this argument acquires additional validity, especially once the provost acts on the P&T guidelines task force’s recommendations. In the next part of the chapter, I shift to how the ethos is translated into academic opportunities for undergraduate students. I explore in similar fashion the extent to which these efforts shape their conduct, and for what purpose.

Academic Opportunities for Undergraduate Students

Chapter four introduced the mindset as one conceptualization of entrepreneurship at TU. In this part of the chapter, I return to this conceptualization and develop it further to shed light on the skills and knowledge related to innovation and entrepreneurship that undergraduate students are encouraged to master and acquire. Increasingly, such skills and knowledge are being incorporated into the academic structure of the university through a constellation of opportunities, including courses, modules, workshops, business model pitch competitions, and even minor degree programs. I describe in some detail each of these opportunities, drawing upon interview data and course syllabi. I argue that, amidst efforts to expand entrepreneurial learning opportunities on campus, there has been insufficient thought given to its implications, which present several concerns regarding the transmission of values that constitute the innovation and entrepreneurship ethos. After discussing these implications, I exemplify them through the case of an undergraduate student-launched social venture, the Food Rescue Movement.

The entrepreneurial mindset in detail. The basic features of the entrepreneurial mindset as it was described in chapter four centered upon opportunity recognition and an understanding of customer demand in the marketplace. Beyond these basic features, interview participants and course syllabi revealed several other skills and types of knowledge requisite to think and act like an entrepreneur. Chief among the skills listed were the ability to pitch an idea and work on a team, thereby demonstrating mastery of interpersonal communication. Additionally, the entrepreneurial mindset necessitated an ability to assume risk and iterate upon prototypes, which generally means feeling comfortable with the high probability of failure. The knowledge cited as essential to the

entrepreneur is captured in what one interview participants called “business literacy;” that is, an understanding of marketing, accounting, and finance. Opportunities for students to learn the entrepreneurial mindset has been increasingly built into the academic structure at Tidewater as part of the president’s vision to expose all students to entrepreneurial learning opportunities.

One of the skills underlying the entrepreneurial mindset that recurred in interviews is pitching an idea. Travis Campbell-Green, noted that one of the goals of entrepreneurship courses “was to give students skills that would be broadly applicable. And I’ll just mention one of these possible skills that they teach in business classes.... It’s the pitch, the elevator speech.... How do you explain your idea in thirty seconds so that someone would want to hear more?” Christine Neilson, director of the Prince Entrepreneurship Center, likewise stated that “almost every job you go to, you have to be selling in some way, and it’s a big part of what we do in workshops.” For this reason, she said entrepreneurship students are regularly practicing their pitch: “That’s what we do. I mean, if you can’t pitch your idea, regardless of whether it’s for a business, you’re never going to get people to buy into your idea.” Describing the Honors Entrepreneurship House, one program director recalled that “they have a real strong emphasis on personal presentation, which is fine...It’s always a little awkward when I walk into their space and everybody shakes hands firmly and looks in you in the eye and is dressed well.” Thus, one skill that is routinely linked to the entrepreneurial mindset is salesmanship—selling an idea, often to those who might be interested in financing it.

A second, related skill is predicated upon the development of strong interpersonal communication in order to work on a team. Although Keith Meyers of the Crandall

Entrepreneurs Program believed the entrepreneurial mindset was mainly “oriented...towards being opportunistic,” he related that “when you begin to decompartmentalize it,” the mindset features “these different elements of self-efficacy and confidence and to some extent interpersonal relationship skills and social capital.” The director of the Honors Entrepreneurship House agreed with Meyers, suggesting that “particularly with kids that are coming in as freshmen,” entrepreneurship “is really a means towards self-expression, self-awareness, [and] self-actualization.” The reason that these soft skills are prioritized is that many interview participants emphasized the team-based nature of entrepreneurial work. As the director of the Honors Entrepreneurship House put it: “We do a lot of team projects because entrepreneurship is really a team sport. You know, innovation is not the lone inventor kind of thing.” In the words of one dean, “a lot of the innovation and entrepreneurship...thinking that they talk about depends on working with a cross-disciplinary team of people, requires that you have people with different backgrounds...because you get a different result. And an enriched conversation.” Interestingly, the dean acknowledged that this emphasis on working with a group in some ways ran contrary to the online learning promoted by some entrepreneurship academic opportunities, as demonstrated below.

A final skill that was frequently mentioned by interview participants revolved around the assumption of risk and the ability to deal with—and learn from—failure. According to Danielle Ramirez of the Center for Social Innovation, “most of the kids here [at Tidewater] are not very well versed in failure. Most of them have been very successful in their academics and their extracurriculars, or they wouldn’t be here... You know, their biggest fear is fear of failure.” One of the goals of a practicum she teaches is

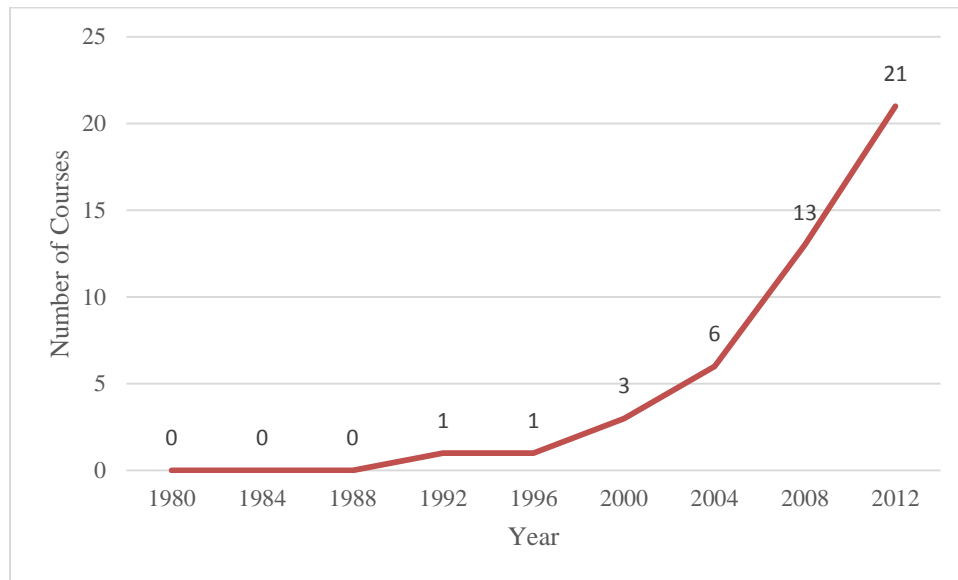
to “push the envelope” and “get them to take risks.” Dealing with failure by making iterative changes was deemed vital to the entrepreneurial mindset. “I think failure’s very important,” claimed Samantha Stone of the Institute for Innovation and Entrepreneurship. “I mean, fearless ideas, this whole model that we’re trying to energize the campus. Don’t be afraid to fail. And entrepreneurs will tell you, you learn more in failure than you learn in success.” One of the ways that the Prince Entrepreneurship Center helps students assume the risk of entrepreneurship and become comfortable with failure is to “de-risk” the process by not telling anyone their ideas are bad. Christine Neilson reported, “We don’t tell anyone, ‘You have a bad idea.’ We help them do the research that they need to kind of decide how they want to go about it.” As I show below, several interview participants, including student entrepreneurs, believed this approach to risk was not sufficiently grounded in the difficult realities of a venture failing, and some even claimed it was designed to merely increase the number of bodies that walked through the Center’s doors.

The other side of the entrepreneurial mindset was knowledge of managing a business. For example, while the first part of the curriculum offered at the Honors Entrepreneurship House focuses on “the basics of ideation, thinking about customers and markets,” in the second part students “learn how to develop a business plan and financial model.” Thus, the program “looks at innovation first and they tries to put a little bit of a business concept around it.” Keith Meyers said his approach to teaching entrepreneurship is also to start with innovation and “how to identify opportunities” and then shifts to “the product development, the marketing, and the financing—all the various elements of developing a startup company.” Christine Neilson called this knowledge “basic business

literacy,” which will be required as part of a proposed minor degree program. Together with opportunity recognition, understanding the market, pitching ideas, working in teams, assuming risk, and learning from failure, business literacy represents an important component of what undergraduate students are encouraged to learn as the innovation and entrepreneurship ethos is translated into academic opportunities. These opportunities are gradually being incorporated into the academic structure of the university through courses, modules, competitions, and degree programs. I describe each of these opportunities in turn, before analyzing them to demonstrate their often overlooked implications.

Entrepreneurship courses. In Tidewater’s course catalogue for 1980, there is no mention of entrepreneurship courses for undergraduate students. By 2013, the Tidewater Technology Enterprise Collaborative alone offered nearly twenty courses per year on innovation and entrepreneurship and, according to its director, reached over a thousand students. Figure 3 shows the growth in courses specifically bearing the word entrepreneurship in their title or description since 1980, based upon course catalogues for the university. As I argued in previous chapters, the rapid increase in entrepreneurship courses began around the time William Pierson started as president in 1998. Although not shown in the figure, courses have also been offered in more of the university’s schools and colleges over time, from just two in 1992 to five in 2012.

Figure 2: Growth of Entrepreneurship Courses at Tidewater, 1980-2012



There are now courses on writing for social entrepreneurship offered through the English department, courses on bio-entrepreneurship for students studying life sciences, and courses in media entrepreneurship in the college of journalism. Based upon the packet that the Institute for Innovation and Entrepreneurship produced for *The Princeton Review*, the university has a total of 45⁹ courses that include content in any way related to innovation and entrepreneurship (19 of which are in the college of engineering; the remaining courses are divided amongst the colleges of humanities [4], agriculture [6], public health [1], undergraduate studies [7], journalism [4], natural sciences [2], public policy [1], and architecture [1]). As has been previously indicated, the steady increase in entrepreneurship courses is consistent with President Henry Pryor's goal of exposing all undergraduate students to entrepreneurial learning opportunities.

The resistance of the dean to creating a separate general education requirement for innovation and entrepreneurship does not mean that entrepreneurship courses are

⁹ This figure is higher than my calculation of 21 courses because my search of course catalogues only sought courses with entrepreneurship in the title or description. The packet was more liberal in its interpretation of courses related to entrepreneurship.

excluded from curricular obligations all students must fulfill. In fact, several interview participants stated that they hoped to develop “I-Signature” courses around entrepreneurship. These courses, according to the university’s general education website, are designed to be “lively and contemporary. They speak to important issues that spark the imagination, demand intellect, and inspire innovation.” All Tidewater undergraduates are required to take two “I-Signature” courses. Furthermore, several entrepreneurship programs offer courses that count towards the “scholarship in practice” requirement of the general education curriculum. One dean related that, when asked whether innovation and entrepreneurship coursework could be turned into a general education requirement, she responded: “We have to find a way to build it into what we have. We had just changed the gen ed. That’s why I said, ‘Scholarship in Practice. There you go. Put it in there.’” Although courses in innovation and entrepreneurship are not mandatory, they have been integrated into the academic program which the university considers essential for all undergraduate students to complete in order to receive a Tidewater degree.

Many of the entrepreneurship courses currently offered at TU are connected to the two previously discussed living-learning programs: the Crandall Entrepreneurs Program, which is for upper-class students of all majors, and the Honors Entrepreneurship House, which caters to first- and second-year students of all majors. These courses exemplify how the entrepreneurial mindset is taught to students at Tidewater. The first course that students in the Crandall Entrepreneurs Program are required to take is titled “Advanced Entrepreneurial Opportunity Analysis in Technology Ventures.” According to the syllabus, this course “is an informed and interesting exploration of entrepreneurial cognition with both theoretical and methodological contributions for active and aspiring

student technology entrepreneurs.” Assignments for the course include a paper on psychological traits of successful entrepreneurs, a paper on developing an innovation-based concept, and a business model design group project. In the Honors Entrepreneurship House, students do not develop a business plan until the second year. The introductory course’s objectives cover “developing an entrepreneurial mind for an entrepreneurial world,” “cultivating a business in diverse, global environments,” “leading and collaborating in a competitive world,” and “industry dynamics of technological innovation.” Required assignments for the course ask students to attend TTEC’s “intensive workshop and networking event on how to launch ventures” and write two papers that assess “entrepreneurial thinking and written communication skills.” One of the more interesting assignments is called the “Gumball Challenge.” Teams of students are given twenty-seven dollars and twenty-seven gumballs and tasked with “creating as much value as possible.” Thus, students are taught to both demonstrate certain cognitive and communication skills and to put their business literacy to practice through simulations and business plan competitions.

The main impediment to the continued growth of entrepreneurship courses, in the eyes of two interview participants, is qualified faculty to teach them. As Keith Meyers observed:

for the university to have a commitment to entrepreneurship education, I think it’s going to come with hiring a lot more faculty that can teach it. Because it’s one thing to say, ‘Wouldn’t it be nice to get to 24,000 [enrolled students]?’ but you can’t divide that among the five or six people we have teaching.

In the same vein, Danielle Ramirez of the Center for Social Innovation worries that courses are being created without any true learning objectives or faculty with training in entrepreneurship: “What I can easily see happening is someone has a course and they try to adapt a few words to make it more entrepreneurship-related, but at the end of the day it was the same thing that they were always doing. And then we count that and say, ‘Look at how many more courses we have!’” Ramirez would like to see the university more systematically define learning objectives around entrepreneurship to ensure that the right content is being transmitted under the banner of entrepreneurship. While courses represent one of the primary ways in which the innovation and entrepreneurship ethos is translated into academic opportunities for undergraduate students, questions remain about its growth and the control of quality.

Design thinking modules. As a way of incorporating more entrepreneurial learning opportunities into the academic structure of the university without necessarily launching new courses, the Institute for Innovation and Entrepreneurship developed modules around design thinking. These modules vary in length and are taught by a lecturer who previously taught at Stanford’s design institute. In an interview, the lecturer defined design thinking as:

an innovation process, a way for people to methodically come up with a wild, new innovation. It doesn’t have to be just a product. Like I said, it could be new services, systems, policies, intangible stuff as well.... The idea is that it’s human-centered, so you start with the people are going to be affected by whatever it is you’re designing. And then you go out and spend a lot of time with them, really understand what they’re lives are like. And then you define the problem...Then,

it's a lot of brainstorming. Coming up with wild ideas, then picking some to prototype. By prototype, I mean you're building a really low-resolution, really cheap model of your solution to hand to somebody and then have them use it... And then constantly iterating until you come up with your solution, you keep increasing the resolution of your solution.

The desired outcome of the design thinking modules is that if students are “dropped into any really tough, existing problem,” they could devise an innovative solution. “It’s making all these students innovators and getting them to question how things are now and push things forward in any discipline.” The emphasis of the modules is on innovation, while the creation of companies is viewed as simply on means of bringing a solution to fruition. Nevertheless, design thinking modules constitute an important vehicle for the teaching of several facets of the entrepreneurial mindset, such as understanding what customers in the marketplace seek and iterating upon failed prototypes. The design thinking lecturer even noted that the idea of design thinking is to “fail early and fail often” as part of a “culture that celebrates failure. We don’t want students to be perfectionists and to be afraid of going after something big.”

To date, design thinking modules have been used extensively in Tidewater’s honors program and courses for first-year students in a selective residential program. In the fall of 2013, over 600 students took part in a design thinking module. Samantha Stone intimated that the decision to build modules around design thinking was purposeful: “one of the reasons we led with design thinking and not the lean launchpad methodology is that [it] is for everyone. It’s how to problem-solve.” The provost recently included design thinking as one example of content to include in a proposed series of “Fearless Thinking”

courses. Another content area suggested in the request for Fearless Thinking course proposals was “entrepreneurship tailored to a specific field of study, for example – the arts, agriculture or non-profits.” As the name implies, Fearless Thinking courses should, according to the provost, “challenge students to take risks” and “foster collaborative teams.” Faculty whose Fearless Thinking course proposals are accepted will be expected to teach the courses three semesters, for which they will receive a monetary award. Additionally, participating faculty will be named Distinguished Institute for Innovation and Entrepreneurship Faculty Fellows. Rather than create separate design thinking courses, it is believed that modules will be built into many Fearless Thinking courses. As I discuss further as part of the implications of efforts to translate the innovation and entrepreneurship ethos into academic opportunities for students, there may be an overemphasis on risk-taking and occasionally valid reasons for fear.

Business model pitch competitions. Arguably the most visible entrepreneurial learning opportunities at TU—attracting the largest number of students—is competitions, most of which require or revolve around a business model and pitch. The Institute for Innovation and Entrepreneurship calculated that there were sixteen innovation and entrepreneurship competitions at Tidewater in 2013. One of the competitions is open to university students across the country, and another is international, bringing together TU students and students from Peking University to compete for money to launch a business that is either based in China or leverages China’s resources. Nine of the competitions are organized by either entrepreneurship programs in the college of business or TTEC. By far the largest competition is the Bull’s-Eye Cup, which is run by the Prince Entrepreneurship Center. Funded by a wealthy alumnus who launched a highly profitable

athletic apparel company, student companies who have been in operation less than five years and have revenues in excess of \$5,000 can compete for up to \$70,000 in cash and prizes. I observed the 2013 Bull's-Eye Cup, which took place in Tidewater's largest performing arts theater. Thousands of spectators filled virtually every available seat in the theater. Each team had an opportunity to pitch their business to a panel of judges, putting into practice the salesmanship touted as part of the entrepreneurial mindset. The pitch consisted of one member of each team—all of whom were male this particular year—explaining through a PowerPoint presentation how their product or service filled a niche in the market and showed the greatest promise for profitability. The team that won the Cup in 2013 was selling a biodegradable mat that facilitated gardening for novices in urban areas.

These observations of the Bull's-Eye Cup were less revealing than an interview with the organizer of a new business model pitch competition in the college of social sciences, Steven Walker. The initial idea to create the competition came from the college's board of visitors, which Walker described as comprising many entrepreneurs and "serial entrepreneurs." Receiving logistical support from the Prince Entrepreneurship Center, Walker sought "a format that was proven to work" and would "not force the immediate appearance of entrepreneurship in our culture." The goal was to create an opportunity for students to "take their great idea and turn it into a startup or at least a pitch for one" and, therefore, become involved in an area that has been dominated by business and engineering students. Walker wanted the competition to send a message to the "UMD entrepreneurial community" that the social sciences were also innovative:

We've got the students that represent very likely the missing pieces to your idea

and your organization. We have the research, we have the anthropology, we have the psychology and sociology behind your student behavior, we have the understanding of satellite imaging, and global position networks and things like that that can drive what's going on.

In this way, students studying the social sciences could be seen as attractive to already entrepreneurial students as they launched their startups.

The most important output that each team must prepare is a business model using a canvas, or guide, provided by the competition. "Because we appreciate the fact that our students, especially at [the college of social sciences] are not going to be familiar with your business plan," explained Walker, the business model canvas "takes the main building blocks of any business plan or executive summary and allows you to approach them block by block." In addition to preparing the business model, teams must also write a written summary of their idea and a series of PowerPoint slides, which will serve as the basis for their pitch if they are selected as semifinalists. The final piece that teams submit for consideration consists of "quotes from potential customers," the assumption being that "if your business is going to be consumer-driven, you need to understand what it is your customer wants." Since all of the teams must submit customer quotes, all of their ideas are expected to be consumer-driven. Throughout this process, teams are required to attend a certain number of workshops and pitch practice sessions with "individuals at the [Prince] Center, as well as our... alumni board of visitors." Prizes are awarded to the best two semi-finalist teams, as well as the team that has best utilized the available resources to help them develop their idea. This is to prevent students from being discouraged if they are beaten by a veteran team like the Food Rescue Movement, which won the

competition in 2013: “A fledgling entrepreneur who’s never done this before will be able to show more improvement, more knowledge gaining, and more progress than a so-called competition shark, who’s already well-established.” For Walker, the whole point of the competition is to introduce students to what he sees as crucial skills: “To get [students] in, get the thinking creatively, working with others across campus...And no matter what they do, if they never get into another entrepreneurship-focused program in their lives, those are things that they will undoubtedly take with them.”

What sets business model pitch competitions apart from other entrepreneurial learning opportunities is that it awards money to students in order to launch a startup or further refine their idea. For many competitions, cash prizes are considered “seed money,” or just a few thousand dollars to help them continue the development process. The possibility of winning money and other prizes is heavily marketed by the organizers of competitions, signifying a recognition that the process is not truly just about learning. Nevertheless, the belief that learning is a central rationale for the competitions has prompted some to consider how to award credit for students that participate. For example, the associate director of the philanthropy center on campus noted that they created a course for which students could register as they put together competition materials: “we need to support students who want to do this and we need to structure that support to give them credit for it.” Such flexibility with credits may prove to be particularly important with student entrepreneurs, as two undergraduate managers of the student startup incubator confided that many students who are working on a venture struggle with their courses. Their point was not that there is a higher risk of attrition among student entrepreneurs, despite the celebration of many technology executives who

elected to leave college early. Instead, the suggestion is that, much like academic entrepreneurs, students attempting to launch a venture face conflicts of commitment.

Entrepreneurship minor degree programs. Several interview participants were not open to the possibility that entrepreneurship could develop into a major degree program at Tidewater. Although they cited the existence of a field of study devoted to entrepreneurship, there was a recurring sentiment that entrepreneurship is an approach that complements other courses of study. As the director of the Honors Entrepreneurship House phrased it: “Part of me thinks you need to do this in conjunction with something else... For me, entrepreneurship is an approach. So, the question becomes an approach to what? It could be an approach to engineering, it could be an approach to doing business, an approach to linguistics, art, any of these things. It pairs well.” He favored offering entrepreneurship as a minor, which could then enhance a student’s major degree program. Currently, Tidewater has one minor degree program in Technology Entrepreneurship, and there is another minor in entrepreneurship being developed. The minor in Technology Entrepreneurship is managed by TTEC and is described as helping “technology-creating students” acquire “a firm grasp of the entrepreneurial process and mind-set.” Once “armed” with this mind-set, students involved in the minor “drive economic growth by launching successful ventures and bringing life-changing products and services to market.” The fifteen-credit program includes nine courses from which students can choose, all of which are taught by TTEC employees. Course topics in the minor include: “entrepreneurial opportunity analysis, marketing high-technology products, strategies for managing innovation, and international innovation and entrepreneurship.” Its curriculum, in other words, is built around fostering the entrepreneurial mindset.

A second minor degree program is in the proposal stage at the time of this writing, and its focus extends beyond technology entrepreneurship. Although the faculty member currently writing the proposal declined to share the document with me until it was ready for dissemination, Christine Neilson of the Prince Entrepreneurship Center mentioned a few of its features. “It will be very unique in that it’s significantly online, a blended structure,” explained Neilson. The core modules devoted to “business literacy” will be almost entirely online and combined with “some sort of experiential component, be it an internship or a project.” There will be several tracks within the minor, such as corporate entrepreneurship, small business management, or technology commercialization. The idea behind the minor, according to Neilson, is that the university “can’t necessarily just talk about entrepreneurship without having something that is a little bit [deeper] and gives these kids experiences that they can get credit for.” It remains to be seen whether the proposal is accepted, although it is difficult to envision its dismissal on a campus whose ethos has increasingly assigned great importance to innovation and entrepreneurship. The creation of minor degree programs—credentials that are recognized outside of the university—effectively validates and structures entrepreneurial ways of thinking and behaving. The conferment of a credential provides some motivation for students to continue taking courses in entrepreneurship and recognizes that effort as the acquisition of important knowledge. Many students, of course, will elect to not pursue a minor in entrepreneurship; nevertheless, the development of these programs, with curricula and learning outcomes, is designed to encourage students to master and acquire the skills and knowledge linked to the entrepreneurial mindset.

There is nothing to signal that the innovation and entrepreneurship ethos will be translated into requirements that all undergraduate students are obligated to fulfill. Instead, Tidewater has created a number of different academic opportunities for students to learn the entrepreneurial mindset and put it into practice in such a way that they might feel empowered to launch a successful venture. These opportunities, from courses to business model pitch competitions, have been growing in number as a reflection of the university's penchant for all things innovation and entrepreneurship. I argue that, amidst the expansion of opportunities that encourage undergraduate students to think and act like entrepreneurs, there has been undue consideration of the implications of translating the ethos. I examine four of these implications and attempt to give them fuller expression through the example of the Food Rescue Movement.

Implications of Academic Opportunities for Undergraduate Students

One of the themes that surfaced as interview participants described the entrepreneurial mindset and how it is taught to students is learning from failure and making incremental improvements to “prototypes.” Iteration is, naturally, a part of the research process in many disciplines. However, the case can be made that there is an under-appreciation of the high probability of failure in entrepreneurship, leading to a lack of conversations that prepare students for the true hardships that can accompany a failed venture. The reality surrounding startups was not foreign to Travis Campbell-Green: “People focus on the big success stories, the Sergiy Brins, the Googles. These are almost miraculous events when they happen. They depend on a lot of luck, on a lot of things being present at the same time. It’s just not going to happen to a lot of people. Most new businesses fail.” The notion that fortune plays a large role in the success of

entrepreneurial ventures resonated with one program director, who reflected: “what’s missing sometimes in the conversation is an awareness of fortune or luck.” He concluded that “the culture of accepting failures is ascendant right now” in reference to American culture. These were the only two interview participants who were concerned about the high probability of failure in entrepreneurship. The remaining interview participants who brought up failure celebrated it as an essential part of the entrepreneurial process. They did not dwell on the details of failure, such as the potential for job loss, bankruptcy, or strained personal relationships. By contrast, failure was an abstract concept and largely overshadowed by perceived benefits of the entrepreneurial process to solve problems and spur economic growth.

As a consequence of this overshadowing, many interview participants admitted that students who took part in entrepreneurial learning opportunities were not truly prepared for failure and what that meant in the real world of business compared the simulated world of competitions. Danielle Ramirez of the Center for Social Innovation reported, “in my social entrepreneurship course, I do a lot of talking about what works. And we probably don’t do enough talking about what fails, and how you build resiliency to failure and learn from it and move on.” She agreed that “we do present a bit of a rose-colored glasses by which people might view entrepreneurship,” but believed failure was less of a problem because “we’re teaching about a mindset, rather than an execution issue.” One solution, she jokingly added, was a whole course on failure: “How to Fail at Entrepreneurship! That would be a really cool [I-Signature] course perhaps.” Tom Parks, who directs TTEC, similarly conceded,

I don't know if we adequately prepare them for that [failure]. It's easy when you're a student to have stars in your eyes and go, 'Yeah, I've heard those numbers. Everybody hears those numbers, but it won't happen to us. They probably are not adequately prepared for that realization.

Yet, he countered that now was the time for students for try and fail: "when you're young. And you don't have financial ties. You don't have a mortgage to pay, and a spouse and kids. That's when you do it. Because you can absorb the failure." As things stand, many students are taught to believe that entrepreneurship can solve difficult problems, drive economic growth, and even allow them to be their own boss. The narrative of startup success is not sufficiently tempered by startup failure, leaving many students vulnerable to the harsh realities of the market. A student entrepreneur who helps to run a startup incubator stated that "as soon you put these things into a program, they treat you like you're very fragile. Like they don't want to break you. And that's good for their numbers. But it's not nice out there. Business is not nice."

One entrepreneurial learning opportunity in which it is possible for undergraduate students to experience failure is business model pitch competitions. In the words of one program director, "in this prize-based culture [of competitions], certainly it does have most of the students failing." This remark revealed a second implication of the translation of the ethos into academic opportunities for undergraduate students: fostering winner-takes-all competition and a prize-based culture. By the time undergraduate students reach Tidewater, they are well-acquainted with competition. Many of the opportunities to learn the entrepreneurial mindset build upon and continue this competitive streak, turning the college experience away from "educating for a life of learning," in the words of former

provost Nancy Martin, into a game in which the most profitable idea is deemed an innovative solution and awarded with cash. As an example of this culture, one program director described the Honors Entrepreneurship House as follows:

They immediately invested some of their money in competitions for the students. So, it's a prize-base culture, as opposed to something else. And in a prize-based culture, you're trying to get everybody to work and most of the people don't get paid. There's some luck guy who gets all the money. That's roughly how prizes work. And so they...live it. And I thought, ick.... And, of course, students are well armed for that kind of activity.

There are few, if any, stipulations attached to the money that students win in business model pitch competitions. Although the hope is that they use it to launch businesses that create jobs, it is possible the money is used in entirely unproductive ways. If learning is, indeed, the ultimate goal—and not starting companies—one must carefully consider the principles being transmitted when public university spaces are converted into microcosms of the market, where lucrative ideas receive cash and ideas whose commercial value is not apparent or non-existent lose out.

A third implication of academic opportunities that develop as a result of the ethos might be referred to as the tyranny of the group or team. Many of the assignments in entrepreneurship courses are group projects, and all of the competitions require teams of students, with an emphasis on interdisciplinary collaboration. An academic executive voiced concern with that he called “all this emphasis on teamwork” connected to innovation and entrepreneurship:

I'm a little worried because some people work well in teams, and some things go well in teams, but not everything. Some of the greatest thinkers in history never collaborated with anybody. Forcing them into a team to brainstorm or whatever would have been stifling.

While their example may not be one to emulate, many of the heroes of entrepreneurship cited by interview participants were not known for their collaboration. In fact, many of them were autodidacts who worked tirelessly on their ideas alone, at times when no one else saw its value. The fact that Mark Zuckerberg and Bill Gates never finished college was not lost several interview participants, including one dean, who said: "We need brilliant people who never finish their degree." These were seen as anomalous situations that do not really capture how innovation happens. There was little willingness to consider that the stress placed on groups or teams in entrepreneurship may inhibit, rather than engender, innovative ideas.

Because entrepreneurship was so widely believed to be a source of solutions, most interview participants paid short shrift the problems it may cause. After all, entrepreneurship in a free market system is not new, meaning some of the difficult problems of the 21st century cannot be divorced from the dealings of entrepreneurs past. It is even the case that entrepreneurs simultaneously solve one problem, but in the process plant the seeds for another. For example, John D. Rockefeller was certainly an entrepreneur who revolutionized the petroleum industry and redefined the shape of modern corporations. In the process, however, he formed a massive trust responsible for controlling the prices of transportation that ultimately caused innumerable small businesses to crumble. At no point in my interviews with entrepreneurship educators or

business model pitch competition organizers was there mention of the trade-offs that inherently accompany entrepreneurship, or that students still need a moral compass. One of the concerns that a program director expressed with respect to the Honors Entrepreneurship House was that “the curriculum that was originally proposed did not have an ethics component to it.” Lost amidst the promotion of entrepreneurship was that the process does not naturally lead to positive outcomes for all people in all situations.

A student-launched venture called the Food Rescue Movement (FRM) exemplifies the influence of the entrepreneurial mindset, as well as the implications of translating the ethos. Officially founded in 2011, FRM was formed by a group of students led by Nate Gallagher. According to Gallagher, “we noticed good food going to waste in the dining halls...and we set up a program to donate this food instead of throwing it out.” The first chapter of the organization was soon joined by a chapter founded by one of Gallagher’s friends at Brown University. “Within a few weeks,” recalled Gallagher, “we had already donated 500 pounds of food, so it really validated super early on that this something that could scale and should be at every college in America.” FRM became regular competitors in business model pitch competitions at TU, and they “cleaned house,” to borrow from one interview participant. The first competition they entered was offered by the Prince Entrepreneurship Center, and Gallagher laughingly remembered: “We didn’t win Pitch [Prince], which was kind of funny because it was the smallest pitch competition we’ve ever been in.” Soon thereafter, however, FRM won \$5,000 in a competition, followed by \$16,000 in another. Gallagher noted, “We just continued to win awesome prizes and grow our impact.” When asked what made FRM an entrepreneurial venture and not simply a successful non-profit organization, Gallagher replied:

That's a great question. Because we're a 51(c)(3) [non-profit], and we currently really don't generate income from our income models.... For me, it has to do with the scalability of it. That it's scalable and it is sustainable. Even though it's not earning our own income, we almost see foundations and individual donors as our customers.... And so just the scalability, the efficiency, that we're using business principles, and entrepreneurship principles in starting it.

The "earned income models" refers to selling food rescue certifications to local restaurants and grocery stores, as well as providing training in food rescue.

In total, FRM calculates that it has won close to \$45,000 in competitions, and it has received additional resources from the university. These resources include free office space at the Institute for Innovation and Entrepreneurship. Although TU has given a great deal to FRM, the university has also benefited from the organization. As Gallagher put it: "our brand is tied to the university's brand now, about Fearless [Thinking]. And they put us on the side of a bus, and like, apparently, we were just in a commercial on ESPN. They really like to take ownership of us." Gallagher saw this as reason to continue the relationship between Tidewater and FRM into the future. Because of this relationship, several interview participants referred to FRM—and its charismatic leader—as the "poster child" of Tidewater's innovation and entrepreneurship push. In addition to money from competitions and resources from the university, FRM received money from foundations. Its biggest donor is the Sodexo Foundation, which is the charitable arm of the Sodexo Corporation (formerly Sodexo-Marriott), a multinational firm that manages university dining facilities. The corporation has a checkered track record with employees at several universities across the country, and there was even a protest at Tidewater over

poor treatment and pay of workers. Salaries for the leadership team of FRM come out of the \$150,000 donated by Sodexo. Gallagher has committed so much time to FRM that he sometimes struggled academically. Currently a sixth-year senior, the young CEO takes courses in non-profit management through the school of public policy, but also receives some credit for his work with FRM.

There is little doubt that the Food Rescue Movement has developed a service that prevents waste and helps feed people in need. The leader of the organization clearly echoed what many entrepreneurship educators say is important for an entrepreneurial venture, including scalability and sustainability. Rather than consider FRM a non-profit organization, Gallagher called it a “social venture,” pointing to their use of entrepreneurial principles and “earned income models.” The organization largely owes its existence to help in its early stages from cash prizes won as a result of selling their ideas in repeated business model pitch competitions. The university has been quick to shine the spotlight on FRM as an example of what the innovation and entrepreneurship ethos can produce in undergraduate students. There is perhaps no better example at Tidewater than FRM of the ways in which student thinking and behavior has been shaped by the institutional emphasis on innovation and entrepreneurship. While this organization was repeatedly cited as an example of undergraduate student entrepreneurship, the number of academic opportunities and fanfare surrounding FRM suggests that others will soon follow.

Connecting Emerging Developments to Theory

Evidence throughout this chapter shows that Tidewater created various mechanisms to nudge faculty members and undergraduate students so that they embraced

the innovation and entrepreneurship ethos. There are no policies in place and no requirements that force either group of actors to think and behave as entrepreneurs. Instead, the university has sought to incentivize academic entrepreneurship by building it into the faculty reward system and to structure opportunities for undergraduate students to learn the entrepreneurial mindset. Assuming the innovation and entrepreneurship ethos continues its present trajectory, it seems probable that the number of academic opportunities for undergraduate students will continue to swell. As follows, the translation of the ethos closely resembles Walters' (2012) definition of governance, which eschews brute coercion in favor of "individuals and groups seeking to shape their own conduct or the conduct of others" (p. 11). The creation of rationalities tied to entrepreneurship—as a panacea for intractable problems or a requirement for employability, for example—as well as incentives replace outright compulsion and are designed to shape actors into subjects. Therefore, data supports the assertion that the translation of the innovation and entrepreneurship ethos constitutes a form of what Foucault termed "governmentality," or striving to shape conduct by teaching and rewarding means of self-management.

The particular subjectivity that is shaped at Tidewater could be quite different from that which is presently produced at Tidewater. For instance, the subjectivity could be based upon public service or nationalism, which was the case during Tidewater's early years as a land-grant institution, when cadets were trained in military tactics and citizenship (McClure, 2012). The type of subject molded at TU due to the innovation and entrepreneurship ethos, on the other hand, is a version of *homo economicus*, the much theorized and sometimes heralded actor who is rational, self-interested, and hyper-

sensitive to costs and benefits. Such benefits, though slow to develop for the institution, can be substantial for individuals who entrepreneurial venture finds success with investors and consumers. University actors have become so accustomed to applying economic analysis to every detail of their lives and treating all phenomena in terms of competition in the market that the entrepreneurial mindset becomes rather banal. In many ways, this version of *homo economicus* is perfectly suited to an economy and political structure beholden to neoliberalism. As the government retreats and laissez-faire approaches reign supreme, citizens are induced to self-manage in ways that perpetuate the capitalist system and permits the government to roll back its presence. One lens to analyze the innovation and entrepreneurship ethos, then, is that it transmits values to university actors which encourage precisely the type conduct required by neoliberal capitalism. Undergraduate students, in particular, are increasingly and actively taught what advocates call the “entrepreneurial mindset” and critics might label a “neoliberal state of mind,” accepting both responsibility for privately funding their education and individually creating their own employment upon graduation. Although the evidence on which this interpretation is made is limited to one case, the innovation and entrepreneurship ethos, as one manifestation of the academic capitalist knowledge/learning regime, sheds light on the role of universities in reflecting and reproducing the social relations of the present iteration of capitalism, consistent with the first theoretical proposition.

Some may argue that there have always been ties binding academe and capitalism. It is true that wealthy industrial magnates used their wealth to establish some of the most renowned universities in the world. Markets have always been operational in

higher education, encouraging fierce competition. In fact, several interview participants claimed that U.S. higher education's model based upon survival of the fittest has allowed it to attain excellence. Although I do not dispute that there is a long history between universities and capitalism, the innovation and entrepreneurship ethos illustrates how the relationship has profoundly changed in recent decades. I submit that the desire to teach students how to solve problems by launching companies and to encourage faculty to better serve society by commercializing their research suggests that universities have been co-opted to fulfill purposes and enrich interests which previously would have been alien to educational institutions, certainly those that are publicly supported and not-for-profit.

Conspicuously, in thirty interviews with individuals across Tidewater, the word "capitalism" was never once uttered. Despite the irrefutable link between entrepreneurship and an economic system built around private entities accumulating capital and competing in a free market, academic capitalism has become so normal, so ingrained in what students and faculty experience, it is virtually invisible. As a result of this invisibility, there is little space to question or explore alternatives to neoliberal understandings of economy and society. In lieu of being a site that foments change and provides some check to the power of private industry influence, the university may be a site of reproduction, ensuring that subsequent generations continue the project of "liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade (Harvey, 2005, p. 2).

Conclusion

This chapter sought to uncover how the emerging innovation and entrepreneurship ethos at Tidewater intersected with the lives of faculty members and undergraduate students. More than a billboard slogan, innovation and entrepreneurship has been translated into incentives and academic opportunities in order to stimulate academic entrepreneurship and teach the entrepreneurial mindset. I argued in this chapter that the incentives designed for faculty members, including expanding P&T criteria and creating awards, have not yet altered the foundations of professorial success. Entrepreneurship was seen as something that could enhance the traditional pillars of the academic profession, provided there were concrete metrics that were subject to the same rigorous evaluation as other areas. Furthermore, newly created awards for innovation and entrepreneurship are few in number and cater to specific disciplines, especially those with faculty members whose research saves the university money or can be successfully commercialized. Accordingly, these awards are not inclusive of all areas of campus. Academic opportunities for undergraduate students to acquire and master skills and knowledge associated with the entrepreneurial mindset are plentiful and expanding. With the goal of exposing all students to entrepreneurial learning opportunities, the academic programs look to be far more influential in changing student thinking and behavior than incentives for faculty members. This conclusion requires further investigation, but its plausibility is reinforced by student acknowledgement of the celebrity status of entrepreneurs in America today.

An important contribution of this chapter was to show that Tidewater's efforts to incorporate the innovation and entrepreneurship ethos into the lived experience of faculty

members and undergraduate students is not without implications. Accompanying any future institutional benefits accrued as a result of the innovation and entrepreneurship ethos are a set of possible consequences that may irreparably harm the academic profession and college student experience. From the creation of faculty free-agents with little loyalty to the institution to the gamification of student learning—complete with hefty cash prizes—the galvanization of innovation and entrepreneurship as institutional ethos could transform a public research university like TU further away from the public good knowledge/learning regime. Evolution, of course, is the inevitable path of any educational institution, but the nature of this evolution is not pre-destined. This chapter raises a set of difficult questions for Tidewater’s leadership to consider related to the viability and advantages of innovation and entrepreneurship as they guide the institution into an uncertain future.

CHAPTER SEVEN: CONCLUSION

Introduction

Since the late 1970s, public universities have contended with a steadily shifting political-economic landscape. Slaughter and Rhoades (2004) theorized that one outcome of this shifting landscape has been a movement away from the “public good knowledge/learning regime” and toward an emerging “academic capitalist knowledge/learning regime.” This latter regime prioritizes profit taking and the privatization of knowledge as networks of actors intersect with what Slaughter and Rhoades conceptualized as the new economy. The strength of this theorization lies in its constant reference to structural trends in American postsecondary education, namely the reduction of funds from the government and the increasing dependence upon private, external sources of money. Additionally, Slaughter and Rhoades effectively captured in this regime many of the behavioral manifestations of academic capitalism, such as institutions establishing revenue-generating professional degree programs, fostering student consumerism, and encouraging faculty to commercialize their research. Questions remained, however, regarding how academic capitalism is catalyzed into values and norms that shape the lived experience of faculty members, students, and staff. Studies have started to address these questions (e.g., Mendoza, 2012), and this dissertation builds upon this scholarship.

This dissertation sought, in some measure, to re-envision the theory of academic capitalism as multi-level process at one institution. It focused upon the means and motivations through which the academic capitalist knowledge/learning regime was brought to fruition at a public doctoral/research-intensive university in the United States.

Specifically, I studied the case of Tidewater University (TU), and its emerging innovation and entrepreneurship ethos between 1998 and 2013. As a conclusion to this study, I present in abbreviated form the main findings revealed in chapters four through six. These arguments are informed by a set of theoretical propositions that were designed to develop a more complete picture of why a public university like TU adopted values and norms of the academic capitalist knowledge/learning regime. The theoretical propositions also shed light on the processes through which university leaders introduced these values and norms into the institution and its ethos.

I summarize in this chapter the ways in which the data supports these theoretical propositions, leading to the initial development of a revision to the theory of academic capitalism. In the final part of the chapter, I discuss two unresolved issues and consider what this project means for policy and practice. Accordingly, I attempt to show how the empirical results of this study can inform the work of people who, like the interviewees whose views are reflected in the preceding pages, care deeply about the future of public higher education. Because this is a singular case study on a large topic, I present several avenues of future research that surfaced in the process of completing this project.

Main Findings of the Dissertation

Question one. Tidewater University has actively attempted to construct an institutional ethos that assigns great importance to innovation and entrepreneurship. Based upon the data collected for this project, the innovation and entrepreneurship ethos consists of at least five values. The first value is that innovation and entrepreneurship are not the exclusive domain of the sciences, engineering, or business. Rather, the ethos endorsed the notion that innovation and entrepreneurship can enhance all disciplines and

administrative offices across the campus. Second, the ethos positioned innovation and entrepreneurship as a highly effective means of solving problems in the 21st century. In fact, innovation and entrepreneurship were seen as a way to address problems that the government and academics had thus far failed to fix. Third, according to the values of the ethos, the impact of research was defined so that true impact became synonymous with commercializing research or ensuring that it somehow has worth outside of academe. Fourth, innovation and entrepreneurship was not simply about faculty members or students seeking out new discoveries. Indeed, the ethos also applied to how the university itself operates, with an emphasis on finding methods to cut costs and enhance performance. The fifth and final value of the ethos at Tidewater University is the belief that there is a rather natural relationship between innovation and entrepreneurship and this generation of students, which is accustomed to immediate results and putting digital technologies to use in the resolution of major issues.

These values became clear as interview participants described the meanings of innovation and entrepreneurship, separately and in tandem, at the university. Importantly, there was a wide array of understandings of innovation and entrepreneurship operational among those I interviewed. Despite this diversity, one of the patterns that emerged in the data was a preponderance of language and examples derived from the for-profit sector. There was a clear bias in the meanings ascribed to innovation and entrepreneurship toward company formation as an intended outcome, and most of the examples of entrepreneurial success came from technology-based corporations. Although interview participants believed that the university's leadership wanted to make innovation and entrepreneurship core values at Tidewater, many believed this process to be incomplete,

either because they did believe it was on equal footing with other values, such as knowledge production or public service, or because they viewed it as rhetoric and, thus, inherently partial. Additionally, it was not uncommon for interviewees to suggest that innovation and entrepreneurship constituted a marketing scheme, or simply a passing fad that would be soon replaced by other rhetoric. Most of the skeptics were faculty members, and several of them opposed the emphasis placed on innovation and entrepreneurship at the university, believing it to either demean their lifelong dedication to advancing knowledge or viewing it as at odds with the purposes of a public university. For this reason, I argued that the innovation and entrepreneurship ethos remains a project under construction, and its future place at Tidewater is far from certain.

The origins of entrepreneurship at the university can be clearly traced back to the colleges of engineering and business, and the influence of these colleges is still strong. Recently, the offices of the president and provost have been actively involved in expanding the reach of innovation and entrepreneurship as it has become a central feature of President Henry Pryor's strategic priorities for the university. Much of this expansion has been in the area of undergraduate education, as more and more academic opportunities have been created to teach the entrepreneurial mindset. I demonstrate that the story of the innovation and entrepreneurship ethos is linked to a core group of central administrators, especially presidents and provosts. There was little to suggest that the promotion of innovation and entrepreneurship was in response to a groundswell of support from faculty members or students. Thus, the vision of a university devoted to innovation and entrepreneurship was most devoutly championed by top administrators at the university. Just as important as where innovation and entrepreneurship originated and

found greatest traction is where it was absent. I contend that, even as university leaders declared the universal applicability of innovation and entrepreneurship, the humanities were largely on the margins of the conversation, more so than the social sciences, either by choice or because the message did not resonate with equal force among all disciplines.

Question two. The decision to initiate and support an ethos built around innovation and entrepreneurship was made in an environment marked by structural and symbolic challenges. University leaders who shared their views as part of this study clearly situated Tidewater in a changing globalized economy, one that required university knowledge production and advanced training in order to ensure that the United States could compete. Contributing to economic growth was seen as one of many mounting expectations placed upon higher education institutions by the government. However, these expectations were not accompanied by additional funds. In fact, university leaders unanimously acknowledged that the university operated in an era of declining funds from the state and federal governments. These structural pressures were joined by the perceived barrage of critique from some legislators and consumers related to the costs and value of a college degree. Catering to the demands of consumers has become an ever-increasing consideration among university leaders, especially because of the institution's reliance upon tuition dollars. Competing for students who can pay tuition and will increase the university's reputation is but one aspect of the highly competitive field in which Tidewater plays. As a university striving for prestige, university leaders paid close attention to other institutions, particularly those they believed to be more prestigious. The political-economic environment university leaders described during interviews is more

complicated than the search for new sources of revenue, which forms the basis of the theory of academic capitalism.

In light of this dynamic context, the reasons cited for initiating and supporting the innovation and entrepreneurship ethos addressed both monetary and non-monetary concerns. It was certainly the case that university leaders were interested in creating a campus culture in which it was possible to generate revenue for the institution. To date, the evidence suggests that Tidewater's entrepreneurial efforts have not resulted in much, if any, net income for the university. Nevertheless, there is a persistent desire to earn money down the road, either from student entrepreneurs who give back to their alma mater or through the commercialization of faculty research that, like Gatorade, becomes a reliable source of revenue. In addition to the desire to make money, university leaders were motivated to initiate and support the ethos because they believed it to be part of a long tradition of serving the state's economy. They linked the ethos to Tidewater's identity as a land-grant institution, thereby attempting to forge an unbroken chain that binds the university's aspirations to a glorified past. Interestingly, the third significant rationale proposed by university leaders was that other institutions were involved in the entrepreneurship "game." There was a sense during many interviews that Tidewater did not want to be left behind as other university's developed programs designed to spur entrepreneurship. For interview participants, Tidewater had an opportunity to get ahead of other schools, while others believed it was already too late. In general, data indicated that, regardless of what the outcome was of the innovation and entrepreneurship ethos, it was symbolically important for TU to be a player. The final reason why university leaders decided to initiate and support the ethos was that it was necessary to attract and

retain faculty members and students. I demonstrated that this final motivation was less convincing than those based upon the pursuit of revenue, heritage, and prestige.

Question three. In order to explore how the values of the innovation and entrepreneurship ethos are transmitted to university actors, I elected to investigate faculty reward systems and academic opportunities for undergraduate students. In the fall of 2013, a task force was convened to review the university's promotion and tenure (P&T) guidelines. The task force's charge explicitly included consideration of how to recognize innovation and entrepreneurship in the P&T process. After interviewing members of the task force, including the chair of the innovation and entrepreneurship subcommittee, and analyzing several documents, I concluded that there were a number of concerns about the place of innovation and entrepreneurship as indicators of professorial success at the university.

The predominant goal of the task force was to recognize a fuller range of activities in which faculty members engage, especially given changes to academic publishing and non-traditional means of sharing research. In the end, the task force recommended that entrepreneurship could enhance a faculty member's record as a part of the three pillars of the profession: research, teaching, and service. However, it should not constitute its own pillar, and should be evaluated with the same degree of rigor as other pieces of evidence used to determine tenure and promotion at the university. In addition to the work of this task force, I also highlighted the recent creation of awards for faculty members related to innovation and entrepreneurship. Although these awards represent one way the ethos is translated into incentives for faculty members, I argue that their reach is limited, and they currently cater to select disciplines. Because the awards are

often based upon faculty members saving the institution money or successfully commercializing their research, the awards are more applicable to the sciences and engineering. It should come as no surprise, then, that the winners of innovation and entrepreneurship faculty awards have mainly come from these disciplines.

The translation of the ethos into academic opportunities for students has been more widespread and influential, seeking to inculcate the entrepreneurial mindset in all undergraduate students at the university. To this end, Tidewater has steadily increased the number of courses that teach the entrepreneurial mindset, and there has been a strident effort to incorporate these courses into the general education curriculum. Furthermore, the Institute for Innovation and Entrepreneurship created modules in design thinking, which teach an entrepreneurial problem-solving process. These modules have been built into courses offered through two of the university's largest residential and scholarship-based programs, reaching thousands of first- and second-year students. One of the most widely publicized means of translating the ethos has been the creation of business model pitch competitions, where students receive feedback for their ideas and can win seed money to launch their ventures. The final academic opportunity I detailed was the development of minor degree programs, reflecting the ways in which teaching entrepreneurship has been integrated into Tidewater's academic structure. Although the university is far from reaching its goal of exposing all students to entrepreneurial learning opportunities, the trend has been one of exponential growth in programs that teach the entrepreneurial mindset and mounting efforts to turn academic opportunities into requirements.

The translation of the ethos into incentives for faculty members and academic opportunities for undergraduate students is not without implications. For faculty incentives, there is the need to ensure that the innovation and entrepreneurship ethos is accompanied by comprehensive and clearly articulated policies to reduce the incidence of conflicts of interest and commitment. The mere mention of innovation and entrepreneurship in conjunction with promotion and tenure may inadvertently send the message to young faculty members that it is expected of them, which is a second implication. Given that the humanities are on the margins of the innovation and entrepreneurship ethos, and that awards currently favor faculty members in the sciences and engineering, a final implication of the translation of the ethos is that it further exacerbates the creation of a two-tier faculty hierarchy.

For undergraduate student opportunities, one of the main implications of translating the ethos is encouraging risk-taking without properly communicating what the risks entail or adequately preparing students for the high probability of failure. That is not to say that students do not experience failure. Many of them fail as a consequence of the prize-based culture celebrated in business model pitch competitions. Another implication of teaching the mindset is that it places too much emphasis on working and thinking in groups, thereby giving undue consideration to the valuable contributions of innovators who prefer to work alone. Lastly, as the university pushed for more students to become entrepreneurs, it has not sufficiently developed learning opportunities on the ethics of the process. Indeed, students learn that entrepreneurship is a means of problem-solving, without being helped to understand the ways in which entrepreneurship has also *created*

issues in society. I exemplified some of these implications of translating the ethos through a social venture started by students at Tidewater, Food Rescue Movement.

In summary, innovation and entrepreneurship carried diverse meanings, but the one recurring meaning of the concepts revolved around creating value through the creation of a product and founding of a company. The origins of innovation and entrepreneurship at Tidewater can be traced to the colleges of business of engineering, but the inclusion of these concepts into the values of the institution is largely the work of central administrators, especially presidents and provosts. In selecting innovation and entrepreneurship as Tidewater's institutional ethos, university leaders sought to respond to many challenges and satisfy several masters. The motivations for supporting values and norms clearly connected to the academic capitalist knowledge/learning regime centered upon possible revenue in the future, continuing a tradition of state service, and pursuing prestige in a competitive higher education field. Two of the ways that the ethos has been translated in ways that affect the lived experience of faculty members and undergraduate students is to develop incentives and create academic opportunities. Many of the efforts to incentivize faculty entrepreneurship involve only certain disciplines and have not drastically altered notions of what constitutes professorial success. However, the influence of the ethos on the undergraduate student experience is easier to discern, as the number of academic opportunities swells.

Ultimately, the actors interviewed for this dissertation all want Tidewater University to continue its trajectory of excellence and effectively navigate the choppy waters of higher education today. Many of them saw innovation and entrepreneurship as an appropriate strategy for ensuring that the university survived and thrived in the future.

As follows, the prevailing opinion was not to pursue innovation and entrepreneurship in order to enrich individuals or the institution. This outcome, of course, is conceivable at TU, but it has long been possible for faculty members to commercialize their research and for universities to explore diverse means of replenishing their coffers. The questions raised throughout this dissertation deal not with whether innovation and entrepreneurship as institutional ethos is a good or bad development at a public university like Tidewater. Instead, they have dealt with the nature of change in American higher education, the relationship between postsecondary institutions and society, and the subjectivities crafted at universities. While the answers to these questions are under-developed, I believe the data collected for this dissertation points to potentially harmful effects in transmitting values of the academic capitalist knowledge/learning regime to university actors. These effects include compromising institutional autonomy; transforming universities into little more than sites of job training; re-orienting academic research to serve economic growth above all else; and training students as individual, mobile, flexible worker-entrepreneurs instead of citizens committed to the public good.

Contributions to Theory

The empirical evidence demonstrated unequivocally that the academic capitalist knowledge/learning regime exists at Tidewater University. Interview participants discussed the university in the terms of a for-profit enterprise that must link with corporations to address funding shortfalls and capitalize on market opportunities. Knowledge was seen by some interview participants as a raw material, emphasizing that its value was predicated upon the extent to which it could produce external funds. Beyond question, TU cultivated faculty entrepreneurship and sought to train students as

entrepreneurs as part of an orientation to economic relevance and growth in the knowledge-based economy. Additionally, the origins of the innovation and entrepreneurship ethos confirmed one of the theory of academic capitalism's constructs: interstitial organizational emergence. Several organizations were established at Tidewater, including the Office of Technology Transfer, TTEC, and TideVentures to bridge the divide between the university, corporations, and the state. Moreover, given the role of central administrators, especially presidents and provosts, in initiating the innovation and entrepreneurship ethos, data supports Slaughter and Rhoades' claim that the academic capitalist knowledge/learning regime assigns greater authority to top-level university leaders.

However, the findings of this project suggest the need to think differently about academic capitalism in order to fully explain how and why Tidewater pushed innovation and entrepreneurship as guiding values and behavioral norms. In light of the gaps I saw in the theory prior to undertaking data collection, I developed a set of five theoretical propositions. These theoretical propositions guided the analysis of data and spoke to 1) the place of universities in a powerfully symbolic field; 2) the role of universities in not simply reflecting the context in which they sit, but also constructing the world as we know it; and 3) the contributions of educational institutions to shaping subjectivities. Table 11 summarizes the five propositions and lists which chapters present data that speak to each of the ideas.

Table 11: Review of Five Theoretical Propositions

Theoretical Basis	Proposition
Cultural dimensions of the political economy of education	<u>Proposition 1</u> : Public universities align their activities with discourses of the knowledge-based economy and reproduce the social relations of capitalism. (Chapters 5 and 6)
New institutionalism	<u>Proposition 2</u> : The development and translation of an institutional ethos is influenced by perceptions of legitimacy and prestige in the higher education field. (Chapter 5)
Heteronomous model of university change	<u>Proposition 3</u> : Accompanying the marketization of public universities is increasing responsibilities to the state, creating dual external controls closely tied to globalization. (Chapter 5)
Governmentality	<u>Proposition 4</u> : The translation of an institutional ethos into incentives for faculty members and academic opportunities for undergraduate students represents a form of governmentality. (Chapter 6)
New sociology of knowledge	<u>Proposition 5</u> : Public universities wield power in validating certain ways of thinking and being in society through its knowledge-processing functions. (Chapters 4 and 6)

All five theoretical propositions were supported by the data, although some more so than others.

The first theoretical proposition is that public universities align their activities with discourses of the knowledge-based economy and (re)produce the social relations of capitalism. Chapter five demonstrated that university leaders believed that the American economy had become knowledge-based, and they justified the importance of university innovation and entrepreneurship because of this transformation. I suggested that Tidewater's alignment with the knowledge-based economy is understandable, as public universities are rendered more relevant in an economy structured around knowledge. It did not matter that Tidewater's leaders could not cite what, precisely, made the U.S. economy knowledge-based. Rather, interview participants emphasized the necessity of the university's evolution based upon knowledge economy discourses. Chapter six demonstrated that by investing in training students to be entrepreneurs—to embody the entrepreneurial mindset—Tidewater helped to create subjectivities perfectly suited to the current iteration of capitalism, characterized by a high faith in the ability of the market to solve problems. Consequently, academic capitalism is not merely about higher education institutions and their search for revenue streams. It is also about the ways in which universities help to bring the capitalist economy into being and reproduce its social relations.

The second theoretical proposition, which is inspired by new institutionalism, posits that the development and translation of an institutional ethos is influenced by perceptions of legitimacy and prestige in the higher education field. The basic idea underlying this proposition is that not all organizational behavior is efficacious. Some practices are rationalized in an organizational field and institutionalized in society. In this way, it is not enough for public universities to succeed

economically to survive. They must establish and maintain legitimacy in order to compete in the market and garner prestige. Chapter five showed that part of the reason why innovation and entrepreneurship have become central to Tidewater's ethos is that other institutions in TU's field of play are active in these areas. Indeed, the university's leaders were keenly aware of how Tidewater was situated relative to peers and prestigious institutions when it came to innovation and entrepreneurship. In order to keep pace with other universities, appear normal in the eyes of stakeholders, and emulate prestigious schools, Tidewater began to develop programs dedicated to innovation and entrepreneurship. Although there was hope that entrepreneurship might one day pay off for the university, the immediate benefit of the ethos appeared to be symbolic just as much as financial.

Chapter five also validated the third theoretical proposition, based upon Schugurensky's (1994, 2006) heteronomous university model. Proposition three contends that accompanying the marketization of public universities is increasing responsibilities to the state, creating dual external controls closely tied to globalization. The main point of this proposition is that public universities must answer to state expectations, particularly related to economic development and job training. One of the recurring motivations that university leaders cited for initiating and supporting the innovation and entrepreneurship ethos was that TU has an obligation to serve the state, and this obligation constitutes a tradition that is weaved into the institution's identity. While the contributions the university makes to the state economy in terms of graduating students and launching companies is quite real and quantifiable, the innovation and entrepreneurship ethos was also put to work as a vehicle of heritage, which produces a novel cultural artifact in the

present through recourse to the past. Driving some interview participants to support the ethos, then, was the belief that it was consistent with Tidewater's longstanding role as a state institution whose contributions are necessary, regardless of how much money it receives in appropriations.

The methods by which innovation and entrepreneurship were transmitted to university actors is the addressed by the fourth proposition. This proposition suggests that universities are engaged in the micro-exercise of power, shaping the conduct of individuals through governance. Rather than force faculty members and students to be more entrepreneurial, Tidewater developed conduct-shaping techniques, such as creating or revising incentives or integrating ideas into the academic structure of the institution. As the fourth proposition maintains, such methods of transmission constitute a form of governmentality, whereby university actors are made into particular kinds of *subjects* through the integration of values and norms into their modes of thought. For Foucault, governmentality was a particularly useful way of showing how neoliberal capitalism persisted, as it induced individuals to learn means of self-management. Chapter six detailed how Tidewater attempted to shape faculty member and student conduct. The evidence questions the extent to which these efforts were successful among faculty members. However, there is perhaps no better confirmation of neoliberal governmentality than the desire at TU to inculcate an entrepreneurial mindset among undergraduate students. The university applied governance in order to craft a student subjectivity based upon opportunism, private sector problem-solving, and a sense of self and society viewed through an almost exclusively market-based economic lens.

The fifth theoretical proposition extends the idea that public universities wield power to the societal level. It argues that public universities validate certain ways of thinking and being in society through its knowledge-processing functions. This proposition found the least explicit support in the data. However, this dissertation showed how entrepreneurship emerged as a field of study at Tidewater, especially after 1998. Whereas students could find no courses on entrepreneurship in 1980, by 2013 the university was brimming with options. The creation of academic opportunities elaborated in chapter six speaks to TU's role in validating entrepreneurship as something worth learning. The fact that this field of study was driven more by the initiatives of university leaders suggests that Tidewater was not merely responding to constituent demand. It was creating and endorsing specific patterns of thought and action in society.

Taken together, these theoretical propositions highlight three conclusions and central contributions of this study to theory building:

1. Higher education is intricately connected to the neoliberal capitalist system, replicating and responding to its discourses and reproducing the social relations on which it depends for continued hegemony.
2. The nature of change in higher education since the 1970s is derived from a combination of structural (policy, resources, demographics) and symbolic (tradition, legitimacy, prestige) challenges, which have in turn required strategies that service structural and symbolic purposes (innovation and entrepreneurship).
3. The theory of academic capitalism inadequately accounts for the two aforementioned conclusions. One possible means of strengthening the theory

is to think of it as a process that higher education institutions undergo. This process operates at several levels. The micro-level of the process includes how academic capitalism shapes the subjectivities of undergraduate students and faculty members. The meso-level of the process influences the actions of departments and campus units as they seek to fund their operations. Lastly, the macro-level of the process informs the strategic priorities of the entire institution. This conceptualization allows for a more comprehensive explanation for the nature of change in higher education.

With this in mind, the theoretical revision I suggest recognizes that the rise of the academic capitalist knowledge/learning regime can be traced shifting resource dependencies, as well as the obligation and desire to serve state economic growth and enhance legitimacy and prestige during an era of heightened scrutiny of higher education. The means by which academic capitalist norms and values are transmitted to university actor include governmentality, or employing techniques of governing designed to shape particular subjectivities. The result of this transmission is that public universities become instrumental in reproducing the social relations of neoliberal capitalism.

Unresolved Issues

There are at least two major issues that remain unresolved in this study, mainly due to insufficiencies in the data. Nevertheless, these issues are relevant to the discussion and merit some consideration. The first issue is that, despite the fact that interview participants often spoke of rationales driving the innovation and entrepreneurship ethos at Tidewater as separate, and they emphasized those that they believed to be most important, there is reason to believe that the motivations presented in chapter five are

intertwined. As I previously noted, resources may well underlie all of the rationales. As an example, the desire to serve the state may relate to a land-grant tradition and self-identification based upon public service. However, state service is also undoubtedly linked to resources. That is, state service may be emphasized by interview participants in order to demonstrate Tidewater's value and curb any government funding reductions. Furthermore, tradition is not entirely separate from prestige, as part of what signals prestige to parents and students is based upon historic indicators of quality in postsecondary education. Lastly, prestige helps institutions to garner additional resources, both from the government and private sources. These interconnections are not treated in detail in this dissertation, but may be corroborated through additional research.

A second unresolved issue revolves around a missing piece of the dissertation's logic about academe and its relationship to capitalism. To a certain degree, the theory of academic capitalism and, therefore, this study presupposes that the academic capitalist knowledge/learning regime is a novel phenomenon in higher education. A more historical approach to these issues could reveal that public universities were purposely structured on a Darwinian model of academic meritocracy. This model has been responsible for producing some of the fantastic successes attributed to U.S. higher education, attracting millions of scholars and students. In this way, it is possible that academic capitalism is an expression of a time-old model, perhaps one with few checks since the end of the Cold War and the triumph of the free-market system. I do not dispute this possibility and believe it to be an important topic of future research, as the scope of this study—and the empirical evidence collected—cannot sufficiently begin to untangle the relationship. With this in mind, even if academic capitalism is inherently linked to the way that

academe is structured, the tone of interview participants, several of whom have worked in higher education for 40 years, suggests that something fundamental in the enterprise has changed. Academic capitalism—and the arguments advanced in this study—point to this notion of transformation, one that is perhaps not entirely new, but submits that the Darwinian model of academe has taken on forms and received emphasis not before seen in recent history.

Implications for Policy

The primary implication of this study for policy is that there is need to seriously consider the outcomes of changes to higher education's political-economic context since the late 1970s. In a time period when assessment is all the rage in education reform circles, there is seemingly little interest in taking stock of the degree to which policies aimed at harnessing university knowledge production for innovation (e.g., Bayh-Dole) and treating a college degree as a private good (financial aid policies) have improved institutional equity and quality. For some observers, the changes in academe described by the academic capitalist knowledge/learning regime represent progress, as public universities are finally finding ways to ensure students are well educated for economic needs and academic research overcomes the confines of the ivory tower. Others contend that the changes are necessary to curb rising costs in higher education. Both of these viewpoints require empirical substantiation; however, what this dissertation shows is that academic capitalism is dramatically altering public universities in several ways.

First, the regime assumes that academic research only has value so long as someone wants to pay for it, either through funding the process or purchasing a product. This reduces the space for academics to explore topics that are fundamentally important

to human existence, yet may not immediately seem valuable.¹⁰ Second, the regime argues that creating consumer products and launching startup companies from the university setting is an effective way to solve problems, denigrating in the process the vital role of universities in educating citizens and even fostering activism. Third, the regime positions universities as job training sites and engines of economic growth, not critical repositories of culture where critical thinking is nurtured. Lastly, the regime undermines the public university's role as social critic and conscience.

At minimum, the most important policy change that the findings of this dissertation advocate is more generous state and federal funding of higher education and basic research. If states elect to continue cutting appropriations, and the federal government prioritizes other areas of spending over basic research, I argue that it must adjust its expectations, reduce regulatory burdens occasioned by the accountability movement, and expect that private contributions to higher education in the form of tuition dollars will become increasingly vital to higher education institutions. As things presently stand, the government is both cutting funding to public universities and expecting more of them, which is an unsustainable situation, fraught with contradictions. Providing more funding to public higher education would demonstrate the important role of universities in the economy that many government officials believe to be based upon the application of new knowledge. This does not mean institutions should be given absolute freedom to decide what to do with an infinitely larger sum of money. Some expectations are warranted and accountability protects taxpayer money. Nevertheless, such a policy change would recognize that the American higher education system achieved a fantastic

¹⁰ It should be noted that there is also reason to critique the notion that research is only valuable if someone is willing to publish it in an academic journal. There are many calling for engaged scholarship, whose evaluation is based on the extent to which it serves community needs.

degree of success for much of the post-World War II period. The same cannot be said of higher education policy since the late 1970s.

Implications for Practice

The implications for practice developed from this study are more numerous than the implications for policy. The first implication is that an institutional ethos that does not have the buy-in of faculty members and does not truly welcome all disciplines will confront difficulties during implementation. The innovation and entrepreneurship ethos was largely created by central administrators, and despite efforts to suggest that the concepts are universally applicable, in practice the ethos has favored science, engineering, and business disciplines. Because of the lack of buy-in and inclusivity, many faculty members oppose the ethos and will choose to ignore it as they go about their lives on campus. No matter how much money the president's and provost's offices put behind innovation and entrepreneurship initiatives, within a system of shared governance, an ethos that does not have the support of faculty members will undoubtedly have a rocky future.

The second implication is that Tidewater needs to conduct a thorough analysis of how much it is spending on innovation and entrepreneurship programs compared to the current and/or expected benefits. It is clear from this study that university leaders do not have a firm sense of the total amount of money that is spent on technology transfer and programs aimed at increasing student entrepreneurship. The individual program directors with whom I spoke indicated that the university may well be losing money as it pursues academic entrepreneurship. The question that emerges is whether this is the best way to spend the university's scarce resources, or whether the money might be put to better use

as TU continues to seek excellence in research and instruction. Another way of putting this implication is that it may be the case the innovation and entrepreneurship are not the right ingredients of a successful institutional ethos at a public university.

The final implication is that entrepreneurship education needs to be radically altered. As follows, the teaching of entrepreneurship should be treated with a dose of reality, such that students understand the risks, recognize the high probability of failure, and see that technology startups cannot solve all of the world's myriad problems. This step can be taken without dissuading students who are interested in creating something tangible and making a difference while they are in college. A course in ethics should be added to any entrepreneurial academic opportunity. Therefore, students learn that the disruption caused by entrepreneurship certainly affects communities in many different ways. Lastly, entrepreneurship education should emphasize that entrepreneurship is one method among many for solving problems and taking action. Other methods include trying to influence policy, becoming a public servant or community volunteer, and even resorting to demonstrations against social injustices and abuses of power. In this way, students are exposed to a more balanced portrayal of entrepreneurship.

Avenues for Future Research

This dissertation has opened several avenues of future research, some of which are evident from its omissions. Admittedly, the relationship between higher education and the capitalist system has existed for centuries, and this treatment of the relationship is woefully incomplete. There is a need for research that provides a more complete, nuanced account of this relationship, showcasing both its positive and negative byproducts. One strength of this study, which is its detailed look at one institution, also

serves as a reason for additional research applying the theoretical propositions to other types of institutions, including those whose administration is not so dominated by individuals from science, engineering, and technology fields. This research should strive to give special attention to patterns that emerge in public opinion of higher education during times of economic crisis. The internalization of academic capitalist norms and values has been subject to analysis in a small number of studies (e.g., Mendoza, 2012; Szelényi, 2013). However, to date there have been few critical studies that venture into the classroom or incubator space with students to better understand precisely how entrepreneurship education affects their opinions and perceptions. Thus, a natural complement to this study would be a critical ethnography of university-based entrepreneurship academic opportunities.

The study of entrepreneurship in American higher education, including this project, has concentrated upon areas on university campus where entrepreneurship flourishes. More research is needed in those disciplines that are on the margins of the conversation, including the humanities and, to a lesser extent, colleges of education. Another omission in this study that warrants a closer treatment is the discourses of innovation and entrepreneurship. For example, a discourse analysis of university leaders' speeches and writing could reveal additional insights about the current state of American higher education and dynamics of power informing its transformation. The findings of this case, including its contributions to theory, need to be further examined through the study of additional institutions. Lastly, this study did not analyze the gender dynamics at play in innovation and entrepreneurship. As chapter four indicated, the initial homes of entrepreneurship at TU were the colleges of engineering and business, which tend to be

male dominated. Moreover, I argued that incentives for faculty members, perhaps reflecting a trend in entrepreneurial engagement generally, were geared towards science, engineering, and technology disciplines. As it is currently structured, entrepreneurship may cater to males, and the gendered nature of this topic should be researched in the future.

Conclusion

This dissertation sought to empirically explore the means and motivations through which academic capitalist values and norms were created and subsequently transmitted to university actors at Tidewater University between 1998 and 2013. Using case study methodology, I collected and analyzed data in order to address research questions about the processes through which Tidewater developed an innovation and entrepreneurship institutional ethos, why this ethos was initiated and supported by university leaders, and how the ethos was translated into incentives and academic programs. In response to these questions, I argue the meanings of innovation and entrepreneurship operational at the university are multiple. Innovation is frequently tacked onto entrepreneurship as a means of making entrepreneurship more palatable. However, some faculty take issue with the recent use of innovation as something new to universities. Entrepreneurship is frequently described and exemplified through reference to for-profit entities, especially technology-based corporations. The institutional ethos related to innovation and entrepreneurship was a strategy that can be traced back to a small number of central administrations. In crafting the ethos, university leaders were responding to a dynamic political-economic environment, shaped by structural and symbolic challenges. The main reasons for initiating and supporting the ethos were the desire to make money in the future,

continuing a tradition of state service, and pursuing legitimacy and prestige. Lastly, I contend that efforts to translate the ethos into incentives for faculty members have thus far been limited and cater to specific disciplines. By contract, the ethos has penetrated the academic experience of undergraduate students, with the potential to powerfully shape the subjectivities they form in college.

In some ways, innovation and entrepreneurship constitute perhaps the perfect strategic priorities for higher education institutions that confront both challenges to their relevance and a barrage of neoliberal ideas about public policy. It is for this reason that they study of entrepreneurship so clearly fits the present historical moment. To study entrepreneurship in U.S. higher education is a window into the nature of change in higher education itself. Despite the appropriateness of entrepreneurship in light of the times, this dissertation gives reason to pause and reflect—and even take action in opposition to—a troubling trajectory. With little sign of a reversal in trends related to higher education governance and the power dynamics of reform, the question seems not to be when academic capitalism will run its course, but rather how far it will go in transforming public colleges and universities before any loyalty to the public good is irrevocably compromised.

APPENDICES

Appendix A. Interview Protocol for Stage One

Thank you very much for agreeing to participate in this study, which explores the promotion of innovation and entrepreneurship at a public research university. As I mentioned, this interview will be used as part of my dissertation. The project is conducted with the supervision of my doctoral advisor, Dr. Nelly Stromquist. There are no direct benefits to the participants. However, possible benefits include contributing to understanding of higher education in the United States. Your participation is voluntary and you can terminate your participation at any time.

The interview will last about one hour. Before asking any questions, I will review with you information about the purpose of the study, the investigators, the procedure, the risks, and contact information. Prior to starting the interview, I will present you with a consent form containing this information, which asks for your signature, indicating you understand this information and agree to participate.

Any potential threat to confidentiality will be minimized by storing data in a secure location, i.e. locked file storage and password protected computers. In addition, your name will not be identified or linked to the data at any time unless you give your express consent to reveal this information. The data you provide through your responses will not be shared with your employer. Neither your name nor the data you provide through your responses will be shared with other participants. You may be asked to volunteer names of other potential participants. Offering names of other participants is completely voluntary, and your identity will not be revealed in any subsequent interviews. Only the principle and student investigators will have access to the participants' names. If you decide to stop taking part in the study, if you have questions, concerns or complaints, or if you need to report an injury related to the research, please contact the principle, Dr. Nelly Stromquist. If you have questions about your rights as a research participant or wish to report a research-related injury, please contact the Institutional Review Board Office. This research has been reviewed according to IRB procedures for research involving human subjects.

Do you agree to participate? If yes, please sign the informed consent form. If no, we will stop here.

The interview will last about one hour, and I would like to ask your permission to record this interview for accuracy. The recording will be available only to me and your identity will be kept confidential. Your identity will not be revealed in any report. If your words are included in the results, any identifying information will be removed.

Do you agree to permit me to record this interview? [If yes, turn on the recorder.]

Let us start with the questions.

- 1.) Introduction

- a. I see that you have been in this position since [YEAR]. How long have you been affiliated with the university?
- b. What previous positions have you held at the university?

2.) Perceptions of the Context

- a. I would like to start by asking for your thoughts on higher education in general. In what ways have public universities changed while you have been at the University?
- b. What are some of the biggest challenges in public higher education today?
- c. Is the University affected by these challenges?
- d. In what ways is the University responding to these challenges?
- e. How do these challenges relate to the work you do at the University?

3.) The Institutional Ethos

- a. What do you think are some of the University's guiding values?
- b. In particular, what values does the University hold concerning research or knowledge creation?
- c. What responsibility does the University have to the local or regional economy?
- d. How would you describe the University's ethos?
- e. Are there any behaviors or ways of thinking the University is trying to normalize in faculty? In students?
- f. How do innovation and entrepreneurship factor into the University's values and norms?

4.) Innovation and Entrepreneurship

- a. Tell me about the current place of innovation and entrepreneurship on campus.
- b. Why has innovation and entrepreneurship become important at the University?
[Room for probing expected here about the economy, need for relevance, state of higher education finance, peer institutions, etc.]
- c. What does the university gain from supporting innovation and entrepreneurship?
- d. Is the support of innovation and entrepreneurship related to or influenced by other institutions?
- e. Do you think the promotion of innovation and entrepreneurship is a response to critiques of higher education? Do you think these initiatives make the University seem legitimate?
- f. What individuals on campus seem to be driving innovation and entrepreneurship efforts?
- g. How do you differentiate innovation and entrepreneurship? Why are these terms used together at the University?

- h. Have you been involved in initiating anything related to innovation and entrepreneurship? What are the initiatives?
- i. What are the goals of the abovementioned initiatives? Who are the intended participants? Who are the intended beneficiaries?
- j. Why did you start this initiative? Did you receive support from any person or office on campus? Outside of campus?
- k. Do you have the option of not supporting innovation and entrepreneurship?
- l. How might innovation and entrepreneurship change the lives of students and faculty on campus?

Appendix B. Interview Protocol for Stage Two

Thank you very much for agreeing to participate in this study, which explores the promotion of innovation and entrepreneurship at a public research university. As I mentioned, this interview will be used as part of my dissertation. The project is conducted with the supervision of my doctoral advisor, Dr. Nelly Stromquist. There are no direct benefits to the participants. However, possible benefits include contributing to understanding of higher education in the United States. Your participation is voluntary and you can terminate your participation at any time.

The interview will last about one hour. Before asking any questions, I will review with you information about the purpose of the study, the investigators, the procedure, the risks, and contact information. Prior to starting the interview, I will present you with a consent form containing this information, which asks for your signature, indicating you understand this information and agree to participate.

Any potential threat to confidentiality will be minimized by storing data in a secure location, i.e. locked file storage and password protected computers. In addition, your name will not be identified or linked to the data at any time unless you give your express consent to reveal this information. The data you provide through your responses will not be shared with your employer. Neither your name nor the data you provide through your responses will be shared with other participants. You may be asked to volunteer names of other potential participants. Offering names of other participants is completely voluntary, and your identity will not be revealed in any subsequent interviews. Only the principle and student investigators will have access to the participants' names. If you decide to stop taking part in the study, if you have questions, concerns or complaints, or if you need to report an injury related to the research, please contact the principle, Dr. Nelly Stromquist. If you have questions about your rights as a research participant or wish to report a research-related injury, please contact the Institutional Review Board Office. This research has been reviewed according to IRB procedures for research involving human subjects.

Do you agree to participate? If yes, please sign the informed consent form. If no, we will stop here.

The interview will last about one hour, and I would like to ask your permission to record this interview for accuracy. The recording will be available only to me and your identity will be kept confidential. Your identity will not be revealed in any report. If your words are included in the results, any identifying information will be removed.

Do you agree to permit me to record this interview? [If yes, turn on the recorder.]

Let us start with the questions.

1.) Background

- a. Please state your name.
- b. Tell me about your role here at the University.

- c. How long have you been in your current role?
- d. What are your main responsibilities in this role?
- e. Have you held other positions at the University?
- f. How many years in total have you been affiliated with the University?

2.) Perceptions of the Ethos

- a. What would identify as the University's core values today?
- b. How are these values communicated? Where have you seen/read/heard them?
- c. If there is an ethos on campus, what would be its major features and components?
- d. Tell me about the current place of innovation and entrepreneurship on campus?
- e. What do think entrepreneurship means? Is this the meaning promoted around campus?
- f. In what ways have you noticed innovation and entrepreneurship at the University? In marketing, in meetings, in course planning, etc.?
- g. What individuals seem to be driving innovation and entrepreneurship?
- h. Have you felt encouraged or pressured to incorporate innovation and entrepreneurship into your work?

3.) Innovation and Entrepreneurship

- a. How has innovation and entrepreneurship been encouraged?
- b. Have you changed the work you do in response to the promotion of innovation and entrepreneurship? How so?
- c. What initiatives have you developed in response to the innovation and entrepreneurship thrust? Why?
- d. What are the objectives of these initiatives? Have you received support from any groups or persons?
- e. Do you think the University is trying to develop a certain type of faculty member or undergraduate student? How you describe this type of person?
- f. What reasons might you suggest for the recent emphasis on innovation and entrepreneurship on campus?
- g. What might be some of the goals of promotion innovation and entrepreneurship at the University?
- h. Do you agree with the direction the University is headed with regards to innovation and entrepreneurship?

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