

Petro-education: Fossil Fuel Futures between Texas and Qatar

By

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*For Ruth Anne Conner, Seham Yusef Al-Siraj, and Muhammed Ghaleb Suleiman Al-Saleh, who I
miss everyday*

Abstract

This dissertation is about the contradictory role of Texas A&M University in transitioning Qatar away from fossil fuels. I argue that Texas A&M University at Qatar (TAMUQ) is a techno-political project to rehabilitate the future of fossil fuel futures not only in Qatar, but also in Texas. These futures work to reconcile the accelerated extraction of fossil fuels with the recognition that the age of abundant oil and gas is ending. Petro-education, the mechanisms in U.S. universities that reproduce fossil-fueled capitalism, can co-exist with and even reinforce development agendas in the Gulf region that proclaim to envision post-oil futures. This produces the conditions for the political contradiction of energy transition and climate change to continue to be postponed and repressed in Qatar, and the broader region. These fossil fuel futures, naturalizing various hierarchies which characterize Qatar's capitalist society, simultaneously reinforce U.S. imperialism, including military operations and occupations, across the broader Middle East and North Africa.

Through twenty months of institutional ethnography in Qatar and Texas, I demonstrate how administrators, faculty, and students navigate TAMUQ's commitment to fossil fuels in the context of competing visions and political struggles over energy transition. By mapping the branch campus' relationship to the oil and gas industry across various locations and scales between Qatar and Texas, I delineate four spaces in which fossil fuel futures are developed and contested at TAMUQ, which include: the land-grant university mission and its entanglements with the U.S. military and resource extraction; engineering labor for the oil and gas industry; gender relations and demographics in Qatar; and engineering research. In doing so, this dissertation offers a grounded feminist intervention in the fields of energy geographies, critical university studies, and anthropologies of the future.

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Chapter One: Introduction

The Company House

The Company House, a museum in Doha's downtown Msheireb, details the early years of Qatar's oil and gas industry. The museum—located in the former headquarters of Petroleum Development Qatar Ltd, the first oil company in Qatar and subsidiary of the Anglo-Iranian Oil Company—centers the labor of Qataris and the exploitation they faced under the British.¹ Amid the museum's focus on Qatari manual labor, a single plaque directly addresses the role of technological expertise in oil extraction during this period: "Although the West provided the technology required for its search and extraction, oil was secured as much through the hard work and commitment of the Company's Qatari workforce."² This tension, of determining the value of Qatari labor in relation to Western technological expertise and natural resources, resurfaces throughout the museum. However, this tension is partially mediated by quotations which decorate the museum's entrance and exit. These words, from the former Emir, Hamad bin Khalifa Al-Thani, and his wife, Sheikha Moza Al-Misned, frame the nation's past in relation to Qatar's contemporary development agenda to transition into a knowledge economy. Their statements emphasize the fundamental value of Qatari labor, or "human capital," as opposed to natural resources or Western

¹ The territory that became Qatar shifted from the Ottoman empire's control (1871-1915) into a British protectorate between 1916 and 1971. The 1916 treaty signed between Britain and Abdullah bin Jassim Al-Thani meant that Qatar officially ceded control over foreign affairs to the British in exchange for military protection, particularly against Bahraini claims, other tribes, and family members which threatened his internal control over the territory.

² This quotation gestures to the historic role of technological expertise mediating the relationship between Gulf rulers and the United States and Britain during the first half of the twentieth century in the Arabian Peninsula. In exchange for oil concessions, rulers were provided with both technical expertise and "military hardware needed to build the infrastructure of a modern state" (Low 2020, 167). As Jones (2010) argued in the specific context of Saudi Arabia, scientists, engineers, and other experts were not only important for the building of the oil industry's infrastructure, but also the formation of the Saudi state's administrative order and authority through the seemingly apolitical technical management of land, agriculture, and water. In Qatar, British agents first focused on establishing a police force in the country, along with a bureaucracy for managing the emerging state's finances and disputes over the distribution of resource wealth (Crystal 1995).

technologies: “Our human capabilities represent the true wealth and not the oil.” Even while emphasizing a shift from the discovery of oil to a knowledge economy, the museum reproduces a more enduring vision of national wealth, which asserts the primacy of Qataris over the nation’s subterranean networks of oil and gas and extractive technology (see Figure 1). In this state-supported narrative, also sponsored by Shell Qatar,³ technological expertise is ultimately folded into the political body of Qatari citizens.



Figure 1. Statues of the Company’s Qatari workers in the Company House Museum.

Source: Author.

The Company House Museum’s framing of Qatar’s labor history⁴ suggests that a future for Qatar without fossil fuels requires not only a retooled economy, but also a population with a

³ Msheireb Museums signed a memorandum of understanding with the multinational oil company Shell to sponsor this museum in 2018.

⁴ The history presented in the museum erases the role of transnational labor in the oil industry, along with labor organizing, solidarity, and strikes across during the 1950s-60s in Qatar and across the Gulf (Wright 2015; Khalili 2020).

particular kind of education. U.S. universities were established in Qatar to aid in the educative dimension of this often-touted transition—a development project that is at the heart of Qatar’s National Vision 2030. Yet when I asked a high-level administrator why Texas A&M, a land-grant university well-known for its relationship with oil and the U.S. military, was selected to set up an engineering branch campus in the country, he proudly explained that it was the university’s world-renowned reputation in petroleum engineering that initially brought them to Doha (see also Myrie 2020b).⁵ Texas A&M University at Qatar (TAMUQ), since its establishment in 2003, has facilitated the extraction of fossil fuels in Qatar through research and education. While doing this, TAMUQ repeats the need to prepare for a national future in Qatar without abundant fossil fuels by diversifying the economy, investing in renewable energy, and restructuring society.

Research Questions

This dissertation is about the contradictory role of Texas A&M in transitioning Qatar away from fossil fuels. The branch campus is part of Education City, a 250 acre (twelve square kilometers/five square miles) urban development project, which hosts six U.S. universities⁶ and is promoted as the lynchpin of knowledge economy development in the country (See Chapter Two, which provides an overview of student citizenship and belonging across Education City). Scholars have argued that such knowledge economy projects across the Gulf have been produced in collaboration with Western consultants, international financial institutions, and universities (Al-Kuwari 2012; Hanieh 2018; Vora 2018; Günel 2019). This project, an institutional ethnography of

⁵ The branch campus offers undergraduate degrees in chemical, petroleum, mechanical, and electrical engineering. In 2011, TAMUQ launched a master’s program, which includes two degrees in chemical engineering (Master of Science and a Master of Engineering).

⁶ U.S. branch campuses in Education City include Virginia Commonwealth University School of the Arts in Qatar (founded 1998), Weill Cornell Medicine–Qatar (founded 2001), Texas A&M University at Qatar (founded 2003), Carnegie Mellon University in Qatar (founded 2004), Georgetown University at Qatar (founded 2005), and Northwestern University in Qatar (founded 2008).

how these transnational relationships are forged, experienced, and contested, investigates Texas A&M's role crafting the national future on display at the Company House Museum. I ask: In what ways are the branch campus' operations entangled in geopolitical and geoeconomic relationships that characterize U.S. hegemony in the Gulf region? How does everyday life within this this educational space contribute to the contemporary architecture of U.S. imperialism in shaping the future of fossil fuels and capitalism in Qatar? Nested within these broader questions, I examine the following specific questions regarding TAMUQ:

- What is Texas A&M University at Qatar's relationship to the oil and gas industry?
- How have students, faculty, staff, and administrators at Texas A&M justified, reinforced, and contested these ties in relation to shifting national visions of post-oil development and energy transition in Qatar?

Argument and Contributions

Through twenty months of institutional ethnography conducted primarily between 2018 and 2020 in Doha and College Station, Texas,⁷ I demonstrate how administrators, faculty, and students navigate TAMUQ's commitment to fossil fuels in the context of contradictory visions and political struggles over energy transition and the economic system that created the global climate crisis. I argue that TAMUQ is a techno-political project to rehabilitate fossil fuel futures not only in Qatar, but also in Texas. These futures work to reconcile the accelerated extraction of

⁷ Research for this project began with two preliminary research trips to Doha between February-March 2017 and February-April 2018. I also did three short research trips to College Station for interviews and archival research in 2016, 2018, and 2019. I moved to Qatar in September 2018 and lived in Doha until August 2020. After leaving Qatar, I continued attending virtual events and following online discussions and controversies on social media. While I have had institutional review board (IRB) approval through my home institution of UW-Madison since I started preliminary research for this project, I acquired local IRB approval in Qatar through Georgetown University at Qatar in April 2018. Local IRB approval is required for all research conducted in Qatar. My local IRB approval expired in February 2021.

fossil fuels with the recognition that the age of abundant oil and gas is ending. These fossil fuel futures, naturalizing various hierarchies which characterize Qatar's capitalist society, simultaneously reinforce U.S. hegemony, including military operations and occupations, across the broader Middle East and North Africa.

By mapping the branch campus' relationship to the oil and gas industry across various locations and scales between Qatar and Texas, I delineate four spaces in which fossil fuel futures are developed and contested at TAMUQ: the land-grant university mission and its colonial entanglements with the U.S. military and resource extraction (Chapter Three); engineering labor for the oil and gas industry (Chapters Four and Five); gender relations and demographics in Qatar (Chapters Two, Four, and Five); and engineering research (Chapter Three). These spaces challenge traditional categories of national economic development in the Gulf by starting not from data created by international financial institutions and the Qatari state, but instead from the social relations and knowledge produced within a key offshore U.S. educational institution.

Within this broader argument and through these spaces, I make three more specific arguments and contributions. First, I reconceptualize the spatial and temporal bifurcations between the Gulf and the United States represented in the Company House Museum and pervasive in both academic literature and popular discourse. Through ethnographic research, I show how the national future of fossil fuels, education, and capitalism in Qatar might be examined relationally, across the spatial bifurcation between a technologically knowledgeable West and a resource-rich Middle East as a space of extraction (Bridge and Wood 2005). In doing this, I tease out how the national vision of the future in Qatar is co-constitutive to the formation of U.S. hegemony in the Gulf.

Second, I develop a conceptual framework to understand how U.S. universities are entangled with the global oil and gas industry, through what I call petro-education. Petro-education encompasses the mechanisms within universities that sustain and reproduce fossil-fueled capitalism. I show how petro-education can co-exist with and even reinforce development agendas in the Gulf region that anticipate post-oil futures.

Third, I document and analyze how U.S. universities work to reproduce and naturalize racialized and gendered hierarchies in Gulf labor markets. Scholarship has shown how U.S. and British oil companies in the Gulf and elsewhere have produced and depended upon racial formations and the conditions of super exploitation they enable (al-Othman 1984; Vitalis 2007; AlShehabi 2019; Appel 2019; Khalili 2020; Wright 2021). As a feminist geographer, I consider the role of social difference, including gender, to be integral to the Gulf's knowledge economy projects to diversify away from fossil fuels. I argue that U.S. branch campuses, such as TAMUQ, manage, reproduce, and normalize contemporary gendered and racialized forms of social difference as they help craft Qatar's knowledge economy and associated imaginaries of post-oil transition (Vora 2018; Vora and Le Renard 2021).

In the remainder of this section, I will contextualize the Education City project within Qatar's post-oil national visions of the future. Before turning to the Qatar National Vision 2030, I will first provide a brief overview of how Qatar's development since the discovery of oil is officially narrated by the state. I then briefly describe this dissertation's interventions at the intersection of energy geographies, critical university studies, and anthropologies of the future. My engagement with these multi-disciplinary subfields and bodies of literature emerges through a broader framework of situating geographical political economy in conversation with Gulf studies. Next, I discuss how I conducted an institutional ethnography of Texas A&M University at Qatar

by incorporating mixed qualitative methods, including archival research, oral histories with students and graduates, interviews with administrators, faculty and staff, and participant observation. I conclude with summaries of the four chapters that make up the body of this dissertation.

A Brief History of Post-Oil Visions in Qatar

Contemporary English-language analysis and media coverage often focuses on how Qatar projects a massive influence despite its small size (Kamrava 2013). To give a sense of this narrative, for example, Qatar is about equivalent in size with Los Angeles County.⁸ Since 2003, the country has hosted U.S. Central Command's Forward Headquarters, Special Operations Command Forward Headquarters, and the U.S. Air Force Central Command Forward, contributing over \$8 billion to develop the largest U.S. military installation in the Middle East. Qatar is also the headquarters of the media network, Al-Jazeera. Its Sovereign Wealth fund, the Qatar Investment Authority, has investments in real-estate, sports, and technology sectors across Europe and North America. It is common to come across the line “Qatar has more assets in London than the Queen of England” in media coverage. In terms of oil and gas resources, Qatar has the largest non-associated⁹ gas reserves in the world, containing 14 percent of known natural-gas reserves. Qatar Petroleum, the country’s national oil company, aspires to transform Qatar into the “Gas Capital of the World.”¹⁰

⁸ According to Qatar’s Planning and Statistics Authority, Qatar’s total population is Qatar’s June 2021 population is approximately 2,504,910 people. <https://www.psa.gov.qa/en/statistics1/StatisticsSite/Pages/Population.aspx> (accessed July 27, 2021).

⁹ Non-associated gas reserves are not associated with an oil deposit.

¹⁰ Qatar’s North Field is a geological extension of Iran’s South Pars Field or the North Dome Gas-Condensate Field. The country first started exporting liquefied natural gas (LNG) in 1997 and is currently a globally leading exporter, primarily to East and South Asia, along with various markets across Europe.

Qatar's global and regional influence is often contrasted with the country's pre-oil and early oil history. Qatar became a British protectorate in 1916 and gained formal independence in 1971.¹¹ Before oil became Qatar's primary export during the 1950s, economic life was largely organized around pearling, fishing, and trading activities. The collapse of the pearl trade during the 1920s and 1930s, partially due to the invention of the cultured pearl, devastated communities living across the Gulf. By 1949, on the cusp of Qatar's first crude oil export, Doha's population was about 12,000 people (al-Othman 1984, 1). There was no electricity in the large village, apart from the generators supplying energy to the oil company's headquarters (now hosting the Company House Museum), along with the homes of wealthy merchants and emerging state institutions (ibid). By 1966, Qatar was entirely dependent on oil revenues and extraction was the dominant activity of the Gulf state (Wright 2015, 105). The Company House Museum projects this narrative of rapid development in a short video that contrasts an unstable pre-oil past of hardship, which extended into the early years of transition into the oil era, with Qatar's transformation into a modern city-state that provides for its citizens. Projecting into the future, the museum affirms that education and knowledge will continue to replace fossil fuels as the source of the country's true source of wealth.

The Company House museum's state-sponsored narrative neglects how the end of oil era had been anticipated in Qatar since the 1960s.¹² The first post-oil development plan was implemented by Sheikh Khalifa bin Hamad al-Thani in the face of a 1960 report by Western experts predicting that Qatar would run out of reserves within a decade (al-Othman 1984). Sheikh Khalifa's development vision for a post-oil era was oriented towards an industrialization plan that

¹¹ This declaration of independence followed the breakdown of negotiations to create a nine-state federation in the Lower Gulf with what became the United Arab Emirates and Bahrain.

¹² In academic studies of Qatar's contemporary post-oil national agenda, there is generally minimal attention given to the long-standing developmental desire and attempts to diversify away from hydrocarbons.

would use hydrocarbons to “overcome the lack of native manpower by use of high technology” (ibid, 120). In this development project, however, plans to industrialize were limited by the need to continue extracting oil for export to pay the cost of imported technology (Othman 1984: xvi-xvii).¹³ As the Company Museum alludes, one of the key emphases of post-oil development in Qatar is a desire to gain technological autonomy from the West. During this period, the state invested heavily in education by building institutions and sending Qataris abroad to study. After independence in 1971, Qatar University was established in 1977 as the first public, national university in the country, which currently serves over 23,000 students and is a major research university at the Gulf regional scale.

Qatar’s current investments in education and expertise are similarly oriented towards preparing for a post-oil future. In fact, Qatar’s contemporary strategy of building a knowledge economy by importing universities is situated in a broader regional development agenda across the Gulf to build post-oil economies (Vora 2018; Günel 2019; Koch and Vora 2019). The presence of offshore U.S. universities, such as Texas A&M, in Qatar has been promoted by Qatar Foundation¹⁴ and its partners as a visionary attempt to bridge the divide between labor, natural resources, and Western technologies—first, by importing U.S.-based expertise, then building infrastructure for local knowledge transfer, and ultimately innovating alternative sources of wealth in a fully-fledged knowledge economy (Ewers 2013, 2016). The Qatar National Vision 2030, made public in 2008, guides most knowledge economy development agendas and national development strategy plans

¹³ Qatar began the process of nationalizing the oil industry in 1973. The company that became Qatar Petroleum was under the control of the state by 1977.

¹⁴ Qatar Foundation (QF), founded in 1995, is a parastatal organization that oversees and funds the Education City project. Founded by key members of Qatar’s Al-Thani ruling family, QF has spearheaded Qatar’s vision to become a leader in education and research at a regional and global scale. While QF describes itself as non-profit entity, the organization is involved in various commercial joint ventures. It has also been critiqued within Qatar for not being transparent to Qatari citizens.

across the country.¹⁵ The overarching vision—oriented around four pillars of human, social, economic, and environmental development—is to gradually diversify the economy away from hydrocarbons by creating new sources of renewable wealth. In this future diversified economy, the knowledge that Qatari citizens produce is positioned as the driver of the nation’s development. The Qatar National Vision 2030, along with other Vision documents across the Gulf, describes achieving diversification by extending the reach of the market through privatization and public private partnerships in areas such as energy, education, and transport. While these appear to be technocratic plans, they are indicators of how Gulf states are prioritizing expanding the frontiers of capital accumulation (Hanieh 2018).

Critiques of the Qatar National Vision, and similar development agendas across the Gulf, describe them as superficial branding efforts crafted by Western consultants and international institutions. Qatari citizens and academics have criticized the national development plan on this basis, along with the absence of active political participation in debating and guiding its policies (Al-Kuwari 2012). As Ali Khalifa Al-Kuwari, a Qatari academic and vocal critique of the Vision has argued: “This array of visions, strategies, and plans that have been elaborated without national consultation have been warmly received and supported by the official and foreign media in an astonishing manner that puzzles both Arab citizens and observers, before they have even had a chance to read the documents objectively” (2012, 87). As much as the Qatar National Vision 2030 has been critiqued inside and outside Qatar, it is pervasive in everyday life, shaping how the future is perceived, experienced, and even re-made. The document proclaims: “By shedding light on the future, the Vision illuminates the fundamental choices that are available to Qatari society” (QNV

¹⁵ Visions such as the QNV 2030 are widespread across the six monarchies of the Gulf Cooperation Council (the GCC). In terms of fossil fuel futures, many of the national visions across the GCC, which are currently oriented around post-oil development and knowledge-based economies, resemble each other. See the Kuwait Vision 2035, Bahrain Economic Vision 2030, Saudi Vision 2030, UAE Vision 2021, and Oman Vision 2040.

2008, 2). Mapping out these choices, it aims to inspire “Qatari people to develop a set of common goals related to their future” (ibid). I encountered the Vision almost daily in Doha—on posters across the city, during conferences, at Texas A&M’s commencement, and throughout my discussions with students. The Vision was reproduced in daily interactions, but simultaneously challenged and reinterpreted by students (see Chapters 4 and 5). As one student, a freshman in mechanical engineering at TAMUQ, who was interested in alternative energy, explained to me: “it may not be good for Qatar, but it’s good for the world.”

The Vision is presented as a framework guiding all national strategies, rather than an outline of specific processes to get there. With regards to Qatar’s investments in education and research, policy has taken different forms since 2008. During my research, I heard anecdotes and observed as the Vision was adapted to respond to crises or geopolitical events, such as the oil price collapse in 2014 or the 2017 embargo of Qatar by Saudi Arabia, Bahrain, and the United Arab Emirates (UAE). For instance, I observed how the increasing militarization of Qatari society has resulted in situations where Qatari men are caught between being channeled into Qatar’s knowledge economy infrastructure and the military-police apparatus (see Chapter Five). With the 2014 oil price and the recent COVID-19 pandemic, Education City, and associated knowledge economy infrastructure such as the Qatar National Research Fund (established in 2006), experienced budget cuts to research, scholarships, and general educational funding (see Chapter Three). Additionally, when I was a visiting researcher at TAMUQ, the branch campus was going to be renegotiating its contract with Qatar Foundation. Rumors would circulate among faculty and staff about whether the institution would be shut down in the coming years. In this way, while there is a singular Qatar National Vision, there have been multiple iterations, transformations, and interpretations of it.

Institutions such as TAMUQ can easily align the Qatar National Vision with policy agendas that may appear contradictory. For instance, the Qatar National Vision is often described by academics and government officials as a post-oil, knowledge economy, or post-carbon development agenda. However, the document includes a section which describes responsible exploitation of oil and gas, envisioning a “vigorous oil and gas sector that generates advanced technological innovations and contributes to the development of human resources and economic capacities throughout Qatar” (28). Additionally, the Vision delineates between oil and gas, describing: “a fully developed gas industry that provides a major source of clean energy for Qatar and the world” (ibid). The branch campus has helped to delink oil from natural gas as a “clean” fossil fuel or transition fuel, and hosts the first engineering experiment station in Qatar, focused on natural gas exploration and exploitation. In this way, there is a close alignment between the Vision and TAMUQ. As I argue in this dissertation, these various iterations and transformations of the Qatar National Vision, along with everyday interpretations of it at Texas A&M, often clash (see Chapters Three, Four, and Five).

Theoretical Framework: The Gulf in Geography

The Gulf is a critical place for geographers to grapple with struggles over the future of fossil fuels. Yet, the Gulf—while increasingly prominent within geographical knowledge production regarding logistics, oil and gas networks, U.S. hegemony, infrastructure, cities, and labor—is often approached from an aerial perspective. This view, drawing attention to regional and global spatial processes, risks presenting the Gulf as a pit stop or touching down place and rarely centers the experiences of people living there. Responding to Deen Sharp’s call (2018) to diffract Anglophone human geography through area studies, this dissertation brings Gulf studies in conversation with geographical political economy (Massey 1994; D. Harvey 2006; Katz 2001;

Hart 2006; Gilmore 2007; Smith 2008).¹⁶ Sharp borrows from the feminist science studies scholar Donna Harraway's optical metaphor of *diffraction*, taking it up as a "tool of analysis" that opens up possibilities to crafting "a critical practice of engagement with the world" (12). He argues that diffraction can assist geographers in "attending and responding to the effects of difference rather than merely representing it" (12).

Rather than identifying gaps or erasures at the interstices of these fields or pointing out pervasive Orientalist representations of the bounded space of the Gulf, I bring geographical political economy and Gulf studies into conversation to identify and provoke questions about the relational geographies of fossil-fueled capitalism. In doing so, I aim to move beyond critiques of the Gulf's representation (Kanna, Le Renard, and Vora 2020). While these critiques of representation have been instrumental in pushing against the pervasiveness of various tropes and erasures about the region, this dissertation aims to investigate the effects of difference and the interconnections between the Gulf and the United States. I approach Gulf capitalism "outside an analytical privileging of the 'national box'" (Hanieh 2018) through overlooked spatial scales produced through Texas A&M's transnational operations. This framework shapes how I intervene in scholarship on the geographies of energy transition, anthropologies of the future, and critical university studies.¹⁷

Geographies of Energy Transition

¹⁶ In particular, I have looked to foundational interventions of Marxist and feminist geographers such as Ruth Wilson Gilmore's work on carceral institutions, Cindi Katz's relational approach to childhood in the United States and Sudan, Gillian Hart's call for critical ethnography and relational comparison, and Geraldine Pratt's (2012) transnational ethnography of intimacy and care work between the Philippines and Canada. These geographers adopt multi-sited methods to show how overlooked, often racialized and feminized spaces, such as the home, schools, and the prison, are central to the working and reproduction of capitalism. While Katz, Hart, Gilmore, and Pratt cover diverse topics and geographies that are distinct from the Gulf context, I draw inspiration from how they ethnographically examine the restructuring of global capitalism across what appear to be discrete spaces and regional contexts.

¹⁷ These literatures will also be discussed in the following chapters.

Energy transition is a geographical process entailing the transformation of economic activities, social life, infrastructures, cities, and spatial imaginaries (Bridge et al. 2013; Huber 2015). Yet, the geographies of alternative energy transition are not yet determined (Lennon 2017; Rignall 2016; Knuth 2019). As the work of Indigenous scholars and organizers in settler-colonial North America have shown, energy transition is a deeply contested terrain of political struggle that produces a range of contending geographical futures (Curley 2018; Spice 2018; Estes and Dhillon 2019). Recent geographical research has critically examined the use of climate change discourse by the U.S. military and the fossil fuel industry—the world’s largest and most powerful emitters of carbon (Gilbert 2012; Bigger and Neimark 2017; Belcher et al. 2019).

This dissertation examines a key, yet underexamined site in the social reproduction of the fossil fuel industry—universities (Tretter 2019). Geographers have drawn attention to how schools are key spaces reinforcing the economic power of the oil and gas industry in a contested era of energy transition (Eaton and Day 2020). I build on this work by examining how the relationship between the oil industry and higher education takes shape across national borders. In addition to developing a transnational approach to petro-education, I show how the management and production of social difference in a U.S. branch campus, particularly along the lines of gender, nationality, class, and race, is integral to Qatar’s post-oil imaginaries.

Anthropologies of the Future

To comprehend the imaginaries of relentless fossil fuel extraction at Texas A&M’s Harold Vance petroleum engineering department that coexist with progress-oriented temporalities of post-carbon development in Qatar, I build upon anthropologies of national development and the future. This scholarship ethnographically demonstrates how postponed, crisis-ridden, cyclical, nostalgic, or apocalyptic futures replace, clash, or coincide with modernist imaginaries of progress at the

heart of development (Guyer 2007; Piot 2010). In the Gulf, temporalities of progress driven by oil-wealth have been consistently disrupted by the anticipation of oil's depletion. In Oman, Mandana Limbert's interlocutors anticipated the future as a cyclical return to the country's pre-oil past; In Abu Dhabi, Gokçe Günel (2019) traces how the government's visions of progress are implemented in a research institute that positions knowledge about renewable energy as a mechanism to transform the emirate from an oil-producer to a knowledge-producer. As the global climate crisis increasingly haunts modernist development visions in the Gulf, scholars and artists have unpacked apocalyptic imaginaries that position the Gulf region as an indicator of future global catastrophe: "to live completely indoors is the only way we'll be able to survive. The Gulf's a prophecy of what's to come" (Al-Maria as quoted in Mufson 2019, n.p.). Sophia Al-Maria, a Qatari American artist and writer, has described this phenomenon as Gulf futurism, "a present made up of interior wastelands, municipal master plans and environmental collapse" that is projected as a dystopian "global future" (Al-Qadiri and Al-Maria 2012, n.p.).

Geographers have sometimes reproduced Gulf futurism—the notion that the region serves as a fleeting sign of dystopian worlds, uninhabitable environments, or cautionary tale of capitalist excess. For example, in urban geography, the concept *urban apartheid*, which is critical for grappling with labor exploitation in the Gulf, similarly deploys a Gulf futurist framing—that the deaths of workers due to overheating to build the Gulf's cities are an indicator of what is to come elsewhere, a warning sign to liberal democracies (Graham 2016). Neha Vora has pointed out how "the sensationalization of exploitation, suffering, and death in the Gulf obscures similar conditions of daily life in parts of the world that are not at all disconnected from these so-called authoritarian contexts" (Vora 2016, n.p.). As Ahmed Kanna, an anthropologist who works in Dubai, has noted about his own initial representations of Dubai as sci-fi movie or dreamscape shifted over time:

“the city emerged as a product of ordinary, even uninteresting processes of technopolitics, geopolitics, and cultural politics—processes that were similar to those occurring in more ‘authentic’ Middle Eastern cities at the time” (Vora, Kanna, Le Renard 2020, 33). Gulf futurism, on the other hand, reinforces the idea that the region is a cautionary tale, even at the level of the atmosphere.

This has political ramifications. Gulf states, such as the United Arab Emirates and Qatar, have capitalized on these framings of the region’s environment (Günel 2019). If the region is currently experiencing temperatures and environmental degradation that other places are projected to experience, private Gulf capital (inclusive of Gulf state elites and ruling families)¹⁸ and multinational corporations can turn regional climate change challenges into opportunities (Günel 2019). Building on anthropological work on everyday experiences of the future in the Gulf, I investigate how fossil fuel futures in Qatar—the simultaneous commitment to the further extraction of oil and gas and the vision of becoming a knowledge producer—are entangled in the operations of a Texas land-grant university.

Critical University Studies

This project is also engaged with critical university studies, an interdisciplinary field that started as an investigation of how the ascendancy of neoliberal market rule restructured higher education (Slaughter and Rhoades 2000; Olds 2007; Newfield 2008; Berman 2012). Unsettling romanticized notions of the university that underpins some of this work, recent scholarship has

¹⁸ Adam Hanieh (2018) has argued that based on his analysis of the ownership structures of Gulf conglomerates “it makes little sense to view the state and private capital as existing independently or autonomously from one another...rather than seeing the state as a competitor, obstacle, or hindrance to private capital accumulation and ‘free markets’...we should view the state as an institutional form that articulates and intermediates the power and interests of the capitalist class itself (again a class that must be understood as inclusive of—but broader than—the ruling families). The Gulf state is—as in all capitalist societies—a class state, not a neutral or parasitic institution severed from the social relations of production and accumulation or one that ‘crowds out’ the private sector” (67).

shown how U.S. higher education has and continues to facilitate settler colonialism and white supremacy (Melamed 2011; Ahmed 2012; Ferguson 2012; Wilder 2013; Meyerhoff 2019; Ahtone and Lee 2020). This dissertation combines these two strands of critical university studies by ethnographically examining the material connections being forged between Texas and Qatar in the name of building a post-oil economy. I build on Vora's work (2018), which draws on critical university studies' interventions to contest the idea that the American university's liberal values are tainted by establishing branch campuses in the Gulf.

Although U.S. universities operate outside the official borders of what the state officially demarcates as the United States, critical university studies remain mostly U.S.-centric. In the coming chapters, I analyze Texas A&M's history as a land-grant university in relation to its educational and research activities in Qatar. I show how the institution's historical and contemporary role in Texas, particularly as a military college, matters for understanding how the institution has reterritorialized in the Gulf (see Chapters Three and Five).

Research Methods

For this project, I drew on mixed qualitative methods, including participant observation, interviews, oral histories, and archival history. My approach to these methods has been guided by geographical approaches to ethnography, particularly institutional ethnography (Billo and Mountz 2016). There are three overarching methodological orientations, grounded in feminist geography, that I adopted as I developed my approach to institutional ethnography.

First, I troubled the ethnographic binary between "the field" and "home." My field site regularly blurred the boundaries between research and academic spaces. As I conducted my research, I was teaching at another U.S. branch campus in Education City. I also participated in workshops at various universities, audited a Gulf studies course at Qatar University, and worked

as a research assistant at TAMUQ. Additionally, during the first five months of the COVID-19 pandemic, while living in Doha, I found myself increasingly engaging with university politics based at UW–Madison. These kinds of blurring of field and home shaped my analysis in significant ways, which I discuss more in what follows along with in the conclusion of this dissertation.

Second, while I had moments of success in my research (such as when I finally acquired local IRB), I attempted to pay just as much attention to moments of so-called failure—when requests for access were not granted or ignored. These instances were not wasted time; rather, they were significant for how I came to understand the institution, along with identifying sensitivities that I was unaware of or did not expect.

And finally, I sought out and cultivated various relations of collaboration. I mean relations of collaboration in the literal sense of conducting research and writing with others. I also mean collaboration in the sense of openly sharing insights and knowledge about these institutions with other researchers and people navigating these spaces, rather than treating them possessively as *my* field site.¹⁹ Most ethnographic or in-depth studies of U.S. branch campuses in Education City contained their own messy stories of barriers and access (Kane 2011; Stanfield 2014; Vora 2018). Discussing and navigating these with other researchers taught me how the Education City project has transformed over time, along with how researchers are required to go through different hoops depending on where they are in their careers, the politics and focus of their research, and their backgrounds and identities. I witnessed Qatari researchers, for example, face barriers in these

¹⁹ By the time I did my research, there was an entire body of work about this space to learn from. There were dissertations on individual branch campuses, particularly Cornell (Kane 2011) and TAMUQ (Stanfield 2014), and studies of the broader Education City project (Koch and Vora 2019; Vora 2018; Kleibert et al. 2020). Along with the scholarship of “outsiders” (researchers without formal institutional connections or jobs in Qatar), an entire body of work on education in Qatar, including at the branch campuses, has emerged through Qatar National Research Fund (QNRF) grants (Gray, Keck, and Bashir 2017; Hillman, Graham, and Eslami 2019; Graham, Elsheikh, and Eslami 2020) and local PhD programs. Some of this work has directly engaged with critical scholarship on the campuses.

institutions that I did not encounter. I learned of South Asian researchers, particularly those living in Qatar without Western passports, regularly dealing with racism in Education City and other institutions across Qatar as they conducted their research. On the other hand, white researchers with U.S., Canadian, or European passports based in academic institutions outside Qatar would conduct research on short two- to three-week stints without being asked about whether they had local IRB. When I asked them about local IRB, which was a major barrier to my own research and that of other graduate students I met in Qatar, they dismissed it as unnecessary.²⁰ At the same time, the case of Matthew Hedges, a white British doctoral student who was in the United Arab Emirates for a two-week research trip and was arrested on charges of spying, was gaining traction as I conducted research in Qatar²¹ (Siddique 2021). At the AAG Annual Conference in 2019, I met with a researcher who told me someone they interviewed on energy transition in the Gulf accused them of spying and reported them to the police. When I was in the middle of conducting my research, an ethnography of Education City came out (Vora 2018) and I observed first-hand how the book was censored within the branch campuses (Ahmed 2019). All of this, along with my own interactions with administrators, had a chilling effect on the way I went about doing my research. I never felt entirely certain regarding what was sensitive and what was not. For this reason, collaboration was critical not only for my research, but also my own well-being.

In the following sections, I discuss how the three principles I outlined shaped my approach to four methods: participant observation, archival research, oral history, and interviews. I also

²⁰ Ignoring local IRB was non-negotiable for me. Although I had gone through IRB at my home institution, I was told by a TAMUQ administrator during my first preliminary research that I could not contact people at the institution without a local IRB. Navigating how to apply for local IRB took about six months; however, in the process I learned that researchers based in Qatar also dealt with confusions over IRB requirements. In Education City, Georgetown University at Qatar (GU-Q) is one of a few institutions that processes local IRBs in Qatar.

²¹ See: Siddique, H. 2021. British academic sues UAE officials over torture claims while in detention. *The Guardian*, <https://www.theguardian.com/world/2021/may/06/british-academic-sues-uae-officials-for-alleged-torture-while-in-detention-matthew-hedges> (accessed August 4, 2021).

reflect on my shifting subject position in Doha and College Station, which I discuss in more detail in the conclusion of this dissertation.

Participant observation

Participant observation is often positioned as a cornerstone of ethnographic research. Yet, institutions are notoriously inaccessible and resistant to conventional ethnographic methods. My position in terms of this method has shifted substantially over the years I was working on this project. These shifts in access, rather than a particular moment when a gatekeeper granted me access, shaped my approach to the institution.

I first developed an interest in the space of Education City while studying Arabic at Qatar University during the 2011-2012 academic year. Between 2011 and 2020, I observed and experienced the transformation of Education City from a securitized enclave on the outskirts of Doha to an outward-facing urban development project. As a student at Qatar University, Education City felt inaccessible to me and other students in the university dormitory, especially because the complex was not open to visitors and broader communities in Qatar and was expensive to visit without access to a vehicle. To enter Education City, you had to show your passport or residency card, along with having a specific reason to visit the space. Since 2012, Qatar Foundation has attempted to open Education City up to the broader public. Education City currently hosts various institutions and events that attract people to the space, such as the Qatar National Library and a seasonal farmers' market. Qatar's ruling family also promotes Education City during national holidays. For instance, high-level members of the family host various events in Education City during Sports Day, a nation-wide day to promote exercise and outdoor activities across Qatar. While the opening of a metro stop in Education City has made it more accessible to communities in Qatar without vehicles, like many spaces across the city, Education City remains largely

inaccessible to working-class communities, particularly migrant workers on visas without their families (Mohammad and Sidaway 2016; see Buckley 2014, 2015 for scholarship on the figure of the “bachelor builder” and construction labor markets in Dubai).

When I began this research, I had no formal institutional connections to TAMUQ or TAMU. I began preliminary research by meeting with a TAMU administrator in College Station about my research interests. My main advisor at UW–Madison, Kris Olds, put me in touch with them, and they subsequently introduced me to a few administrators and faculty with ties to the branch campus. Through these interviews, I learned that my research questions about engineering research at the branch campus were more sensitive than my questions about engineering education. Most administrators and faculty (at Texas A&M and other institutions across Qatar) were not interested in answering my questions about research and would often pivot to topics concerning education and student life. Engineering research was a sensitive topic to broach for a host of reasons, including competition within and across institutions, non-disclosure agreements with industry and the Qatari government, and suspicions regarding why I was interested in this topic as a geographer, a non-engineer, and a woman who appeared young.²² Administrators that did meet me either showed me public relations PowerPoints or directed me to their university’s website. These meetings were critical for developing an understanding of the institution’s official narrative of its operations in Qatar. Administrators, faculty, and staff no longer associated with TAMUQ were more open to speaking with me and advised me on how to go about doing my research. Additionally, some of these early meetings led to contacts in other parts of Education City, including at Qatar Foundation.

²² It was not uncommon for me to be asked my age during interviews.

At the same time, I met with faculty across Education City who did research on the internationalization of higher education in Qatar. After meeting with TAMUQ faculty in the liberal arts department, they suggested the possibility of being a visiting researcher at the branch campus. I returned for three months during the Spring 2018 semester as a visiting researcher and formally began the process of attempting to acquire local IRB.²³ The process of applying for local IRB was different than what earlier researchers had described in their studies. There was no longer an institutionalized pathway for independent researchers to receive IRB approval in Qatar. As a graduate student, I needed to apply with a principal investigator based at an institution in Qatar. My confusion was compounded by the fact that TAMUQ had indefinitely suspended its contract with Georgetown University at Qatar, which used to process local IRBs for everyone based in Education City doing social science research. Even TAMUQ liberal arts faculty were not able to apply for IRB and were disgruntled about the process.²⁴

As a visiting researcher at TAMUQ, I did not know whether I would have to secure three IRBs to do my research: one from UW-Madison (my home campus), one from TAMU (the main campus), and one from a local institution in Qatar. I was advised by a mentor to attend an IRB information session at the branch campus to determine whether I needed to apply through TAMU's IRB. I explained my situation to the IRB representative, who was flown in from College Station to negotiate a new contract with a local institution and explain the situation to disgruntled TAMUQ liberal arts faculty and the few engineers who did research involving human subjects. After the

²³ During this period, I attended campus events, met additional TAMUQ faculty and staff, and presented my dissertation proposal to a group of graduate students in the Sustainable Environment program at Hamad Bin Khalifa University (HBKU).

²⁴ No one seemed to know exactly how I could acquire local IRB. The rules regulating IRB in Qatar had changed quickly over the past fifteen years. There were multiple institutions in Education City involved in IRB reviews according to Qatari law and regulations. Some of the universities in Education City had local IRB capacity (like Georgetown University at Qatar), and some like TAMUQ, worked with a local partner.

presentation, I approached her to introduce myself and inquire into whether I needed to go through Texas A&M's IRB. She stopped me after I described myself as a PhD student at UW–Madison, asking me to clarify whether I was paid staff at TAMUQ. “No,” I replied. Slowly distancing herself away from me, she asked: “OK. So you are not our responsibility and we are your subjects, right?” I attempted to explain my methodology and that I was not sure whether I needed to go through Texas A&M's IRB.²⁵ “But you will be interviewing *us*,” she replied. “We are your subjects,” she repeated. This differed from what another researcher I knew in Education City was told. For instance, a colleague, a doctoral student at Hamad Bin Khalifa University (HBKU)²⁶ who already had local IRB from her institution and was conducting research on engineering higher education in Qatar, was told by a TAMUQ administrator that she also had to go through Texas A&M's IRB office in College Station. This added extra months of delay to her research. While multiple IRBs is not necessarily an unusual requirement when it comes to research on universities, the institutional power of the IRB in this context was that there are no consistent or transparent practice or rules. After a lengthy process, I eventually was able to acquire local IRB through Georgetown University at Qatar.

Although I suddenly became a visiting researcher “inside” the institution, I encountered various uncertainties and difficulties during this period. First, it was unclear exactly how I would stay in the country the entire time. As a visiting researcher at TAMUQ, I could be in the country for up to three months but would have to travel outside the country and start the visa process again. This process included getting a chest x-ray and blood test, along with fingerprints. By the time I

²⁵At one point, I was warned by the Georgetown University at Qatar IRB office that I may have to go through IRB at every institution of higher education I was conducting interviews at: Qatar University, College of the North Atlantic Qatar, Hamad bin Khalifa, and TAMUQ/TAMU. Thankfully, I did not have to do this.

²⁶ HBKU opened in 2010 as a member of Qatar Foundation. The university is primarily focused on national research areas and graduate education.

finished my research, I had gone through the medical examination three times. Second, the financial cost of living in Doha is high. Even with research funding, it was challenging to locate affordable housing. I moved three times during my February-May 2018 research trip in Doha.²⁷

When I returned to Qatar in September 2018, my relationship to the campus and everyday life as a researcher and graduate student in Doha transformed fundamentally. A visiting lectureship for the 2018-19 academic year had opened in TAMUQ's liberal arts department. My partner, Luke, applied and got the job. Suddenly, both our lives, along with my relationship to TAMUQ, transformed. The net income he was offered was more than either of us had ever made before. The branch campus provided us with a three-bedroom apartment, six times the size of our previous apartment, in a high-rise tower with a view of the Gulf. I directly saw the contracts that faculty with U.S. citizenship were offered at the branch campus. I was suddenly bumping into TAMUQ administrators, faculty, and staff in the apartment elevator, where we made small talk. Most significantly, I had residency, which would make traveling easier, along with opening the possibility to work in the country. I could also afford to go to the expensive restaurants, cafes, and bars that some of my interlocutors frequented. While my everyday life transformed, I found that the people I interacted with daily at TAMUQ and other institutions began to treat me differently. I was not seen as temporary, flying in for a brief research stint. Even as I explained that we were not planning to stay longer than a year and that we were in Doha because of my dissertation research, TAMUQ faculty and staff assumed we would be there longer. One person responded: "When people say, 'I am staying one more year,' they really mean five." Another TAMUQ faculty member shared a joke that an American employee at the branch campus would regularly repeat:

²⁷ I rented a room in a family's villa in Al-Waab neighborhood in Doha, which was about a twenty-five-to-thirty-five-minute drive from the campus depending on traffic and construction. I then booked a hotel room across the street from Education City. A TAMUQ faculty member eventually hosted me at her villa for the remainder of the time.

“When you come to Doha, you come with two bags: a bag for bullshit and a bag for money. You leave when the first one gets full.”

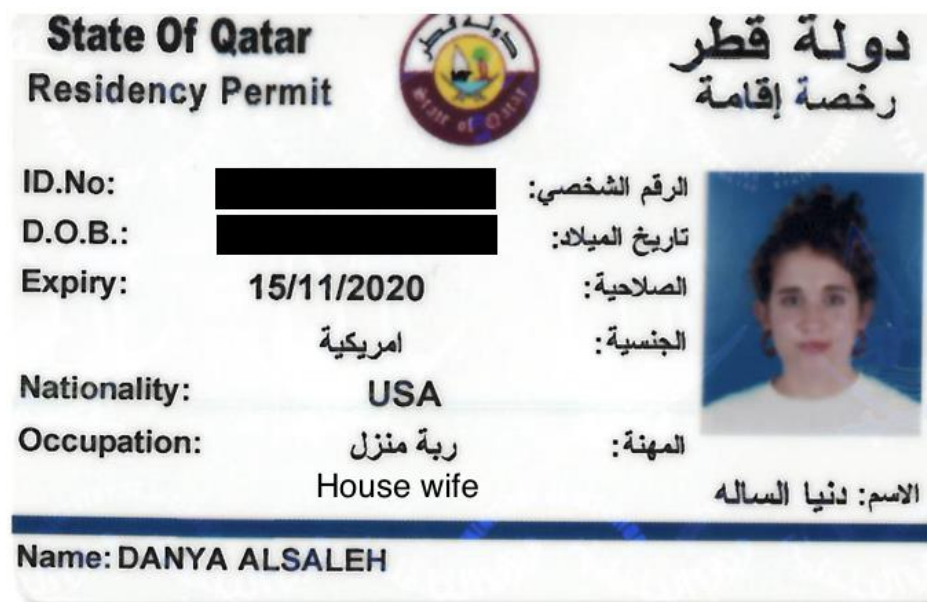


Figure 2. My residency permit with my new occupation: housewife.

Source: Author.

At the same time as I was incorporated into TAMUQ faculty life, I suddenly became the “wife” of someone in my research context (see Figure 2). No matter how many times I would explain that we were there for my dissertation project, the lasting perception was that I was there for his work. However, I quickly began to own the position of “housewife” and stopped correcting people when they made those assumptions about my presence at the branch campus. I would sometimes joke that I was a housewife who just thought I was doing research. To avoid some of these interactions, I spent more time at other engineering-related institutions across Qatar.

Like people assumed would happen, we ended up staying longer than expected. During the following 2020-2021 academic year I worked as an adjunct at Virginia Commonwealth University School of Arts Qatar, another U.S. branch campus in Education City. While Qatar Foundation was pushing for collaboration between the branch campuses, they remained discrete institutions. To

me, they felt like their own worlds. When I initially started my research, I observed these distinctions when travelling between Qatar University and Education City. However, my movement between the various branch campuses was also jarring. By the time I finished my research, I had institutional connections with three U.S. branch campuses in Education City. I also spent significant time conducting interviews and attending events at College of the North Atlantic-Qatar, HBKU, and Qatar University.²⁸

All these transitions—from being a student living in Qatar University’s dormitory to a doctoral student hanging out in a cubicle in TAMUQ’s liberal arts department trying to figure out IRB to my transformation into a “housewife” interpersonally and institutionally—were critical moments shaping my orientation to participant observation. Rather than a linear path where I slowly accumulated more access to the branch campus, each phase of my research came with distinct barriers and forms of access, along with critical insights into the various worlds of higher education in Qatar.

Archival research

To build an archive of a U.S. land-grant university that has reterritorialized in the Gulf, I draw from diverse materials. These sources span from a scrapbook of “the first lady of TAMUQ,” Texas A&M’s University Archive and Oaktrust (a digital repository containing documents about Texas A&M University at Qatar) to documents my interlocutors shared with me, the Wikileaks U.S. diplomatic cables, and Texas Congressman Ruben Hinojosa’s congressional papers at the University of Texas Rio Grande Valley Special Collections and Archives. I also visited

²⁸ Although this is not included in this dissertation, I also spent time conducting research at universities and colleges with engineering programs across Qatar, such as Qatar University, Hamad bin Khalifa University, and College of the North Atlantic-Qatar. I had IRB approval to conduct interviews about engineering higher education with people affiliated with these institutions. These interviews gave me insight into the broader landscape of engineering higher education in Qatar.

ExxonMobil's archive at UT Austin. The unconventional institutional history I trace from these materials in this dissertation reflect broader issues impacting historical methods across the Middle East/North Africa and the Gulf.

Archives are difficult to access, heavily securitized spaces, and forcibly censored from the Gulf to Egypt (Fahmy 2013; Carminati 2018; Bsheer 2020). In fact, scholars working in the Arabian Peninsula and elsewhere have taken up the archive question as research in of itself (Bsheer 2020). Across the Gulf, state censorship has taken place at the same time as heritage urban development projects have produced state-sanctioned historical narratives through the creation of national archives and museums. Since these projects are often outward facing, intended to improve public relations image abroad, the ability of researchers to access historical materials in national archives is significantly easier for foreign researchers. In the context of Saudi Arabia, for example, national researchers face severe limitations and restrictions (ibid). In the Gulf, historians have drawn substantially on private collections and British colonial archives. Some of these archival materials housed at the British Library, particularly the India Office Records related to the Persian Gulf, have been digitized in partnership with the Qatar Digital Library. In this way, knowledge economy projects promote the expansion of a heritage industry, with the digitization and cataloguing of certain materials for the state's history-making and heritage projects (ibid). Early in my research, faculty at Qatar University and Northwestern University at Qatar recommended that I visit the Company House Museum to ask about their archives. When I did, I was told there was no archive, but a small library at the Bin Jelmood house, a museum in Msheireb focused on slavery in the Gulf, that I could visit.

In this discussion of the broader context of archival research in the region, I want to emphasize that I simultaneously encountered various restrictions when navigating Texas A&M's

archive and library, both in College Station and Doha. While the Texas A&M University Archive in College Station was a space early in my research in 2016 where I gained access to crucial materials about the negotiations over the branch campus, these documents were not accessible to me on later trips. On a follow-up trip in 2019 to the university archive in College Station, the archivist was not able to pull the materials I had been given years before. Apologizing, the archivist informed me that there was a collection about the early days of the campus housed at TAMUQ. In a September 2019 meeting that a fellow PhD student and I coordinated with TAMUQ library staff about accessing these materials, we were told that the reason they could not share those materials with us, despite complying with the State of Texas Records Retention schedule, was because of the “grey” area the offshore campus occupies. Regretfully apologizing that they could not be more accommodating, one of the librarians explained: “the problem is we are beholden to the State of Texas and the State of Qatar.” My colleague, a Qatari TAMUQ alum, followed up by asking how much, if they had to guess, is the balance of power between Qatar and Texas in the governance of the campus. While one of them quickly replied, “I would say 70-30 to Texas,” the other indirectly disagreed, emphasizing that the only thing Qatar controls is the budget and building. Directing their response to my colleague, they reminded her that, as a former TAMUQ student, she should be intimately familiar with Texas’ control over the campus. As a student, had she not learned Texas history in Qatar due to Texas law? We left the meeting without much insight into the grey area the first staff member described and what kinds of documents stored in the library inhabited this space and why.

I approach these moments as participant observation of the manifold practices regulating archival life of Education City and TAMUQ. The archival materials I draw from, while scattered, helped me to construct an understanding of the institution’s early days and the various actors that

made it possible, ranging from George H.W. Bush to a network of Aggies working for the oil industry across the Arabian Peninsula.

Interviews

I conducted fifty-nine semi-structured interviews between July 2018 and August 2020 with faculty, administrators, and staff at branch campuses across Education City, Qatar Foundation, HBKU, Qatar University, and the College of the North Atlantic Qatar, along with employees at Qatar Petroleum. I opted out of recording unless someone asked to be recorded. All interviews I conducted are anonymized and all references to people I interviewed are pseudonyms. Any potentially identifiable titles, career trajectories or positions have been changed to further anonymize interviews.

Combined with archival materials and secondary sources, these meetings were crucial for tracing the history of the branch campus. Interviews with TAMUQ employees involved in the campus' startup days were more open. On the other hand, interviews with faculty, administrators, and staff currently affiliated with TAMUQ were more challenging to navigate. To understand sensitive issues, such as admissions and research, I looked to TAMUQ counterparts at other institutions. For example, data about student demographics is difficult to access at the branch campus.²⁹ While there is some public data available due to public records laws, they are vague because TAMUQ uses categories from the state of Texas. For this reason, I was not able to collect substantial quantitative data about students at TAMUQ and across Education City. Through an interview with an admissions officer at another U.S. branch campus, I learned about how branch

²⁹This even shapes the experience of undergraduate students within the institution. In an interview with an engineering student at TAMUQ, she expressed her own frustrations completing a course assignment that required research on engineering education in Qatar. She chose to research the gender gap at TAMUQ and was shocked at the difficulty she faced acquiring data about student demographics across the majors. To access the data, she had to sign a non-disclosure agreement, in addition to having her presentation and PowerPoint slides reviewed by TAMUQ's Office of Records.

campuses categorize and track their students as Qatari, resident, and international, along with how militarization of Qatari society was impacting outreach in Education City. Through interviews with staff and researchers at the Qatar National Research Fund and Qatar University, I deepened my insight into the broader politics of engineering research and the oil and gas industry in Qatar. Interviews outside the branch campus helped me further clarify and streamline the questions I asked at the branch campus. I also was introduced to TAMUQ faculty and staff through their counterparts at other institutions, and vice versa.

Oral histories

On top of the fifty-nine semi-structured interviews I conducted, between December 2018 and March 2020 I also conducted forty-six oral history interviews with engineering students and alumni from TAMUQ, College of the North Atlantic-Qatar (CNA-Q), HBKU computer engineering students, Education City's academic bridge program, and Qatar University.³⁰ The interviewees were from Qatar, Palestine, Bahrain, Pakistan, India, Iraq, Egypt, Sri Lanka, Pakistan, and the United States. In the context of TAMUQ, oral histories offered insight into students' experiences, which often countered official institutional narratives. As opposed to semi-structured interviews, oral histories were more open-ended and generally focused on students' experiences and lives post-graduation working in the oil and gas industry. I found that engineering students' fears and aspirations were entangled with ideas about fossil fuel futures and energy transition.

In these conversations, we discussed why they studied engineering, how they ended up at the institution they studied at, curriculum and coursework, their post-graduation life, and goals and aspirations. By keeping the conversation relatively open-ended, students and alumni were able to

³⁰ I did not interview these oral histories unless I met with some students more than once, but most discussions, ranging between thirty minutes to two hours, took place once. Twenty-six of these students had an affiliation with TAMUQ.

direct the conversation and ask me questions. Many students were curious why I chose my topic and what my findings were. The questions I asked students about goals and aspirations sometimes brought up anxieties over the future and I found myself in the position of counselor, especially with students who were interested in transferring to TAMUQ or a U.S. institution elsewhere. Some students, especially those with friends who already met with me, were interested in participating in my research because they felt I had knowledge about the institution, graduate school, and post-graduate life in Qatar. Others were interested in academic research and would ask me about the process of doing a PhD. I also had graduates follow up inquiring whether I had any insight into hiring practices of certain companies or ministries. During moments when the people I interviewed directly asked me my findings, I shared what I understood at that point about engineering education in Qatar.

Analysis

Taken as a whole, this dissertation is based on a blend of methods, some of which took precedence over others depending on my constantly shifting positionality in relation to TAMUQ/TAMU and the Education City project. Due to how the various methods I adopted shifted over time, my analysis of the different types of data I collected was staggered. By the time I began officially conducting interviews and oral histories, I had already done substantial archival research and discourse analysis of TAMUQ's public relations materials. Through these materials, I constructed a timeline of the institution's history and key events, along with identifying themes associated with TAMUQ's and Qatari state institutions' official narratives about knowledge economy development and post-oil futures in Qatar. I then triangulated these data with information I learned through interviews with TAMUQ faculty, staff, and administrators and archival methods to construct my argument about Texas A&M's land-grant geographies in Qatar (Chapter Three).

In addition to cross-checking information I learned through interviews, I focused on moments when interviewees both complemented and contradicted TAMUQ and the Qatari state's official narratives.

Oral histories were the last method I adopted in this project, and I analyzed students' diverse stories navigating TAMUQ and other institutions of higher education in relation to the data I collected through archival methods and interviews, which I began months earlier. Due to the pervasiveness of state-sponsored public relations materials throughout Education City, I continued to focus on moments of conflict and contradiction in interviews and oral histories in relation to the post-oil imaginaries projected by Qatari state institutions and TAMUQ. My analysis of these themes centered on moments when interviews and oral histories contradicted official narratives. The main contradictions I identified centered on student demographics and gender relations, the ambiguous role of U.S. federal and state law in the campus' operations, and anxieties that students, faculty, and staff articulated about the future of fossil fuels. Through this asynchronous process of data analysis, I identified four spaces in which fossil fuel futures are developed and contested at TAMUQ, which I will summarize in the following section.

As I began writing, I cross-checked the argument in relation to previous studies and investigations of Education City, along with key interlocutors. I presented my preliminary findings at various workshops and conferences in Qatar and the broader Gulf. These included presenting my dissertation proposal to fellow PhD students at HBKU and Chapter Five at Gulf Studies conferences at Qatar University and the American University of Kuwait. My interlocutors, including TAMUQ faculty and former TAMUQ students, shared their critical feedback with me, and this in turn, helped me to refine my initial arguments and confirm that the contradictions I identified resonated with people who worked and studied at the institution.

Outline of Chapters³¹

This dissertation tells the story of Texas A&M University and its contradictory role in transitioning Qatar's economy away from fossil fuels. The following chapter, "Contestations over Imperial Citizenship: Student Protest and Belonging in Qatar's Education City," provides an overview of the broader Education City project. Zooming out from TAMUQ and centering student struggles across Education City, Chapter Two develops the concept *imperial citizenship* for understanding how U.S. branch campuses in Qatar produce and manage forms of belonging and stratification in relation to both the Qatari nation and U.S. hegemony in the Gulf. As I mentioned earlier in this introduction, this dissertation traces how Texas A&M reproduces and manages various forms of social difference for Qatar's imagined post-oil future. Faculty, staff, and administrators at U.S. branch campuses, such as TAMUQ, arrive with and develop their own ideas of how social engineering in Qatar should take place.

Chapter Three, "Engineering a Texas Land-Grant University in Qatar," argues that Texas A&M's land-grant university status is fundamental for understanding its territorialization in Qatar over the past two decades. Tracing how ideas of Texas A&M's land-grant mission were articulated by various actors involved in establishing and operating the branch campus, I argue that TAMUQ's "success" in Qatar has been shaped through the university's direct ties to the military and warfare, along with frontier imaginaries and relations of extraction, speculation, and paternalism. The land-grant university, established to produce white masculine labor and citizen-soldiers in Texas, has adapted and recreated the institution to produce patriotic engineers for Qatar's future knowledge economy that accept, or at least are ambivalent regarding, U.S. military operations in the region.

³¹ This dissertation follows the article model.

Chapter Four, “Educating Petroleum Engineers for the Future of Fossil Capitalism,” turns to how TAMUQ channels engineering labor into the oil and gas industry during a time when the future of engineering is discursively situated beyond oil. This chapter traces three modes of petro-education, which I describe as the mechanisms in universities that sustain the economic power of the oil and gas industry. These three modes of petro-education are flexible and work across TAMUQ’s diverse student body. These mechanisms redirect their interests and expectations of the future toward the “greening” of fossil capitalism. The relationship between petro-education on offer at Texas A&M and Qatar’s post-oil development agenda produces the conditions for the political contradictions of energy transition and climate change to be postponed and repressed in Qatar, and the broader region. This has dire consequences for human and other-than-human life in the Gulf.

The final substantive chapter, Chapter Five is titled “Who will man the rigs when we go? Transnational Demographic Fever Dreams between Qatar and Texas” and it turns to anxieties at the branch campus about the demographics of Qatar’s future engineers. While the branch campus celebrates the presence of women at the branch campus as a sign of progress in Qatar, it simultaneously works to recruit more Qatari men to “man” Qatar’s masculinist-extractive industries and the military. These efforts take on a feverish nature as they collide with related anxieties about Qatar’s racially-coded demographic “imbalance”—a small Qatari population relative to a large “foreign” workforce. This chapter shows how anxieties about national post-oil futures in Qatar are simultaneously transnational fever dreams, tied up in fears about the future of fossil fuels, capitalism, and U.S. hegemony.

Chapter Six summarizes how these four substantive chapters complement each other, along with revisiting the broader project’s interventions. I conclude by reflecting on the emergent and

unresolved questions I have about this educational project to rehabilitate the future of fossil-fueled capitalism between Qatar and Texas.

Chapter Two: Contestations of Imperial Citizenship: Student Protest and Organizing in Qatar's Education City³²

Introduction

On 6 December 2018, an undergraduate at Texas A&M's branch campus in Doha, Qatar (TAMUQ), emailed the university community to protest the administration's decision to mourn the death of former US President George H. W. Bush by closing the campus for a day. She wrote:

As a student of TAMUQ, I am not proud that the university is turning a blind eye to the war crimes and racism of the 41st president of the US and instead presenting us with a hagiographic portrayal of his life. I don't understand why we're focusing on his "connections to TAMU" when most, if not all, of us students are not proud of those connections.

I find that incredibly disrespectful to the many families that he displaced and murdered. There are likely students at our university who have been and still are affected by the legacy of his war crimes.

I think that our university should encourage us to face inconvenient truths and to stand with the oppressed rather than the oppressor. Cancelling classes in honour of a racist war criminal feels a lot like standing with the oppressor to me.

Texas A&M, a public land-grant university in College Station, Texas, has a long history of engagement with the Bush family. These ties highlight the university's entanglement with US imperial enterprises, which extend into the Persian Gulf. George H. W. Bush's own explanation of why he decided to place his presidential library at the campus despite not attending Texas A&M focused on these connections: "Over the years, Aggies have provided great service to the Armed Forces of our country. Patriotism abounds at A&M."³³ Meanwhile, Qatar hosts the largest concentration of US troops abroad. The US military's Central Command is at Al Udeid Air Base, not far from the Education City complex that hosts TAMUQ and several branch campuses of

³² I co-authored this chapter with Dr. Neha Vora, Department of Anthropology and Sociology, Lafayette College. It was published as part of a roundtable on citizenship and belonging in the *International Journal of Middle East Studies*, December, 2020.

³³ Aggie is the term of a member of the Texas A&M community.

American and other foreign universities.³⁴ The students at these institutions are Qatari citizens, South Asian and Arab immigrants, and international students, primarily from Asia, Africa, and the Middle East.

Requiring these students to commemorate the death of a man whose policies have directly or indirectly had an impact on their families' lives highlights the way U.S. branch campuses in Qatar are institutionalized sites of *imperial citizenship* formation: ideas and practices of citizenship that accommodate and normalize US imperialism among racialized subjects both outside of the United States and domestically. Yet they also are spaces where students formulate anti-imperial subjectivities, as the protest email clearly showcases. In this piece, we draw upon our extensive fieldwork (Danya is a geographer and Neha is an anthropologist) in Doha over the last decade to further explore these imperial contestations, as well as the ways that students are reconfiguring their relationships to Qatar.

Although studies of citizenship in the Arabian Peninsula consider how the relationship between subjects and the state is contingent upon immigration status, race, gender, class, religion, sexuality, marriage, urbanization, neoliberal forms of development, and politicization, citizenship scholars rarely consider residents of the Gulf as individuals who have felt the impact of U.S.-led imperialism. In contrast, political economy and geography scholarship centers the role of U.S. hegemony in the region, its impacts on the decisions that state actors make, and the ways that U.S. financial institutions and markets are intertwined with Gulf economies, especially those of oil and gas (Vitalis 2007; Labban 2008; Jones 2010; Mitchell 2011; Kadri 2014; Hanieh 2018). As Gulf state rhetoric and investment has shifted in the last two decades toward knowledge economy

³⁴ U.S. branch campuses in Education City include Georgetown University at Qatar, Weill Cornell Medicine—Qatar, Northwestern University in Qatar, Virginia Commonwealth University School of the Arts in Qatar, Carnegie Mellon University in Qatar, and Texas A&M University at Qatar.

projects, it is important to note the way that these development agendas have facilitated and reinforced the architecture of U.S. power in the region. For example, the RAND Corporation, a think tank established to support warfare research of the U.S. Armed Forces, developed Qatar's knowledge economy policy and education reform between 2003 and 2013. Similarly, Texas A&M's branch campus in Qatar was established in 2003 as the United States was invading Iraq.

Providing expertise in petroleum and chemical engineering, fields closely tied to the oil and gas industry, the branch campus further links the fossil fuel economies of the Gulf of Mexico and the Persian Gulf. Similar to British and US oil companies, which simultaneously produced capitalist, racialized, and nationalist subjects, branch campuses are liminal sites of U.S. empire and imperial citizenship formation. They are uniquely situated vis-a-vis both Qatari and U.S. (both federal and state) sovereignties in ways that are not always clear to university or state actors. The debate over whether TAMUQ should memorialize Bush's death reflected this uncertainty about how each branch campus is subject to federal governance of U.S. higher education, which is compounded for public universities as they also are beholden to U.S. state laws. For example, students at TAMUQ are required, per Texas state law, to take a course that considers U.S. state constitutions, with special focus on Texas. Meanwhile, employees at Virginia Commonwealth University in Qatar must undergo U.S. Homeland Security background checks, per Virginia state law. In the case of Bush's memorialization, Texas law prevailed when governor Greg Abbott proclaimed that all state agencies should be closed for the burial, and he was officially mourned in Qatar.

Branch campuses regularly operationalize these ambiguous legal geographies to justify institutional decisions and rhetoric about practically everything—holidays, research protocol, security, student affairs, employment, and more. For example, those hired locally in Qatar are not

guaranteed the protections of the U.S. legal system, such as equal pay and benefits; branch campuses are therefore able to take advantage of ethno-racial compensation hierarchies in Qatar to underpay or overexploit many employees in clerical, service, security, and maintenance positions, either directly or through outsourcing. When it comes to issues of national security, however, U.S. federal and state law is implemented. Given Trump administration security restrictions regarding “foreign national involvement in teaching or research activities” through the Protect Our Universities Act of 2019, Russian, Chinese, and Iranian nationals hired at U.S. branch campuses are restricted from working on certain types of research projects.

The relationship between the branch campus and the home campus, however, is presented to the student body as seamless and resolved, since the branch campuses provide a mirror degree. Moments of student activism and protest demonstrate that this is far from true. It is imperative to consider how higher education in Qatar produces not only forms of belonging and stratification in relation to the Qatari nation but also in relation to U.S. hegemony. As this chapter explores, these forms of belonging have coalesced through both seemingly extraordinary moments of student protest and the everyday organizing of student clubs.

Protesting for What Was Promised

This chapter began as a frantic Twitter direct message exchange between us in November 2019, as Northwestern University at Qatar (NU-Q) students on Twitter began to expose racist and sexist comments and behavior that they had experienced from then Dean Everette Dennis as well as some faculty and staff members. Many of the students’ experiences echoed the findings described in Neha’s ethnography about Education City and the reception the book had been receiving across the branch campuses (Vora 2018). We discussed the backlash of some white faculty (including refusals to engage with the text and one case of disinviting the author from a

public talk³⁵), whereas faculty of color found that it validated their experiences of marginalization (Ahmed 2019). NU–Q’s issues did not seem unique to that campus but systemic inside Education City, and we started to fold what students were exposing there into our broader conversation.

In response to the Twitter storm and ensuing letters from students, the Northwestern dean, along with the provost who was visiting from the Evanston main campus at the time, convened an emergency town hall meeting, at which students staged a silent protest. The meeting also was live streamed by some students, and during the meeting over 1,000 people joined, several commenting that they were NU–Q alumni. Neha watched it in the early morning hours from the United States, while Danya watched it from a café in Doha, and we discussed it as it happened.

The students had chosen a representative to speak on their behalf. In her statement, she laid out a series of demands addressed to the provost, which included a more representative faculty, better handling of Title IX cases, and accountability for discrimination against students by faculty and administrators. “We demand policy, and not just apologies!” she said. She highlighted ongoing experiences of marginalization, racism, and sexual harassment that students have faced at the hands of faculty and administration, noting that these are daily occurrences. In the Q&A session that followed, students pressed the administration on whether a search that was underway for a new dean would include diverse search committee members and job candidates, especially from the region. They also challenged a faculty member who was a focus of the students’ Twitter activism about comments she had recently made in her class that stereotyped Qataris. A few days later, the NU–Q student union held a meeting for students and asked them to anonymously write down their concerns. Student concerns included lack of diversity in faculty and courses, racial discrimination by faculty (as well as student to student), mishandling of Title IX complaints,

³⁵ I (Danya) observed this as Neha’s book was published while I was conducting my dissertation research in Education City.

censorship of student-run clubs by the university, and poor working conditions for student workers. At that meeting, the student union president told the attendees: “The administration, both here and in Evanston, I assure you, is definitely listening to us now” (Sentient Magazine 2019).

It was not surprising that student demands were addressed primarily to the provost of the Northwestern system and Evanston. Students were calling the US university to task for not living up to the liberal promises that it claimed to offer: nondiscrimination, equal rights under the law, racial and gender diversity, institutional transparency regarding legal protocol and hiring processes, and freedom of expression. The response from administrators and faculty, particularly at the town hall, was indicative of the way branch campuses flatten students’ challenges to institutions and appropriate them into narratives of educational success, which themselves are colonizing moves. After students calmly yet emphatically told a faculty member at the town hall how upset they were that she had used the term “Qatarred” in a blog post to discuss daily life in the country, and re-blogged supposedly humorous lists that contained derogatory stereotypes about Qataris and immigrant groups, the faculty member’s response was that she was “proud” of them for exhibiting the wonderful education that they had received at Northwestern. This sentiment—that students were demonstrating their training in democracy, critical thinking, and free expression—was repeated by administrators at the meeting, and again in write-ups about the protest, social media postings, and personal conversations. Instead of taking responsibility for how they had failed the students, faculty and administrators managed to claim student protest as a moment of their own creation.³⁶

³⁶ As with the Orientalist framing of the institutional response to the NU-Q students—that NU-Q had successfully taught the Qatar students how to practice freedom of speech—the co-optation of student movements by the administration is common to US universities. One prominent example is UC Berkeley’s celebration of the “Free Speech Movement,” while at the same time the UC system has actively suppressed contemporary student organizing, such as for the Occupy movement and the COLA (cost of living adjustment) strike.

The inability to see the students in Doha as equal to those in Evanston became evident again a few months later when a new controversy erupted on Twitter about an NU–Q event in February 2020 featuring members of the Lebanese band Mashrou’ Leila. The band has openly gay members and considers its music political, producing songs that address gender, sexuality, climate change, state suppression, refugee activism, and Palestine. They were invited to speak about their role in Middle Eastern “media revolutions.” The event sparked anger among some conservatives in Qatar not affiliated with Education City, who felt that inviting openly gay speakers went against the country’s values. This is a recurring subject of debate online in Qatar, especially on Arabic Twitter, and highlights rifts between segments of the citizenry who disagree about the trajectory of the country’s development, its demographics, and what constitute the parameters of national culture. NU–Q and other Education City students for the most part defended the event in the name of free speech and tolerance and argued with detractors. At times the threads became vitriolic, with some non-Qatari students targeted as outsiders who did not have a right to be in the country, at which point other students spoke up to defend the idea that immigrants belong in Qatar too.

NU–Q ultimately canceled the event, citing security concerns, and announced that it would be relocated to the Evanston campus. Implicit in this decision was the message that gay speakers are safer in the United States than in Qatar, and that the main campus, unlike the branch campus, is a site of free speech. In an interview with the Daily Northwestern newspaper, Northwestern’s president Morton Schapiro noted the “different values” in Qatar and dismissed claims by the Qatar Foundation (the parastatal that funds and oversees operations in Education City) that the event’s cancellation did not have to do with safety concerns, saying: “Did you see some of the blogs? Some of the things that people wrote? We had to protect the safety not just of the performers, but

of the audience that was going to be on our campus...I hope to have them on campus and broadcast it back (Srivastava, Luciano, and Hu 2020).”

The “clash of civilizations” framework through which this controversy was cast was due in part to the overlapping sovereignties at work in Education City. Based on pressure from external community members, the Qatar Foundation cited “Qatari law” in canceling the event, without further explanation. This was easily spun into “security concerns” by the Northwestern main campus administration. It was unclear who initiated the event’s cancellation, or if it was a joint decision by both institutions. For the most part, branch campuses enjoy autonomy in event planning, hiring, and curricular choices. Decisions not to push back against the Qatar Foundation, or claims that certain choices are made to accommodate Qatari norms, lead to the scapegoating of Qatari culture as intolerant and unsafe. Given the climate of Islamophobia and white supremacy currently trafficking under the guise of free speech on U.S. campuses, often overseen by campus police, the idea that Evanston would be a safer space for a Lebanese band to perform (provided they are able to procure visas) is arrogant at best.

The cancellation’s imperial cast did not go unnoticed by students. Some cited the fact that highly controversial speakers who went against Qatar’s supposed social and cultural values had been welcomed by NU–Q and other Education City campuses before, such as the Harvard law professor Alan Dershowitz, who has openly advocated violence against Palestinians. Others felt that the decision to cancel the Mashrou’ Leila event did not represent the desires of NU–Q students and painted them in a negative light. In both the protest and the controversy around Mashrou’ Leila, NU–Q students showcased a different kind of belonging to Qatar, one that was not nativist but rather based on shared experiences and solidarities. Members of immigrant groups were offended by racism toward Qatari students, and Qatari students defended immigrant students

online from fellow citizens. This activism emerged from the contradictory experiences of studying at a U.S. university where the promise of liberal education simultaneously revealed deep imperial inequalities and led to the formation of new subjectivities and politicizations.

Student Clubs: Between Segregation and Solidarity

Student clubs are institutionalized spaces where students negotiate the limits of imperial citizenship and cultivate forms of localized belonging. Branch campuses advertise clubs and associations as venues for students to practice leadership and community building as important workplace skills. Administrators also describe clubs as spaces where students exercise the liberal tenets of US education, such as freedom of speech and the open exchange of ideas. Administrators, however, understand these tenets as principles that must be modeled for the student population. A student affairs employee explained in an interview with Danya why she was so happy to see students exercising their freedom of speech during the NU–Q protest: “When they get in trouble with something, students will say they have the freedom of speech, and I have to explain ‘that’s not what it is.’” Staff and faculty both tend to see students, and particularly Qatari students, as subjects of authoritarian regimes who must repeatedly be instructed how to properly practice academic freedom. However, when students actually exercise their academic freedom to organize collectively through clubs they “get in trouble” with the university, especially when they come up against its interests.

There are similar categories of student groups at each branch campus, including academic, extracurricular, athletic, and service clubs. Professional associations, such as the Society of Professional Journalists at NU–Q, the Carnegie Mellon Business Association, and the Society of Petroleum Engineers at TAMUQ, provide career development activities tailored to the majors offered at each campus. The most prominent nonacademic student organizations are identity-based

clubs, such as the South Asian Society at Georgetown University–Qatar and the Sudanese Students Society at TAMUQ. Club activities culminate in an annual Education City–wide event, where student groups (organized by nationality and ethnicity) showcase their culture to the rest of the campus with food, music, poetry, and dance. The most ubiquitous identity-based groups are Qatari Student Associations (QSAs). In 2019, these clubs co-organized a Qatar Foundation–sponsored public event for Qatar’s National Day called “Education City United.” Although non-Qatari students attended this event, Qatari students were its face, and the majority of attendees were Qatari students and their families. Framed by the branch campuses and the Qatar Foundation as a celebration of Education City’s diversity and cultural heritage, these events depoliticize and essentialize difference and further entrench segregation between students.

Although identity-based student organizations put on the most visible events across Education City, student organizing is not limited to these cultural and nationalist projects. In interviews with Danya in 2019, a number of Qatari TAMUQ students expressed a lack of interest in the QSA. A junior explained why he was no longer an active member: “My first year I was really involved in the student body. I got an award for the most committed member of QSA. Then my second year, I realized every single event is always the same. It’s nothing new.” A freshman explained her lack of interest, saying: “I’m not into nationalism.” Some of these once-active students eventually decided to establish new clubs that dealt with issues related to environmental and social justice.

As students express shared political interests and solidarities, they have started to form groups that transcend identity-based organizations. These multiethnic groups spread as students learn of clubs at another branch campus and decide to form a similar organization at their university. Although these organizations often frame their activities (sometimes strategically) as

service, volunteering, or humanitarian work, such as the Recycling Tree Huggers at CMU–Q or the Peace Club at TAMUQ, many students involved in these groups are invested in organizing for structural change inside and outside of Qatar.

When students organize multiethnic clubs that highlight societal inequities, they come up against the limits of imperial citizenship and feel pressured by their institutions to reframe their organizing as cultural and identity-based rather than political; this is sometimes done in the name of not wanting to offend Qatari culture, presumed to be inherently oppressive (for example, when students want to highlight migrant labor concerns in the country or even on their campuses), but these are pressures that come directly from student affairs and other administrative staff, none of whom are Qatari or have any sustained interaction with the Qatar Foundation. Additionally, although many immigrant and international students are from elite backgrounds, there also are working-class and refugee students studying in Education City. When the branch campus administration indicates that something is too sensitive for the Qatar Foundation or against Qatari law, students, aware that this may not be true, are sometimes willing to accept these explanations due to their precarious positions, both in relation to Qatar and the U.S. university (which has facilitated their student visas).

The pressure to depoliticize is most overt in relation to Palestine solidarity organizing, which attracts Palestinian and non-Palestinian students. Although there are Palestine-related organizations at three of the branch campuses, students have shared stories with us about how they have been policed when they organize Palestine solidarity events, told by administrators to remove references to apartheid, and make sure that events remain strictly in the realm of culture. These moves by branch campuses resemble the systematic intimidation and criminalization of student movements for Palestinian rights and liberation across U.S. universities (Sirri 2016). However, by

strategically mobilizing ambiguity around the legal geographies governing the branch campuses, administrators have argued that students must censor their activities because of Qatar's legal restrictions on student activism. For example, when students at TAMUQ started a Palestine Solidarity Club (replicating an organization at the main campus), the university administration told them they had to immediately stop their social media activities and dissolve their organization because it was a political group that would have to be approved by Qatar's Ministry of Interior. The student organizers, regularly told that they have to comply with U.S. law, strategically responded with TAMUQ's own geographical imagination of itself as an extension of U.S. territory: "No, we're under Texas law."

It is significant that the initial attempt of TAMUQ students to counter the administration's claim that their club would be illegal in Qatar was to state that they were not subject to Qatari law. Encountering U.S. federal and state law from thousands of miles away in their daily interactions with student affairs and through official training and course requirements, students across Education City have regularly described their branch campuses to us as extensions of U.S. territory. This description is a citizenship claim: they are students at a U.S. university deserving of all the freedoms and protections that entails. In the aftermath of the NU-Q protest, even administrators and staff deployed this geographical imaginary, arguing that the students would never have been allowed to organize such a protest at Qatar University (the national university located in another part of Doha). Depending on the case at hand, administrators alternately place the branch campus within the United States (for example, to justify heightened security measures because of U.S. technology export regulations) or in Qatar (to limit student organizing through clubs). At times, Qatari law is suspended, and at other moments it is enforced by U.S. branch campuses. It is most common for administrators, however, to describe their branch campuses as a

liminal space where Qatari and U.S. legal systems are both at play, while simultaneously blaming Qatari society for the university's inability to live up to its liberal values.

The TAMUQ student organizers were only successful in countering the directive to dissolve their Palestine Solidarity Club once they reframed their association as identity-based: “We said, ‘But there is the Qatari Student Association and there is a Desi organization.’³⁷ How come when it comes to Palestine we have to get approval from the Ministry?” The group renamed itself the Palestinian Cultural Club, and was required by student affairs to include in their constitution that they are an “apolitical, cultural club” and that “No member has the right to open and engage in any political conversation.”³⁸ Although TAMUQ administrators blamed the location of the branch campus in Qatar for these restrictions, students were more likely pressured to formally depoliticize their organization and include these clauses in their constitution due to anti-boycott legislation in Texas. It is not accidental that Palestine reveals most starkly the limits of freedom of speech on offer to students at U.S. branch campuses, as Zionism continues to be one of the strongest “manifest knowledges” of the American academy (Chatterjee and Maira 2014). The efforts to organize clubs that move beyond identity and culture also reveal the ways that students are forming solidarity around issues of local significance that transcend the deeply segregated national and ethnic spaces of Qatar and Education City, and highlight how student affairs offices are invested in such essentialized and colonial understandings of diversity. Students at other branch campuses have shared stories with us about struggles they have faced to organize around environmental issues and workers’ rights at their universities. These clubs bring together immigrant, citizen, and international students around shared political interests, and in effect are

³⁷ Desi is a commonly used term for South Asian in the Gulf region and among South Asian diasporas.

³⁸ Palestinian Cultural Club Constitution and By-Laws, Article IV: Ethical Code of Conduct, Texas A&M University at Qatar. <https://tamuqatar.campuslabs.com/engage/organization/pcc> (Accessed July 12, 2021).

sites of multiethnic citizenship formation, where students discuss and create Qatari futures together.

Conclusion: Shifting Forms of Belonging

As we were finishing this piece, protests erupted globally following the circulation of a video of the brutal murder of George Floyd, an unarmed Black man, by a white Minneapolis police officer on 25 May 2020. Although anti-Black police brutality in the United States is systemic and the Black Lives Matter movement has been active since 2013, this particular murder, along with other state-sanctioned and extrajudicial killings that had occurred in preceding weeks, brought thousands to the streets. These uprisings prompted a shift in institutional rhetoric; universities, corporations, and even police departments started issuing statements condemning George Floyd's death and supporting #blacklivesmatter, including several of the home campuses of U.S. universities in the Arabian Peninsula. Texas A&M announced a system-wide day of mourning for George Floyd, which included a release from work for all nonessential personnel and a memorial service on 8 June 2020. The Northwestern home campus issued a statement condemning the murder, as did Virginia Commonwealth University, Carnegie Mellon University, and Cornell University. It was not lost on students at the branch campuses, however, that their institutions have work to do in addressing the specific ways that racism and anti-Black sentiment manifest locally.³⁹ Students at NYU Abu Dhabi, in the local newspaper, *The Gazelle*, published an analysis of the lack of Black representation among faculty and senior administration, and the erasure of Black students from the 2020 commencement magazine (Abraham et al. 2020). At NU-Q, the African

³⁹ In the weeks immediately following the murder of George Floyd, Virginia Commonwealth University School of the Arts in Qatar and Georgetown University at Qatar were the only branch campuses that organized events that facilitated discussion regarding the relationship between uprisings and protests about systemic racism in the United States and issues in Qatar.

Students Association issued a statement pushing back at the framing of the branch campus as a mere extension of the U.S. university, which said:

We cannot settle for the statement issued by various leadership in Evanston, because NU–E and NU–Q are two different institutions that operate from different locations and in different contexts serving different student bodies. It is one thing to condemn police brutality in America, but it is another thing to recognize that racism and anti-blackness exist here in Qatar and at NU–Q (African Students Association NU-Q 2020).

Education City’s U.S. branch campuses are set up to produce elite graduates who normalize imperial relationships and international hierarchies inside and outside of Qatar. This is not surprising; the branch campuses reinforce and reproduce exclusionary ideas about citizenship and racialized hierarchy in Qatar through depoliticized identity-based student clubs, admissions procedures, and instruction in the classroom. However, students also are formulating anti-imperial critiques and expressing solidarity between citizens, immigrants, and international students. These forms of belonging have coalesced through both the mundane everyday organizing of student clubs and seemingly extraordinary and historic moments of student protest.

As seen in the politicizations explored here, students ground their experiences in global understandings of social justice alongside localized mobilizations that highlight how imperial citizenship is intertwined with Qatari nationalism. Their critiques of the main campus’s policies and relationship to the branch campus undergird students’ multiethnic approaches to localized politicization and forms of belonging in Qatar. In response to student resistance, the branch campuses reinforce their operations as a liminal imperial space: American exceptionalism abroad and its dependence on racialized hierarchies and whiteness ultimately remain intact.⁴⁰

⁴⁰ Our understanding of racism and American exceptionalism in the Arabian Peninsula is informed by Ruth Wilson-Gilmore’s definition of racism as “the state-sanctioned or extra-legal production and exploitation of group-differentiated vulnerability to premature death” (2007, 28).

In a follow-up email to the TAMUQ branch campus community about Texas A&M's day of mourning for George Floyd, employees were informed that the system-wide day off did not apply to them, since the memorial would be taking place after working hours in Doha. Apparently, in Qatar, some American lives are more worthy of mourning than others.

Chapter Three: Engineering a Texas Land-Grant University in Qatar

Muster 2018

On 21 April 2018, in Doha, Qatar, I found myself observing Muster, an annual Texas A&M tradition. Muster⁴¹ has its origins in an 1883 reenactment of the 1836 battle of San Jacinto⁴² by the Corps of Cadets, a student military organization that remains active on Texas A&M's campus. By the early 1900s, the event had morphed into "the roll call for the absent," a yearly memorial of all Aggies who have passed away (Texas A&M 1985). Texas A&M's engineering branch campus in Qatar (TAMUQ), committed to carrying out its land-grant university mission, also partakes in the tradition of Muster. The event, beginning with a howdy,⁴³ the U.S. national anthem, and the Aggie "war hymn," is a simultaneous celebration of the U.S. military and Texas A&M University.

Until this point in my research, I had mostly found that TAMUQ events were deliberate about tailoring Texas A&M traditions to the mission of developing a knowledge economy in Qatar. This event, however, was an unabashed celebration of the United States, both its military actions abroad and also settler colonialism domestically. Unlike other TAMUQ events I had observed, Muster was notably under-attended by students; most people in attendance were American administrators, faculty, alumni, and staff with longstanding connections to the main campus 8,000 miles away in College Station, Texas. Among an intimate group of people who had clearly attended many Musters before, I felt the most out of place since starting my research, especially as participants enthusiastically sang and yelped the Texas A&M war hymn: "The eyes of Texas are upon you, that is the song they sing so well...Sounds like hell!" This annual memorialization

⁴¹ Muster refers to the U.S. military term: muster roll. Muster rolls are lists of soldiers assigned to a military unit, often referring to a company, but also a regiment or special unit.

⁴² 21 April is San Jacinto Day, the annual celebration of Texas' defeat of the Mexican Army.

⁴³ Howdy is the official greeting of Texas A&M.

of U.S. militarism, transplanted from Texas,⁴⁴ serves as an important entry point to examine how Texas A&M's identity as a land-grant university and its material ties to settler territorial expansion (Ahtone and Lee 2020) and U.S. imperial geographies (Kirk and Moeller 2021) is reformulated in the Arabian Peninsula, particularly in relation to students and communities in Qatar.

Introduction

This chapter traces Texas A&M University at Qatar's establishment and operation as the territorial extension of a land-grant university over the course of two decades. Land-grant universities were first established through the Morrill Land-Grant College Act of 1862 (hereafter Morrill Act) to promote the education of farmers and the industrial classes and provide military training. While this mandate has shifted and varies substantially across institutions (Sorber and Geiger 2014), land-grant missions shape popular and academic imaginaries of public higher education in the United States (Stein 2017; Goldstein, Paprocki and Osborne 2019) and continue to operate on the premise that they serve "the public that funds it" (C. Harvey 2021: 146).⁴⁵ How does Texas A&M situate itself in Qatar as a land-grant university that is simultaneously legally, administratively, and politically nested within the state of Texas? In this chapter, I argue that the construction of Texas A&M as a land-grant university in Qatar is crafted to signal commonalities between Texas and Qatar, while evading the legal, socio-political, geopolitical, and administrative contradictions of invoking Texas A&M's land-grant status in Qatar.

Texas A&M's land-grant mission is regularly deployed to emphasize the distinct material benefits that the university can offer Qatar. An administrator involved in TAMUQ's establishment explained to me: "There is nothing like the land-grant university. That put us in a different place

⁴⁴ Aggies are encouraged to practice Muster wherever they are in the world.

⁴⁵ This is the reason one of the Texas Higher Education Coordinating Board's pre-conditions for TAMUQ to be approved was that no Texas tax dollars would be spent on it.

than the privates [in Education City].⁴⁶ Illustrating the land-grant university's unique offerings in Qatar, including replicating its fire training program for Qatar Petroleum, he listed the engineering agencies at Texas A&M, such as the Texas Engineering Experiment Station, the Texas Transportation Institution, and the Engineering Extension Service.⁴⁷ At the same time, relations of territory, legal authority, and mission in Qatar are compounded for Texas A&M. As a public land-grant university, Texas A&M is also beholden to Texas state laws and institutions, such as the Texas Higher Education Coordinating Board, the highest authority overseeing public higher education in Texas. This oversight is the reason why students at TAMUQ are required, per Texas state law, to take a course that considers U.S. state constitutions, with special focus on Texas. As the previous chapter showed, the application of Texas law at TAMUQ extends beyond curricular decisions and admissions protocol into student affairs. On the other hand, there were also moments throughout my research when both TAMUQ and TAMU employees cited Qatari law and Qatar Foundation as the reason certain procedures such as records retentions protocol, enshrined in Texas law, were ambiguous.

In this chapter, I trace how administrators, faculty, staff, and students renegotiated the land-grant identity of the branch campus, and its ties to Texas and the U.S. military, at various points between 2001, when negotiations for the branch campus were first initiated, and 2021, when I completed my dissertation research. Just as Texas A&M's mission as a land-grant university has changed in Texas, it has also transformed in Qatar. By narrating the twenty-year story of Texas A&M in Qatar, this chapter contributes to emergent scholarship on the geographies of U.S. land-

⁴⁶ Four out of the six U.S. branch campuses in Qatar are private.

⁴⁷ The Texas Engineering Experiment (TEES), for instance, is governed by the Board of Regents. In 2014, the Board of Regents approved the establishment of a new TEES center that is led by TAMUQ. This new center, the Gas and Fuels Center, combines a commitment to supporting natural gas and shale gas exploration, production, and monetization activities in both the United States and Qatar.

grant universities in the Middle East/North Africa, particularly in the Gulf, and how these partnerships fit into shifting geopolitical relations (Koch 2020; Low 2020) and new forms of capital accumulation across the region (Günel 2019). Land-grant universities are critical spaces for geographers to grapple with longstanding debates in the discipline about the blurred boundaries between civilian and military in contemporary capitalism (Smith 2004; Smith and Cowen 2004; Loyd 2009; Sparke 2007; Pinkerton, Young, and Dodds 2011; Roberts, Secor, and Zook 2011, Cowen 2014; Roberts 2014; Morrissey 2017; Moore 2019).

This chapter is organized as follows. I begin by bringing Texas A&M administrators' imaginaries of the land-grant university's mission in Qatar in conversation with studies of the material relationships between land-grant universities and U.S. imperial geographies (la paperson 2017; Stein 2017; Goldstein, Paprocki, and Osborne 2019; Kirk and Moeller 2020; Koch 2020; Tristan and Ahtone 2020; Tsianina Lomawaima et al. 2021). Drawing on this literature, I approach Texas A&M's land-grant geographies in Qatar as a significant space for examining how contemporary knowledge economy projects continue to be shaped by U.S. empire, ranging direct ties to the military and warfare to frontier imaginaries and relations of extraction. Through this approach, I characterize Texas A&M's land-grant geographies vis-à-vis colonialism and militarism through four historical periods. During the first period (2001-2003) of negotiations, Texas A&M administrators focused on selling the idea of a campus in Qatar to audiences in Texas. They framed Qatar as an appendage of U.S. military infrastructure and aligned the project of transplanting land-grant values in the broader Middle East with propaganda about the democratizing benefits of U.S. military invasions and occupations in Iraq and Afghanistan. The second period (2003-2007), characterized by the frontier imaginary of the "wild west," entailed the work of experimenting with the institution's military traditions, including Muster, and

normalizing its U.S. military collaborations to Aggies in Qatar. Texas A&M's land-grant geographies took a distinct form during the third period (2008-2015) with the influx of massive flows of research funding, marking a transition from the wild west period to the institution's adoption of frontier imaginaries and relations of resource extraction, speculation, and paternalism. Texas A&M drew on its land-grant mission to model how research should be incorporated into Qatar's national development, particularly by pushing for the export of its existing programs in Texas. Finally, TAMUQ's land-grant geographies were retooled during the final period (2017-2021) in response to the coordinated embargo of Qatar by Saudi Arabia, the United Arab Emirates, Bahrain, and Egypt. The campus mobilized its land-grant ties to the U.S. military and the production of citizen-soldiers to develop new forms of Aggie identity and research areas that aligned with Qatar's increasingly militarized society. I conclude with the story of one student who embodies and articulates the contradictions of Texas A&M's entanglements with U.S. militarism and the expansion of neo-colonial frontiers in Qatar.

Land-Grant University Geographies: Colonialism, Militarism, and U.S. Empire

At TAMUQ's 11th commencement ceremony (see Figure 3), Charles W. Schwartz, the chairman of the Texas A&M University Board of Regents gave Texas A&M's graduates in Qatar "one last message in American history." He continued: "As you know, we are a land-grant university." Contextualizing the materialization of the land-grant university mission, he turned to the U.S. Civil War:

There was a time that it was unsure whether the United States would continue as a single nation. It was involved in a great civil war between 1860 and 1864. In 1862, the Congress of the United States passed the Morrill Act, which created the great land-grant universities, including Texas A&M in the United States. When President Lincoln signed the Land-grant Act, he was unsure whether the union would continue as a single nation, but he was certain that its future depended upon an educated people. That is our heritage and that is what we believe today. Today we are the 138th reaffirmation of that principle.

Schwartz did not directly explain what Texas A&M's heritage meant for the graduates sitting before him in Qatar. Instead, he quickly directed the students' geographical attention to the main campus in Texas, where over 6,000 additional Texas A&M degrees would be awarded the following day. By focusing on the graduations taking place in Texas, he reminded the Qatar-based graduates of the promise that the institution made to them when they first enrolled: the degrees being awarded in Qatar, by "the authority invested in the Texas A&M University Board of Regents," are identical to those being awarded in Texas. Wrapping up his speech, he briefly reminded them of the responsibilities and obligations that come with this degree. He concluded with a thumbs up and a "Gig'em," one of the university's many catchphrases.

Evading the question of *whether* or *how* Texas A&M's mission as a land-grant university extends to Qatar, the chairman's underlying message was that both the United States and Qatar share in a patriotic commitment to "an educated people." Although not explicitly drawing this out, his speech made a subtle connection between this version of Texas A&M's history and Qatar's contemporary development vision. The prevailing development discourse in Qatar is that the state is investing its resource wealth into the nation's long-lasting source of revenue, its people and their education. In this context, the chairman linked the Morrill Act—considered a watershed event in the development of U.S. public higher education and often associated with class mobility, public mission, and agricultural uplift (Sorber and Geiger 2014; Goldstein et al. 2019)—with Qatar's investment in Texas A&M.

Texas A&M's land-grant status is often emphasized by TAMUQ administrators to promote the university's continued existence as a branch campus to the Qatar Foundation and Qatar-based partners in the oil and gas industry. The first TAMUQ promotional materials allocate an entire

page to the history of Texas A&M as a land-grant institution (TAMUQ 2003).⁴⁸ TAMUQ administrators regularly emphasize the university's ability to contribute vital services to Qatar through its century-long engineering research partnerships with state agencies and industry as a land-grant university.



Figure 3. Celebrations at TAMUQ's eleventh commencement ceremony.
Source: Author.

⁴⁸ In these early promotional materials, the history of Texas A&M as a land-grant institution is explained in the following way: Texas A&M was established in accordance with the Morrill Act. The university, originally named the Agricultural and Mechanical College of Texas (Texas A.M.C.), was created four years later with the proceeds from the sale of federal lands, making it the first public higher education institution in Texas. Over 150 years later, Texas A&M asserts its continued commitment to the original land-grant mission, namely, to provide the working class with a practical, accessible education and meet the needs of the state's population, through an emphasis on agriculture and engineering.

However, one critical aspect of the original mission of land-grant universities mostly goes unaddressed in Texas A&M administrators' Qatar-based constructions of the university's history—the teaching of military science (Richardson 2013). The erasure is significant because Texas A&M leadership remains proud of its contemporary fidelity to the military component of the Morrill Act. In commemoration of the 150th anniversary of the Morrill Act, Texas A&M's university president, R. Bowen Loftin, asserted the university's continued dedication to military science education:

The military tactics aspects of the land-grant concept are alive and well at Texas A&M. The Corps of Cadets is the largest uniformed student organization on any campus in the country, with the exception of the service academies, and it also provides more officers for the military than any other institution, other than the service academies. It also serves as a leadership laboratory for young men and women who do not plan to enter the military but want the training and discipline that will service them well after graduation in the nation's workforce (Texas A&M Today 2012).

The Morrill Act's vague mandate for land-grant colleges to provide military training, along with a lack of national consensus about the purpose of land-grant colleges, led to different regional interpretations and reformulations of the land-grant mission, including at Texas A&M (Geiger and Sorber 2013). Texas A&M's contemporary ties to military education reflects the regional emergence of “quasi-military” land-grant colleges during the 19th century in the South:

The southern land-grant colleges embraced the military requirements enthusiastically and turned to the Citadel and the Virginia Military Institute for models. Able male students who attended southern land-grant colleges wore uniforms, lived in barracks, and participated in a demerit system. Few land-grant colleges took military training as seriously as did Texas A&M. Those hoping for a farmer's college were dismayed by the strong military focus (Richardson 2013, 142-143).

Unlike other land-grant universities, such as the University of California system, which obscure their military connections (Kirk and Moeller 2020), Texas A&M leadership emphasizes the university's historic and contemporary dedication to the U.S. military. For instance, in a letter of

invitation to President Ronald Reagan to speak at Texas A&M's 1985 Muster, the Associate Deputy Attorney mentioned the university's "outstanding" Reserve Officer Training Corps (ROTC) program, assuring Reagan that "the audience will be 'our type of crowd'" (McClure 1985). To appeal to broader audiences, Texas A&M administrators rearticulate these educational ties with the U.S. military as valuable training in core values of leadership and loyalty that can be extended to all Aggies, including in Qatar, who are not enlisted in the U.S. military (see Figure 4).

Texas A&M's role producing citizen-soldiers is intertwined with a century of segregation. As a Confederate state that subsequently mandated segregated schooling during the Reconstruction Era, the Texas legislature maintained that Texas A&M could legally maintain an all-white student population if the state established a separate institution of higher education for Black students (Ura 2021).⁴⁹ Jefferson Davis, the Confederate President and vehement opponent of the Morrill Act,⁵⁰ was first offered the Texas A&M presidency, and although he declined, nominated the eventual pick (Richardson 2013). While there were various visions for public higher education during the Reconstruction era, when Democrats came to power in the state, they "worked to shape Texas A&M into a post-Confederate, quasi-military academy equipped with barracks and cannons. It thus became a place to rebuild 'Southern honor and white manhood on the ashes of a failed confederacy'" (Sorber and Geiger 2014, 393, cited in Geiger and Sorber 2013, 101). Texas A&M managed to maintain itself as an all-white campus until 1964 due to a provision in the Texas

⁴⁹ The Alta Vista Agriculture & Mechanical College of Texas for Colored Youth, now called Prairie View A&M University, was established in 1876. Established on the grounds of the Alta Vista plantation, Prairie View A&M is the second oldest historically Black university in the country.

⁵⁰ In *Black Reconstruction in America 1860-1889*, W.E.B. Du Bois gives insight into why the slaveholding planter class would be opposed to higher education for the children of farmers: "If the leaders of the South...had guided the production of cotton or food so as to take every advantage of new machinery and modern methods in agriculture, they might have moved forward with manufacture and been able to secure an approximately large amount of profit. But this would have involved yielding to the demands of modern labor: *opportunity for education*, legal protection of women and children, regulation of the hours of work, steadily increasing wages and the right to some voice in the administration of the state if not in the conduct of industry" (1998, 38, emphasis mine).

constitution and the 1890 Morrill Act that allowed for separate schools. Statues of Confederate figures, such as Lawrence Ross, a Confederate Army general and former Texas governor, continue to sit on Texas A&M's campus, along with other Jim Crow Era monuments.

This history of slavery, militarism, and white supremacy, while upheld in particular ways at Texas A&M, underpins U.S. higher education. As Craig Wilder (2013) showed in his work on colonial-era universities, the slave economy and Indigenous dispossession were fundamental to the formation of what are now known as Ivy League universities—including their buildings, endowments, and knowledge production. Subsequent scholarship and student activism has continued to excavate white supremacist histories at campuses ranging from the University of Chapel Hill-North Carolina (Purifoy 2019; Cravey 2021) and Cornell University (Kertész and Gonzales 2021) to the University of Wisconsin–Madison (Pleasant and Kantrowitz 2021).

The publication of the ground-breaking *High Country News* investigation, “Land-Grab Universities” (Ahtone and Lee 2020), placed the land-grant university system, often associated with progressivism, social mobility, and access, “side by side with its counterpart: the story of Indigenous dispossession that made that ‘progressivism’ possible” (C. Harvey 2021, 102). Land-grab universities is a reformulation of the word land-grant university. This reformulation emerged out of Tristan Ahlone and Robert Lee’s investigative report that mapped each of the 10.6 million acres of stolen Indigenous land granted to the U.S. land-grant university system. These nearly eleven million acres were stolen by violence-backed treaties or seizures. This work shows how land-grant universities did not just benefit materially from the sale of Indigenous land and ethnic cleansing, but in this moment of colonization rapidly facilitated the land’s transfer into private ownership. Their report, and this term, has sparked multiple investigations and organizing efforts addressing how colonialism continues to shape U.S. higher education (Curley and Palmer 2021).

As Stein (2017) has argued, while land-grant universities are diverse institutions and do not form the majority of public institutions of U.S. higher education, they hold a particular place in popular and academic imaginations. Complementing this work, geographers and historians have traced how the knowledge and labor produced by land-grant universities, in the fields of engineering, agriculture, and military science, are intimately tied to settler territorial expansion (Kertész and Gonzales 2021) and U.S. imperial geographies (Kirk and Moeller 2020; Koch 2020).

In this chapter, I examine how Texas A&M's identity as a land-grant university, an institution entangled in settler territorial expansion, white supremacy, and U.S. military ventures, is reformulated in Qatar, particularly in relation to students and communities. To return to the event that opened this section, TAMUQ's eleventh commencement ceremony brought together administrators, differently situated at the university, including Cesar Malave, the Dean and CEO of TAMUQ, Michael Benedik, the Vice Provost of Texas A&M, and Charles Schwartz, along with other members of Texas A&M's Board of Regents. Each of them spent time at the ceremony articulating the complex, often contradictory relationship between Texas A&M and Qatar. Some of the Texas A&M administrators speaking at the event emphasized that the Qatar-based students were receiving more than identical Texas A&M degrees—they had also become Aggies. As the Vice Provost put it to TAMUQ's eleventh graduating class: “we know that the students have embraced the Aggie spirit and Aggie pride both of which show through all that you do.”



Figure 4. Corps of Cadets building in College Station: “We Make Leaders” and “Guardians of Tradition.”
Source: Author.

But what does it mean for students to “embrace” the Aggie spirit and pride in Qatar? Texas A&M administrators emphasized a respect for students’ diverse commitments to their respective nation, family, and friends. In fact, the keynote speaker made a point to translate the relevance of Muster to the graduates before him in Qatar. He explained to graduates in Qatar:

You are always going to be remembered on April 21. It is with a view of how you wish to be remembered when Muster gets called for you that I ask you to consider what gives meaning to the word loyalty. And for the students in this room, never forget what matters most in life: family, friends, colleagues, and country.

Instead of focusing on the relationship between Muster and the U.S. military, the speaker reframed Muster as a tradition that celebrates a universal idea of loyalty. In doing so, he carved a space for non-U.S. citizens situated in Qatar, even those who have been directly affected by U.S. military incursions and occupations across the region, to participate in Muster as Aggies—offering them a

form of imperial citizenship (Chapter Two). In this way, the Texas land-grant university in Qatar is reconceptualized as a space for Qatar-based students to adopt the Aggie spirit, rooted in U.S. militarism.

However, this reconceptualization is fraught with contradictions, and has been made and remade over the past two decades in Qatar. The construction of Texas A&M's history as a land-grant university in Qatar is crafted to signal the institution's values to students and their families, such as loyalty and leadership, that are abstracted from Texas A&M's enduring linkages to the U.S. military. At the same time, institutional actors, ranging from Texas A&M University administrators to high-level U.S. government officials and Qatar's ruling family, evade the contradictions of invoking Texas A&M's land-grant mission to build a knowledge economy in Qatar. In what follows I characterize how Texas A&M's land-grant geographies and its entanglements with militarism and U.S. war-making have taken shape and shifted across four historical periods between 2001 and 2021.

Land-Grant Values in the Middle East (2001-2003)

The first delegation from Qatar to explore the branch campus idea arrived in College Station in December 2001, a few months after the 11 September 2001 (hereafter 9/11) attacks. Two years later, as the United States was invading Iraq, delegates from Texas A&M and Qatar Foundation met in New York City to sign the first ten-year agreement.⁵¹ The negotiations, and subsequent first few years of TAMUQ's operations, were oriented around selling this partnership to public audiences in Texas in the early geopolitical context of the U.S. "War on Terror" and its geoeconomic propaganda of making the Middle East "into a bastion of peace and freedom through free market reforms" (Sparke 2007, 338; Mitchell 2011). As the assistant commissioner of

⁵¹ The first ten-year agreement between Texas A&M and Qatar Foundation was signed on 25 May 2003.

universities at the Texas Higher Education Coordinating Board explained prior to the Board's April 2003 vote on the branch campus proposal:

The world has not paid much attention to Qatar until recently. We see daily briefings from Armed Forces delivered from Qatar. The idea that a Texas public university would establish a branch campus in such a place grabs your attention. (The Battalion 2003).

This section gives an overview of how administrators molded the land-grant mission in this geopolitical context by framing Qatar as the geographical extension of the U.S. military. Qatar—hosting the forward operating base of U.S. Central Command and the 379th Air Expeditionary Wing of the U.S. Air Force—is, along with the Gulf Cooperation Council states (GCC), a major logistical and command-and-control hub for the U.S. military (Morrissey 2016).

While the 2003 Iraq War and the establishment of TAMUQ are not strategically linked events, it is important to point out that key individuals were associated with *both* war-making and this educational initiative. For instance, Robert Gates, the President of Texas A&M (2002-2006) who oversaw the establishment of TAMUQ, was Director of Central Intelligence under George H.W. Bush (1991-93) and Secretary of Defense in Barack Obama's administration (2006-11). Gates later served on the National Security Higher Education Advisory Board, created by the Federal Bureau of Investigation (FBI) to foster connections between institutions of higher education and the FBI. Gates' role was a major reason the negotiations and approval process were successful (Stanfield 2014). Letters of support for this branch campus, written by Robert Gates, George H.W. Bush, and oil and gas company executives, were enrolled to support the territorial expansion of Texas A&M. In a letter from Bush to Hamad bin Khalifa al-Thani, the Emir of Qatar, he mentioned:

As you may know, my Presidential Library is at Texas A&M University. I have a lot of respect for Texas A&M and particularly for its President, Dr. Robert Gates (Bush 2003).

In publicized promotions of the branch campus, Robert Gates emphasized the enthusiasm of officials from the U.S. State Department for the project (The Battalion 2002). In fact, Gates was so critical to the campus' legitimization, that when he announced his position as Secretary of Defense, the Chancellor and Provost were concerned about what this would mean for the branch campus's future.

Texas A&M also had an extensive network in the region. Although Robert Gates emphasized that he was "pleased to extend the Aggie family to Qatar" (TAMUQ Joint Advisory Board 2003, 2) the Aggie family was already rooted across the region, and the branch campus drew on this infrastructure to immediately connect with the oil and gas industry. The Aggie Doha Club had been operating in Qatar since 1997 and was formally recognized by Texas A&M in 1999. As Stanfield (2014) documented in an interview with a TAMUQ administrator, this alumni network extended across the Arabian Peninsula:

[There are] so many Aggies in Arabia—particularly working for Aramco in Saudi Arabia—that [a branch campus] was a natural. There were already thousands of Aggies that work in the area, so there were contacts to begin with...it was just a very natural choice (104).

After the campus was established, these Aggies corresponded with Gates, sharing developments in Qatar's oil industry: "The staff at your new educational facility in Qatar could make special efforts to be supportive to both of these oil giants and hopefully result in even greater monetary support to TAMU" (Sharp 2004). James Muschalik, describing himself a "a proud member of the TAMU Class of '84, as well as a proud employee of the ExxonMobil Corporation," wrote to Gates:

I would like to offer my assistance to Texas A&M as it launches its new school in Qatar. I'm moving to Qatar...and will be involved in ExxonMobil's joint venture operations (Muschalik 2003).

Texas A&M drew on these networks during negotiations and throughout the campus' start-up days. One administrator recalled how an Exxon Mobil employee gave them advice about how to do business in Qatar: "go to everything and then decide after what's useful." Oil industry executives also advised on TAMUQ's benefits packages for U.S. citizens. The Doha Aggie Club was actively involved throughout 2002-2004 in hosting members of Texas A&M during their assessment and startup of TAMUQ (TAMUQ Office of Public Affairs 2005, 9).

Despite the enthusiasm for this branch campus from U.S. political figures, the U.S. State Department, and oil executives, there was nothing inevitable about this partnership and it took substantial effort, resources, and sometimes pure luck to launch it (Stanfield 2014). Before Qatar Foundation approached Texas A&M, they had already reached out to many other U.S. universities.⁵² In fact, aside from Virginia Commonwealth University, TAMUQ stands apart from the elite private US universities operating branch campuses in Education City. The reason that Texas A&M was first identified and approached was because of its petroleum engineering program.

High-level university officials were aware that establishing a branch campus in the Middle East was sensitive and could be received negatively at the university (ibid). To counter this, the proposal for the prospective branch campus prominently situated Qatar as an extension of U.S. imperial geographies: "A supporter of the United States, Doha, Qatar is the location of the U.S. Central Command in the current war against Iraq" (Texas A&M University 2003). This framing was also prevalent in local reporting by the Bryan College Station *Eagle* and *the Battalion*, the student newspaper of Texas A&M since 1893. In an article in *the Battalion* about the upcoming

⁵² Prior to deciding on a model where multiple universities provide specific degrees, Qatar Foundation was seeking a single U.S. university to offer multiple majors. Some of the universities that Qatar Foundation approached include the University of Wisconsin–Madison and University of North Carolina at Chapel Hill.

vote on the branch campus, Qatar was described as “home to the US military’s Central Command during the war with Iraq,” and “at least 700 miles from the Iraqi border” (The Battalion 2003). Positioning Qatar as an extension of U.S. military infrastructure, the article also emphasized safety and security protocol: “the foundation has agreed to reimburse the university for evacuation expenses if the school believes it’s not safe for its faculty to remain there (ibid).” As David Prior, the Interim Provost during negotiations explained: “We’re not closing our eyes to the whole question of security in the Middle East” (ibid).

In the proposal to the board, the branch campus was framed in terms of its benefits to Texas A&M and the broader Texas community. As Prior articulated this:

One of the concerns was that this could not be a drain on the State of Texas resources...the idea that students in Texas were being rejected and that spaces and funding were opening up for non-Texans in the Middle East (Texas A&M University 2003).

While it was not difficult to get approval from the board, there were “particular segments from the public that saw this as a divergence from TAMU’s purpose as a land-grant university (Myrie 2020c).” The proposal to the board emphasized the benefits for the state of Texas, which were framed to align with Texas A&M’s contemporary land-grant mission and its internationalization strategy:

Build strong alliance with the business community in Texas; Enhance Texas’ position as the leader in global energy technology. Prepare Texans to function and compete in global society. Develop research partnerships that increase competitive edge of Texas business and industries in world markets (Texas A&M University 2003).

In this way, territorial expansion was framed to align with Texas A&M’s land-grant mandate to serve the state of Texas and Texans.

While the proposal did not outline the benefits for Qatar, administrators did position Texas A&M's role in Qatar in relation to the institution's land-grant mission. One administrator explained that the university would:

bring some good to that region by having an educated populace and taking American values, *taking Land Grant creation values to the Middle East...we can have an impact on the philosophy and make them more democratic, in addition to educating them and making them engineers* (Stanfield 2014: 104, *emphasis mine*).

Texas A&M's land-grant geographies, bifurcated between Texas and Qatar, were flexible. The campus could enhance Texas' global position in the fossil fuel industry as a provider of technological innovations *and* spread civilizational land-grant values across the Middle East by producing patriotic Qatari Aggie engineers with an appreciation for American values. As the U.S. military was citing similar benefits they would bring to Iraq, this idea of the land-grant mission coalesced with propaganda about the geoeconomics and geopolitical benefits of U.S. military occupations in the Middle East. During this period, Texas A&M administrators successfully sold the geographies of Qatar as an appendage of U.S. military infrastructure, and by extension Aggieland, to audiences in Texas. Whether Aggieland would be accepted by the student body and Qatar's broader communities was still unknown.

The Wild West⁵³ (2003-2007)

Reflecting on his experience first landing in Qatar from College Station, an incoming TAMUQ staff member found himself thinking: "Toto, we're not in Kansas anymore" (Myrie 2020a) Texans arriving from College Station quickly molded the institution for audiences in Qatar by emphasizing comparisons of Texas' lifestyle, values, and attitudes with the environments and political economy of Qatar (see growing body of academic literature on whiteness, racialized labor

⁵³ David Stanfield (2014) described TAMUQ's start-up days in relation to a "wild west" imaginary.

hierarchies, and Euro-North American enclaves in the Gulf: Vitalis 2007; Walsh 2007; Kanna 2014; Vora 2015). While crafting an identity as Aggies in Qatar, administrators simultaneously worked to address lingering concerns that TAMUQ did not absorb any resources from Texans. They attempted to show that the branch campus could actively contribute to Texas A&M's land-grant mission by experimenting with its relationship to the U.S. military in Qatar.

The inaugural group at TAMUQ consisted of five staff, seven faculty, and twenty-nine students. TAMUQ's first few years were defined by this close group of staff and faculty, whose responsibilities quickly extended beyond their official job descriptions (Stanfield 2014). Referring to this time as the "wild west," staff and administrators perceived their educational "experiment in the desert" (Myrie 2020a) through a frontier imaginary. As "pioneers," they were doing something that had never been done before, and more importantly, had the vision and determination to take it on. As David Prior explained, the campus' success was due to a "powerful combination of determination, resources, enthusiasm, Texas 'can do' attitude" (Myrie 2020c). Looking retrospectively at what Education City became, administrators involved in setting up TAMUQ often pointed out that other universities, even their rival, the University of Texas, had been approached but rejected the offer. "They must regret it now," reflected an administrator after emphasizing Texas A&M's successes participating in the venture (Myrie 2020b).

Imaginariness of the frontier pervades the collective narrative of the faculty, staff, and administrators who traveled from Texas during the campus' start-up days. Acting as visionary "pioneers" shaping the future of higher education, they cherished not only the excitement of working outside of the box and long hours to create something novel, but also the camaraderie of working as a small, intimate group. TAMUQ's lead network engineer, who was responsible for setting up the TAMUQ's network infrastructure expressed his pride:

[I] have been able to create technical solutions in Qatar, that probably wouldn't ever have a chance to do elsewhere... Very few people get to build something from scratch... [You] really have to think long term (Myrie 2020d).

The campus' start-up years were focused on experimenting with Aggie identity and recruiting and retaining students.⁵⁴ From designing TAMUQ's long-term physical infrastructure to managing day-to-day operations, TAMUQ staff even found mundane tasks riveting work. Describing their first year, a staff member recalled "going down to the *souqs* [markets] constantly to buy everything," from retrofitting shower poles as flag poles to searching for light bulbs that did not blow up (Myrie 2020d). Even the most deceptively simple task, such as locating barbeque sauce in Doha, was exciting. A staff member explained, this work "felt like an Indiana Jones movie, like [I] had just stepped into the 1930's or 1940s (ibid)." This kind of adventure was extended not only to marketplaces in Doha, but even to other U.S. universities in Education City. In an oral history project about the campus' early days, Charles Bowman, the Interim Dean and lead of negotiations, described the story of in-fighting between TAMUQ and Cornell, which also had a branch campus in Education City and refused to let TAMUQ make IT connections through their system. He recalled the story of a staff member crawling "under the raised floor and mak[ing] the connections without Cornell knowing" (Myrie 2020b).

In many ways, this narrative about the wild west is intertwined with ideas that Aggies began to develop about themselves in Qatar. Bowman described the first time he met the Emir and Sheikha Moza. Meeting them outside during the summer, he was accompanied by another administrator, who eventually replaced Bowman as Dean and CEO of TAMUQ. "Emir started talking to [Mike] Kemp – said to him 'It's a little hot here.' Kemp said, 'We're from Texas, we're used to this.' [The] Emir burst out laughing... I'll never forget that moment: 'We're from

⁵⁴ By 2008, student enrollment grew from 29 to approximately 350 students. Faculty increased from seven to 75.

Texas...” (ibid). These notions about Texas in Qatar were crafted during TAMUQ’s first official event. For the official celebration of TAMUQ’s program launching, the branch campus held a Texas-style barbeque at the Emir’s stables in Education City. This event was quite large, involving a delegation from College Station, ambassadors, and the attendance of the Emir and Sheikha Moza, along with a student delegation from Texas A&M. Students from the main campus performed the Aggie Wranglers, a Texas-style folk dance, a presentation of the “spirit of Aggieland.” At the event, Sheikha Abdulla Al-Misned, the President of Qatar University, who was also part of the negotiation team, came over, said: “You Aggies are just like Qataris. You know how to have a good time” (ibid). These stories about Aggie comfort in Qatar were articulated through instances of mutual understanding between the Qatari ruling class and Texas A&M staff.

The question of extending Aggie traditions among the broader Qatari population, particularly students and their parents, was yet-to-be determined. In an interview, Gates was directly asked how Texas A&M can “replicate [military] traditions [in Qatar] for students who may have a hard time identifying with the early days of the A&M College of Texas?” Referencing Muster, Gates responded that he hoped that “it is a long time before our Qatar campus has the need to replicate our ‘Silver Taps’ tradition.” Instead, he emphasized other traditions that he considered more transferable in Qatar, such as the Aggie ring and saying Howdy. Yet, he also understood Texas A&M’s transferability in Qatar as a “unique American university” that integrates

world class academics...with espousing time-tested values such as character and integrity, loyalty to one another and to the university, leadership development, the importance of family, and exercise of one’s religious beliefs (TAMUQ Office of Public Affairs 2006a, 16).

It is these values, extracted from their ties to U.S. military institutions on campus, that he emphasized as shared between students in College Station and in Qatar, framing the campus as a space to “advance mutual understanding and peace in the entire region” (ibid).

All TAMUQ staff from the main campus went through cultural sensitivity training, with one staff member describing their caution: “[We] tried to not push too much of the Aggie tradition, so the Qatar students could develop some of their own customs.” During an August 2019 visit to College Station, I met with the wife of a TAMUQ administrator. She kept a scrapbook of TAMUQ’s first few years, which archived the campus’ early days extensively, and rivaled the university’s own records on TAMUQ in the university archive (see Figure 5). Emphasizing the intimacy of those early days, she recalled the names of TAMUQ’s first students, and even kept in touch with some of them. While not officially an employee of TAMUQ, she was jokingly referred to as TAMUQ’s “first lady,” and helped establish a Qatar chapter of the Federation of Texas A&M Aggie Mothers Club. As the *Aggie Platform* explained: “Because association with Texas A&M isn’t limited to the student, Aggie moms, aunts, and sisters attended a reception to learn more about the campus and their role in their student’s success” (TAMUQ Office of Public Affairs 2007, 9). As a mechanism to establish ties with families in Qatar, the Aggie Mom’s Club, along with other outreach efforts, attempted to translate Aggie values and traditions beyond their student body.

As TAMUQ attempted to develop relationships with communities across Qatar, the institution attempted to recreate Muster for the student body. Muster had been performed by the Aggie Doha Club Qatar years before Texas A&M arrived. TAMUQ’s first Muster in 2004 was not documented by the branch campus. It is likely that the first year, TAMUQ staff joined the Aggie Doha Club Qatar, and did not extend the tradition to the student body. However, by 2005, the branch campus actively attempted to share the tradition with the student body. This first documentation of Muster, in *the Aggie Platform*, explicitly connected the event to the U.S. military. Defining Muster as “to gather soldiers together,” the promotion of the event explained: “soldiers may be mustered for inspection, by their superior officers to collectively receive

news/orders or, in a less formal sense, to enjoy one another's company" (TAMUQ Office of Public Affairs 2005). Just one year later, these references to the U.S. military disappeared, and the Aggie Platform defined Muster as "when a group gathers together to support and strengthen each other" (TAMUQ Office of Public Affairs 2006b, 10).



Figure 5. A photo of a page from the scrapbook archiving TAMUQ's early days.
Source: Author.

These early revisions to the description of Muster in TAMUQ's promotional materials reflects the anxiety staff had about the U.S. occupation of Iraq and the presence of the U.S. military on campus. David Stanfield, who participated in a TAMUQ Muster as a speaker in 2007, explained in his dissertation:

the staff was nervous about reading off the names of military personnel because the war in Iraq was going on at the time and was unpopular with many Qatar campus students... (Stanfield 2014, 226).

Along with revising the definition of Muster, the next iteration of the event in 2006 emphasized the participation of Qataris. Mona Al-Maadeed, Class of Texas A&M University 1998, gave the keynote address for the ceremony. Describing Muster as a tradition honoring members of the Aggie family who passed away that year, Al-Maaded incorporated Qatar's Aggies into Muster. Acknowledging that students may not recognize that years' names, she asserted: "Whether your family tree is the Century Tree or the Sidra tree, young and old, faculty and staff, current and former students, in College Station, Galveston, Doha, and everywhere else around the globe, we are one family" (TAMUQ Office of Public Affairs 2006b, 10). A Cadet performed Silver Taps live from College Station, projected on the screen. By 2007, the *Aggie Platform* described that year's Muster as the first ceremony planned and carried out by TAMUQ students, with ten students taking part in the ceremony and a major from the U.S. army base playing Silver Taps (TAMUQ Office of Public Affairs 2007, 16). They called the "names of sixteen students from the main campus and five former students who passed away in the region" during the Roll Call for the Absent (ibid).

As the university experimented with extending its military traditions to TAMUQ students, the branch campus openly developed collaborations with the U.S. military, extending the military aspect of its land-grant mission to Qatar. During Spring 2007, Robert Gates returned to the campus as U.S. Secretary of Defense, joined by another "top-ranking Aggie," General Michael Moseley, Chief of Staff of the U.S. Air Force. Together, they met with TAMUQ students (ibid, 12). A few months later, TAMUQ hosted a group of West Point cadets to participate in a joint enrollment political science class with TAMUQ and West Point faculty. TAMUQ's promotional materials for audiences in Qatar and Texas situated this partnership in relation to Texas A&M's military ties, explaining that both Texas A&M and the United States Military Academy at West Point were

formed “by government mandate to address the critical shortage of both engineers and military leadership” (ibid). Describing the cadets’ experience at TAMUQ, the article explained that “there is no military program at TAMUQ, so the cadets were allowed to enjoy the more relaxed classroom atmosphere in their ‘civies’ as well as getting to know the Qatar Aggies” (ibid). This program brought the base commander from the U.S. Army post in Qatar to speak to students and involved a mock “Amazing Race” challenge where cadets were dropped off in various spots across Doha and “had to find their way back to...Education City.”

The work of experimenting with importing the institution’s military traditions in Qatar, including Muster, was entangled with frontier imaginaries of the wild west that characterized TAMUQ’s start-up years. Over the course of this period, the campus developed programs that integrated U.S. military bases, education, and the civilian spaces of the city, offering educational experiences to future citizen-soldiers, while normalizing U.S. military presence and war-making among Qatar Aggies.

“It was like a party” (2008-2016)

By 2008, administrators declared TAMUQ a “mature organization” (TAMUQ Joint Advisory Board 2019, 4). TAMUQ rapidly transformed from an institution primarily focused on undergraduate education to a massive research operation, in alignment with its status in the United States as an R1 research intensive university.⁵⁵ A mechanical engineering faculty member described TAMUQ during this period as an “undergraduate college bolted onto a national lab.” “It was like a party,” he laughed, “We overdosed and were addicted for quite a while.” The university’s land-grant geographies in Education City took new forms as the Qatar National Research Fund (QNRF) awarded millions of dollars in research funding to TAMUQ. After 2014,

⁵⁵ This is a Carnegie Commission on Higher Education designation.

QNRf substantially cut these research funds, asserting that they were not witnessing sufficient results. Comparing the aftermath of this rapid influx of funding and subsequent budget cuts to the aftermath of partying, the faculty member explained:

Now we are in hangover stages of the party. Everybody has a headache, and everyone is like what are we going to do?

While the “wild-west” period of TAMUQ’s start-up days was over (Stanfield 2014), related frontier imaginaries and relations of resource extraction, speculation, and paternalism were reworked in relation to research.

For most TAMUQ faculty and staff I interviewed, this whiplash in TAMUQ’s institutional mission was due to ignorance in Qatar regarding how a knowledge economy develops, and the role of universities in that process. The faculty member who described the present as a “hangover” argued that Qatar Foundation (QF) “needs to decide what we are.” Using other educational institutions as placeholders to illustrate this, he explained: “[First we were] Blinn College⁵⁶ and we did a good job and then Qatar Foundation was like we want [you] to be a Berkeley so we tried that, [but by] then we have people trained to be Blinn College and we go back and forth back and forth.” Linking this vacillation to Qatar Foundation’s misunderstanding of what their research funding could realistically produce: “Qatar Foundation thought [we would] write lots of papers, and they would become famous.” Pretending to be a Qatar Foundation representative directing their naïve expectations to TAMUQ, he joked: “But you haven’t produced any companies!” Ending on a positive note, he asserted: “QF has a better understanding now of what is possible.”

From the beginning of negotiations, administrators described tensions between Texas A&M and Qatar Foundation over the role of research at the branch campus. There is a kind of

⁵⁶ Blinn College District is a two-year community college in Texas.

paternalism that Texas A&M adopted, mobilized through its land-grant identity, to teach institutions in Qatar what the relationship between academic research and national development should look like. Qatar Foundation wanted Texas A&M to solely be an undergraduate teaching institution. Texas A&M attempted to make the case that research and graduate education are central to the university's identity as a land-grant university. An administrator described these efforts: "[We] had to explain that TAMU is a research-intensive university, and the whole combination of research, scholarship and teaching can't be taken apart." While the first ten-year agreement did not include research funding in the contract, Qatar Foundation promised that there were plans for a research funding agency in the works. In fact, Texas administrators reflected that they were responsible for Qatar Foundation's eventual investment in research funding: "We kept saying, 'you don't have the research, we can't get the faculty there and there is no future for the campus. And then we, to some extent pushed them, and as a result they developed [Qatar National Research Fund] QNRF. To some degree we provided the impetus" (Stanfield 2014).

Texas A&M drew on its engineering experiment stations and extension services particular to its land-grant status to demonstrate the value of research to Qatar Foundation. They showcased pre-existing programs and research areas that were easily transferable and could enhance operations for petroleum and chemical industries in Qatar. The first program to be transferred to Qatar was the Brayton Fire Training Field, a program that began as the State Firemen's and Fire Marshal's Association of Texas, and part of Texas A&M Engineering Extension Service, which focuses on emergency response. These tours directly led to the creation of Qatar Petroleum's Ras Laffan Emergency and Safety College (RLESC), which is jointly operated by Qatar Petroleum and Texas A&M Engineering Extension Service. Another initial research program developed at TAMUQ was a process safety program, which entailed a pre-existing partnership between BP and

Texas A&M. When I asked the administrator why this program was taken up at TAMUQ, he explained that BP wanted to get a foot in the door in Qatar. There was “bad blood” between BP and Qatar due to nationalization of the oil industry, and they wanted to get back in the country.

Texas A&M promoted these early research collaborations, particularly through the transfer of pre-existing programs, such as the Texas Engineering Extension Service, to show what research funding could do to support Qatar’s oil and gas industry. Texas A&M drew on its land-grant research centers to teach Qatar how research can be incorporated into national development, while ensuring that research funds move back to the main campus and the State of Texas through a model of exporting and recreating pre-existing programs in Texas.

With the establishment of the Qatar National Vision in 2008, the QNRF began to pour funds into TAMUQ. During the height of QNRF’s funding in 2011-2012, the second largest funder of research, after the National Science Foundation at Texas A&M’s College of Engineering was the QNRF. The faculty member who described this period as “the party times” explained that TAMUQ was not equipped for this amount of funding:

[some] faculty had five grants at one time and barely knew how to do this. Even the most reputable researchers don’t have this many labs and researchers...there was no structure for this.

The funds being channeled to Texas were substantial, especially due to the 20 percent fee Texas A&M acquired for indirect costs (Stanfield 2014). While this amount is less than other indirect cost percentages, QF (the funder) also pays the salaries of the staff at TAMUQ who process these grants, along with the labs used for research housed at TAMUQ. Other U.S. branch campuses were not able to negotiate these indirect cost percentages, however, Texas A&M was able to due to its land-grant status: “We were able to negotiate because by law we can’t spend any money at the main campus to the benefit of Texas A&M at Qatar” (Stanfield 2014, 152).

As QF developed its own understanding of how research should align with Qatar's national development, the institution began to integrate criteria that research should have tangible outcomes that make an impact in Qatar. The "party times" were over. As QF emphasized knowledge performance indicators, national research priorities, and industry-academia partnerships, the institution began to demand results. "You can't eat papers," as a QNRF staff member put it to me. TAMUQ needed to generate income for Qatar, and not just absorb QNRF funding.

By the end of this period, institutions in Qatar challenged Texas A&M's paternalistic attempts to model how research should be incorporated into Qatar's national development, particularly by exporting its existing programs in Texas. TAMUQ administrators subsequently began to re-emphasize its role as an educational institution in producing Qatar's engineering leaders and working on basic research. While the party times were already over by the time I arrived in Doha, I encountered their material traces and afterlives in TAMUQ's parking garage basement. A TAMUQ faculty member, on a smoke break in the shade of the parking garage, pointed out to me some equipment gathering dust on the other side of the garage. Describing this as expensive laboratory equipment, he explained how TAMUQ purchased and imported them only to discard them a few years later when QF cut their budget and they could not cover the annual costs of maintaining them. Not discarding them entirely, but removing them from the branch campus' lab, TAMUQ staff placed them in the parking garage.

The Blockade and its Aftermath (2017-2021)

During June 2017, Saudi Arabia and the United Arab Emirates announced a coordinated embargo against Qatar. Along with severing diplomatic relationships, the embargo entailed the closure of Qatar's only land border with Saudi Arabia and bordering Bahrain and the United Arab Emirate's airspace and territorial waters. Robert Gates, who had been a critical force in

legitimizing TAMUQ, suddenly emerged in support of the blockade. Accusing Qatar of destabilizing the broader region, Gates proposed possible sanctions and relocating the U.S. military base. “The United States military doesn’t have any irreplaceable facility,” he said. “Tell Qatar to choose sides or we will change the nature of the relationship, to include downscaling the base” (Ahmed 2017). Gates turned on Qatar, and by extension the institution he helped build, which he once described as having “the potential to advance mutual understanding and peace in the entire region” (TAMUQ Office of Public Affairs 2006a, 16). As factions in U.S. foreign policy circles lobbied against Qatar, including its funding of U.S. higher education, TAMUQ mobilized its land-grant ties to the military and the production of patriotic citizen-soldiers to develop new forms of Aggie identity and strategic research areas for an increasingly militarized Qatari society.

TAMUQ became a key space for the mobilization of nationalism and militarization during the blockade. The institution began to make the case that engineering is a patriotic career: “the blockade has made engineering a patriotic career in Qatar because of the role engineers will play in building the nation and moving to a knowledge-based economy” (The Peninsula 2020). Through outreach among Qatari youth, TAMUQ linked engineering to the military and security industries in Qatar, describing its engineering degrees as a pathway for leadership roles in the military. As Qatar’s society increasingly militarized during the blockade, instituting a draft, TAMUQ and other branch campuses in Education City began to recruit more heavily from local military schools. Its graduates began to be work in other arms of the defense industry, such as Barzan, a quasi-private arm of the Ministry of Defense, established to enhance Qatar’s military capabilities and investment in the defense industry.

As the Qatari state began to emphasize self-sufficiency and consumption of Qatar-produced goods, TAMUQ launched a new public relations campaign that branded its engineering

graduates “Made in Qatar.” The institution began to hire its Qatari graduates as faculty, showcasing that their instructors were no longer just coming from the main campus, but products of the branch campus itself. Texas A&M also supported Qatar’s rapid investments in agribusiness during the blockade. As Qatar flew in 22,000 cows and launched a massive dairy operation, transforming the country into a net dairy exporter (Koch 2020), Texas A&M sent a delegation of experts working in dairy science to consult on Qatar’s agribusiness, which expanded rapidly during the blockade. Prior to the blockade, Qatar was buying most of its drinking water from Saudi Arabia. TAMUQ offered itself up to provide engineering expertise for these problems of self-sufficiency during the pandemic, and the rapid development of national agriculture industry and logistics for desalination. “Made in Qatar” campaigns were even supported by TAMUQ staff from the main campus, Texans who developed their own forms of belonging in Qatar and emphasized that even after the blockade was over, they would not be buying Saudi goods or visiting Dubai.

The institution drew on its outreach and community engagement programs to realize Qatar’s strategic areas during the campaign. The controversy that sparked the blockade was linked to a cybersecurity attack. Suddenly, Qatar Foundation began to pour funding into cybersecurity programs. TAMUQ developed extension and professional education programs in cybersecurity, collaborating with the Qatar Armed Forces. TAMUQ drew on land-grant principles related to outreach and extension services to work on cybersecurity, which emerged as an entirely new field of interest in Qatar in alignment with this geopolitical context.

Yet, as TAMUQ repurposed its land-grant geographies for an increasingly militarized Qatari society and the rapid development of national industries, contradictions re-emerged over Texas A&M’s own ties to the U.S. military. A TAMUQ faculty member tweeted in response to a post by *Doha News*, a local news outlet, related to the occupation and colonization of Palestine.

Her short response, “show me a country today that has its original border from the 1500s,” asserted that borders are always in flux, suggesting that any attachment to the idea of Palestine is foolish. Students read her tweet as violent and insensitive toward Palestinian students in Education City, especially since she made this comment during May 2021, as Israeli occupation forces stormed the Al-Aqsa compound, attempted to ethnically cleanse already-displaced Palestinians from Jerusalem, and subsequently launched a deadly assault on Gaza. As this exploded into an online controversy, TAMUQ students began disclosing that the historian showed them pictures in class from her time serving in the U.S. military during the 2003 U.S.-led invasion and occupation of Iraq. An alum from another branch campus in Education City tweeted:

Is it normal for war criminals to come teach us liberal arts after participating in the killing of our people? She’s living the American dream, killing middle easterners and then getting hired in the same region she helped destabilize as a liberal arts professor.

TAMUQ students organized around this, raising their complaints about her hiring, along with concerns about her role in the military. The student body president, who met with Cesar Malave, TAMUQ’s Dean, to raise student grievances, summarized the administration’s response in a series of bullet points, including: “regarding her time in Iraq, [Malave] stated that the university has preference to people that served in the military when it comes to hiring.” Not aware that Texas A&M essentially is a military school, and that the faculty member also received her PhD from the institution, students continued to express outrage online towards TAMUQ and QF. One student wrote: “I am ashamed now to be called an Aggie with people like [this professor] representing us.” Students, seeing the hiring of military personnel as contradictory, did not fully grasp the ways that the presence of U.S. military personnel at the branch campus is in fact an extension of the U.S. military base, for which Qatar paid the construction costs.

During this period, TAMUQ aligned its land-grant mission with state-supported forms of Qatari nationalism and patriotism, branding its students and research with a “Made in Qatar” seal. Today, the institution’s material connections to the U.S. military—shaping even the faculty make-up of the branch campus—continue to come into conflict with both the shifting tides of U.S. geopolitical mappings of the region and TAMUQ students’ anti-imperialist sensibilities regarding U.S. war-making and interventions across the region.

Conclusion

Marshall, a student studying abroad in Qatar for a semester, described himself as born into A&M, “I have been an Aggie since I was a baby.” A sophomore in the Corps of Cadets, with a father and sister who were in the Corps before him, he patiently explained to me various Aggie practices and terminology: frog, the organization of the Corps of Cadets, why no one is allowed to walk on the Quad in College Station, and Muster. While knowledgeable about Aggieland, he was not an enthusiastic Aggie. Through a series of coincidences, combined with the expectations of his father, he unwillingly discovered himself in the Corps, studying petroleum engineering at Texas A&M. When I asked Marshall whether he would recommend his friends back in College Station study abroad in Qatar, he quickly responded: “No. It would be harder to be a patriot if you came here.” Marshall elaborated:

[Coming here] will make it harder to live that life. Some have contracts with the military and are obligated to join...it’s “easier to join the military if you haven’t met those people.

He seemed to partially be talking about himself. He had already attempted to join the Navy. Before traveling to Doha, he was considering enlisting in the Marine Corps or Army after the semester ended. His time in Qatar changed his mind: “I thought that’s bad because now I won’t sign.” It was as though he wanted to spare his friends the challenges to his worldview that he had

encountered over the past few months. This was the most chilling interview I had, and not because the information Marshall shared was new to me. I was disturbed by how direct he was: “They could not do their job.” By job, he meant be a citizen-soldier.

He was also unwilling to extend the U.S. military geographies of the land-grant university to Qatar. He had recently attended TAMUQ’s rendition of Muster:

Here it wasn’t very emotional. Since [TAMUQ] is a new campus and not tied to the Corps at all... A lot of the traditions at A&M are due to the Corps... [Muster] has so much to do with US military. [TAMUQ students] are neither American nor American aspiring soldiers.

Unlike administrators, who regularly re-engineer Muster and other A&M traditions in Qatar, abstracting them from the US military and attaching them to values of loyalty and leadership (see Figure 6), Marshall was direct. These students were not U.S. citizens, nor were they “American-aspiring soldiers.” While Corps of Cadets has similarly been reimagined in Texas, detached from military obligations, even while retaining ROTC education, most of its students *could* be soldiers in the US military. In fact, 40 percent of its 2,300 members currently enlist as an Officer after graduation (Texas A&M Corps of Cadets 2020).

When administrators first opened the campus, they thought of students like Marshall at the main campus (Stanfield 2014). They presented the land-grant university expanding its geographies as a mechanism for white Texans like Marshall to become global citizens, to expand their horizons beyond their hometown and state. In fact, some of the early promotional materials the institution produced focused on visiting students from the main campus and the cultural competencies they acquired while studying abroad in a “secure” part of the Middle East: language learning, new friendships, and experiences traveling around the region. Over a decade later, Marshall considers this experience unsuitable for students who actively participate in the military aspect of the land-grant mission, which as he points out, pervades the entire university.



Figure 6. Decoration in TAMUQ's student lounge in Doha.

Source: Author.

The work of engineering and re-engineering the land-grant university mission in Qatar is ongoing. This chapter builds on scholarship on land-grant university geographies by bringing it in conversation with work on branch campuses and the internationalization of higher education. Land-grant universities, while popularly understood in relation to their public mission and class mobility, were formed through literal land grabs and produced colonial knowledge to further facilitate resource extraction and military conquest across the United States and elsewhere. This chapter shows how the military component of the land-grant idea, intertwined with U.S. imperial geographies, is being remade, reformulated, and challenged in Qatar.

Chapter Four: Educating Petroleum Engineers for the Future of Fossil-Fueled Capitalism

Introduction: Basel, Miriam, and Hind

Basel, a Palestinian who grew up in Abu Dhabi, studied chemical engineering at Texas A&M's branch campus in Qatar as an international student. He told me about a pivotal moment, during his senior year, when an administrator invited him to his office to discuss an opportunity to interview with Shell Qatar. He immediately said no, explaining to me: "I started talking about solar, wind, blah blah blah...the whole climate change story." He laughed recalling how the administrator responded: "'He said, 'you're an idiot. You're not leaving [my office] unless you say yes.... So, I said 'yes.''" Basel interviewed, was offered the job, and went to work at the Pearl GTL. The Pearl GTL is the world's largest natural gas-to-liquid petroleum products plant, with cables that if unwound extend from Qatar, where it is located, all the way to Houston, Texas.

Miriam, a Qatari sophomore majoring in chemical engineering, was considering transferring to another university. She explained disappointedly that chemical engineering at Texas A&M was closely attached to the oil industry. Her desire to transfer was motivated by her love of Qatar's marine inhabitants—its dugongs and hawksbill turtles—and her commitment to halt environmental destruction in the country, which as she noted in our meeting, has already led to the collapse of Qatar's pearl oyster beds. Although she had no interest in a degree focused on petrochemicals, she was mulling the possibility of staying, and slowly trying change things from the inside.

Hind, a Palestinian student who grew up in Qatar, applied to study electrical engineering at the branch campus. However, she was admitted as a petroleum engineering student with the promise that she could easily switch majors after completing her first year. When she went to the program chair to discuss changing majors, he convinced her that she should stay—there was an exciting future for her in the field. At that point, she was close with students in her cohort. The chair's enthusiasm was the final push in her decision to continue with petroleum engineering.

Each of these stories introduce the different ways that Texas A&M channels engineering labor into the oil and gas industry in the Gulf during a time when the future of engineering in Qatar is discursively situated beyond oil. In fact, petroleum engineering is regularly the most under-enrolled major at Texas A&M's branch campus. Over the past decade, increasing numbers of students do not want to work for the oil and gas industry. For students like Basel and Miriam, their rejection was tied to political positions they held about the destructive nature of the industry and their commitments to an alternative future. For other students, petroleum engineering did not appear to fit within the scope of Qatar's national development agenda of building a knowledge

economy. Within this state-sponsored vision of development, Qatari engineering students, such as Miriam, are envisioned to produce innovative market-oriented technical fixes for national dilemmas of fossil fuel dependency. Immigrant and international students like Hind and Basel, but especially Hind, were regularly told that they would find it difficult to secure a well-paying job as an engineer in the industry. This was why the interview that Shell Qatar offered to Basel was so significant—it was the first year the corporation was actively recruiting non-Qatari students. Hind, as a woman and a Palestinian, was advised by family and friends that she should not major in petroleum engineering because even if she did secure a relevant job she would will likely occupy a subordinate or precarious position. At the time of our interview, I had already spoken with dozens of engineering students and graduates across Qatar’s educational institutions. It was difficult for me to not interject and point out that her admissions story was linked to a broader context of under-enrollment in petroleum engineering. Unlike other students I spoke with, she did not directly ask me what I thought or whether I had any research findings to share. She was nearing the end of her sophomore year and was comfortable with the faculty and students in her *batch*, a word commonly used by people working and studying in Education City to refer to cohorts.

Many of the students I interviewed at Texas A&M University at Qatar ended up working for the oil and gas industry, even those with ethical and political antagonisms against this work. A few students even studied petroleum engineering due to institutional mechanisms that Hind described. Admissions, recruitment, curriculum, mentorship, study abroad, and even interpersonal relationships all work to continue to channel students into the industry and ensure the labor pool

and expertise for the continuation of fossil-fueled capitalism. I label these various mechanisms as *petro-education*.⁵⁷

Petro-education encompasses the mechanisms within universities that sustain and reproduce fossil capitalism⁵⁸ (Angus 2016; Malm 2016). As Eaton and Day (2020) argued in their study of pedagogical practices obstructing energy transition in the Canadian context, educational institutions are key, yet overlooked spaces that maintain the economic power of the oil and gas industry (see Figure 7). Universities continue to produce labor and knowledge for the industry despite downturns, anticipatory calculations of peak oil, and the gains of movements for climate and environmental justice. While petro-education is not limited to engineering as a discipline, petroleum and chemical engineering departments remain significant spaces within universities where this work takes place. Petroleum engineering programs in U.S. universities such as Texas A&M, for example, have developed situated mechanisms to ensure that whenever the oil era seemed to be ending that they continued to recruit petroleum engineers by reimagining the future of the field (Blevins and Fiddler 1979; Mathieson, Meehan, and Potts 2019; Caruana 2021). Petroleum engineering in the United States, since its inception as a profession and formalization in universities, has been continually remade and reimagined (Marsden Miller 1963). Land-grant universities such as Texas A&M forged the contemporary social role of the engineer in the United States, including petroleum engineering, as a broadly defined mass profession in the United States, “which includes a wide range of different kinds of engineers with very different statuses” (Meiksins 1996, 92).

⁵⁷ See Eaton and Day 2020 for discussion of petro-pedagogy in Canada which focuses on teaching practices in schools. This chapter builds on their work by expanding their pedagogical lens to examine how the relationship between the oil industry and education take shape across national borders.

⁵⁸ Fossil capitalism links the development of capitalism to the burning of coal, oil, and gas, beginning with coal-fired steam engines during the early Industrial Revolution.



Figure 7. A laboratory test well on Texas A&M’s College Station campus that stands as a working piece of equipment on an actual well site.

Source: Author.

This chapter traces how Texas A&M produces petro-education in relation to shifting visions of post-oil development in Qatar. Students at TAMUQ are the primary products of this space, hailed as future “engineering leaders” tasked with problem solving Qatar’s emergent national challenges. Centering the experiences of students and their expectations of the future, I show how petro-education works to channel students who, like Hind, have no interest in working for the industry and redirect the interests of students, like Basel and Miriam, towards “greening” of fossil capitalism. The chapter is organized as follows. First, I will situate petro-education in relation to scholarship on technopolitics and engineers within and beyond the “Middle East” and the Gulf. I then turn to three specific modes through which petro-education at Texas A&M produces batches of petroleum engineers, while reinforcing particular ideas about fossil capitalism

and engineering in Qatar. The first mode promotes cyclical ideas about fossil fuels, which displace students' uncertainty about the future of oil into seemingly controllable actions they can take as individuals. The second mode integrates diverse mechanisms ranging from admissions to interpersonal relationships to channel students into the industry who did not apply to study petroleum engineering or reject working for the industry. The third mode, which predates the creation of the Qatar National Vision 2030, but extends into the post-Vision present, integrates patriotic sentiments about Qatari students overseeing the nation's wealth as experts, while naturalizing particular ideas about the global economy and the role of American scientific and technological expertise within it (Beasley 2017). These three modes of petro-education are not discrete, but rather work together. I argue that petro-education at Texas A&M is flexible, maneuvering across heterogenous and fluctuating ambitions and demands for the future in Qatar. In doing so, petro-education offers a capacious mode of response to address contradictions inherent to post-oil state-sponsored agendas in Qatar, but also popular narratives about climate crisis and energy transition that threaten the Qatar National Vision 2030. This chapter contributes to geographical and anthropological scholarship on energy transition, particularly transnational projects that aim to reconcile the worse consequences of the climate crisis with a greener model to preserve fossil capitalism by protecting the oil and gas industry's assets.

Critical Geographies of Engineers and Engineering⁵⁹

The academic study of the technopolitics⁶⁰ has an established geographical point in the Middle East, North Africa, and the Gulf (Mitchell 2002). Engineers are key actors that take part in technopolitical work through designing, manipulating, and managing urban and rural

⁵⁹ This framing section draws from collaborative work and writing with Dr. Mohammed Rafi Arefin, University of British Columbia.

environments. Engineers have implemented and designed the colonial and imperial infrastructures that continue to shape everyday life across the region (Alatout 2009; Meiton 2018). They serve as managerial labor overseeing the nation's dams, sanitation systems, extractive infrastructures, and electric grids (Akhter 2015; Arefin 2019; Lawson 2021). Through their technological interventions managing and designing these infrastructures, engineers intervene in politics—producing nationalism (Akhter 2021) and state repression (Jones 2010; Arefin 2019). Across the Middle East and beyond, the profession remains central for producing seemingly technical and apolitical solutions to the contemporary conflicts and ecological contradictions of capitalism, including the climate crisis and energy transitions (Günel 2019).

Through this range of work, engineers inhabit an ambiguous social position. As Björkman and Harris (2018) have argued: “Engineers’ ambiguous status as ‘anti-political’ technicians yet still political actors means they do not fit neatly within received conceptualizations of power and authority...” Marxist scholars have similarly argued that engineers—as technical workers that range from managers to rank-and-file subordinate positions—are challenging to place within the social structure of capitalist societies because they differ widely in relation to production “in the ambiguous social position of being part of wage labour, but linked in various ways, to capital” (Meiksins and Smith 1996, 17). Scholars grappling with the role of engineers in these various processes and contexts have conceptualized them and their profession in distinct ways. They are planners (Arefin 2019), extensions of colonization and empire (Meiton 2018; Alatout 2021), managers (Stamatoupolou-Robbins 2019), techno-scientists (Alatout 2021), retrofitters (Günel 2021), administrators (Akhter 2021), technocratic bureaucrats (Andreas 2009), cosmopolitan innovative actors (Günel 2019), and maintenance workers (Barnes 2017). Engineers also do the

work of maintenance and repair in their communities without formal training or state-recognized credentials (Wahby 2021).

This chapter focuses on engineering education in an era characterized not only by mass upheavals from global uprisings against white supremacy and the uneven unfolding of the pandemic, but also transition—diverse plans for transitions to more environmentally just futures. Across the global South, including the Middle East, international organizations and state institutions have deployed these plans for transition—framed under the discourses of clean energy, sustainable development, or security—to privatize infrastructure and facilitate capital accumulation and dispossession. In this moment, engineers are quickly emerging as key actors tasked with translating these struggles over transition as technical issues. From engineering new water systems free from lead and building more integrated cities to creating climate resilient infrastructure, the profession remains central for producing seemingly technical and apolitical solutions to the conflicts and ecological contradictions of capitalism. But at the same time, engineers are critical for re-engineering and rebuilding just environmental futures. Critical studies of engineering and engineers therefore cannot just be about critique, but also must theorize from a normative stance: what might environmentally and socially just engineering look like? In this chapter, I analyze the logics, practices, subjects, and contradictions of petro-education to argue that attention to engineering education provides some insight into how formally trained engineers flexibly adopt this range of work and how ideas about what engineering in this era should or could be are contested.

Gokçe Günel (2019) labeled the work of engineering in this era as “technical adjustments, which she defined as:

a mode of response for dealing with climate change independent of ethical, moral and political entailments. According to this perspective, climate change is a

management problem that experts may resolve, rather than an ethical and moral problem that humans around the world should recognize, discuss, and address as political agents (11).

Günel developed this concept of “technical adjustments” to describe the work of innovative “cosmopolitan actors” at Abu Dhabi’s Masdar Institute, initially advertised as the first post-carbon city and linked to another land-grant university, MIT. This project, while distinct from Qatar’s investments in knowledge economy infrastructure, resembles post-oil development visions across the Gulf that assert that knowledge will inevitably replace fossil fuels as a source of wealth. Through this work of “technical adjustments,” engineering and engineers are closely tied with the development and reproduction of capitalism.

But how do engineers come to adopt this practice of “technical adjustments”? Trained in their studies to be “problem solvers,” engineers often perceive themselves—or are perceived by others—as uniquely positioned to control and render solvable the messiness of the material world. As scholarship on engineering education has pointed out:

Arguably, problem solving is seen by communities of engineers around the world as the single most important skill defining engineering practice—notwithstanding cultural, institutional and disciplinary differences (Downey 2005).

At TAMUQ, problem solving is the main paradigm by which prospective and current students are introduced to what it means to be an engineering leader. When I asked faculty and students how they would define what it means to be an engineer, the most common response I heard was problem-solving. While the institution officially defined engineering as the work of “problem solving,” students and faculty simultaneously adopted divergent understandings of what it means to be an engineer. One faculty contested this idea of engineering as problem-solving, asserting that the main aspect of engineering is planning, not problem solving. Engineering “is more like problem identification or task identification,” he explained. “[Engineers] think of problems in

terms of narrowly constructed physical constraints.” One of the problems he identified was a gap between engineering and the social sciences, explaining: “on the one hand, engineers are more ignorant of society. And on the other hand, social science is more ignorant of engineering.”

Petro-education at the campus is interwoven with these contestations over what it means to be an engineer. Some students adopted this notion of problem-solving, eager to apply their skills to solve the world’s problems. Others took a more pessimistic view of their education. A petroleum engineering student studying abroad in Qatar from the main campus, disillusioned with the prospect working for the oil and gas industry, spoke about the ethics and engineering course he was taking: “It seems like the most ethical way to be an engineer is just to not be an engineer.” Students, in this way, contest official framings of what it means to be an engineer and develop their own understandings of what engineering could or should be.

Building on Günel’s argument about technical adjustments in Abu Dhabi, I argue that petro-education offers insight into how engineers are trained to adopt this practice and approach to climate change and energy transition. I also challenge the description of actors in these institutions as “cosmopolitan” arguing that even in the international spaces of the knowledge economy, various hierarchies, framed by nationality, but often racialized and gendered, are upheld. The stories of students navigating this educational space in Qatar, where the future is anticipated as a series of engineering problems to be solved, are critical moments to understand how fossil fuel futures are made and remade between Texas and Qatar. Petro-education, much like the work of technical adjustments, makes possible particular interventions, while foreclosing others in the Gulf. The following three sections will turn to the three modes by which petro-education produces batches of petroleum engineers and reinforces ideas about fossil capitalism and engineering in Qatar.

Petro-education 1: How to be the Next Rockefeller or Work Until You Die

Petro-education is inseparable from ideas about the temporality of fossil fuel as a natural resource (Ferry and Limbert 2008; Appel, Mason, and Watts 2015). The production of petroleum engineers at Texas A&M's Harold Vance Petroleum Engineering department in College Station has historically been closely tied to a cyclical temporality of oil as a commodity with naturally recurring cycles of ups and downs (Rogers 2015). As Timothy Mitchell (2011) has argued, conceptions of infinite oil supplies, attached to this cyclical temporality, were understood as a source of endless growth and progress without limits. Petroleum engineering departments are a critical space where this cyclical temporality is reproduced and naturalized. These cyclical ideas about fossil fuels work to displace students' uncertainty about the future of oil onto themselves. It is not oil futures which are uncertain and by extension the utility of their degree, but rather students' individual orientations to work and self-improvement—how they flexibly adapt to infinite cycles of booms and busts.

The most enthusiastic petroleum engineering student I interviewed was Kelsey, a white U.S. citizen, who was studying abroad at the branch campus for a semester. We met over coffee at the Qatar National Library, located just a few minutes' walk away from Texas A&M's branch campus. Nearing the end of her study at the branch campus, she had many impressions to share with me about how studying petroleum engineering compared at the main campus. She had read Daniel Yergin's *The Prize*⁶¹ and enthusiastically recommended the book to me, emphasizing the key takeaway she gleaned from the text: it was oil men and the oil they discovered which transformed the world. The significance of oil in shaping the intimacies of everyday life and

⁶¹ *The Prize* tells the history of oil exploration and development, centering the experiences and travels of primarily British, American, and Dutch oil men across the globe.

geopolitical events enthralled her and influenced how she understood her studies as a petroleum engineering student in an era of energy transition. She explained:

It blew my mind how dependent we are on oil and the shortcomings of alternative energy....Oil shapes everything we do and I liked that. If you make an improvement in this one field it could make an impact on a global scale....

Offering an example of a seemingly minor “improvement” in the industry, she referenced that fracking was only recently invented during the 1970s at Texas A&M. Throughout our conversation, she reminded me: The Harold Vance Petroleum Engineering Department at Texas A&M is the best program in the world. In fact, this legacy was the deciding factor pushing her to study in College Station over Stanford University’s program in energy resources engineering.

Kelsey asserted a future of fossil fuels that was cyclical, characterized by a series of booms and busts. Repeating what she had been told, I gathered, at various times in her studies, she explained that Texas A&M’s petroleum engineering department was unique from equivalent programs across the United States. The department took care of its students by carefully regulating the numbers admitted according to oil prices. Oil markets had ups and downs, and therefore, the need for petroleum engineers went through cycles: “A&M regulates that number...people are commodities, and the department recognizes that demand is not consistent compared with supply.” At the same time, she emphasized that the boom-to-bust cycle of the industry required adventurous people, who were willing to take risks, just like the oil men that she had read about in *the Prize*. A key lesson she had gleaned from her studies was that the industry is always changing and transforming. This constant renewal meant that regardless of the department’s admission process, petroleum engineers must be prepared for a future of unknowns. This cyclical temporality was tied up in masculine ideas about bravery, foresight, and commitment that resonated with Kelsey, who did not see sexism as a barrier for her in her future career.

Kelsey was also certain that fossil fuels would remain central regardless of energy transition: “As there is a push for cleaner energy, liquefied natural gas will become a bigger part of it.” This description of natural gas as a transition fuel was another core tenet of petro-education on offer at the branch campus. She explained that the biggest challenge for the future of liquefied natural gas in the United States was the “disconnect between people on the ground versus the people putting in the money.” Wall Street, according to Kelsey, is “stuck on where the oil is and don’t see the future.” Kelsey had a sophisticated sense of how the industry operated, from the scale of drilling—which is where she planned to focus for a few years—to the finance capital necessary for natural gas infrastructure—which she saw as the future of the industry.

Her aspirations “to be the next Rockefeller” reflected this. She explained to me that she would work in drilling for the next five years, then get an MBA, and eventually open her own company. Kelsey’s plan, one of the most detailed post-graduation plans I encountered during my interviews with students, was crafted through her participation in Texas A&M’s “petroleum ventures program.” The program, as Kelsey described to me, takes:

Thirty petroleum engineers and thirty finance students and cross pollinate us and we hear from CEOs. There is high demand from Goldman Sachs where they want to hire petroleum engineers. They want somebody on their side who knows what. We’ll be the next leaders of the oil and gas industry.

Leadership, one of the core values at Texas A&M, is woven into petro-education. In the case of the ventures program, which was in its fourth cycle when I spoke with Kelsey, students are taught that integrating knowledge of finance capital with petroleum engineering would help to mediate uncertainties and extend the life of fossil fuels into the future. It also helped her map out a personal trajectory, which I found most students I spoke with at the branch campus had not yet delineated with such detail and confidence. She understood Qatar as a prelude for her, rather than merely a study abroad experience. She imagined that it was likely that she would return for work, if not to

Qatar, then to another similar place. After her studies, she was going to be spending the summer working in the Permian Basin as an intern for an oil company in Texas. After graduation she would work in the fields to gain on-the-ground experience, ideally with ExxonMobil; she would then get an MBA. With this accumulation of knowledge, Kelsey would then start her own company, with dreams of becoming a captain of industry, citing John D. Rockefeller, a key character in *The Prize*, as her inspiration.

This version of petro-education—characterized by a cyclical temporality made manageable on an individual scale through values of leadership, entrepreneurship, and bravery—was prevalent at Texas A&M Qatar. Engineering students like Miriam and Hind were also being told they would be future leaders in Qatar, and some articulated similar Rockefeller desires—in this context, to be the future CEO of Qatar Petroleum. In fact, I often overheard faculty and administrators deriding this “titan of industry” aspiration by exceptionalizing it to Qatari men. It was not unusual for an educator or administrator to complain that they could not meet the Qatari state’s educational goals because “Qatari men only want to be managers and CEOs.” However, unlike Kelsey, branch campus students did not have access to the petroleum ventures program, which develops and instills these sensibilities among a select group of students. Instead, the future was mediated in Qatar by ideas of fossil fuel futures and work.

Early in my research, nearly a year before I met Kelsey, I sat in a session organized by the student chapter of the Qatar Society of Petroleum Engineers (QSPE),⁶² which was one of the most active student professional society organizations at the branch campus. An electrical engineering

⁶² Qatar Society of Petroleum engineers, established in 1982, is “a professional society represented by all SPE members and volunteers residing in Qatar.” It is registered among registered societies governed by the Ministry of Administrative Development, Labor and Social Affairs in Qatar (since 2004). It is a branch of SPE, which is the largest “individual member organization serving managers, engineers, scientists, and other professionals worldwide in the upstream segment of the oil and gas industry.” Student members are from Qatar University and TAMUQ <http://www.qspe.qa/wordpressxt/overview/> (accessed June 5, 2021)

student who was a student worker in the liberal arts department, where I was spending most of my time as a visiting researcher, invited me to the event. The organization had invited an Aggie with decades of experience in the oil industry to discuss the future of petroleum engineering. Approximately twenty students were there, and the organization provided a lunch of McDonalds hamburgers and fries, which students enjoyed as the speaker gave his presentation.

In many ways, what the invited speaker shared resembled Kelsey's portrayal of the future of fossil fuels and engineering; there are downturns, but these downturns require brave engineers who are willing to overtake them. A slide included a graph that projected the global energy portfolio a century into the future. He argued that while alternative energy sources would be the future of the industry, fossil fuels would continue to be critical. Energy transition, as Kelsey argued, resembles similar ups and downs that have characterized the industry since the Drake well in Pennsylvania sparked the first oil boom in the United States in 1859. The 2014 drop in the price of oil was on the minds of many students who were still experiencing its effects in Qatar four years later. In response to questions about whether they should be strategically majoring in something broader, like mechanical engineering, the speaker emphasized the interdisciplinary nature of petroleum engineering. Attempting to dispel their concerns about securing a job, he encouraged students to major in petroleum engineering. This latest downturn was not permanent. It just required brave and flexible engineers to adapt and remake themselves, just as he had later in his career when he decided to pursue a master's in mechanical engineering. He countered their concerns:

The human being is a wonderful piece of engineering. We are great at reinventing ourselves.

Another student followed up by asking how they should prepare for the future automation of the oil field,⁶³ referencing the technological shifts that the speaker discussed in his presentation. Elaborating on the need for students to commit to lifelong learning given these future transformations, he made a broader point about their generation's necessary orientation to work:

There will be no pension. In the next thirty years, there will be a change where you might have to work forever.

This, in fact, was a main point threaded throughout his presentation. He was not merely emphasizing cyclical conceptions of the industry to displace students' fears over their future as petroleum engineers.

He made the case that their ideas of work needed to change completely. My notes from his presentation reflected this:

Be a leader.
Re-educate yourself during a downturn to stay productive.
Be ready for the future.
There are lots of opportunities.
Don't restrict yourself to your home country.
Oil and gas will be needed.
Focus on cost, not price.

The speaker, a white U.S. citizen, mentioned that he would be speaking a few days later to chemical engineering students at Qatar University (QU), the country's national university. In that moment, I remembered my friend, an international student from Chad, who studied chemical engineering at QU and could not find a job after graduation in Qatar. She moved back to Chad and still cannot find work in her field—neither through the Ministry of Labor nor private oil companies. This mode of petro-education, addressing an abstract student body that could be anywhere in the

⁶³ At the time, automation in the oil and gas industry was a focus of discussion in petroleum engineering professional societies. The speaker was repeating talking points that are common in industry and professional society presentations about how automation would impact petroleum engineering education.

world, reproduce and erase various labor hierarchies in the field of engineering, framed by nationality, but often racialized and gendered.



Figure 8. Qatar Foundation branding of Education City: “We lay the foundations for lifelong learning.”
Source: Author.

The presenter outlined many unknowns about the future, including automation of the oil field. Like Kelsey, he emphasized that there was one thing that was certain: the future would require fossil fuels. Displacing uncertainty regarding energy transition onto general questions of precarity and work, he kept repeating that this generation would likely have to work until they die. He explained: “You will not be able to retire until seventy...or maybe eighty.” This messaging was

quite common at the branch campus. In my notes, I had written early on in my research: “Every talk references that this generation will work until they die.” This messaging dovetails with the buzzword, *lifelong learning*, which in recent years was integrated into Qatar Foundation’s branding of the Education City project (see Figure 8). The speaker had incorporated lifelong learning, the notion that the economy requires workers who are willing to continue to upskill—adding value to themselves by constantly pursuing new skills and knowledge—with ideas about the future of fossil fuels.

The speaker, talking to a room of students from Qatar, Iran, Sri Lanka, Yemen, Oman, and the broader regions of South Asia and the Middle East, emphasized mobility as something they should embrace. Discourses around the Qatar National Vision 2030, which emphasizes a national future where Qataris are serving their country, has increasingly emphasized staying within the country (recent developments around scholarships and sponsorships aim to keep Qataris graduates working within the country). Since 2007, the national oil company, Qatar Petroleum has worked towards transforming itself into an international energy player, which will require mobile “engineering leaders.” However, the focus of the Qatar National Vision 2030, and related Grand Challenges emphasize national questions related to energy transition, desalination technologies, and cyber security. Additionally, this world of mobility is not as accessible to many TAMUQ students, who unlike Kelsey, carried passports that came with travel restrictions which made it difficult to acquire those international experiences and learning opportunities. For many students, it was only through their relationship with the branch campus that they could temporarily surpass travel restrictions to study abroad in the United States or Europe. Only certain engineers get to be cosmopolitan innovative actors in the Gulf.

For example, when I asked Basel, whose story opened this chapter, what advice he would offer to future engineering students, he quickly responded that they should not study chemical engineering if they “have a shitty passport.” Basel’s advice to other Palestinians, or as he further specified “any Arab from a fucked-up country,” was not to study chemical engineering: “don’t do it unless you do a 4.0 [GPA]...once you’ve done quantum physics it’s over.” He explained that studying chemical engineering would make it difficult for an “Arab from a fucked-up country” to acquire better work opportunities outside of the Gulf, particularly in the United States. He learned this firsthand when he traveled for a job at a firm in the United States for a summer internship and had to wait nineteen hours in immigration:

You go to the U.S. and you are asked, ‘do you know how to make explosives?’ If you study chemical engineering of course you do.

This experience made him turn away from the kinds of on-the-job learning opportunities the speaker emphasized students should pursue as lifelong learners:

I had to retract some of my work with Shell to reach out to the nuclear industry. I don’t want anything to do with it.

Other students described similar issues barring them from educational and research activities, including TAMUQ staff and researchers with passports that were targeted by U.S. sanctions and security restrictions.

This mode of petro-education in Qatar, targeting students who are already studying petroleum engineering or considering working for the industry, emphasizes a cyclical temporality of oil that displaces their fears. Instead, students, wherever and whoever they are, should adopt flexible orientations to work grounded in bravery and continual self-improvement. The speaker put it bluntly: they would have to work until they die. As the speaker emphasized, this generation will have to reinvent themselves multiple times during their careers. *Why not study petroleum*

engineering? Automation and artificial intelligence will require they have to commit to this orientation to work regardless of what they study. Yet, TAMUQ students' experiences contradicted this mode of petro-education envisioned for an audience of U.S. passport holders studying in Texas. The opportunities to develop these orientations to work were hard-to-reach or inaccessible to many of them—particularly non-Qatari students with passports from, in Basel's words, "fucked-up" countries.

The pipelines to petroleum engineering at Texas A&M have been racialized and gendered since its inception. As Constant II showed in a study of petroleum engineering in U.S. universities, Texas A&M's petroleum engineering department, established in 1928 and the oldest in the state, developed in relation to Texas' "oil fraternity," an "ethnically, religiously, and culturally homogenous...politically and socially dominant" group consisting of "white, Anglo-Saxon, Protestant...males, the vast majority of whom shared southern, rural or small town backgrounds, as well as a healthy dose of political skepticism most often expressed as florid populism" (Constant II 1989, 454). Texas A&M's relationship to this Texas-based oil fraternity has certainly transformed (just as the oil fraternity has), particularly with the institution's internationalization efforts and educational ties to the Gulf which predate the branch campus. With the rise of university rankings, the program has attracted students from outside the "oil fraternity" across the United States. Yet, Texas A&M's student population continues to consist of large numbers of students whose parents and grandparents were Aggies. Kelsey for instance, used the language of settlers to describe her family ("we were the first settlers [in Texas]") and proudly told me about her family members who studied at A&M and served in the military with famous university figures. Another petroleum engineering student from the main campus spoke of his father in the industry. Texas A&M's petro-education developed in relation to the oil fraternity and continues to

uphold particular ideas about work undergirded by masculinity, whiteness, and U.S. provincialism/exceptionalism. The bifurcation between petro-education on offer to main campus students and the branch campus is rooted in these hierarchies, and the contemporary example of the petroleum ventures program illustrates this. Engineers like Kelsey are encouraged to imagine their future as a John D. Rockefeller, while students in Qatar, future “engineering leaders,” are derided for their own CEO aspirations. Petro-education in Qatar teaches students that the problem is not the future of oil—it’s their own orientation to work. They are instructed to direct their problem-solving skills to themselves.

Petro-education 2: Beyond Petroleum Engineering

Some TAMUQ students, like Basel and Miriam, aspired to put their education as problem-solvers to other uses, regardless of whether energy systems built around oil and gas could extend a century or more into the future. In this section, I address how another mode of petro-education, integrating diverse mechanisms spanning from interpersonal relationships to curriculum and admissions, channels these students as needed into this field. As the Qatar National Vision 2030 shifted to further incorporate global discourses of energy transition and sustainability, combined with the post-2014 drop in oil prices, petroleum engineering was consistently the least enrolled major at the branch campus. A staff person noted that oil companies were sponsoring fewer students to study petroleum engineering, and it was increasingly difficult to secure summer internships⁶⁴ for students. It’s always a cyclical position, he explained. The past few chairs of the petroleum engineering department were not even petroleum engineers, but rather chemical engineers who were taking on interim chair duties. Petro-education’s emphasis that oil and gas

⁶⁴ Texas A&M’s petroleum engineering degree requires that the student work as a summer intern in an oil and gas company.

would still matter even in the context of energy transition cannot do much work if students are not applying to study petroleum engineering or being sponsored by companies.

TAMUQ staff thought of the under-enrollment in petroleum engineering as a problem. An employee familiar with TAMUQ's outreach activities shared how recent hires of Qatari engineering faculty were helping to attract more students to the field. The branch campus hired two Qatari engineering faculty, a chemical engineer who studied all the way through at Texas A&M and a petroleum engineer from the second TAMUQ batch. The outreach staff member mentioned the critical role of the Qatari petroleum engineering faculty's participation in TAMUQ's Summer Engineering Academies, a program for high school students. He explained that the students who work with him often go on to immediately apply to study at the branch campus:

This is the discipline he [the petroleum engineering faculty member] chose and he wants to get people interested in it...he has high energy and attracts students to the field.

The professional success of both these faculty is promoted at the campus as an example of what can be possible if students work hard. As the petroleum engineering faculty explained after receiving a TAMUQ Alumnus of the Year award:

This award means a lot. I am a product of this university, which is why students look up to me because I am just like them. It is a very big responsibility because I always need to do my best and deliver my very best. *I do this for the students so in the future, the students can aspire to be someone like me and work just as hard* (MENA FN 2018, emphasis mine).

His presence as a potential role model has helped to revitalize the petroleum department, particularly by inspiring Qatari students who were not necessarily interested in petroleum engineering to consider studying.

The mobilization of interpersonal relationships to reach these students extends into other areas. The program has a strong alumni network which it calls upon regularly to showcase the kinds of careers that graduates have crafted for themselves in the oil and gas industry. In particular, the organization tends to showcase the success of women in the industry. Hind cited these events, along with a women mentorship program, as reasons she felt comfortable majoring in petroleum engineering despite the caution her family initially had about her opportunities post-graduation.

Students who are opposed or not interested in petroleum engineering and degrees like chemical engineering, which is also closely tied to the industry, are often residents who are warned by their parents there would not be an easy future for them in the oil industry. Many of the students I spoke to who had family sharing these insights had parents or close relatives who work in it in Qatar and have a sense of what their careers would look like and encouraged them to pursue electrical or mechanical engineering. Hind was one of these students. She never applied to study petroleum engineering, and when she found herself admitted to TAMUQ, but not her major of choice, admissions let her know she could switch after her first year. At the time of our interview, she was passionate about the field, and was close with her fellow batch. Admissions, combined with the various mobilization of interpersonal relationships, channels students like Hind into petroleum engineering during a time of under-enrollment.

Students who were not petroleum engineering majors encountered petro-education in other ways. In particular, chemical engineering at the branch campus is closely tied to the oil and gas industry. A TAMUQ chemical engineering faculty regretfully told me: “chemical engineering is treated as though it is the downstream.” He was a systems engineer and did not see himself as solely interested in particular technical problems of the oil and gas industry’s downstream: refining crude petroleum, along with natural gas, into usable products (petrochemicals, gasoline, gas-to-

liquids products, and more). A Bahraini chemical engineering student, who chose the major because enjoyed chemistry in high school and was interested in possibly working in the cosmetics or pharmaceutical industries, was disappointed in how much the curriculum was tailored to oil and gas. This was the same problem that Miriam was dealing with at the time of our interview. Interested in the other-than-human life impacted by development in Qatar, she chose chemical engineering because she thought the degree could potentially translate to work related to environmental destruction caused by the oil and gas industry and construction. However, the relationship between chemical and petroleum engineering was so close at the campus that chemical engineering faculty were chairing the petroleum engineering department. In this way, even students who think chemical engineering might offer them alternative work outside the oil and gas industry, were being taught particular areas of chemical engineering that support the oil industry's downstream operations.

The branch campus increasingly started to incorporate ideas about environmental responsibility and sustainability into the branch campus. Petro-education has worked to channel this work towards greening fossil capitalism. For instance, the chemical engineering Qatari faculty member at the campus actively does work that falls under this umbrella. In a profile of her work, TAMUQ's magazine described her career pathway as one that integrated the national vision with sustainable notions of engineering:

Before beginning her graduate studies, she met with a professor who advised her to look at [Qatar National Vision] to see what she could look forward to in the next 30 years... I wanted to be an asset instead of a number, Dhabia says. She says she sees herself having most impact on the environmental pillar of [Qatar National Vision]. Growing up in the industrial area of Al Khor, Dhabia thought maybe she could work to improve quality of life and sustainability in the area. In her research, she has worked in process integration and carbon dioxide integration, making use of carbon dioxide given off by plants to make emissions reduction more attractive and profitable (TAMUQ 2014, 9).

The Qatari faculty member herself, positioned as a role model for women students at the campus, described Texas A&M in relation to Qatar's environmental development: "TAMU promotes a culture of environmental responsibility for today and innovative solutions for tomorrow."

Miriam, whose story opened this chapter, was a chemical engineering student who held opposing ideas of what sustainability in Qatar should look like and critiques of how TAMUQ failed to address issues related to climate change in the curriculum. Miriam was working to organize workshops and discussions about environmental degradation across the country, along with turning some of her interests to addressing practices related to consumption at the branch campus itself. She found that faculty and staff considered her amusing, laughing off her requests. While she admitted that the curriculum was closely tied to the oil and gas industry, Miriam started to repeat the idea that perhaps she could change things from this inside. In this way, petro-education works to redirect student interest toward greening the industry.

When I met Basel, a Palestinian chemical engineer who graduated in 2011 from Texas A&M's engineering branch in Qatar, he continually emphasized that he never intended to work for an oil company. "Climate change was becoming a thing. It is the techno-economic challenge of our time," he contextualized his interest in alternative energy as *the* most critical field to pursue as an engineer. After working on various faculty research projects as a student worker, Basel was encouraged by his faculty mentors to consider graduate studies in chemical engineering with a focus on alternative energy. However, he quickly changed his mind when his dad had sudden health issues and he realized he would have to look for a well-paying job to support his parents. During his senior year, he was called to a TAMUQ dean's office: "he said he had an opportunity for me." Shell Qatar was interested in trying out local non-Qatari TAMUQ engineers to work for

them. Basel, adamantly opposed to working for the industry, immediately rejected the offer of an interview with the company:

I said, no thanks, I don't want to work for oil and gas. I started talking about solar, wind, blah blah blah...the whole climate change story.

He laughed, recalling how the administrator responded: “He said, ‘you’re an idiot. You’re not leaving unless you say yes.... So, I said ‘yes.’” He was offered the job and went to work at the Pearl GTL, the world’s largest gas-to-liquids plant. He has been working for Shell since he graduated and believes that he can make the most change through the industry, rather than some “tiny start-up company.” When I met Basel he was on his way to study alternative energy systems at Stanford University, sponsored by Shell, of course.

Basel’s adamant desire not to work for the oil and gas industry was common among the TAMUQ engineering students I interviewed. Many non-petroleum engineering students shared in this attitude, which was often driven by an overt disdain for the oil and gas industry—what it represents, how it treats its workers, and the violence it continues to wreak globally through extraction. When I asked students about their aspirations for the future, some responded by saying that after graduation they would ideally be intervening in the climate crisis as an engineer.

But most often, the lack of interest in working for oil and gas was not necessarily linked to a concern over climate change, but actually a broader product of the very institutionalized discourses of engineering in Qatar, promoted both by TAMUQ and Qatari state institutions. From the moment that students are admitted, they are repeatedly told that they are Qatar’s next generation of engineering leaders. For students, such as Basel, the idea of being an engineering leader is more significant than acquiring a high-paying job as an engineer for a company in Qatar—oil or otherwise. It is more exceptional than the professional aspirations of their parent’s

generation. As Basel described it, the goal of “living in a three-bedroom apartment in Qatar for the rest of your life...the world is bigger.”

Students like Basel, Hind, and Miriam are admitted to TAMUQ with heterogenous interests and aspirations. Petro-education is capacious enough to accommodate and redirect their energies. This mode of petro-education extends beyond petroleum engineering to draw students either into the industry or to redirect their critiques to the work of “technical adjustments” and greening capitalism. As heterogenous and contradictory post-oil visions of the future filter into the space of the branch campus this mode of petro-education, weaving together interpersonal networks, diversification of the faculty, curriculum, and admissions, work together to either directly draw students into the industry or redirect their aspirations toward the work of “technical adjustments” and greening capitalism.

Petro-education 3: Patriotic Engineers Overseeing the Nation’s Wealth

In this section, I address how petro-education manifested before the Qatar National Vision 2030. This mode of petro-education integrates patriotic sentiments about Qatari students overseeing the nation’s wealth as experts, while naturalizing particular ideas about the global economy and the role of American scientific and technological expertise within it (Beasley 2017). It extends into the present, integrating patriotic notions of engineering with the first two modes of petro-education and directing them towards Qatari students.

Initially, the stories of Basel, Miriam, and Hind that opened this chapter seemed clear moments to me when petro-education was clashing with everyday interpretations of the Qatar National Vision 2030 and the future of fossil fuels. This is not to say that petro-education itself is incompatible with the knowledge economy outlined in the Vision, which outlines a future for fossil fuels, particularly natural gas. However, the discourse itself, which increasingly linked the Vision

to words such as *engineering leaders*, *post-carbon economy*, *post-oil*, *knowledge-based economy*, resulted in a disorienting situation for students. As I outlined above, fewer students saw a future for themselves in petroleum engineering or had an interest in working for the oil and gas industry.

Over lunch with Ghalya, a PhD student doing research closely related to my own, I shared my thoughts on this idea of a possible clash between the Vision, as interpreted by students, and petro-education at Texas A&M. She also happened to be one of the first batches of petroleum engineering students at the campus. She explained that her generation was different than this current generation of students I was describing. When Ghalya was studying petroleum engineering, it was an exciting time to study this topic in Qatar. Petroleum engineering had never been offered in the country, and she was one of the first Qatari women to study it. Before 2008, when the Vision 2030 was first publicized, the main reservation around petroleum engineering was that eventually oil and gas would run out and the job would inevitably not exist. The excitement around petroleum engineering was figuring out ways to extend the life of hydrocarbons, to take the helm from foreign experts and manage Qatar's subterranean networks as Qatari citizens. Aljazi, another Qatari woman studying prior to the Vision's release, similarly expressed the excitement she felt seeing changes in the industry to accommodate Qatari women: scarves that are fire-resistant, the slow building of informal networks, and formal mentorship programs. At that time, it was exciting to oversee the national body of wealth and manage the exploitation of Qatar's reserves as Qatari women. This is the national framing of petro-education that Texas A&M continues to promote in outreach and in informal conversations with students, particularly in relation to the figure of the Qatari engineer.

Ghalya differentiated her batch's attitude with the students I was interviewing who were currently attending Texas A&M. This generation has the idea that what the industry is *doing* is

bad, as opposed to unpredictable or temporary. She elaborated: these students have ideas that are more linked to sustainability—we should not be burning fossil fuels anymore. Students increasingly did not aspire to be petroleum engineers, overseeing the extraction of Qatar’s hydrocarbon deposits.

Ghalya was reminding me that the Qatar National Vision did not always exist. As someone who started my research on this project in 2016, it was hard to remember there was a time before the Vision. Even administrators I had interviewed about the establishment of the branch campus would reference it. We would be discussing events taking place in 2004, four years before the Vision was launched, and the Vision was sometimes overlayed onto Texas A&M’s activities. Although the Vision had not formally existed, the idea of building a knowledge-based economy pre-dates the Vision. Certainly administrators, who work closely with the royal family and high-level government officials, were aware of the broader project outlined in the Qatar National Vision 2030 before it was formally advertised. However, before 2008, the emphasis on transition was attached to the overall sense of the inevitable depletion of resources and the instability of oil markets in shaping budgets and development. This in fact was the key focus and impetus for why build a knowledge-based economy.

Only during the past few years have government officials and administrators linked the Vision to projects focused on linking alternative energy to climate change. In fact, Texas A&M was approached because Qatar Foundation wanted to offer petroleum engineering in Education City. Dr. Charles Bowman, the first President and CEO of the branch campus, explained why Texas A&M got selected over other possible universities:

We were approached because QF said we needed petroleum engineering. Others that got initial contact but were rejected. The country decided needed petroleum engineering to get oil and gas out of the ground...We weren’t asked to offer civil engineering (Myrie 2020b).

Bowman went on to explain that Qatar Foundation was looking to invite a single institution to offer various programs, rather than individual branch campuses with distinct course offerings and majors:

...They had made several passes at finding institutions that could offer all the programs they wanted, and couldn't find a single institution with all the programs they wanted. *The big holdup was petroleum engineering, offered by only eighteen schools in the US...* (Myrie 2020b)

Texas A&M was selected *because* Qatar Foundation was looking for petro-education—the institutions within US universities that sustain and reproduce fossil capitalism. Qatar Foundation wanted a particular mode of petro-education, one that could wrest the industry from “foreign” experts and incorporate Qatari managerial class of technical workers to oversee the industry. As this vision of engineering was reformulated in relation to the Qatar National Vision 2030, the other modes of petro-education redirect the interests and aspirations of Qatari students, like Miriam.

Conclusion

Petro-education, the mechanisms within universities that sustain and reproduce fossil capitalism, is not limited to petroleum engineering. It extends to other bodies of knowledge, such as chemical engineering, along with the broader political economy of the branch campus and university. As notions about sustainability and post-carbon development have emerged discursively as the focus of Qatar's development, along with popular ideas about climate crisis and fossil fuels, TAMUQ's diverse student body arrives to the campus with aspirations and ideas that are sometimes irreconcilable with petro-education. In this chapter, I described three interrelated modes of petro-education: 1) asserting an infinite, but cyclical, future of oil which displaces anxieties over the future onto students' individual orientations to hard work and perseverance; 2) mobilizing a diverse array of mechanisms, spanning from admissions to curriculum and diverse

faculty role models, toward students who have critiques of the industry or do not see a future for themselves in it; and 3) pursuing patriotic notions of managing the nation's wealth. These three modes of petro-education work together to naturalize and produce segmented engineering labor in Qatar, organized around nationality, but often racialized and gendered. Accommodating a diverse student body, these three modes work flexibly in relation to the student in question. For example, the forms of petro-education crafted prior to the Qatar National Vision, which emphasize Qatari nationals controlling their oil and gas reserves as technical experts, is less suited to Palestinian students such as Hind or Basel. In the post-Qatar National Vision era, the first mode of petro-education, which emphasize particular ideas of work and fossil fuel futures, can be melded with the third mode to accommodate Qatari students who are questioning committing to a future working in the oil and gas industry. Trained as problem solvers, students' interests in developing tools, strategies, and concrete actions for a post-fossil fuel future are accommodated by petro-education. Further research into petro-education and energy transition would be needed to understand how and whether these mechanisms have developed in universities based in the United States. Yet, the stories of students navigating this transnational educational space in Qatar, where the future is anticipated as a series of engineering problems to be solved, are critical moments to understand how fossil fuel futures are made and remade between Texas and Qatar.

Chapter Five: “Who will man the rigs when we go?” Transnational Demographic Fever Dreams between Qatar and Texas⁶⁵

Introduction

Sheikha Hind Al-Thani, the sister of Qatar’s Emir and the Chief Executive Officer of Qatar Foundation, regularly champions Education City—a transnational education zone (Kleibert et al. 2020) which hosts six U.S. branch campuses—as an emergent space of gender equality in Qatar. A *Bloomberg* interview with Sheikha Hind in January 2019 began with a question about the gender make-up of Education City, pivoting on a statistic that I heard repeatedly throughout my fieldwork: “Texas A&M’s student body: the women [at the branch campus] represent 50 percent in Qatar, but just about 20 percent in Texas [at the main campus].” The interview, targeting a Western audience, framed this comparative statistic about women engineering students as historically and geographically exceptional across the Gulf region. According to Sheikha Hind, these numbers signify early signs of a gender-equitable future for Qatar, even offering possible lessons for the #MeToo movement: “Qatar’s movement to tackle many of the issues the Western world is rallying against today began a quarter of a century ago. It required massive investments in physical and societal infrastructure so that women today could be empowered to say ‘me too’ in their own way” (Al-Thani 2018). Texas A&M University at Qatar (TAMUQ) has similarly highlighted the relatively high number of women at its engineering branch campus as a manifestation of women’s empowerment.

Yet, through interviews with TAMUQ administrators and staff, I learned that this public relations celebration was riddled with anxiety. Early in my research, I interviewed a TAMUQ employee about the institution’s outreach in schools across Qatar. Describing the institution’s

⁶⁵ This chapter is under review at *Environment and Planning C: Politics and Space*.

agenda, he focused on a specific objective: the urgent need for the branch campus to educate more Qatari men to work in spaces such as oil and gas refineries, offshore facilities, and the military. Mentioning a TAMUQ outreach program designed to attract Qatari children and youth, he stressed that the need for Qatari men engineers was not only critical for Qatar, but also for the United States, which has its largest military installation in the Middle East, the United States Central Command (CENTCOM), located only about 35 km southeast from TAMUQ (Morrissey 2017). Conjuring a geopolitical scenario that involved the evacuation of all Americans from Qatar, he rhetorically asked me: “Who will man the rigs when we go”?

Pairing together these two accounts of what the feminization of engineering means for the future of Qatar produces a friction. The first analysis of these statistics, represented by a prominent member of the Qatari royal family, suggests that access to education is the means by which women in Qatar will achieve gender-equity. In the context of the proliferation of transnational education zones across various world regions, the Gulf has become an offshore campus hotspot (Kleibert et al. 2020). In Qatar, these branch campuses are promoted domestically as a long-term investment enabling Qatari citizens, particularly women, to acquire degrees from U.S. universities without studying abroad (Vora 2019). According to this narrative, the increasing numbers of women attending U.S. universities are signs of progress in Qatar’s transformation into a knowledge economy. The second explanation, expressed by a TAMUQ employee, asserts the unfeasibility of Qatari women populating critical engineering jobs. Framing this impracticality as a threat to both Qatar’s future and the continuity of U.S. military and economic power, the employee signaled towards a demographic dilemma repeatedly raised by scholars and policymakers with decades of experience in Qatar’s education system (Al-Misnad 2010): the low numbers of Qatari men

pursuing postsecondary education, particularly in science, technology, engineering, and mathematics (STEM) fields.

In my research, the friction between these conflicting interpretations prompted a series of questions about how the education of Qatari women engineers are not only caught up in fears and anxieties about national futures, but also the future of U.S. empire, fossil fuels, and capitalism in the Gulf. The educational project of producing engineers in Qatar is uniquely embedded in global capitalism (Meiksins and Smith 1996), particularly as a profession closely tied to the development of oil and gas, the military and logistics spaces across the Gulf (Mitchell 2011; Cowen 2014; Khalili 2018, 2020; Ziadah 2017). This was the very framing that university administrators, oil executives and high-level government officials adopted during the branch campus' early days. On 3 November 2003, with the U.S.-led invasion of Iraq already eight months underway, U.S. President George H.W. Bush sent a letter to the Emir of Qatar in support of Texas A&M's engineering branch campus. While Bush did not mention the benefits of this arrangement for oil companies, university administrators and oil executives described this educational partnership as beneficial to "the multinational companies that have major investments there" (Bush 2003). Robert Gates, who was the President of Texas A&M in 2003, and went on as Secretary of Defense, emphasized the backing of U.S. State Department officials for the project. These various statements were enrolled to support the territorial expansion of Texas A&M—a land-grant university with close ties to the U.S. military and fossil fuel industry. In this chapter, I argue that the everyday anxieties I encountered about gender and engineering labor at TAMUQ cannot be disentangled from geopolitical and geo-economic struggles over the future of fossil-fueled capitalism in the Gulf.

I approach these anxieties by drawing upon Banu Gökariksel, Chris Neubert and Sara Smith's (2019) concept of "demographic fever dreams," which traces the intimate everyday connections between demographic fantasies and fears of masculine decline with respect to changing gender norms. Demographic fever dreams lack coherence, as they are simultaneously attached to and detached from demographic data. The fever dream is future-oriented, primarily motivated by anticipation that the dominant population will be made surplus (566). Driven by this chaotic anxiety, fever dreams require constant demographic maintenance, "giving them a 'dizzy quality' not unlike that experienced by a person with a high fever" (ibid). Gökariksel, Neubert and Smith take a relational approach to the demographic fever dreams animating fascist and resurgent rightwing movements they examine in India, the United States and Turkey, arguing that they "are situated across oceans yet tied together by global flows and histories of colonialism, nationalism, and patriarchy into a constellation of ideas that center future threat as a justification for political action and violence" (561).

In this chapter, I develop a transnational approach to demographic fever dreams by following the constellations of ideas and practices about population, gender relations, and labor traveling between Qatar and Texas. Over the past few decades, demographic fever dreams in Qatar have solidified around what policymakers and academics have characterized as an educational imbalance between Qatari men and women. Qatari women inhabit a paradoxical role in these fever dreams. While the large number of Qatari women with engineering degrees is palatable to international audiences, TAMUQ cannot conceive of how they will be absorbed into the military, the security apparatus, and fossil fuel industry, which are largely dependent upon masculinist labor and gendered performances. As TAMUQ promotes Qatari women graduates as evidence of the institution's impact in Qatar, there is a simultaneous attempt to recruit more Qatari men. Their

relative absence is a pervasive object of anxiety within Qatar's institutions of higher education. Even as some women engineers have been hired by masculinist-extractivist institutions in Qatar, the fever dream does not subside, but turns to another, related object of anxiety: the so-called demographic "imbalance" of a small population of Qatari citizens relative to "foreign" migrant labor. Demographic fever dreams at TAMUQ over "who will man the rigs" are simultaneously articulating with fears over Qatar's non-citizen population, which comprise nearly 90 percent of the country's workforce, and whose exploitation has been integral to both Qatar's development model and contemporary global capitalism (Khalaf, AlShehabi, and Hanieh 2015). In fact, the delirious nature of the fever dream becomes most apparent when anxieties about Qatari women engineers collide with interrelated fears about non-citizen labor and racialized class hierarchies.

Through this transnational approach, I show how feverish interventions around labor demographics in Qatar's capitalist society are produced, circulated and mobilized within an offshore U.S. university. I draw on twenty months of institutional ethnographic research conducted between February 2018-December 2019 in Doha, Qatar and College Station, Texas, including an analysis of forty six oral histories with current and former engineering students in Qatar⁶⁶ and fifty interviews with faculty, staff, and administrators working at TAMUQ and other relevant institutions in Qatar.⁶⁷ First, I address how my approach to demographic fever dreams is situated in relation to geographical studies of knowledge economy development. Then, I contextualize institutional attempts to shape the composition of Texas A&M's student body in relation to Qatar's broader development agenda. In the remainder of this chapter, I examine two ways that Texas A&M manages the gender demographics of future engineering labor in Qatar: 1) outreach and 2)

⁶⁶ Twenty-six of these students had an affiliation with TAMUQ.

⁶⁷ All names used throughout this paper are pseudonyms. Any potentially identifiable titles, career trajectories or positions have been changed to further anonymize interviews.

industry sponsorships and government scholarships. Each of these mechanisms are animated by demographic fever dreams that are impossible to fulfill, simultaneously attached to and detached from demographic data, requiring perpetual social engineering. Demographic fever dreams about engineering labor in Qatar are intertwined with and animated through institutionalized practices and histories of patriarchy, nationalism, settler colonialism situated in Texas. U.S. universities, such as TAMUQ, are both participants and drivers of restless demographic fantasies undergirding capitalist society in Qatar, foreclosing alternative possibilities and futures.

De-exceptionalizing the Education of Women in Qatar

As geographic conceptualizations of higher education have shown, universities are not bounded containers but embedded in and productive of socio-spatial processes ranging from citizen formation to urbanization (Hanson-Thiem 2009; Waters 2016; Nguyen et al. 2017). Geographical scholarship on knowledge economies and international branch campuses (Olds 2007; Jons and Holyer 2013; Robertson and Olds 2017; Moisio 2018) has importantly situated projects such as TAMUQ in broader political economic processes. While this work informs my approach to branch campus spaces, my focus on everyday anxieties over demographics requires me to forefront scholarship on gender, labor, and education in the Gulf. The citational practice I take here is exacerbated by exceptionalist approaches and hierarchies within English-language knowledge production on the Gulf, including in geography, dominated by scholars based in North American and Western European institutions (Kanna, Le Renard, and Vora 2020). In the remainder of this section, I contextualize the demographic fever dreams I encountered at Texas A&M in relation to Qatar's knowledge economy agenda and the history of U.S. higher education and the Gulf.

The comparative statistics that opened this chapter transport you between Texas A&M's flagship campus in College Station and its branch campus in Doha. However, this comparison is only intelligible if it is decontextualized from both the history of Texas A&M and Qatar's education landscape. Pivoting on the assumption that the Gulf must be lagging behind the United States when it comes to women's access to higher education, the comparison requires the erasure of Texas A&M's history as a segregated land-grant university with ongoing commitments to the military component of the Morrill Act, which transferred eleven million acres of Indigenous land through violence-backed treaties or seizures to fund land-grant, or *land-grab*, universities (Lee and Ahtone 2020). The Texas Aggie Corps of Cadets,⁶⁸ a student military organization, is the largest uniformed body of students outside of federally supported military academies. Until the mid-1960s, enrollment at Texas A&M was restricted to white men who received mandatory military training in the Corps of Cadets. Currently, membership in the Corps of Cadets is voluntary and does not require military commission. However, all members are subject to the same Reserve Officer Training Corps (ROTC) requirements and discipline as cadets who are preparing for active military duty. Texas A&M, in this way, remains a key space for the production of citizen-soldiers in the United States.

In addition to the erasure of Texas A&M's history, the comparison hinges on the notion that the percentage of women attending Education City's universities is exceptionally high. According to Qatar's Ministry of Planning and Statistics (MPS), the total number of Qatari women attending universities within Qatar was 21,644 and the total number of Qatari men enrolled in universities was 9,838 during the 2016/17 academic year (MPS 2017). These statistics are not necessarily exceptional to Qatar. Across the Gulf, women comprise 60 percent of engineering

⁶⁸ Aggie is the term for a member of the Texas A&M community.

students, which is double the percentage in the United States (Hillman et al. 2017). These high numbers are not even unique to the contemporary moment. For instance, during the 1973-4 academic year at Qatar University, 62 percent of the overall student population were women (Al-Misnad 2010). Scholars of higher education in the Gulf have described this trend as a “reverse gender gap” (Ridge 2014) or “the missing boys” phenomenon (Misnad 2010).

Demographic fever dreams about women’s education, in this way, are simultaneously dependent on and detached from data. The comparative statistic about Qatar and Texas, although mobilized as an indicator of the university’s impact, makes no sense, even to the people and institutions promoting it. Qatar’s reverse gender gap in universities has been a long-standing source of anxiety. For example, in 2008, Qatar’s General Secretariat for Development Planning (GSDP) identified the “challenges of Qatar’s male deficit in education” as a problem that needed to be addressed within the national development strategy (GSDP 2008). Pointing to the fact that this imbalance has existed for more than two decades, the GSDP expressed concern over the fact that the proportion of Qatari men pursuing higher education has declined, whereas for women it has risen. During my fieldwork, I regularly discussed this imbalance with faculty, administrators, staff, and students. They offered explanations that ranged from lack of motivation, an excess of jobs in the military with pathways for promotion, and the ability of Qatari men to study abroad.

Along with this long-established policy focus on ameliorating Qatar’s reverse gender gap, research in Qatar has focused substantially on developing pathways to further integrate Qatari women college graduates into the labor market. In fact, scholars working on gender, nationalism and labor in the Gulf have examined how decades of women’s access to higher education has not translated into their participation in the labor market (Al-Rasheed 2013; James-Hawkins et al. 2017; Golkowska 2017; Rajakumar et al. 2017; Ennis 2019; Liloia 2019). This scholarship argues

that this is a reflection of contradictory national policy that aims to simultaneously increase women's educational opportunities in line with international discourses of empowerment, while maintaining patriarchal social norms that prioritize gendered family obligations. By tracing how Qatari women navigate these expectations, this scholarship importantly highlights how women's bodies become material and discursive sites where fears and anxieties about national futures play out. However, much of this work pivots on a spatial imaginary that positions universities, especially the U.S. branch campuses of Education City, as outside the realm of society (see Al-Muftah 2017, Koch 2018, and Vora 2019 for examples that reject this).



Figure 9. TAMUQ admissions promotional material.

Source: Author.

Demographic fever dreams, by centering how social hierarchies productive of masculine national identity motivate incoherent demographic desires and fears, offer critical insight into the contradictory relationship between the reproduction of population and labor in Qatar's spaces of higher education. Anxieties over student demographics, particularly around recruiting and retaining Qatari men, in Education City's branch campuses are pervasive. The Education City project is a cornerstone of the Qatar National Vision 2030 (see Chapter One for an overview of the Vision). This development plan articulates the ruling family's vision to build a market-oriented knowledge economy that is less dependent on non-national workers, who comprise approximately 89.5 percent of the total population in Qatar (Vora 2015, 171; Babar 2020). The official state policy of replacing non-citizens with national "human capital" is called Qatarization, officially adopted in 1997, which offers incentives to companies to hire Qataris and has been implemented in different forms across the Gulf region (AlShehabi 2015; Ewers 2013). The Qatar National Vision 2030 describes human capital as self-disciplined citizen-workers who "can...function effectively within a competitive knowledge-based international order" (QNV 2008).

Across the Gulf, a prominent strategy to produce this population has been by importing U.S. and other foreign universities and investing in research parks, such as Dubai International Academic City, Qatar Science and Technology Park in Qatar, and Masdar City in Abu Dhabi (Günel 2019; Kleibert et al. 2020). In Qatar, U.S. branch campuses participate in Qatarization initiatives through admissions, curriculum, and outreach, although they do not publicize this and closely guard data about student demographics (Vora 2019, see also Chapter One for a discussion of how this impacted my methodology). Education City ostensibly provides Qatari students with the expertise and skills to replace the professional expatriate class from North America and Western Europe, rather than the majority of workers in Qatar, who are working-class from South

Asia, Southeast Asia, and East Africa laboring in construction, services, and domestic labor. In this way, the production of Qatari human capital in Education City (and arguably similar spaces across the Gulf) is tied up in anxieties around racialized labor hierarchies—which on the one hand is embodied in the white U.S. or European expert and on the other, the racially-coded demographic imbalance.

The low numbers of men acquiring postsecondary degrees has been deemed a key barrier to realizing Qatarization. At the same time, Qatari women, positioned by the state as “an untapped reservoir of knowledge and skills” (Qatar Ministry of Planning and Development 2015, 55-6, as quoted in Al-Muftah 2017) are compared to an untouched pool of oil—idle potential that must be extracted and refined for the nation’s “sustainable development” (Al-Muftah 2017, 20).⁶⁹ These contradictory fantasies about the national workforce position Qatari women as an “unlocked” resource, while erasing longstanding development agendas that aim to educate more Qatari men and integrate women into particular feminized sectors of the labor market. Qatari women engineers, in this way, are simultaneously celebrated and undesirable labor.

Demographic fever dreams about producing skilled Qatari engineers haunts Texas A&M’s educational mission in Qatar. The university’s branch campus, which has graduated over 1000 engineers since 2003, positions itself as training Qatar’s “engineering leaders.” The contemporary role of Texas A&M in the Gulf has a history that extends to the 1960s and 1970s, when Texas-based oil companies developed a strategy to deal with decolonization and the nationalization of oil fields by expanding their efforts to sponsor international students to study abroad at U.S. universities (Beasley 2018). This educational partnership enabled oil companies to strategically reinforce “the idea that the U.S. was the center of training and expertise serving an integrated

⁶⁹ Observation at conference session titled “Unlocking the Potential of Women for Sustainable Development” in Doha, Qatar in December 2019.

global economy rather than controlling that economy” (ibid, 188-89). Although Texas A&M advertises itself as building the foundations for a post-oil knowledge economy in Qatar, the institution continues the work of promoting the United States as the center of expertise and mostly produces a managerial class structure in the fossil fuel industry. While TAMUQ does not have an official agenda regarding the gender-makeup of Qatar’s engineers, the branch campus has worked to align the demographics of its student body with the goals of the Qatar National Vision 2030 (see Figure 9). Texas A&M has over a century of experience linking engineering to a national agenda. In fact, administrators regularly harken to this history when they differentiate their branch campus from other universities in Education City.

Research Strategy: Tracing a Transnational Demographic Fever Dream

The institutional narrative of Texas A&M as a progressive force for women was pervasive. To disrupt narratives that erase unofficial agendas, I focus on moments when anxieties over Qatar’s population and gender norms emerged in my interviews with administrators, faculty, and staff. I found that the institution’s feverish relationship to Qatari women is intertwined in fears about the limits of Qatarization, which is often coded through references to the small size of Qatar’s citizen population. For example, in an interview with a former U.S. diplomat with ties to high-level members of Qatar’s ruling class, they noted:

Qatarization has been accomplished. The problem is that there are not enough people to do these things... They need 90,000 to man the military. How will they do this if the population is 200,000?⁷⁰

In this section, I focus on administrators’ anxieties over co-education, showing how ideas and practices regarding women’s education were shaped by Texas A&M’s own history as a gender- and racially-segregated institution until the mid-1960s.

⁷⁰ Interview conducted in Doha, Qatar in 2019.

In an office in College Station, Texas, I started an interview with a former TAMUQ administrator about the first few years of the branch campus. Arriving at the meeting with questions I had prepared about research collaborations, I was quickly distracted by how gender relations permeated our conversation. Starting the interview by emphasizing that the entire Education City project was built by Sheikha Moza Al-Misnad⁷¹ so that Qatari women could study at U.S. universities, the administrator paused to ask if it was alright if he referred to these students as girls. Unsure if I heard correctly, I quickly decided to respond, “yes.” Relieved that I did not seem offended, he explained that it was disorienting for him to jostle back-and-forth between the cultural geographies of Doha and College Station: “we used to say girls here too, but now it’s women.”⁷² His ability to use the language of girls in Doha was familiar, reminding him of Texas A&M’s first few decades as a co-educational institution. During our interview, his memories of gender relations at College Station during the 1980s were interspersed with nostalgic commentary about co-education in Doha. In some of my interviews with long-time Texas A&M administrators and faculty, they would compare their observations at the branch campus to earlier times both at Texas A&M and within the field of engineering. However, in their comparisons to Texas A&M’s “early days” of co-education, none of the faculty or administrators mentioned that women’s formal admission on a limited basis in 1963 was followed by de-segregation a year later. In this way, they tended to overlook the institutional relationship between racism and sexism and instead focus on what they considered seemingly harmless behaviors that they could re-adopt in Qatar.

Co-education was and continues to be a key focus of the branch campus’ institutional anxieties. In interviews with administrators about the challenges they faced during the branch

⁷¹ The wife of the former emir, Sheikh Hamad bin Khalifa Al-Thani. She spearheaded Qatar Foundation’s Education City project.

⁷² Interview conducted in College Station, Texas in July 2018.

campus' first few years, they would emphasize the difficulty of creating co-educational learning spaces. Education City was the first large-scale co-educational institution of higher education in the country; the project of integrating students was perceived by early administrators as a social engineering problem. One administrator told me how TAMUQ courted Qatari parents, particularly those with daughters, who were concerned about sending their child to a co-educational environment. He explained that when trying to “sell the campus” to concerned parents “the question was: why was [co-education] essential”?⁷³ To answer this question, the institution made the case that co-education would prepare students for the “actual workforce.”

The struggle of creating a co-educational space did not end after TAMUQ recruited their first “batch” of approximately thirty students (cohorts are regularly referred to as batches across Education City). From the perspective of administrators, self-segregation was prominent among the first batch, eventually wavering off by the third group of students. Constantly surveilling the social life of their students, administrators noted that the first two batches of Qatari students had to be forced to mix through group projects and assigned seating. An administrator mentioned his relief when, at some point during the third year, he saw “male and female students sitting together and playing some sort of card game in the common space.”⁷⁴ The surveillance of Qatari students' behavior has led to various forms of segregation and differentiation between Qatari and immigrant students, who make up over half of Texas A&M's student body (Vora 2018; Al-Saleh and Vora 2020).

Co-education is perceived by administrators as a key part of Texas A&M's ongoing educational mission in Qatar. For a few faculty and administrators, the work of socializing students reminded them of the recent past at Texas A&M, with some expressing nostalgia at their ability in

⁷³ Interview conducted in College Station, Texas in July 2018.

⁷⁴ Ibid.

Qatar to rehabilitate ways of being that have been deemed sexist on the main campus. Vora (2018), has described these broader efforts in Education City as “a civilizing mission of heterosociality,” with coeducation functioning as an indicator of liberal notions of progress (83). The fixation on co-education tended to pivot on preparing future engineers for the workforce, particularly the private sector. Getting the national population, especially men, to work for the private sector has been a key tenet of development strategy across the Gulf since the 1990s. The creation of these co-educational spaces is tied to a development strategy of acclimating Qatari students and their families to accept particular kinds of work.

Administrators, in discussion of gender relations at TAMUQ, provide explanations that pivot on exterior socio-cultural spaces, such as families, the workplace, and the national oil and gas industry. In this narrative, TAMUQ is merely reacting to the cultural norms of their host country, while trying their best to deliver an educational experience that matches the main campus. However, many of the stories I heard from students and alumni through oral histories about their experiences diverged substantially from these narratives. For students, the spaces of TAMUQ, the workplace, and the Qatari state were not always distinct realms. They worked together, molding their pathways as engineers in Qatar. Demographic desires and fears at TAMUQ are intimate and embodied (Robbins and Smith 2017; Gökarıksel, Neubert, and Smith 2019), shaping students’ everyday lives as they navigate the institution. In the following two sections, I highlight two specific mechanisms through which TAMUQ manages the gender demographics of Qatar’s national workforce and students’ experiences of these methods.

Rehabilitating Engineering as a Masculine, Patriotic Duty

At this juncture, demographic fever dreams have solidified around the increasing educational imbalance between Qatari men and women. As the high numbers of female engineers

are outwardly celebrated, educational institutions have worked to attract young Qatari men to engineering. TAMUQ has also been involved in such initiatives. While TAMUQ's formal outreach strategy in Qatar has shifted since it began in 2007, it is ridden with expressions of anxieties regarding the geopolitical and geo-economic significance of TAMUQ's role in shaping Qatar's demographic future, best reflected in the question: "Who will man the rigs when we go?"

As Cowen and Siciliano (2011) argue about military and security industries in North America in the broader context of the feminization of certain forms of labor:

The rise of "immaterial" labour and emotional work associated with the rise of the "knowledge economy" ...has led some scholars to diagnose an ongoing process of "feminization" (Vosko 2000), and the decline of forms of masculinity typically associated with blue collar work and industrial production: machismo, strength, and physicality. But in contrast to scholarship which posits the redundancy of working-class masculinities within post-Fordist labour markets and gender norms (McDowell 2003), we argue that it is precisely these devalourized masculinities that are experiencing a rebirth through *insecurity*. When our economic optic expands to consider the centrality of men and boys to an expansive web of security industries and the gendered performances that constitute their reproduction, it is hard to deny that masculinity matters (1518).

Building on their argument, I add to the "economic optic" the oil and gas industry, which itself continues to primarily depend on masculinities for its reproduction. It is for this reason that TAMUQ, attempting to supply labor for the military and oil and gas industry while building a knowledge economy, reluctantly celebrates the feminization of engineering.

In 2007, TAMUQ began to connect with high schools in Qatar. An administrator, reflecting on his time in Doha from his office in College Station, outlined TAMUQ's early strategy of convincing students to become engineers:

Motivation doesn't always come automatically. Why do a challenging degree like engineering? What's the motivation?⁷⁵

⁷⁵ Interview in College Station, Texas in July 2018.

Elaborating on this with an explanation I heard repeatedly throughout my fieldwork, he pointed out that Qatari men are likely able to secure a well-paying job in the public sector without a college degree. He continued, tapping into demographic anxieties about foreigners managing strategic areas of Qatar's economy: "We gave them a scenario of how to manage technical areas run by expats. How do you trust the expats that they are doing what you want them to do?" Our conversation about TAMUQ's early outreach strategy quickly shifted to the question: "How do you motivate them [Qatari men] to stay there [Doha] as opposed to the U.S. and the U.K.?" Continuing by calculating the total number of high schools in Doha and the percentage of students that TAMUQ admits from them, the administrator concluded: "even with the numbers we had, we could still get the best of the best."

Over the next decade, outreach grew substantially to include a range of activities, including summer camps, road shows, and engineering design workshops. Between 2014 to 2017, outreach events increasingly began to define engineering as a patriotic duty. While early strategy gave general scenarios of "expats" in charge of sensitive technical spaces of the oil industry, the emphasis became increasingly focused on the police and military. Outreach activities, assuming that a large percentage of young Qatari men are interested in pursuing military careers, pointed out that they would have more opportunities with a bachelor's degree in engineering. Attempting to destabilize the pervasive assumption that engineering in Qatar primarily means working in the oil industry, outreach worked to expand the definition of engineering in line with service, patriotism, and national duty—Aggies core values. A TAMUQ employee articulated the strategy to me in the following way: "to be an engineer you can serve your country."⁷⁶

⁷⁶ Interview in Doha, Qatar in February 2019.

Texas A&M has nearly 150 years of experience linking engineering to service in the U.S. military through the Corps of Cadets. Between 2015-2017, TAMUQ began to organize outreach events that included the participation of the Qatar Armed Forces. For instance, a drone camp was organized during 2017 to teach high school students about drone technologies. The event included the participation of officers from the Reconnaissance and Surveillance Center (RSC) of the Qatar Armed Forces. This outreach activity is the result of a memorandum of understanding between TAMUQ and Qatar's RSC to strengthen ties between TAMUQ and the Qatar Armed Forces. After the 2017 embargo of Qatar by Saudi Arabia, UAE, Bahrain, and Egypt, which entailed a sea, air, and land blockade that lasted three and a half years, TAMUQ's ties with the military further congealed. For instance, TAMUQ began to organize cybersecurity courses for the Qatar Armed Forces.

During this period, strategic discussions about outreach increasingly shifted from a need to recruit Qatari men to a general sense that the military has already forged this connection. The military has even moved beyond assumptions that some TAMUQ administrators, faculty, and staff had previously expressed to me regarding the gendered division of men in the field and women in the office in Qatar. For instance, the Ministry of Defense began to sponsor women studying at TAMUQ. In discussion of this phenomenon, a staff member explained that after the blockade the Ministry of Defense started "pulling young engineers away from a deficit workforce in industry."⁷⁷ This has raised new challenges for TAMUQ: first, how will the institution provide the numbers to populate these fields? And second, how will the branch campus manage the different state institutions and corporations seeking out their graduates?

⁷⁷ Interview in Doha, Qatar in February 2019

Because demographic fever dreams are impossible to realize, requiring perpetual social engineering, they cannot hold onto a single object of anxiety. Their objects of anxiety are slippery, constantly mutating into what appears as an emergent problem. Although Qatari women are suddenly being recruited to participate in what has been previously constructed as masculine labor, demographic fever dreams at TAMUQ do not subside, but collide with another, related object of anxiety: the overall insufficient number of nationals to populate strategic areas as engineers.

A TAMUQ employee, observing students being hired to work in the Ministry of Defense, elaborated on this challenge. They gave an example of a student who had been sponsored for four years by an oil company, graduated, worked for the company for six months, and then took a job with the military. The employee explained that although the company “had invested over a million Qatari riyals” (approximately \$247, 670) into this student, the company “could not really do anything because the student was still doing something considered serving the country.”⁷⁸ Another example a TAMUQ employee shared with me involved two TAMUQ students who were working on super colliders through a research internship program in Europe. The Ministry of Defense, learning about their experience through a public relations feature called to have a meeting with them; they were immediately recruited to work on a nuclear energy program.

Demographic fever dreams at TAMUQ have been intensified by the growing militarization of Qatari society. Not only has the Qatari military increased its purchases of weapons from the United States, but the government has also instituted a new law requiring a year of compulsory military service for every Qatari man. Announced in March 2018, this law temporarily brought the already low numbers of Qatari men who were enrolled as freshmen for Fall 2018 to zero. The legal requirement for conscription remains ambiguous when it comes to whether students enrolled in a

⁷⁸ Interview in Doha, Qatar in February 2019.

university can postpone serving immediately after their high school graduation. Qatari men, in this way, disappear and reappear randomly in the halls of TAMUQ.⁷⁹ By the time they arrive at TAMUQ, many of them have already signed up to work as engineers in the military. This makes it even more difficult for the branch campus to ensure that its graduates populate other critical fields in Qatar, specifically the oil and gas industry.

In this context, demographic fever dreams about the increasing numbers of Qatari women populating the branch campus' classrooms have refocused to fixate on what appears as a new problem—the overall “deficit” Qatari workforce. The institution continues to use outreach to balance this deficit and has started to admit larger numbers of students with the aim of doubling the current numbers of engineers that TAMUQ graduates. In the following section, I will focus on how women studying at TAMUQ encounter multiple institutional mechanisms established to produce a masculine engineering workforce in Qatar. I attempt to further unpack the delirious nature of the demographic fever dream by centering the experiences of engineering students, particularly Qatari women.

Regulating the Feminization of Engineering

An administrator, discussing the particular challenges that women students face at TAMUQ, explained: “Companies [in Qatar] are complaining about things that we found in the U.S. thirty years ago. [They complain to us] ‘*we got women, we train them, they have babies and they never come back.*’”⁸⁰ Positioning TAMUQ as outside space and time in Qatar, he elaborated: “females were generally better students” and “kept male students on their toes,” but sadly had to deal with attitudes that “we had in the U.S. thirty or forty years ago.” Reflecting on TAMUQ’s

⁷⁹ Interview in Doha, Qatar in March 2019.

⁸⁰ Interview in College Station, Texas in August 2019.

first batch of students, he proudly told me: “One of our first female graduates landed an offshore rig for a month.”

Administrators often promoted spatial imaginaries of the branch campus as a progressive space for Qatari women, while erasing how the institution reproduces and reinforces nationalist masculine gender roles. However, U.S. universities in Qatar—through internships, professional development, career fairs, outreach, industry sponsors, and alumni networks—do not passively receive and graduate students in Qatar. TAMUQ, which currently admits over one hundred students per year, not only closely monitors its alumni, but also invites them to participate in university events, recruits them for mentoring programs, and has hired Qatari graduates as faculty.

Speaking to Aisha, a Qatari graduate from TAMUQ’s first batch, about her educational experiences, I asked her: “Why Texas A&M?” She quickly answered: “not by choice...⁸¹” She wanted to study engineering abroad. Since her high school did not teach in English, she was placed in the Academic Bridge Program, a year-long program to prepare Qatari students for studying at the university-level in English. She discovered, while in the program, that she could be sponsored to study abroad:

...some colleague, she told me Qatar Petroleum (QP) is offering good scholarships, maybe better than the Ministry of Education...so I called [QP]. I asked them if they would fund me to study engineering at American University at Sharjah (AUS). They said yes, but first I had to take an exam at QP. Of course, I passed and...I was sponsored by them.

However, the establishment of TAMUQ disturbed her plans: “Before the year ends, A&M showed up and invited [all QP sponsored-students].” She was told by her QP advisor that all the sponsored students were required to take A&M’s entrance exam. “I told them, ‘OK. I’ll take it, but I don’t want to go to A&M.’” She took the exam and passed: “Fortunately, *or unfortunately*, I got accepted

⁸¹ Oral history interview in Doha, Qatar in January 2019.

to A&M, and everyone who passed the exams were put in A&M here and everyone else got to go abroad.” For Aisha, AUS was an exciting option *because* she would be studying outside of Qatar. Explaining how she eventually came to abandon her dream, she said: “One of my colleagues told me ‘no don’t be mad, it’s a really big powerful school in the U.S.’ Then I surrendered to the new reality.”

Aisha emphasizes a force shaping her educational trajectory that TAMUQ administrators did not mention in my interviews with them: corporate sponsors. Sponsors, through quotas, guide the student to suit their future workforce needs. TAMUQ’s educational operations are closely tied to these industry sponsorships. In fact, the first batch likely had a number of students, in addition to Aisha, who were rerouted through their sponsorships to enroll at the branch campus. However, in interviews, administrators tended to focus on the early recruiting work they had to do in high schools to dispel parents’ fears of co-education. In fact, Texas A&M, particularly before it had established a reputation in Qatar, depended on sponsors to route their student employees, like Aisha, into the branch campus.

Not only has TAMUQ depended on sponsorships to guide students to its program, TAMUQ also works closely with industry to navigate the demographic desires of the labor market. Sarah, another student from TAMUQ’s first batch, explained how her sponsor attempted to influence the major that she selected: “QP had certain majors they wanted female students to major in: chemical or electrical...I was interested in petroleum because previously there were no female petroleum engineers in this country.”⁸² However, her advisor at QP advised her against it, saying that petroleum engineering requires a lot of traveling. Her advisor’s attempt to dissuade her incited Sarah to pursue petroleum engineering with even more commitment: “For me, [studying petroleum

⁸² Oral history interview in Doha, Qatar in January 2019.

engineering] was good *because* I wanted to travel.” Intent on studying what she wanted, she explained how she circumvented her sponsor’s instruction: “I chose chemical [engineering] on paper with QP...then I went to uni[versity] and changed it later...” I asked her: “Did QP know? Did they eventually find out?” Her response: “Believe me they were following us very closely... At the time, QP had an advisor office at Education City.” While Sarah could take advantage of some lack of coordination between TAMUQ and her sponsor, she eventually was reprimanded for changing her major without her sponsor’s permission.

Statistics about TAMUQ’s student body reflect sponsored students’ stories about navigating their majors. Most women are enrolled in electrical or chemical engineering, with the lowest numbers studying mechanical engineering (Hillman et al. 2017). In interviews with faculty and administrators about this discrepancy, their explanations were largely placed on spaces outside of TAMUQ—sexism within the national industry, family pressure, and cultural norms. When I asked Dalia, a Palestinian electrical engineering student why most female students are found in electrical or chemical engineering, her explanation blurred the boundaries between these realms:

...Even here at Texas [A&M], they’re supposed to be supportive of everything but if you say for instance you want to major in mechanical, they say ‘are you sure?’ People who advise us, like alumna, might even say something like ‘if you’re a woman whose major is mechanical it is difficult to find a job.’⁸³

Ideas about particular majors, such as mechanical, as being more “masculine” is not overtly articulated by TAMUQ advisors, faculty, and administrators. In fact, all the faculty members I asked rejected this notion and explained that any disparity across majors reflected both corporate and social ignorance in Qatar. However, women who are considering pursuing mechanical engineering are often warned by faculty, staff and other students that they will struggle after

⁸³ Oral history interview in Doha Qatar in January 2019.

graduation. Although chemical engineering at TAMUQ is a field closely aligned with careers in the oil and gas industry, students are advised that this degree is more appropriate for women in Qatar. This is itself deceptive since chemical engineers working in the oil and gas industry are often expected to work in industrial plants, which are masculinized workspaces.

Corporate sponsorships and government scholarships available to Qatari students not only cover tuition, but also come with a substantial monthly salary. Faculty have occasionally joked with me about the wealth their Qatari students have, particularly as sponsored engineers. A Canadian instructor at an engineering program in Qatar, describing the wealth that he observed among his Qatari students, laughed: “my students drive better cars than me.”⁸⁴ However, these comments elide the anxieties that Qatari women have around negotiating these contracts, in addition to family debt⁸⁵ or financial struggles that push some students to pursue a sponsorship or scholarship.

When I spoke with Ghada, a Qatari student who was choosing between a sponsorship and a government scholarship, she explained that securing a sponsorship would ensure that after engineering she will work as an engineer. Rumors circulate among women engineering students that a government scholarship is extremely risky because upon graduation they may end up placed in an unrelated ministry doing office work. For Ghada, the sponsorship is also a risk because the tuition charged to corporate sponsors is double TAMUQ’s tuition rates. Therefore, the debt she would take on if she failed her courses or switched careers would be massive. She explained to me: “I counted my tuition fees. It would be 1,125,000 Qatari riyals (*approximately \$309,000*) by the time I graduated, and this is just tuition fees.” Ghada, whose academic interests in physics and

⁸⁴ Interview in Doha, Qatar in February 2019.

⁸⁵ While Qatar has the highest gross national income (GNI) per capita in the world, 75 percent of Qatari households owe more than \$68,700 in debt (Finn 2016).

nuclear energy are not offered as majors in Qatar, wanted to ensure that she would be able to work as an engineer in alternative energy. However, it was tricky for her to determine the safest route towards achieving this goal. Whether students were choosing between a corporate sponsorship, a government scholarship, or a private scholarship with Qatar Foundation, they found that each came with different risks: substantial debt, repayment in the form of years of labor, or a job working in an unrelated field.

Many faculty tended to express an imaginary of the national population as uniformly wealthy, provided with post-graduation options that non-Qatari students could rarely access. Qatarization initiatives have certainly produced an educational landscape where nationals are given preferential treatment that marginalizes immigrant and international students within the Education City project (Vora 2019). However, I noticed, especially among Qatari students between 2015-2019, increasing uncertainty regarding these contracts. Over the past two decades, government scholarships have been restructured, with new reforms implemented every year.⁸⁶ These changes in the scholarship system, first initiated in the early 2000s, have worked to extend the reach of the market in higher education. Over the past decade, the government scholarship program has increasingly aligned itself with projections of labor market needs by incentivizing certain majors with higher monthly salaries. On top of this, the government has experimented with repayment programs that change on a yearly basis. These repayment options have shifted from initially requiring graduates to work for any government organization for the number of years they studied to working for a specific appointed ministry for double the years they were on the scholarship. The scholarship conditions for one student could be radically different for another who just signed their contract a year before.

⁸⁶ Interview in Doha, Qatar in March 2019.

The Qatar National Vision 2030, which aims to diversify Qatar's economy, has indirectly entailed increasing cuts to government spending on particular social initiatives. This has led to restructuring various elements of the Gulf's social model, such as scholarships, which have previously "been out of bounds" of neoliberalism's reach (Hanieh 2019, 200). These radically changing reforms are a product of attempts by the Qatari ruling elite, Western consultants and international financial institutions to discipline citizens to accept a relationship between education and debt that must be repaid.

These neoliberal reforms have been framed by both Texas A&M and the Qatari ruling class as emancipatory for Qatari women. As market logics are increasingly embedded in Qatar's education system, Qatari women are guided to sign contracts to pursue engineering, a field which remains closely linked to masculinized workspaces. When the occasional Qatari woman accepts an engineering position that requires them to work offshore or in a chemical processing plant, TAMUQ celebrates them as success stories made possible by their institution's presence in Qatar. When Qatari women do not pursue engineering careers, TAMUQ administrators place blame on Qatari society, national industry, and even the women themselves. However, at every step, the educational pathway of these students at TAMUQ is closely managed. Driven by demographic fever dreams that prioritize the increased production of national human capital, the main task of TAMUQ is to graduate as many Qatari Aggies as possible, while managing the perceived overabundance of women and scarcity of men.

Conclusion

Through an examination of transnational population-based desires and fears about Qatari engineering labor, this chapter shows how U.S. universities are participants in and drivers of fantasies about labor demographics in the Gulf. The feminization of engineering is simultaneously

celebrated, combatted, and managed at TAMUQ. The presence of female students, symbolizing modern progress, is actively celebrated as the embodiment of Qatar's development vision. This celebration is not merely rhetorical, but also reflected in various institutional support mechanisms, such as a women's mentoring program. Yet, the institution simultaneously works to regulate the feminization of the field by presenting engineering as a masculine patriotic endeavor and guiding students into majors that align with the fossil fuel industry's projected needs. TAMUQ administrators and faculty argue that their need to recruit men is due to cultural norms pervasive in Qatar's national industry and military. However, this transnational demographic fever dream is as much about the future of engineering, diversity dynamics in U.S. universities, and this particular institution—Texas A&M, a settler-colonial land-grant university with institutional ties to the U.S. military and oil and gas industry, along with cherished connections to political figures, such as George H.W. Bush, George W. Bush, and Robert Gates. Established to produce patriotic white masculine labor in Texas, the university has adapted and recreated the institution to manage the demographics of Qatar's future engineers.

A female future, aligned with modernity, is rhetorically celebrated and publicized internationally, yet materially unimaginable, reflected in the question I opened the paper with: "who will man the rigs when we go?" The question itself contains mistaken assumptions about who *currently* "mans" the rigs—primarily low-wage and mid-level managerial workers from South and Southeast Asia. The employee who made this point about the feminization of engineering in Qatar, however, was not referencing the laborers who work Qatar's rigs on a day-to-day basis. He was describing managerial labor, alluding to U.S. command over West Asia and North Africa's hydrocarbon deposits and surplus capital (Hanieh 2018; Jones 2012; Mitchell 2011; Vitalis 2007). Geographers, grappling with U.S. power across the region, have approached these

dynamics through various mechanisms, spanning from knowledge production to international financial institutions, foreign aid, and military intervention and occupation (D. Harvey 2003; Roberts, Secor, and Sparke 2003; Smith 2005; Roberts 2014; Bhungalia 2015).

In this chapter, I expand this geopolitical and geo-economic lens to the realm of U.S. higher education. I argue that Qatari women's education is entangled in a multitude of fantasies and fears about the future of masculinist extractivist and militarized infrastructure in the Gulf. Transnational demographic fever dreams, contradictory and delusional fantasies about population, currently underpin the Gulf's knowledge economy projects. Fever dreams over the production of Aggie engineering leaders in Qatar, while fixated on the absence of Qatari men and the overabundance of Qatari women, is interwoven with fears over Qatar's racially-coded "demographic imbalance." This demographic fever dream is nonsensical. Yet, administrators, faculty, staff, policymakers, and even U.S. diplomats are constantly doing the math, pointing out that there just are not enough Qataris to man the military and the fossil fuel industry. The fever dream persists, chaotically shifting and identifying new, often contradictory, mechanisms to re-engineer Qatar's population for a post-oil future. The fantasies and fears underlying it, projecting a demographic future where Qataris have replaced a foreign workforce, are simultaneously about the hegemony of the United States in the Gulf.

Chapter Six: Conclusion

...if we want to change the university and construct a knowledge commons we need to be concerned not only with the content of the curricula, and most important, the cost of studying, as crucial as these undoubtedly are. We need to question the material conditions of the production of a university, its history, and its relation to its surrounding communities. Especially in the U.S., where so much of the land used by institutions was appropriated following the bloody dispossession of its former inhabitants, such a reckoning is essential. --Sylvia Federici in “The University: A Knowledge Common?”

As I was grappling with whether I should wrap up my research during the first few months of the COVID-19 pandemic, *High Country News*' land-grab university report came out. I was still living in Doha, which was under lockdown at the time. In the aftermath of this report, I found myself rethinking how I was conceptualizing the branch campus as a territorial extension of a land-grant university (Chapter Three). This was followed a few months later by the summer of uprisings against white supremacy and anti-Black racism in the aftermath of the murder of George Floyd by Minneapolis police. As my own department at UW-Madison went remote and my life in Doha was limited to my apartment, I began to participate in discussions with fellow graduate students about social justice at our university and in our department. Official statements from UW–Madison and universities across the country denounced racism and articulated institutional commitments toward diversity, equity, and inclusion initiatives. The demands that groups of students, faculty, and staff at UW–Madison and universities across North America formulated, on the other hand, pushed for divestment from the police and the military on campus. Some statements explicitly connected campus policing to questions of land and Indigenous dispossession, citing the land-grab universities report. U.S. branch campuses in Qatar were not immune from these discussions, and students called on their administration and faculty to formulate their own statements addressing

the specificities of racism and university life in Qatar (Chapter Two). This sequence of events impacted how I understood Texas A&M University at Qatar. At the same time, the process of studying “the material conditions of the production of a [U.S.] university, its history, and its relation to its surrounding community” in Qatar fundamentally guided my engagement with these renewed student-led movements for universities working in the interest of social justice (Federici 2019, 101).

This dissertation reflects my attempt to think about the everyday life (including politics) of higher education between the Gulf and the United States. By grappling with the analytical tensions of moving and thinking between Doha and College Station, I conceptualize Texas A&M as a transnational space shaping the future of fossil fuels at various scales. I argue that Texas A&M’s branch campus works to rehabilitate fossil fuel futures, even in the context of post-oil development agendas in the Gulf (see Figure 10) and debates over energy transition, climate change, and Green New Deals in the United States (Ajl 2021; The Red Nation 2021). Texas A&M’s contradictory role transitioning Qatar away from oil and gas dependency into a knowledge producer entails molding Qatar’s demographics and gender relations (Chapter Five), crafting forms of student citizenship and belonging to both Qatar and the United States (Chapters Two, Three, and Five), experimenting with notions of engineering and work (Chapter Four), and rebranding the idea of the land-grant university mission (Chapter Three). And by moving across these four spaces, I show how this educational space, shaping the future of fossil fuels and capitalism in Qatar, reinforces the contemporary architecture of U.S. imperialism across the region.

Related to this overarching argument, I make three additional contributions. First, while the United States and the Gulf Cooperation Council (GCC) are materially connected through military infrastructure, joint operations, finance capital, weapons purchases, and higher education,

the state-society relations and political economy of GCC countries, such as Qatar, are most often conceptualized within a national or regional paradigm. Each of the chapters push against the forms of methodological nationalism (Moore, Rosenfeld, Nost, et al. 2018) pervasive in Gulf studies and, to a lesser extent, energy geographies, critical university studies, and anthropologies of the future. Through ethnographic research, I show how the future of fossil fuels, education, and capitalism in Qatar might be examined beyond nation-centered imaginaries. Not only does this approach offer insights into the role of U.S. institutions crafting the Gulf's post-oil economies, but it also unsettles approaches that exceptionalize the Gulf as a dystopian warning sign to the West. Gulf states have capitalized on these representations of the region's societies, economies, and its physical geographies (Kanna, Le Renard, and Vora 2020). The Gulf's atmospheric, marine, and earthly environments, treated as an indicator of what is to come elsewhere due to climate change, currently serve as a testbed for various technological fixes. The rust of pipelines due to extreme heat and salinity, the increasing sandstorms that disrupt solar panels and negatively impact air quality, and malfunctioning cooling technologies in the face of humidity and scorching heat—all these are opportunities to produce more resilient, profitable technologies and materials (Günel 2019). The Gulf's post-oil knowledge economy projects and research agendas are developed in close collaboration with U.S. universities such as Texas A&M.

Second, the concept *petro-education* contributes to geographical and anthropological scholarship on energy transition by showing how U.S. universities are important spaces that sustain and reproduce fossil-fueled capitalism. As engineering students at TAMUQ increasingly question pursuing careers in the oil and gas industry, petro-education adapts to channel them into the industry or the related work of greening its operations. The three modes of petro-education I identify in Chapter Four are flexible and redirect students' heterogenous interests, subject-

positions, aspirations, and demands for the future. Like the work of technical adjustments (Günel 2019), petro-education reproduces particular approaches to engineering and problem solving within the Gulf, while foreclosing others.

Third, and related to petro-education, I argue that the management and production of social difference among students is integral to this educational project of rehabilitating fossil fuel futures. By delving into Texas A&M's history as a segregated military college, I show how the land-grant university's practices of social engineering in Texas are retooled to produce Aggies in Qatar. Related to this contribution, I also examine how the institution's close contemporary relationship with the U.S. military molds student citizenship and belonging for the Qatar's post-oil future. The forms of belonging produced at the branch campus are intertwined with imperial citizenship on offer to students across Education City (Chapter Two). In TAMUQ's efforts to produce more Aggie engineers for Qatar's post-oil transition to knowledge, students are educated to simultaneously be patriotic to Qatar and the United States.

I make these arguments at the intersection of three fields: geographies of energy transition, anthropologies of the future, and critical university studies. These bodies of scholarship complement each other by filling in certain gaps and generating productive questions about Education City and energy transition. While geographies of energy transition offer insights into the construction of emergent energy markets and the political economy of transition, anthropologies of the future focus on everyday experiences of post-oil development agendas. At the same time, anthropologies of the future tend to focus on nation-centered imaginaries, even in relation to transnational spaces of knowledge production in the Gulf. Critical university studies, the investigation of how "capitalism as a social system...has been supported and challenged by

forces within the university,” (Ferguson 2017, 115) has helped me to situate the Education City project in relation to fossil-fueled capitalism.

Bringing these three fields of scholarship into conversation simultaneously generates numerous analytical tensions. A key tension I identified emerges from the absence of attention to the Gulf, particularly within critical university studies. In many ways, the social struggles and debates I grappled with in the opening paragraph above are at the heart of critical university studies. Yet, critical university studies most often focus on the geographies of U.S. higher education located within the official borders of the United States. Although U.S. universities have operated branch campuses in the Gulf for over two decades, they rarely are addressed in critical university studies’ scholarship (Vora 2018). When they are, these branch campuses are largely described as perversions of the U.S. university’s liberal values or the end-result of the neoliberal restructuring of higher education. These kinds of absences take on different forms within the other bodies of literature I draw on. By maneuvering between these multi-disciplinary bodies of work and putting them in conversation with my research findings, I examine how fossil-fueled capitalism is being remade between Qatar and Texas.

The tensions I encountered at the intersections of critical university studies, geographies of energy transition, and anthropologies of the future generated three additional topics I intend to explore in future work. First, I plan to further develop the questions I raise in Chapter Three about colonialism and the land-grant university’s operations in Qatar. *The Red Deal*, a movement-oriented document for climate justice and Native liberation, states: “The geopolitical relationship that countries like the United States have with the rest of the world is deeply intertwined with settler colonialism. Imperial projects build on settler colonial ones” (The Red Deal 2021). While *High Country News*’ land-grab university report provoked me to rethink how I understood the

reterritorialization of Texas A&M in Qatar, there are under-explored questions regarding the relationship between settler colonialism and imperialism articulated through land-grant universities. As I was writing this dissertation, I learned of several geographers working on land-grant universities' international operations, spanning from the ties between the University of Arizona and the Gulf (Koch 2020), the University of California system and Israel, and UW-Madison and Indonesia. Each of their projects focuses on the expertise produced by land-grant universities about land, particularly in the fields of desert science and agriculture, and how this knowledge was mobilized in support of national development agendas, state-building projects, and colonization abroad. In future work, I intend to further examine Texas A&M's land-grant mission in Qatar in relation to studies of land-grant universities operations outside the official borders of the so-called United States.

Second, this dissertation primarily focused on engineering education, rather than engineering research. In future work, I will draw on the data I collected about the securitization of engineering research at TAMUQ. The shifting terrain of the U.S. security state in the university, in search of foreign influence, heightened already existing contradictions over the role of U.S. universities in building a knowledge economy in Qatar. How do you trace foreign influence in the U.S. offshore university, which had been understood as a globalist educational endeavor? As an example of securitization against foreign influence, U.S. policy under the Trump Administration, particularly the 2019 Protect Our Universities Act⁸⁷, amplified these hierarchies, further excluding and marginalizing people in the branch campus, specifically researchers holding citizenship or residency status in Russia, Iran, and China, along with the many students at TAMUQ with “shitty” passports. However, rather than approach the heightened securitization as a contradiction

⁸⁷ See H.R. 1678 – Protect Our Universities Act of 2019: <https://www.congress.gov/bill/116th-congress/house-bill/1678?r=4&s=1> (accessed August 14, 2021).

particular to the Trump period—marking a shift from U.S. universities’ openness to global capitalism versus an embrace of isolationism and white nationalism—I found that these contradictions are endemic to higher education’s relationship to the U.S. security state. In this future research, I plan to examine two points of contradiction impacting engineering research in Qatar: the securitization of U.S. branch campuses against “foreign influence” and the creation of new research relationships through a funding program designed to privilege local knowledge production.



Figure 10. A sign for a conference at the student center in Education City.
Source: Author.

Finally, post-oil imaginaries in Qatar position natural gas as a transition fuel. These ideas were reinforced by Donald Trump, when he dubbed natural gas as “freedom gas,” reflecting broader attempts by the oil and gas industry to differentiate natural gas from oil and coal as a cleaner fossil fuel. In future work, I plan to trace how natural gas in the United States and Qatar became a site of development at TAMUQ. Qatar, one of the world’s top exporters of liquefied natural gas, is where various technologies for monetizing natural gas production were first implemented. I plan to further develop my analysis of petro-education by examining how TAMUQ facilitates the transfer of knowledge about natural gas produced in Qatar to Texas, and vice versa.

By exploring these three additional aspects of petro-education in future work, I hope to strengthen my argument about this offshore educational experiment to rehabilitate the future of fossil-fueled capitalism between Qatar and Texas. As the tour of the Company House Museum in the Introduction narrates Qatar’s past to reinforce the nation’s contemporary transition, Qatari labor is positioned as the nation’s greatest source of wealth. Yet, just as the British were entangled in the emergence of the Qatari nation and its labor hierarchies in the age of fossil fuels, strangely Texas is wedded to the story of Qatar’s post-carbon futures and attempts to remake itself (see Figure 10).

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