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The U.S. Fossil Fuel Divestment Movement: Towards a Justice-Based Paradigm of Sustainability at Higher Education Institutions

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THE U.S. FOSSIL FUEL DIVESTMENT MOVEMENT: TOWARDS A JUSTICE-BASED PARADIGM OF SUSTAINABILITY AT HIGHER EDUCATION INSTITUTIONS

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In the last ten years, the fossil fuel divestment movement at higher education institutions has emerged as a key component of the global climate movement. It has also posed a challenge to the dominant paradigm of sustainability in higher education by calling on institutions to help incite outward systemic change to ensure justice for those most impacted by environmental problems, rather than simple efforts to green the campus. As the movement sees a resurgent escalation in the U.S., this study uses data from active and inactive campaigns across the country to assess the key characteristics of institutions and campaigns that have been involved. Records from an organization involved in national coordination of the movement, campaign Facebook pages, and an online survey distributed to campaigns were used to obtain data. The results provide an overview of the current state of active campaigns and divested institutions, where divestment activity occurs and at what type of institutions, the types of groups leading campaigns and their goals, how campaigns construct their arguments, and the barriers and drivers faced by campaigns. The study offers valuable insight into the nature of the movement during its first ten years with implications for both higher education institutions and activist participants. Institutions should embrace divestment as a necessary direction for sustainability in a time of societal crisis and work to break down barriers faced by campaigns that attempt to initiate this process. The movement, though robust in the Northeast and on the West Coast, may need to work to expand, particularly into areas in the South and western half of the country that have had

very few campaigns. In addition, though justice has been heralded as a key tenet of the movement, campaigns were found to be limited in their conception and application of this principle by often employing it in the abstract rather than in regards to recognition of specific populations impacted by injustice or action to mitigate such injustices. This could be further developed in the movement, for example, through more focus on solidarity with frontline communities or targeting communities in need for reinvestment.

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CHAPTER 1

INTRODUCTION

Human society is currently facing unprecedented challenges associated with the sustainability of the systems by which it operates. A global economy reliant on continual exploitation of the natural environment coupled with social structures lending to increased inequality among human populations has resulted in mounting problems that critically threaten the wellbeing of humans and the environment (Stephens et al. 2008). Climate change is one such problem that currently threatens human society and ecological stability with dire consequences if further unmet by transformative action across many sectors to mitigate its effects (Healy and Debski 2016).

Major environmental problems like climate change are opening up opportunities for societal stakeholders to become leaders in creating systemic change to build a more sustainable society. With their role as the premier institutions of knowledge production and dissemination, higher education institutions hold a unique potential for being agents of change to facilitate this transformation (Stephens et al. 2008). Current sustainability discourse and action within higher education institutions, however, has been characterized as embodying an apolitical, reformist approach focused on internal efforts to incrementally reduce institutions' environmental impacts, instead of acting directly to create change in the world at large that will ensure justice for those most impacted by problems like climate change (Healy and Debski 2016). Scholars have linked these characteristics with higher education's close alignment with a neoliberal agenda that favors an economic growth view of sustainability (Huckle and Wals 2015, Selby and Kagawa 2010). Sustainability initiatives in higher education have also often been top-down, allowing students limited say in what actions take place (Healy and Debski 2016).

The ongoing fossil fuel divestment movement at higher education institutions has emerged as a challenge to this dominant paradigm in that it is largely driven by students and is focused on using institutions' influence to politically engage with the outside world in order to address systemic issues responsible for major environmental problems. Students involved in this movement have been leading campaigns to get their schools to publicly commit to divest financial holdings tied to fossil fuel companies in order to socially stigmatize an industry they see as being one of the primary culprits bearing responsibility for climate change. This movement is motivated not only by environmental concerns, but also concerns over environmental justice, which has been less touched upon in higher education sustainability discourse (Grady-Benson and Sarathy 2016, Healy and Debski 2016).

Students engaged in social movements at higher education institutions have had a noted impact on shaping cultural landscapes and policy (Rhoads 2016). Study of student movements focused on sustainability has increased in recent years, but is still an emerging field, and little attention has been given to highly politicized movements like fossil fuel divestment. In addition, there is a lack of studies of student sustainability movements that span across multiple institutions, including for fossil fuel divestment (Murray 2018). The college fossil fuel divestment movement has been ongoing for nearly ten years and has recently seen a surge of activity, including a national day of action in February 2020 that was the largest day of action for the college fossil fuel divestment movement so far (Divest Ed 2020). A movement-scale study of the college fossil fuel divestment movement presents an important opportunity to assess its progress and the lessons learned so far as it enters a new decade.

This study specifically aimed to assess the fossil fuel divestment movement at United States higher education institutions in three ways. The first assessment aimed to describe the

characteristics of institutions where campaigns have occurred, including how many have active campaigns, how many have divested, the geographic distribution of institutions where campaigns have occurred, and what type of institutions campaigns have occurred at. The second aimed to describe the characteristics of campaigns, including the type and makeup of groups leading them, their goals, and what themes they use to construct their arguments. The final assessment asked what barriers and drivers campaigns experience to advancing towards their goals. Three primary methods were used that each collected data from as many campaigns within the United States as possible, both inactive and active. The first of these methods was an analysis of data on institutions that have had campaigns obtained from the program Divest Ed, which focuses on coordinating and coaching college fossil divestment campaigns in the United States. The second method was an analysis of text from the "About" section of campaign Facebook pages. The third method was an online survey distributed to campaigns by email.

In addition to providing an expansion and update to the current literature on the college fossil fuel divestment movement, the intended contribution of the study was twofold. First, the study was intended to provide information to decision-makers and other stakeholders at higher education institutions on the nature and dynamics of the movement. A second aim of the study was to provide movement leaders, working from the scale of national coordination down to that of individual campaigns, with analysis to help better reach their goals. With these objectives considered, and an overarching goal in mind of the movement of sustainability in higher education towards a justice-based paradigm that is in line with the systemic change needed to meet today's crises, I adopt a critical perspective of both sustainability practice in higher education and the college fossil fuel divestment movement itself. For higher education, I consider ways in which action for fossil fuel divestment may be limited by the dominant

reformist, green economy paradigm of sustainability that has been noted by several scholars in the divestment literature (Grady Benson and Sarathy 2016, Bratman et al. 2016, Healy and Debski 2016). For college fossil fuel divestment, I look for ways in which the movement may not be living up to its full potential, particularly in regards to its utilization of the concept of justice, which has been heralded by divestment scholars as a central tenet of the movement (Grady Benson and Sarathy 2016, Bratman et al. 2016, Healy and Barry 2017). The results of the study provided a valuable window into the college fossil fuel divestment movement in the United States that provide useful takeaways for both higher education institutions and leaders within the movement.

On a personal level, this project represents a culmination of over five years of experience as a participant in the college fossil fuel divestment movement, in which I have been a student leader of a campaign at Southern Illinois University. During the last year and a half, I have concurrently researched and participated in the movement, while also seeking to immerse myself whenever possible in the national movement coordination, including by following communications among movement leaders and attending mass divestment video calls. This participant experience has given me an invaluable perspective through which to develop my research framework.

CHAPTER 2

LITERATURE REVIEW

2.1 Sustainability in Higher Education

Sustainability is a relatively new focus for higher education, both in terms of education and institutional operations. The need for higher education institutions to help promote and adopt measures related to sustainability began to receive attention with the advent of the first international declarations for sustainable development, beginning with the Stockholm Declaration in 1972 (Wright 2002). Since then, continual international advocacy for sustainable development, largely led by the United Nations, including such efforts as the 1987 Brundtland Commission report *Our Common Future* and the United Nations Decade of Education for Sustainable Development between 2005 and 2014, has contributed to sustainability becoming an important consideration at higher education institutions (Healy and Debski 2016).

As critically important centers of knowledge production and dissemination, higher education institutions have potential to play a major role in transitioning society towards sustainability (Stephens et al. 2008). However, this role may not be fully realized based on higher education institutions' current limited approach to sustainability. Higher education institutions tend to put the focus of sustainability action on individual responsibility, either for the common citizen or for the institution in general. On the level of the individual person, sustainability initiatives in higher education are often geared toward influencing students and others to adopt more sustainable behaviors in their daily lives. On the level of the institution, focus is given to reducing institutions' own impact on the environment (Grady-Benson and Sarathy 2016). While these initiatives play an important role in public sustainability education and modeling sustainable practices for society, institutions maintaining this focus fail to embody

another critical role that higher education can play in societal transition towards sustainability in which institutions work directly to engage with broader society to promote and impart change (Healy and Debski 2016, Stephens et al. 2008).

This lack of outward action on the part of higher education institutions seems to stem in large part from a business-as-usual sustainability philosophy that is unwilling to challenge the underlying forces responsible for many of society's sustainability problems (Grady-Benson and Sarathy 2016). This largely takes the form of a close alignment with a neoliberal, globalization agenda in which higher education institutions act as free-market entities seeking economic growth and monetary gain. Sustainability then becomes little more than a tool for higher education institutions to demonstrate their moral-soundness (Huckle and Wals 2015, Selby and Kagawa 2010). There has been little attempt in higher education sustainability rhetoric to unpack how sustainable development can be a model goal for society if "development" in the mainstream neoliberal sense is dependent on endless economic growth in a world with finite resources, a managerial and human-domination view of the environment, and exploitation and homogenization of marginalized groups of society (Selby and Kagawa 2010). Educational institutions attempt to bring a balanced approach to sustainability by utilizing the "triple bottom line" system (weighing considerations of society, environment, and economy), but even this falls short on a critical level by seeming to equate the importance of social and environmental wellbeing with the desire for making a profit, as Selby and Kagawa (2010) point out. Scholars argue that in order for humanity to make its best attempt at solving major environmental problems like climate change, and transition to a truly sustainable society, immediate actions are needed to transform the systems that humans rely on, but higher education institutions seem

content to enact gradual, reformist policies directed within the institution (Grady-Benson and Sarathy 2016, Healy and Debski 2016).

In spite of these issues, students at higher education institutions often have difficulty changing and developing sustainability policies due to these decisions typically being top-down, and students having difficulty understanding how institutional policies are made and being able to navigate the pathways to influence them (Murray 2018).

2.2 The College Fossil Fuel Divestment Movement

Within the last decade, the fossil fuel divestment movement has emerged as a starkly contrasting counter to mainstream sustainability rhetoric in higher education and elsewhere focused on individual responsibility within the established economic system (Grady-Benson and Sarathy 2016). The movement began in 2010 when a student group at Swarthmore College in Pennsylvania launched a campaign to get their school to divest from fossil fuel companies in solidarity with communities in Appalachia fighting mountaintop removal. Shortly after, students at several other higher education institutions had begun organizing for divestment from coal companies at their schools (Bratman et al. 2016). These first seeds of action attracted the attention of prominent environmental advocates and national and international activist groups, who began to promote the issue and lend help to students initiating similar campaigns. Most prominent of these was author Bill McKibben and his climate-action organization 350.org, whose widespread promotional efforts inspired hundreds of student-led fossil fuel divestment campaigns in the United States and internationally (Grady-Benson and Sarathy 2016, Healy and Debski 2016, Leal Filho et al. 2018).

The movement has since become an important component of an international grassroots uprising for climate action (Healy and Debski 2016), and has expanded beyond higher education

institutions with groups campaigning for religious organizations, philanthropic foundations, governments, and more to divest. As of March 30, 2020, the 350.org associated advocacy network Fossil Free listed on their website 1187 institutions worth approximately $14.14 Trillion that have made fossil fuel divestment commitments, 15% of which were educational institutions (Fossil Free, n.d. a). Scholars have argued that although the divestment movement has done little to directly hurt fossil fuel companies financially, its indirect impacts have been substantial. This includes shifting public discourse around climate change to frame fossil fuel companies as the perpetrators of the crisis, thereby putting them on the defensive in the climate debate. It also includes changes in the finance sector, including opening up demand for fossil fuel free investment opportunities and challenging standard notions of fiduciary duty to better reflect future-looking and ethical considerations (Bergman 2018). In the United States, evidence has indicated that the first few years of the divestment movement initiated a "radical flank effect" on public climate change discourse in which the extreme ideas it presented found a way to public consciousness while liberal policy ideas that were previously seen as far reaching, like carbon tax and cap and trade, received more mainstream attention, thereby shifting the center of public discourse on climate action in a more radical direction (Schifeling and Hoffman 2017).

The goal of fossil fuel divestment campaigns at higher education institutions is to convince each institution to halt and remove institutional financial investments that include fossil fuel companies, usually those involved in fossil fuel extraction. There are different methods through which divestment is carried out by institutions that can include divesting anywhere from all fossil fuel companies to selected ones or selected sectors of these companies, such as coal companies. Most commonly, schools use the Carbon Underground 200 list of the top 100 coal companies and top 100 oil and gas companies, ranked by potential carbon emissions from their

reserves, as the companies to divest from (Healy and Debski 2016, Leal Filho et al. 2018). Reinvestment, the complementary side of divestment, in which institutions are called to invest money taken out of fossil fuels into desired alternatives, has been a part of the movement since its beginning, but has received less focus by campaigns and, in turn, less attention in the literature. Campaigns and organizations in the movement have often called for reinvestment in climate mitigation solutions, such as renewable energy and low carbon infrastructure (Bergman 2018). Others, including Divest Ed, have focused on the potential for reinvestment into communities, particularly those subject to historical marginalization (Divest Ed n.d. b, Grady Benson and Sarathy 2016). Divested institutions have often taken a more reserved approach, however, by reinvesting in currently held non-fossil fuel companies or fossil fuel free funds (Healy and Debski 2016).

The fossil fuel divestment movement in higher education can be considered radical in that it breaks with mainstream reformist efforts to address sustainability issues by striving to impart immediate change on society at a systemic level. The direct goal of getting higher education institutions to divest from fossil fuel companies lies primarily in the social stigmatization of the fossil fuel industry, in hopes of this creating political and economic pressure for a societal transition away from fossil fuel use (Bratman et al. 2016, Healy and Debski 2016). This has led to the idea espoused by divestment and other climate change advocates of a "just transition" to a clean energy economy, essentially a full-scale switch from the current extraction-based fossil fuel energy system to an equitable one powered completely by clean, renewable energy, while ensuring fairness for all involved in the process of transitioning (Healy and Barry 2017). On a deeper level, the movement can be seen as a challenge to the dominant economic systems of society, including the political and economic forces of capitalism

(Bratman et al. 2016). Divestment activists have often called attention to the corruption and immorality of the fossil fuel industry, and at the core of their argument is a desire to see a switch towards an economic system which values environmental and social wellbeing over the desire for profit (Healy and Debski 2016).

As such, social justice has often been observed as an essential value and arguing point for divestment campaigns (Grady Benson and Sarathy 2016, Bratman et al. 2016, Healy and Debski 2016). This stands in stark contrast with typical sustainability discourse at higher education institutions, which, by focusing on reformist environmental impact reductions, tends to ignore the systemic social injustices that are inseparably wrapped up with environmental problems (Healy and Debski 2016). The fossil fuel divestment movement can be thought of as emerging from the climate justice movement that originated in the late 1990s and early 2000s. The climate justice movement developed from the broader grassroots environmental justice movement which has sought to bring issues of disproportionate harms on historically marginalized populations, like racial minorities, poor people, and indigenous peoples into the mainstream environmentalist narrative, which has often ignored such issues. The climate justice movement recognizes that climate change will have the greatest impact on those same populations that have been subject to social marginalization and injustice for centuries (Bratman et al. 2016, Schlosberg and Collins 2014). However, despite the radical and social justice-oriented leanings of the movement, fossil fuel divestment has built its power on being a populist force made up of a broad assemblage of individuals with varying perspectives. College campaigns are often also made up of relatively privileged, white individuals (Rowe, Dempsey, and Gibbs 2016; 233-249; Bratman et al. 2016; Grady Benson 2014). The college fossil fuel divestment movement has always had the potential to be a challenge to the structural forces causing injustice in society, but could also end up taking

a narrow field of vision that focuses on climate change as an isolated environmental problem that can be solved through simple market shifts towards renewable energy (Rowe, Dempsey, and Gibbs 2016, 233-249).

In addition to the aspects stated above that differentiate the fossil fuel divestment movement from the current paradigm of sustainability in higher education on the basis of goals and values, the movement is substantially different in that it is led primarily by students calling for and creating institutional change from the bottom-up, as opposed to traditional top-down implementation. There is also a strong emphasis in the movement on collective action rather than individual responsibility (Grady-Benson and Sarathy 2016, Healy and Debski 2016). Campaigns often operate like other student groups do, with a small base of individuals working together, though with a specific goal of achieving institutional change on campus. This may involve working inside of institutional channels, such as meeting with administrators, or outside of these channels, working to build public support and create coalitions among other campus groups. The movement is also part of a vein of popular environmentalist activity that has increasingly turned to confrontational, direct action-style tactics, such as marches, sit-its, mass arrests, and blockades to achieve their goals. These types of actions may come during heightened periods of escalation when more conventional methods are continually met with rejection from decision-makers (Bratman et al. 2016, Healy and Debski 2016).

The college fossil fuel divestment movement in the United States is currently coming out of a phase of transition and starting to rebuild momentum. Around 2017 national groups like 350.org and the Divestment Student Network stepped back from their roles of connecting and supporting divestment campaigns at higher education institutions and the movement began to lose steam. Shortly after, Massachusetts non-profit Better Future Project, which had been

working with campaigns on a regional level, decided to step into the role of national coordination. In 2018 they launched Divest Ed, a program that would work to coach, provide assistance to, and connect campaigns across the country (Shemkus 2019). Divest Ed have since worked to escalate the movement. These efforts recently culminated with Fossil Fuel Divestment Day on February 13th, 2020 which saw campaigns on 59 campuses hold rallies, sit-ins, and other actions, and according to Divest Ed, was the largest single day of action for the student fossil fuel divestment movement. This came as momentum was already high from recent divestment commitments from major institutions like the University of California System and Georgetown University (Divest Ed 2020). This is the moment that the college fossil fuel divestment movement was in as of the completion of this study.

2.3 Student Movements in Higher Education

The fossil fuel divestment movement fits in with a long history of student-led social movements in higher education that have served to shape policy and culture across society. The 1960s is the decade that has been most noted for student activism, with highly visible movements against the Vietnam War, and for the rights of blacks, women, and other marginalized groups. These movements often used highly confrontational and aggressive tactics to promote their causes, such as marches, sit-ins, and destruction of property. Ultimately this era of student action helped shape the cultural conversation of the time, sometimes leading to policy changes as well. The era from the 1960s to near-present-day saw student activism become less apparent, but still continue in an impactful way (Rhoads 2016, Winston 2013). One key example was the apartheid divestment movement of the 1980s that saw students at higher education institutions campaigning for their schools to end their investments in companies doing business in South Africa. Higher education institutions that divested played an important role, along with other

types of institutions that took action, in contributing to policy and global stigmatization that deeply undermined the apartheid regime (Ansar, Caldecott, and Tilbury 2013). Student activism continues today, with some scholars noting a resurgence in activity over mounting social and environmental concerns. College campuses have recently played host to student involvement with such widespread movements as Occupy Wall Street and Black Lives Matter (Murray 2018, Rhoads 2016). Students organizing for action on climate change is another recent phenomenon that has taken hold at higher education institutions (Healy and Debski 2016).

Student movements for sustainability at higher education institutions is a fairly new field of study that has not yet received widespread coverage in academic literature. Much of the work done here has been on student sustainability movements of a less politically charged nature than divestment, such as campaigns for public behavior change, measures to make the campus more "green," and sustainable gardens. Many of these have also been case studies focused on successful initiatives at individual institutions, with limited ability to compare results across the higher education landscape (Murray 2018).

Despite this, barriers and drivers to success of student sustainability movements have been identified. Murray (2018) conducted a literature review of 38 articles on student sustainability movements in higher education and identified a number of these. The most common barrier reported was getting and maintaining student involvement, due to such factors as lack of interest, lack of free time, and high turnover rate of students. Another common barrier was difficulty navigating institutional governance systems to create change. This was both due to lack of knowledge of how the institutions were governed, as well as lack of power and ability for students to have their voices heard. In some cases, students faced stakeholders on campus who were openly unsupportive of or hostile to their objectives. A third common barrier involved

difficulty obtaining funding or resources for successful initiatives (Murray 2018). Some authors noted effects relating to this of institutions operating like businesses, with the financial bottom line often outweighing environmental and social concerns (Bratman et al. 2016, Healy and Debski 2016).

Two primary common drivers of student movement success were identified. First, collaborations both within and outside of institutions were integral to success for many initiatives. This included partnerships between student groups, support from outside environmental or social justice organizations, and working with faculty. Another key driver identified was interdisciplinary approaches that sought to expand beyond a narrow view of sustainability and bring in ideas and perspectives from other disciplines (Murray 2018). At least one study also identified the importance of maintaining consistent leadership to combat the student involvement problem, which could be achieved partly through training new student leaders at appropriate times (Duram and Williams 2015).

Murray (2018) describes several areas of research on student-led sustainability movements that should be expanded. Among these, more multi-site studies are needed to gain a better understanding of similarities and differences between student sustainability movements at different institutions and the barriers and drivers they experience. In addition, more work needs be done to identify actionable steps that can be taken by student movement participants and other stakeholders at higher education institutions to best facilitate student-led transitions to sustainability. There is also a general lack of research on student sustainability movements oriented towards political change on a societal level. Indeed, Murray only identifies three articles on student movements for fossil fuel divestment at higher education institutions. The highly political nature of this type of movement may result in additional or different barriers and drivers

than less political sustainability movements. For example, a case study of a student fossil fuel divestment campaign at American University found that participants had to deal with challenges associated with accommodating students with less radical perspectives than others and determining whether to work inside or outside of institutional decision-making channels to further the campaign. Students dealt with these issues, respectively, by working with students with less radical orientations to increase involvement and using a balanced mix of inside and outside strategies (Bratman et al. 2016). Finally, Murray points out a major lack of studies addressing how student sustainability movements interact with intersecting issues of social justice, equity, and power. This includes how student campaigns work with social justice or indigenous groups. More research that addresses the intersectional nature of sustainability as it relates to student movements at higher education institutions is clearly needed.

CHAPTER 3

METHODS

3.1 Introduction

The purpose of this study was to assess the characteristics of fossil fuel divestment campaigns at higher education institutions in the United States and the higher education institutions where they occur, as well as to assess the barriers and drivers that fossil fuel divestment campaigns at higher education institutions in the United States experience to advancing towards their goals. These goals are summed up in the following three overarching research questions:

1. What are the characteristics of higher education institutions in the United States at which fossil fuel divestment campaigns occur?
2. What are the characteristics of fossil fuel divestment campaigns at higher education institutions in the United States?
3. What are the barriers and drivers that fossil fuel divestment campaigns at higher education institutions in the United States experience to advancing towards their goals?

The study first involved identifying a population of the largest number of higher education institutions in the United States as possible where fossil fuel divestment campaigns have occurred. This was done by obtaining records on campaigns from Divest Ed, a program of the nonprofit organization Better Future Project that focuses on coordinating and coaching fossil fuel divestment campaigns at colleges and universities across the United States. To obtain data to answer the study's research questions, three separate methods were used. These were a study of institutional data from the records provided by Divest Ed, a study of the text of "About" sections on campaign Facebook pages, and an online survey sent to campaigns across the country. To

answer Question 1, information directly from the records provided by Divest Ed was used. For this, an expanded population of institutions where campaigns have occurred that was determined towards the end of the study period was used in lieu of a sample. The analysis for this portion involved computing descriptive statistics on the data that was obtained. To answer question 2, data obtained from the Facebook study was used, with supplementary data provided by the online survey. These methods utilized separate samples that were analyzed separately, but the results for each were both relevant for the research question. The analysis for this portion involved computing descriptive statistics from qualitative and quantitative data from the Facebook pages and survey responses. Question 3 was answered with data obtained from the barriers and drivers portions of the online survey, using the campaigns that returned the survey as the sample. The analysis for this portion involved computing and comparing descriptive statistics for ratings given to a number of possible "barriers" and "drivers" by survey respondents. With the purpose of the study being primarily to describe the key characteristics and experiences of fossil fuel divestment campaigns and characteristics of the institutions where they occur, along with the small sample sizes used (particularly in the case of the online survey), multivariate and inferential statistical analyses were not used.

In addition to the data collected and analyzed through the methods described above, I build upon over five years of experience as a participant in the college fossil fuel divestment movement, as a student-leader of a campaign at Southern Illinois University. During the period of the study, I not only concurrently participated in this role but also sought to immerse myself in the national movement as much as possible, including by participating in mass video conference calls for campaigns throughout the country organized by Divest Ed and following communications between college divestment organizers throughout the country on the Power

Shift Network Slack online workspace used by Divest Ed and many organizers within the movement for communication and coordination. Though this participant experience did not provide any data directly used for this study, it did contribute essential knowledge that helped to guide the development of the study and the conclusions that were made. Due to my close ties to the campaign at Southern Illinois University, this institution was not included in the sample for the Facebook study or for potential outreach for the online survey, as I would have had undue opportunity to influence the data collected for these. However, Southern Illinois University was included in the population studied for the institutional characteristics analysis in order to not leave it out of the overall picture sought to be created here of institutions where campaigns have occurred.

A full list of all higher education institutions used in this study can be found in Appendix A. It is noted here which institutions were used for the Facebook study and online survey, while the full list constitutes the expanded population of institutions used for the institutional characteristics study.

3.2 Identifying Initial Population

The first step in the study was to identify an initial population of the largest number possible of United States higher education institutions where fossil fuel divestment campaigns have occurred. For this, permission was granted by Divest Ed to use two of their databases on fossil fuel divestment campaigns at United States higher education institutions. The first was a regularly updated interactive map of all known past and present campaigns in the United States featured on their website at divested.betterfutureproject.org/campaign-map. The second was a regularly updated internal spreadsheet used by Divest Ed staff and affiliates that contains data on all known United States higher education institutions where fossil fuel divestment campaigns

have occurred. During the months of May through August 2019 institutions with past or present campaigns were identified from these two sources. Using both sources was deemed important because the map and the spreadsheet were not always updated at the same time and some institutions that appeared on one did not appear on the other. This process took close to four months due to the simultaneous collection of campaign email addresses and Facebook pages discussed in sections 3.4 and 3.5 below, however the records were rechecked at the end of the period to make sure that no institutions had been added during the process that were missed, and the final list comprised of 249 institutions was considered up to date as of August 30th, 2019.

For the purpose of the process described above and this study in general, the "institutions" considered are any higher education entities that have had a campaign advocating for that entity to divest from fossil fuel companies or that has made a commitment to fossil fuel divestment. This includes college and university systems that were occasionally listed in the Divest Ed records, sometimes in addition to institutions within those systems. It also includes institutions where administrators have committed to divestment without being called upon to do so by other stakeholders, such as students. These institutions were not always differentiated within the Divest Ed records, but they were assumed to be rare cases.

3.3 Institutional Characteristics Data Collection

To address Research Question 1, data on United States Higher Education Institutions where fossil fuel divestment campaigns have occurred was obtained directly from the internal spreadsheet provided by Divest Ed. This was done during the latest time possible during the research period to ensure the most up to date data was used. By the time this process was to begin a number of new institutions had been added, so the population for this component of the study was updated to match the expanded list of 266 institutions now included here and data was

collected on all of the institutions (see Appendix A for a full list of these institutions). This data collection occurred between February 17th and February 26th, 2020, making the institutional data collected completely up to date as of the end of this period. This timing also allowed for information to be included that was added surrounding the national day of action for higher education fossil fuel divestment campaigns Fossil Fuel Divestment Day on February 13th, 2020.

Data were collected on a variety of characteristics relating to the institutions and the divestment activity that has occurred there, whenever the information was listed for these factors, and compiled in an Excel spreadsheet. Factors relating to the nature of the institutions included the state institutions are located in, enrollment numbers, size of the institutions' endowments, whether the institutions are public or private, and various other descriptive factors noted for the institutions (such as being a community college, having a religious affiliation, or designation as an Ivy League school). Characteristics relating to divestment activity at institutions that were recorded were whether the campaign that has occurred at each institution was currently active or inactive and the type of divestment commitment made by institutions, when applicable. Divest Ed classifies divestment commitments by institutions into two overarching categories: full divestment and partial divestment. Fully divestment means that an institution has committed to divest from all (or the Carbon Underground 200) fossil fuel companies including coal, oil, and natural gas companies. This includes institutions that have only committed to divesting their direct investments in such companies. Partial divestment means that an institution has committed to divest from some fossil fuel companies, such as coal or tar sands companies, or certain fossil fuel companies (Divest Ed n.d. a). It was recorded if each institution was marked with these designations. If neither designation was given, an institution was marked as not having a divestment commitment.

3.4 Campaign Facebook Page Data Collection

An analysis of text from the "About" section of Facebook pages for fossil fuel divestment campaigns at as many of the higher education institutions as possible within the initial population determined was carried out as the primary method of addressing Research Question 2. Social media, including Facebook, has been seen to play an important role in social movements in recent years, and therefore offers an invaluable opportunity to glean information on these movements from a research perspective (Dahl Crossley 2015, Monterde et al. 2015). As such, research has been done on student and youth movements that has exploited activists' common use of social media platforms for communicating with the public and among each other (Maireder and Schwarzenegger 2012, Bosch 2017). Researchers in other fields have also used information on public Facebook pages as a primary data source, for example in studies of corporate marketing strategies and online memorialization for the dead (Parsons 2013; Kern, Forman, and Gil-Egui 2013). However, college fossil fuel divestment campaigns' presence on social media offers an opportunity for research that so far has not been exploited. The fact that Facebook pages connected to campaigns at about two-thirds of institutions in the initial population were identified demonstrates that Facebook is a common tool used by campaigns to communicate with the public, and therefore has the potential to be useful for research. The method of analyzing text on the "About" sections of campaign Facebook pages extends document analysis techniques utilized by other researchers to understand the college fossil fuel divestment movement (Healy and Debski 2016; Grady Benson and Sarathy 2016; Maina, Murray, and McKenzie 2020; Stephens, Frumhoff, and Yona 2018). For the purpose of this research, the particular method used represented a means of obtaining documents sharing information about campaigns that was available for a large portion of institutions, was easy to

identify and access, and was standardized to a single format.

The process of preparing to collect data began during the period of May through August 2019 when Facebook pages for campaigns were identified during the process of identifying the initial population of institutions to use for the study. During this period, as institutions with fossil fuel divestment campaigns were identified from the Divest Ed campaign map and internal spreadsheet, Facebook pages for campaigns at these institutions were also identified. This was done through two methods. First, if one or more campaign Facebook pages were listed among the information provided for institutions with divestment campaigns on the Divest Ed map or spreadsheet this was recorded for the institution in question. Second, if no Facebook page was listed for a campaign at a particular institution, or if Facebook pages listed no longer existed or were inaccurately tied to the institution in question, an internet search was conducted to try to identify a Facebook page for a campaign for the institution in question. This was done on both Facebook and Google, usually using the key terms "divest", "fossil free", or "fossil fuel divestment" in addition to the name of the institution. For Google searches, usually only the first page of results was looked at. For the Google search, if a website or webpage for a campaign or an article about divestment activity at the institution in question came up, these were looked at to see if a campaign Facebook page could be identified from these or if the name of a group working on running a divestment campaign at the institution could be identified, in which case a Facebook and Google search using the group name was conducted. Both Facebook pages specifically for a divestment campaign at the institution and for a group running a divestment campaign at the institution are considered "campaign Facebook pages" for this component of the study and were recorded. Occasionally the same Facebook page was identified for multiple institutions within a higher education system, due to a cross-campus effort for divestment at

those systems, in which case the page was attributed to the system rather than any of the individual institutions within them.

The next part of the Facebook study involved extracting the data from the Facebook pages identified to be used for the analysis. This process occurred between January 17th and January 27th, 2020. For each institution from the initial population with one or more Facebook pages identified, one page was selected for extracting data. If more than one page relating to a divestment campaign at an institution had been identified, the one that was used was the one that was deemed to be most relevant to the study. For example, pages specifically for a divestment campaign were favored over pages for groups running a divestment campaign, pages with more recent posts were favored over pages with less recent posts, and pages with no text in the "About" section mentioning divestment were considered disfavored. Extracting the data involved copying any text from the "About" section of the pages that allows descriptive text (including the brief and long description, Story, mission statement, General Info, Products, Impressum, and Awards portions of the section) and pasting it into a single Word document used for all of the data, labeled with the name of the institution. Additional data collected and compiled in an Excel workbook included the date of the page's last post and the year the page launched (if this was included in the designated section for this in the "About" section). It was also recorded whether the text from the "About" section described a campaign for fossil fuel divestment only, mentioned other activities in addition to campaigning for fossil fuel divestment, didn't mention fossil fuel divestment at all, was unclear about whether it was referencing fossil fuel divestment, or if it had no text in the descriptive sections at all. This process generated a total of 166 pages at different institutions to potentially use for the analysis.

3.5 Online Survey Response Collection

An online survey of individuals who have been involved with student-led fossil fuel divestment campaigns at higher education institutions was conducted in order to address Research Question 3 and partly address Research Question 2. This portion of the study focused specifically on student-led campaigns because a large portion of the survey concerned experiences of campaigns, and it was assumed that the experiences of student-led campaigns may vastly differ from those of campaigns led by other stakeholders (such as faculty or alumni). Based on the literature on the college divestment movement and my own experience, students were understood to be the stakeholder type leading campaigns in the vast majority of cases, so the results from the survey were still expected to represent the norm of campaigns within the movement.

The process of conducting the survey began during the period of May through August 2019 when contact email addresses for campaigns to send the survey to were identified during the process of identifying the initial population of institutions to use for the study, much in a similar way to how campaign Facebook pages were identified, as described in section 3.4. During this period, as institutions with fossil fuel divestment campaigns were identified from the Divest Ed campaign map and internal spreadsheet, contact email addresses for campaigns at these institutions were also identified. This was done through two methods. First, if one or more contact email addresses for a campaign were listed among the information provided for institutions on the Divest Ed map or spreadsheet this was recorded for the institution in question. Second, if no email address was listed for a campaign at a particular institution, an internet search was conducted to try to identify a contact email address for a campaign for the institution in question. This was done concurrently with the search for Facebook pages for campaigns at institutions, if applicable, by searching on both Facebook and Google, usually using the key

terms “divest”, “fossil free”, or “fossil fuel divestment” in addition to the name of the institution to look for Facebook pages, websites, or webpages with information on a campaign at the institution that listed a contact email address for the campaign. If the name of a group running a divestment campaign at the institution in question was discovered through this process additional Facebook and Google searches on these groups was conducted if an email address had not been discovered yet. Email addresses specifically for a divestment campaign at the institution, email addresses for a group running a divestment campaign at the institution, and email addresses for representatives of these campaigns were all recorded (although email addresses of specific individuals listed on the Divest Ed spreadsheet were not recorded due to privacy concerns associated with these not being publicly available records). Occasionally the same email address was identified for multiple institutions within a higher education system, due to a cross-campus effort for divestment at those systems, in which case the address was attributed to the system rather than any of the individual institutions within them.

The survey sent to campaigns was designed and distributed using the online survey platform Qualtrics, and contained a cover letter followed by 64 questions distributed over three sections. Appendix A contains the full text of the survey. The first section contained questions designed to obtain background information on the campaigns participating that included multiple choice questions and questions that asked subjects to type a short factual response or an open-ended response. Factors questioned about in this section included what institution the campaign was located at, status of the campaign, time the campaign had been active for, goals of the campaign, progress and accomplishments of the campaign, type of group leading the campaign, the subject’s affiliation with the institution and campaign, number of people that have typically been involved in the campaign, and demographic makeup of individuals involved in the

campaign in terms of gender and race. The second section focused on barriers faced by campaigns. Sixteen potential barriers were given and subjects were asked to rate each on a scale from one through five for how much of a barrier they had been to their campaign advancing towards its goals, if experienced, with "1" being a very small barrier and "5" being a very large barrier. An option of marking "0" was also given to indicate that a factor was not experienced by the campaign. The third section focused on drivers faced by campaigns. 33 potential drivers were given and subjects were asked to rate each on a scale from one through five for how much of a driver they had been to their campaign advancing towards its goals, if experienced or used in the campaign's strategy or tactics, with "1" being a very small driver and "5" being a very large driver. An option of marking "0" was also given to indicate that a factor was not experienced by the campaign or used in its strategy or tactics. Some of the factors mentioned here were meant to directly contrast with others in order to asses which factor or factors among these are more of a driver to campaigns. These sets of factors are listed in Table 3.1. Both the barriers and drivers sections also included a question at the end of each where subjects were asked to write any major barriers or drivers, respectfully, that they experienced but were not mentioned among those given as possibilities in the section. For the purposes of this study, "barriers" are considered anything that acts as a deterrent towards campaigns advancing towards their goals, while "drivers" are considered anything that helps campaigns to advance towards their goals. These could include anything from the nature and processes of institutions, to campaigns' access to resources or support, to strategies used by campaigns. The phrase "advancing towards (a campaign's) goals" is used instead of "achieving divestment" to recognize that campaigns may have intermediate or additional goals that are important to them, and this was kept open for interpretation on the survey to allow campaigns to determine what it meant for them.

Table 3.1 Sets of contrasting potential drivers in survey

Range of Individuals Involved
Encouraging individuals with a variety of perspectives and views to get involved
Limiting involvement to individuals with similar perspectives and views
Leadership Style
Using a horizontal leadership approach
Using a vertical (hierarchical) leadership approach
Argument Framing
Using environmental arguments
Using social arguments
Using economic arguments
Using mix of environmental, social, and economic arguments
Inside Vs. Outside Strategy
Working inside institutional decision-making channels
Working outside of institutional decision-making channels
Using a mix of working inside and outside of institutional decision-making channels

The survey was distributed through the Qualtrics system to one email address for each institution that a contact address for a campaign had been identified for. For institutions which multiple contact addresses had been identified for, the address that was deemed to be most closely tied to the most recent activity of a campaign was chosen to send the survey to. Also, if email addresses for both a campaign or group running a campaign and for individual representatives of a campaign or group had been identified, the campaign or group address was chosen to send the survey to. On October 22, 2019, emails were sent to contact addresses for campaigns at 159 institutions containing a link to the survey. The email requested that one member of the fossil fuel divestment campaign the recipient had been associated with, if that campaign was student-led, fill out and submit the survey. The recipients were given exactly four weeks to complete and submit the survey, during which time two reminders were sent. A small amount of emails from the original distribution bounced or failed to be delivered. For the

campaigns tied to these institutions that an alternate email address was available for, a second distribution of emails was sent to these addresses exactly one week after the initial deadline and these campaigns were given an identical deadline and reminder schedule as those in the original distribution but just set back one week. Once the deadline for all surveys to be submitted was reached, a final reminder email was sent out to campaigns that had started but not finished the survey according to the data provided on Qualtrics. The final day given for campaigns to complete and submit the survey was December 10, 2019, by which date all completed surveys that were to be used for the study, 22 in total, had been received (all institutions that survey responses were used from are noted in Appendix A).

3.6 Data Analysis

To address the study's three overarching research questions, institutional data from the Divest Ed internal spreadsheet, data extracted from campaign Facebook pages, and data from the online survey responses collected, as obtained from the methods described above, were analyzed.

To address Research Question 1, regarding characteristics of higher education institutions at which fossil fuel divestment campaigns occur, the institutional data collected from the Divest Ed spreadsheet was analyzed, using the entirety of the expanded population of institutions with campaigns identified, rather than a sample. From the data collected, descriptive statistics were computed for each factor looked for to get a sense of what could be inferred about characteristics of institutions where fossil fuel divestment campaigns occur in general. This included finding the total number of institutions with given characteristics (e.g. public institutions, institutions with active campaigns, institutions that have fully divested) and finding a percentage of institutions with each characteristic out of the total population of institutions. From the data collected on location of institutions, totals and percentages were found for the number occurring in each of

the four regions and nine divisions of the United States defined by the United States Census Bureau (2018). The Divest Ed map of institutions with divestment campaigns was also used as a visual reference of where institutions that have had divestment campaigns are located. For quantitative data, such as enrollment and endowment size of institutions, measures of central tendency and distribution were computed, such as the mean, minimum, and maximum. For enrollment and endowment size, institutions were also categorized by classes representing equal intervals for the values for each of the factors (intervals of 10,000 students for enrollment $500 million for endowment size), and the totals and percentages of institutions falling in each of these categories was computed.

The process of analyzing the data extracted from campaign Facebook pages began by determining a final sample to use. The pages that were identified as not mentioning fossil fuel divestment in the "About" section were excluded. These mostly appeared to be pages for student environmental or sustainability groups that worked on a variety of initiatives and didn't mention their work on fossil fuel divestment. Six pages that were identified as being unclear whether they were referenced fossil fuel divestment (e.g. they may have mentioned "divestment" or sustainable investing but didn't clearly state they were working towards divestment from fossil fuels) were reviewed further by looking at other aspects of their page and recent posts, and all were included based on evidence of involvement with fossil fuel divestment found. This yielded a sample of 144 pages to be used for the analysis (see Appendix A for a full list of institutions with Facebook pages used for this study).

The next step was to read through the text collected from each page and mark down in an Excel workbook each key campaign characteristic that was mentioned at least once by a campaign. Some of these key characteristics were predetermined and looked for within the text

descriptions, while other were emergent in that if an important characteristic came up that had not been identified yet while reading over the text from a page, it was added to the characteristics looked for. There were three major categories of characteristics that were sought out and identified. The first was group makeup and type, which included the stakeholder types that were leading the campaign, the type of group leading, and the area of focus of the group leading the campaign. The second category was goals of the campaign, which included goals or demands listed on the page, including both the type of divestment they were seeking as well as any goals stated in addition to divestment. The final category was key themes that occurred in the text provided by the campaigns. These themes were primarily broken up into the areas of environmental, social, and economic. Environmental themes included anything related to the wellbeing of the environment or negative impacts on the environment, such as climate change, pollution, or conservation. Social themes included anything related to the wellbeing of people or groups of people, or negative impacts on this, such as health, justice, and human rights. To analyze themes of justice, the way campaigns referenced justice was looked at. This include both direct mentions of the words “justice” or “just” as well as references to disproportionate harms being imparted on particular groups of people or efforts to right these unfair harms. Economic themes included anything related to the wellbeing of or negative impacts on the economy as a whole or the economic or financial situation of institutions, groups, or people, such as financial benefits to institutions from divesting, economic impacts of climate change, and the development of clean industries. Any time an environmental, social, or economic theme or a subtheme within these areas was referenced at least once in the text from a campaign’s page it was noted that that theme was mentioned for that campaign. There were some themes that fell outside of the core environmental, social, and economic areas, such as references to the mission or values of

institutions or religious values, that were also noted in the same way.

The final step for the Facebook analysis was to compute descriptive statistics on the characteristics marked down from the text from campaign pages. This involved totaling up the number of pages that mentioned each characteristic and finding the percentage of all pages that mentioned each characteristic. For some types of characteristics that were not referenced by all campaigns, such as the stakeholder type leading the campaign, a percentage that referenced a specific characteristic relevant to that factor (such as being-student led) out of those that provided an answer for that particular factor was also found. For quantitative data on factors like date of last post, measures of central tendency and distribution were computed, such as the mean, minimum, and maximum.

Analysis of the online survey responses involved computing descriptive statistics for the questions within each section. For the background information section, the number of subjects that gave each particular answer for each question was totaled up and the percentage of the total number of subjects providing each answer was found. For questions that required subjects to type their answer, responses were sorted into categories and totals and percentages of the total responses were found for these. For the barriers and drivers sections, the total number of subjects that marked each score (0-5) for each potential barrier or driver listed was found. With these totals, two percentages were found: the percentage of the total responses indicating each score and the percentage of those who had marked each score above 0, indicating their campaign had experienced the factor in question, was found. The total and percentage of subjects marking any score above 0 was also found. Finally, for each potential barrier and driver the mean was found of all scores that had been given that were above 0, representing the average score out of all subjects whose campaign had experienced each factor. For the questions asking subjects to type

in any additional barriers or drivers experienced by their campaigns, responses received were broken into categories and the total responses for each category was found.

Research Question 2, regarding the characteristics of fossil fuel divestment campaigns at higher education institutions, was addressed through the analysis of the data obtained from the Facebook study, with supplementary data provided by the online survey. The Facebook study provided data on a variety of characteristics of campaigns through information publicly available that a sample of 144 campaigns had decided to display on the social media platform, including the type of group leading the campaigns, goals of the campaigns, and key themes campaigns used to frame the information they provided about themselves. The online survey provided data on characteristics of a sample of 22 campaigns that were given in direct response to questions by survey respondents, including goals of campaigns, types of groups leading the campaigns, demographic characteristics of individuals involved in the campaigns, positive and negative factors experienced faced by campaigns, and tactics used by campaigns. The Facebook study was the primary method used because it was focused specifically on determining campaign characteristics and had a substantially larger sample size. However, both the Facebook study and the survey provided unique insights into different characteristics of campaigns that were used to inform the conclusions of the study. Some of the questions asked in each method overlapped, such as the goals of campaigns and the types of groups leading campaigns, while others were similar or informed each other, such as the key themes explored by the Facebook study and questions asked on the survey about how useful framing arguments in certain ways was. In these cases, results from both methods were compared and used in conjunction with each other to inform the conclusions of the study.

Research question 3, regarding barriers and drivers experienced by campaigns, was

addressed solely through the analysis of the barriers and drivers sections of the online survey. Calculating the percentage of campaigns that experienced each barrier or driver provided evidence to make conclusions on how prevalent each barrier and driver is to campaigns in the movement. In addition, the means of the scores given to each barrier and driver for those campaigns that experienced each factor provided evidence to make conclusions on how strong of a barrier or driver each of the factors are to campaigns in the movement. To further understand what types of barriers and drivers are most important for campaigns, the factors that were scored in the survey were broken up into categories that were aggregated to be assessed together. For barriers, the factors were divided into factors involving the dynamics of groups leading campaigns (or group factors), factors relating to the nature of the higher education institution campaigns are located at (or institutional factors), and factors relating to collaboration with stakeholders or groups on campus or outside of the institution (or collaboration factors). For drivers, factors were broken up into group factors, institutional factors, collaboration factors, and the additional category of strategies used by campaigns (or strategy factors). For all of the factors within these categories the mean of the percent of campaigns who indicated that they had experienced each was found as well as the mean of the means that had been found for the ratings given to each of the factors by campaigns who had experienced them. For potential drivers tested within a category that were meant to directly contrast with each other (as discussed in section 3.5 and listed in table 3.1), only the highest scoring factor in terms of both percentage experienced and mean of the ratings was used for this part of the analysis in order to focus on the variations within these sets that are the biggest drivers. The values calculated for each factor within these sets of contrasting factors were also compared to each other to understand which ones are larger drivers than the others. Additional barriers and drivers that were written in by subjects provided

suggestions for other barriers and drivers that may be important for campaigns in the movement. The background information from the first section of the survey also provided important information to frame the results based on what types of campaigns and individuals were involved with the study (such as how long campaigns had been active and how much progress campaigns had achieved).

The methods used in this study were mainly designed to carry out a qualitative analysis to help describe the major characteristics of United States college fossil fuel divestment campaigns and the institutions they occur at, along with the barriers and drivers experienced by these campaigns. In addition, the sample sizes used were relatively small, particularly the sample of 22 campaigns that responded to the online survey. For these reasons, statistical analysis was restricted to using univariate descriptive statistics, instead of multivariate and inferential quantitative statistical analysis.

CHAPTER 4

RESULTS

4.1 Introduction

This study began by identifying an initial population of 249 higher education institutions in the United States where fossil fuel divestment campaigns have occurred. Data collection then proceeded through three component methodologies, after which analysis was done on the data collected to address the three overarching research questions. This chapter covers the results of the descriptive statistical analysis done on the data collected through each of the three data collection methods. Section 4.2 covers the results found from the analysis of data on characteristics of higher education institutions where fossil fuel divestment campaigns occur obtained from Divest Ed, while section 4.3 covers the results of the analysis of data obtained from campaign Facebook pages, and section 4.4 covers the results of the analysis of data collected from the online survey distributed to fossil fuel divestment campaigns at higher education institutions throughout the United States. Discussion of the results from these analyses will be covered in Chapter 5.

Before data collection began on the characteristics of institutions, the population used for higher education institutions where fossil fuel divestment campaigns have occurred was expanded from 249 to 266 institutions based on updates and additions within Divest Ed's records. A full list of all 266 of these institutions can be found in Appendix A, along with which ones were used in the Facebook and online survey studies.

4.2 Institutional Characteristics

Data was collected from the records of Divest Ed on 266 higher education institutions in

the United States where fossil fuel divestment campaigns have occurred to assess the key characteristics of these institutions in relation to the United States college fossil fuel divestment movement as a whole, including the nature of divestment activity at these institutions and the geographic distribution of the institutions. Data within Divest Ed's internal records is updated on a continual basis with information received from a variety of sources, so the information obtained was considered up-to-date as of when it was collected in February 2020. This section describes the results of the analysis of this data, which was conducted on all 266 institutions.

4.2.1 Divestment Activity

The first characteristics of institutions where divestment campaigns have occurred at that were looked at related to the specific nature of fossil fuel divestment activity that has occurred at these institutions. The major results of this analysis are described in Table 4.1. Appendix A also lists the divestment status and campaign status identified for every institution included in the study.

Table 4.1 Institution divestment activity

	Number	% of Total
Divestment Status		
Fully Divested	55	20.7%
Partially Divested	17	6.4%
Not Divested	194	72.9%
Campaign Status		
Active	119	44.7%
Inactive	147	55.3%

Of the 266 institutions identified, 72 (27.1%) were found to have made fossil fuel divestment commitments, while 194 (72.9%) have not made a fossil fuel divestment commitment. Institutions that have made commitments were further broken down into the categories of commitments used by Divest Ed. 55 institutions (20.7% of all institutions studied)

have committed to be “fully divested”, while seventeen (6.4% of all institutions studied) have committed to be “partially divested”. Some data on the types of full and partial divestment commitments that have been made was obtained, however this data was incomplete and not sufficient for clear results. For example, eleven institutions (all of which were from the University of California System) were noted as committing to divestment of both direct and indirect fossil fuel investments, five institutions were noted as committing to divestment of only direct fossil fuel investments, and eight institutions were noted to committing to full divestment in another way. However, the type of full divestment was not specified for the remaining 31 institutions in this category. For partial divestment, six institutions were noted as committing to divest from coal investments, two were noted as divesting from coal and tar sands investments, 6 were noted as partially divesting in another way, and three were not specified. Two of the institutions that had divested direct and indirect investments were also noted as having previously committed to partial divestment commitments, with one of these previously committing to divestment of only direct investments as well.

Of the 266 institutions identified, 119 (44.7%) were noted as having fossil fuel divestment campaigns that were currently active, while 147 (53.3%) were noted as having had campaigns that were now inactive. Twelve of the institutions that were found to have active campaigns were also institutions that had made fossil fuel divestment commitments, all of which were commitments to partial divestment. Data was obtained on the year campaigns were established for 38 institutions. The earliest of these was 2011 for a campaign at University of California Santa Barbara, while three institutions (Rochester Institute of Technology, Temple University, and Woods Hole Oceanographic Institution) had campaigns that started in 2020,

presumably within weeks of the completion of this study. The mean of the years listed as years when campaigns were established (expressed as whole numbers) was 2013.8.

4.2.2 Geographic Distribution

The geographic distribution of higher education institutions where fossil fuel divestment campaigns have occurred was analyzed by finding the total amount of all 266 institutions identified that are located within each of the United States Census Bureau's four regions and nine divisions. The descriptive statistics computed from this analysis are listed in table 4.2, along with the states that are included within each of the Census Bureau's divisions. A map of the Census regions and divisions is shown in figure 4.1. Among the four Census regions, the Northeast has had the greatest number of institutions with divestment activity, with 105 institutions (39.5% of the total). Within this region, New England has had 61 institutions with activity and the Middle Atlantic division has had 44 institutions. The region with the second highest number of institutions with divestment activity is the West with 72 institutions (27.1% of the total). Within this region, the Pacific division has had 55 institutions with activity and the Mountain division has had seventeen institutions. The region of the South has had the third highest number of institutions with activity, at 47 (17.7% of the total). However, this activity has largely been concentrated along to South Atlantic division, which has had 38 institutions with activity, while the East South Central and West South Central divisions have only has five and four institutions with activity, respectively. The Midwest region has had the lowest number of institutions with divestment activity, 42 (15.8% of the total). Within this region the East North Central division has had 24 institutions with activity and the West North Central division has had eighteen institutions with activity. Appendix A contains a full list of the states where each of the institutions used in this study are located.

Table 4.2 Location of institutions with divestment activity and divestment commitments by U.S. Census regions and divisions

	Institutions	% of Total	Divested	% of Divested
Northeast				
New England	61	22.9%	20	27.8%
Middle Atlantic	44	16.5%	10	13.9%
Total	**105**	**39.5%**	**30**	**41.7%**
Midwest				
East North Central	24	9.0%	3	4.2%
West North Central	18	6.8%	2	2.8%
Total	**42**	**15.8%**	**5**	**6.9%**
South				
South Atlantic	38	14.3%	7	9.7%
East South Central	5	1.9%	0	0%
West South Central	4	1.5%	0	0%
Total	**47**	**17.7%**	**7**	**9.7%**
West				
Mountain	17	6.4%	2	2.8%
Pacific	55	20.7%	28	38.9%
Total	**72**	**27.1%**	**30**	**41.7%**

New England states: CT, ME, MA, NH, RI, VT
Middle Atlantic states: NJ, NY, PA
East North Central states: IN, IL, MI, OH, WI
West North Central states: IA, KS, MN, MO, NE, ND, SD
South Atlantic states: DE, D.C., FL, GA, MD, NC, SC, VA, WV
East South Central states: AL, KY, MS, TN
West South Central states: AR, LA, OK, TX
Mountain states: AZ, CO, ID, NM, MT, UT, NV, WY
Pacific states: AK, CA, HI, OR, WA

Figure 4.2, which is a screenshot of Divest Ed's Campaign Map (found at divested.betterfutureproject.org/campaign-map) taken on March 11th, 2020, provides a visual representation of the spatial distribution of higher education institutions where fossil fuel divestment activity has occurred in the United States. The image was obtained around the same time that data was collected for the institutional characteristics portion of this study, and institutions shown on the map almost exactly reflect this data. Orange circles on the map

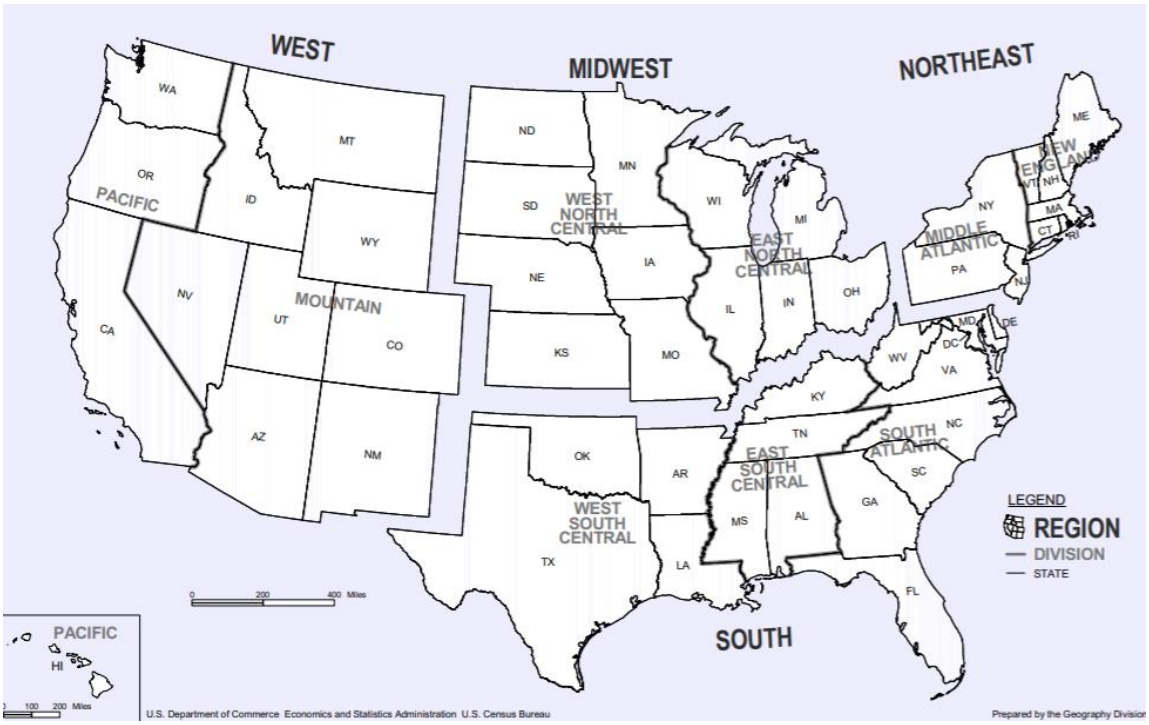

Figure 4.1 U.S. Census regions and divisions. Source: United States Census Bureau (2018). Not pictured is Alaska, which is in the Pacific division.

represent institutions that have committed to full divestment, yellow circles represent institutions that have committed to partial divestment only, blue circles represent institutions with currently active campaigns, and grey circles represent institutions with campaigns that are now inactive. The University of Hawaii in Honolulu, Hawaii, which has committed to full divestment and is the only United States institution with divestment activity identified not located in the contiguous United States, is not pictured. There are some institutions with divestment activity in Canada that are included on this map, though only United States institutions were included in this study. The map reflects the geographic distribution of institutions with divestment activity that is demonstrated by the data listed in table 4.2, with a large concentration of institutions with divestment activity along the east coast (New England, Middle Atlantic, and South Atlantic divisions) and west coast (Pacific division) of the country, while institutions with divestment activity are fewer or largely absent in the states between the east and west coast, particularly in

Figure 4.2 Map of higher education institutions in the U.S. with fossil fuel divestment activity. Image obtained from Divest Ed's Campaign Map (divested.betterfutureproject.org/campaign-map) on March 11, 2020. Orange circle = fully divested; yellow circle = partially divested; blue circle = active campaign; grey circle = inactive campaign. Not pictured is University of Hawaii in Honolulu, Hawaii (fully divested).

the East South Central and West South Central divisions, along with much of the states in the Mountain division.

The number of institutions out of the 266 total identified that have made divestment commitments per each Census region and division was also computed and is described in Table 4.2. These follow a similar trend of geographic distribution as with all institutions that have had divestment activity, with the Northeast and West having the most institutions with divestment commitments, with 30 (41.7% of divested institutions) each. Within the Northeast, New England has 20 institutions with commitments and the Middle Atlantic division has ten institutions. Within the West, the majority of divested institutions are in the Pacific region with 28 institutions, while the Mountain division only has two such institutions. The South is the region

with the third highest number of institutions with divestment commitments at seven (9.7% of divested institutions), though these all are located in the South Atlantic division. No institutions with divestment commitments were identified for the East South Central and West South Central divisions. The Midwest is the region with the lowest number of institutions with divestment commitments with five such institutions (6.9% of divested institutions). Within the Midwest, the East North Central division has three divested institutions and the West North Central division has two divested institutions. Figure 4.3 shows a modified version of the map in figure 4.2 where only the institutions that have made fossil fuel divestment commitments are shown. This map reveals a similar spatial pattern as that of the map with all institutions with divestment activity, with institutions that have made divestment commitments predominantly concentrated in the Northeast region (and South Atlantic states nearby) and in the states on the west coast. Relatively very few institutions in the states between the east and west coast of the United States were identified to that have made fossil fuel divestment commitments.

Figure 4.4 displays a bar graph representing the total number of higher education institutions that have had divestment activity and that have made divestment commitments per each of the Unites States Census divisions.

4.2.3 Institution Type

To get a sense of the type of higher education institutions where fossil fuel divestment campaigns occur at in the United states, basic characteristics of the 266 institutions identified were assessed, including the number of public versus the number of private institutions, and the distribution of the enrollment and endowment sizes of the institutions. The descriptive statistics for these characteristics are summarized in table 4.3.

The number of institutions identified as public was 142 (53.4%), while 124 institutions

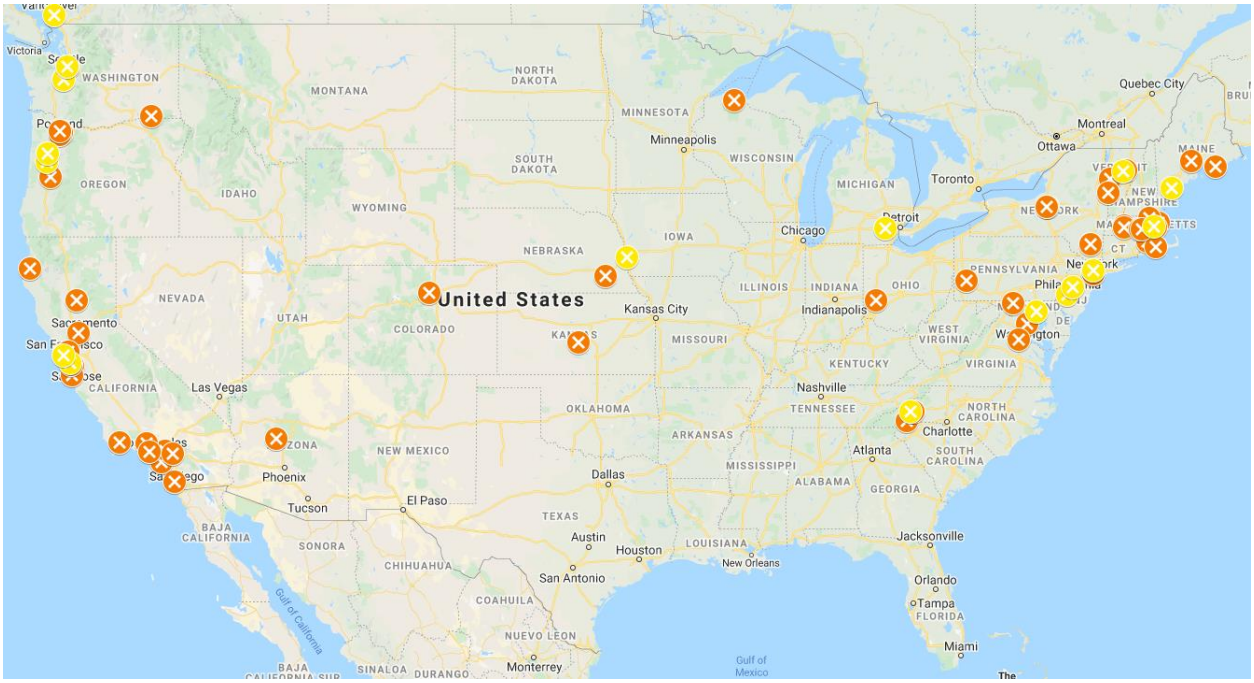

Figure 4.3 Map of higher education institutions in the U.S. that have made fossil fuel divestment commitments. Image obtained from Divest Ed's Campaign Map (divested.betterfutureproject.org/campaign-map) on March 11, 2020. Orange circle = fully divested; yellow circle = partially divested. Not pictured is University of Hawaii in Honolulu, Hawaii (fully divested).

(46.6%) where identified as private. Enrollment numbers for institutions (the combined total of undergraduate and postgraduate students at a given time) varied widely between 194 students at one private college to 478,638 students at one university system. Because there were several institutions that were marked as higher education systems that had far higher enrollment than any of the non-system institutions, it was decided to exclude these institutions from the descriptive statistics presented to create a less skewed picture of the types of campuses that students organize for divestment on, as campaigns for systems to divest are not necessarily active on all campuses within those systems. This left a total number of 226 non-system institutions that enrollment data was identified for. Of these institutions, 112 (49.6%) were identified as having less than 10,000 students. From there enrollment numbers decreased for each equal interval of 10,000 up through the interval of 40,000 - 49,999, which had eleven institutions. There were 8

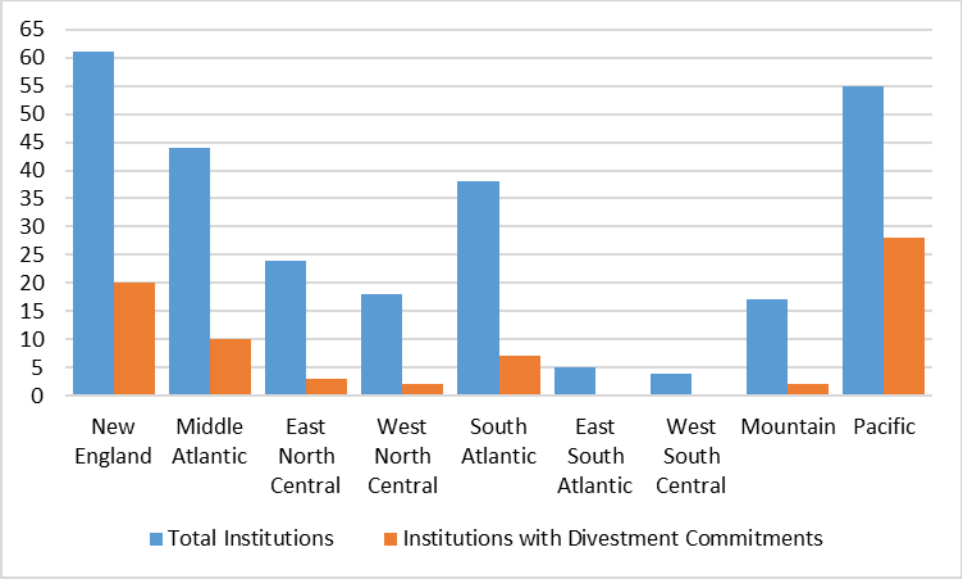

Figure 4.4 Number of institutions with divestment activity and divestment commitments per U.S. Census divisions

institutions that had enrollment numbers above 50,000 students, with the largest being 98,783 for Pennsylvania State University (a university with campuses throughout Pennsylvania). Figure 4.5 shows this decreasing distribution across equal intervals of enrollment numbers. The mean of all non-system enrollment numbers identified was 15,143.8 students.

The distribution of institutions' endowment sizes was found to follow a similar pattern, though there were no higher education institution systems that were found to be distinct outliers from non-system institutions and were kept in the descriptive statistics. Of 228 institutions that an endowment size was identified for, 113 institutions (49.6%) were found to have endowments less than $0.5 billion ($500 million). Of these, 49 institutions had endowment sizes less than $100 million. For institutions with endowments greater than or equal to $0.5 billion, the number of institutions decreased or stayed the same for all increasing equal intervals of $0.5 billion through the interval of $4.5 – 4.99 billion, which had one institution. Beyond this, nineteen institutions had endowment sizes greater than $5 billion, with the largest being Harvard University's at $36 billion. Figure 4.6 shows this decreasing distribution across equal intervals of

Table 4.3 Institution type

	Institutions	% of Answers*
Public vs. Private		
Public	142	53.4%
Private	124	46.6%
Enrollment		
0 - 9,999	112	49.6%
10,000 - 19,999	44	19.5%
20,000 - 29,999	36	15.9%
30,000 - 39,999	15	6.6%
40,000 - 49,999	11	4.9%
≥ 50,000	8	3.5%
Endowment Size		
$0 - 0.49 B	113	49.6%
$0.5 - 0.99 B	33	14.5%
$1 - 1.49 B	22	9.6%
$1.5 - 1.99 B	17	7.5%
$2 - 2.49 B	9	3.9%
$2.5 - 2.99 B	4	1.8%
$3 - 3.49 B	4	1.8%
$4 - 4.49 B	4	1.8%
$4.5 - 4.99 B	1	0.4%
≥ $5 B	19	8.3%

***** The percent out of all institutions that an answer for the particular factor was identified for Higher education institution systems were excluded from enrollment totals.

endowment size numbers. The mean of the endowment sizes for all institutions was $1.78 billion.

Other institutional characteristics were looked at in addition to the ones described above, however, the data obtained for other characteristics was not complete enough to make clear assessments for other factors. That being said, some other data is worth mentioning. There were 28 institutions (10.5%) that were noted as having a religious affiliation. Fifteen were identified as higher education institution systems. All eight higher education institutions that are considered part of the Ivy League were identified within the population. All six remaining active institutions

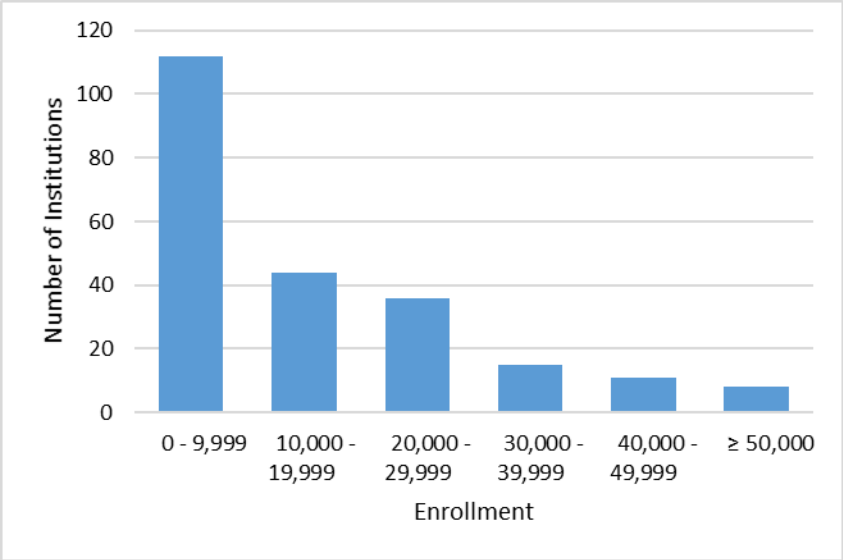

Figure 4.5 Institution enrollment size distribution. Excludes higher education institution systems.

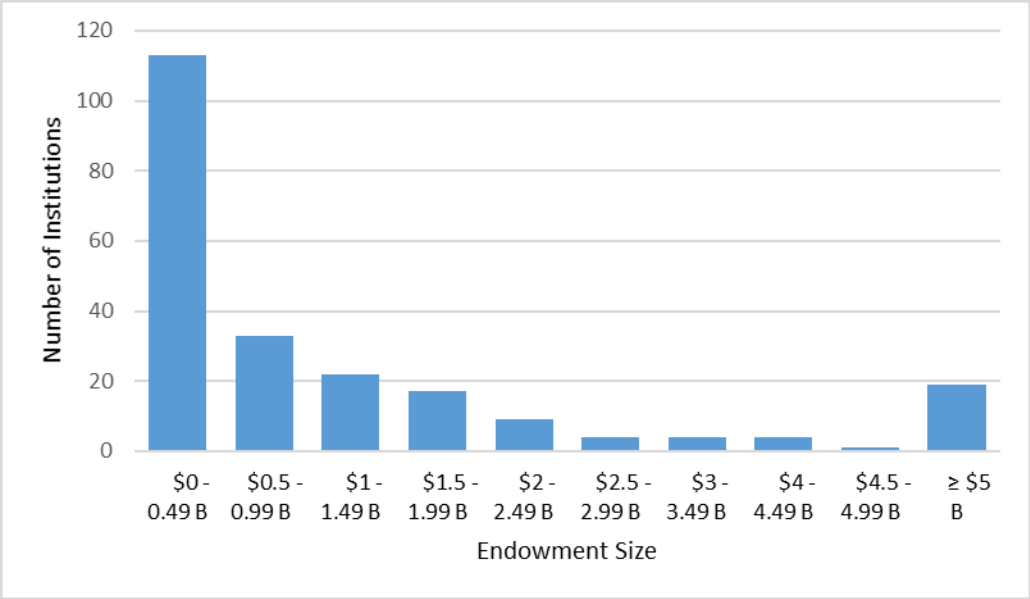

Figure 4.6 Institution endowment size distribution

within the group of prestigious historically women's institutions known as the Seven Sisters Colleges were present. Five of these are still considered women's colleges, which made up the five women's colleges in the population. Finally, five institutions were identified as community colleges.

4.3 Campaign Facebook Page Study

For the study of Facebook pages for college fossil fuel divestment campaigns a total of 144 pages, each representing a campaign from a different institution from the total initial population of 249 institutions, were selected. These pages varied in how recently they had been active with some not having made a post since as far back as 2013 and several having posts from 2020. The mean year that pages made their last post was 2018. The mean word count of the text extracted from the pages' "About" sections (excluding duplicate passages, which were deleted) was 180.3, though text provided in this section varied from a single sentence to several paragraphs. The following sections detail the results of the campaign Facebook page study, including information found on group makeup and type, campaign goals, and key themes.

4.3.1 Group Makeup and Type

The first characteristics looked for the campaign Facebook descriptions were what types of groups were leading the campaign and the types of stakeholders involved in them. The most data obtained out of these factors was for the stakeholder types involved in the campaigns. Of the 144 pages, 88 (61.1%) mentioned types of stakeholders involved in their campaigns. The most common stakeholder type by far was students, mentioned by 82 campaigns (93.2% of those providing an answer). Following this, alumni and faulty were both mentioned by thirteen campaigns (14.8% of answering), and staff were mentioned by five campaigns (5.7% of answering). Other types of stakeholders were mentioned by fourteen campaigns. This includes eleven campaigns that mentioned some variation of "community members" being involved, though it was not clear from most of these whether the campaigns were referring to individuals in the local community who are not affiliated with the institution or individuals within the general community of the institution (possibly including students, faculty, and other affiliates).

The results described thus far for stakeholder types involved are displayed in table 4.4. Of note, six campaigns who mentioned a stakeholder type did *not* mention students, though none of these included language that necessarily implied that students were not involved.

Table 4.4 Stakeholders involved in campaigns

	Number of Campaigns	% of Campaigns Answering
Students	82	93.2%
Alumni	13	14.8%
Faculty	13	14.8%
Staff	5	5.7%
Other	14	15.9%

Based on 88 campaigns who mentioned at least one stakeholder type involved. Campaigns are counted in all categories they mentioned.

Data was also collected on the types of groups and the major focus of groups leading campaigns, however, this data was not as complete or clear as with the data for stakeholder types. There were 29 campaigns who described they type of group they were part of. Fourteen of these noted being part of a "coalition," though it was usually not clear what the coalition referenced was comprised of. Another common response was being part of a campus organization, which thirteen campaigns directly mentioned. There were 47 campaigns that directly described the major focus of the group that they were part of. The majority of these, 29 campaigns, referenced focusing on the fossil fuel divestment campaign they were leading. Nine campaigns referenced being more broadly focused on climate action, while four referenced being even more broadly focused on environmental or sustainability work. There were three campaigns that were part of groups that worked on broader divestment goals than just divestment from fossil fuels. This included the campaign from University of Florida that also focused on divestment from arms trade and prisons, the campaign from University of South Florida that also focused on divestment from human rights violations, private prisons, and sweatshops, and the

campaign from California Polytechnic State University that focused primarily on divestment from industries perpetuating war with fossil fuel divestment also included as a side goal. Anecdotally, the majority of campaigns that did not directly describe the major focus of the group they were part of seemed to be focused on fossil fuel divestment, broader climate action, or broader environmental or sustainability work. California Polytechnic State University was the only institution noted with a campaign that was part of a group that seemed to be focused primarily on other social issues than climate change or other environmental-related issues.

4.3.2 Campaign Goals

The next characteristic studied from campaigns' Facebook pages was what the campaigns were seeking to achieve, stated in the form of goals or demands. 143 out of the 144 total campaigns made statements about what they were trying to achieve in the descriptions on their pages. A summary of the descriptive statistics on the main goals mentioned by campaigns is provided in table 4.5.

Of the 143 campaigns mentioning goals, 141 (98.6%) mentioned divestment from fossil fuels. Of the two campaigns not mentioning fossil fuel divestment, one most specifically discussed establishing a revolving loan fund at their institution to fund sustainable campus projects, while the other simply mentioned "encouraging their university to incorporate environmental concerns into its management of the endowment." These campaigns, however, were confirmed to be working on fossil fuel divestment from a general look at other sections of their Facebook pages. Only one campaign was focused on divestment from coal, with the rest mentioning fossil fuel divestment focusing on divestment from all fossil fuels (coal, oil, and natural gas) or a generally stated divestment from "fossil fuels". 27 campaigns (18.9%) mentioned in some form divestment from the top 200 fossil fuel companies. If not specifically

Table 4.5 Goals Described in Campaign Descriptions

	Number of Campaigns	% of Campaigns Answering
Divestment Type		
Fossil fuel divestment mentioned	141	98.6%
Coal only	1	0.7%
Top 200 fossil fuel companies*	27	18.9%
Other industries/issues**	4	2.8%
Direct and indirect investments	28	19.6%
Direct investments only	1	0.7%
Timeframe given	44	30.8%
Reinvestment		
All mentioning reinvestment	45	31.5%
Unspecified sustainable alternatives	34	23.8%
Clean/renewable energy	12	8.4%
Local/campus	2	1.4%
Other	4	2.8%
*Non-Divestment/Reinvestment****		
Education/awareness	11	7.7%
Investment transparency/disclosure	8	5.6%
Climate action beyond institution	5	3.5%
Campus energy/emissions reductions	4	2.8%
Fostering activism on campus	4	2.8%

Based on 143 campaigns mentioning goals they are working towards or demanding. Campaigns are counted in all categories they mentioned or apply to.
* Likely a reference to the Carbon Underground 200 list of the top 100 coal and top 100 oil and gas companies by the carbon emissions potential of their reserves

** Campaigns advocating for divestment from fossil fuels in addition to other industries or issues, such as prisons or war
*** Top five included

stated, this was understood to be likely in reference to the Carbon Underground 200 list of the top 100 coal and top 100 oil and gas companies ranked by the potential carbon emissions of their reserves often utilized by fossil fuel divestment campaigns (Fossil Free, n.d. b). Other than this, it was generally not clear whether campaigns were asking for divestment from only fossil fuel extraction companies or other companies along the fossil fuel supply chain, such as fossil fuel

distribution and utility companies (these types of further-downstream options were very seldomly mentioned). Only four campaigns mentioned a goal of getting their institution to divest from industries or issues other than the fossil fuel industry in addition to their fossil fuel divestment goal. The institutions these campaigns were located at and their additional divestment goals were:

- California Polytechnic State University: divestment from the "war machine", in particular weapons producers
- University of Florida: divestment from the arms trade and prisons
- University of South Florida: divestment from human rights violations, private prisons, and sweatshops
- Yale University: cancelation of holdings in Puerto Rico's Debt

Most campaigns did not specify whether they were calling for divestment of direct investments or indirect investments (such as investments in commingled funds that include fossil fuel companies), but of those that did, 28 (19.6% of institutions stating goals) specified both direct and indirect investments and one specified just direct investments. There were 44 campaigns (30.8%) that gave a period of time for which they wanted to see their institution achieve their divestment goals by. A large majority of these, 33 campaigns, called for the divestment process to be completed within 5 years.

There were 45 campaigns (31.5% of campaigns mentioning goals) that mentioned a reinvestment goal. This included both campaigns that directly mentioned reinvestment and those that called for directing investments towards particular industries or issues that likely implied reinvestment of money taken out of other investments. Of these campaigns, 34 (75.6%) gave mostly ambiguous statements on what they wanted their institution to reinvest in that alluded

broadly to investing more sustainably, such as “socially and environmentally responsible funds”, a “sustainable and just future”, or “just solutions.” The second most common type of statement given for reinvestment was a demand for reinvestment into clean or renewable energy, which was given by twelve campaigns (26.7%). Among the other types of reinvestment goals given, only two campaigns mentioned a goal of reinvestment into the local area or community. One of these campaigns simply mentioned reinvesting into “local alternatives”, while the other was the campaign advocating for investment into a new campus sustainable revolving loan fund, mentioned above, that was noted would create jobs for the community.

Of the 143 campaigns mentioning goals, 34 (23.8%) mentioned a goal that was not directly for divestment or reinvestment. The most common of these was to promote education or awareness of the issues they focused on (such as about climate change), which was mentioned by eleven campaigns. Other mentions of additional goals included eight campaigns that called for transparency or disclosure of investments, five campaigns that mentioned they were working on climate action goals outside of their institution, four campaigns that mentioned goals for implementing sustainable energy on campus or reducing campus carbon emissions, and four campaigns who mentioned helping to foster activism on campus as a goal.

4.3.3 Key Themes

The key themes in the descriptions provided on the campaign Facebook pages were analyzed by coding of themes observed and dividing them into the three categories of environmental, social, and economic themes, with themes not fitting into these categories being kept separate. Within the major three themes, key subthemes were identified that were mentioned often (generally, these are important themes that were mentioned by over 5% of campaigns). The descriptive statistics on responses identified for the three major themes,

subthemes, and other key themes are listed in table 4.6 and also represented as a bar graph in figure 4.7.

Table 4.6 Major Themes and Subthemes in Campaign Descriptions

	Number of Campaigns	% of Total
Environmental	**116**	**80.6%**
Climate change	99	68.8%
Social	**89**	**61.8%**
Justice	62	43.1%
Health	11	7.6%
Wellbeing of graduating classes	8	5.6%
Economic	**49**	**34.0%**
Financial benefit to institution	26	18.1%
Other		
Alignment with institution's values	52	36.1%
Sustainability*	45	31.3%

Campaigns are counted in all categories they mentioned themes related to. Only themes mentioned by over 5% of campaigns are listed.
*Includes only direct mentions of words "sustainability" or "sustainable."

Environmental themes were the most common among the three major themes, being mentioned by 116 campaigns (80.6%). Not surprisingly, climate change was an important environmental subtheme, being mentioned or referenced by 99 campaigns (68.8%). This was often discussed in terms of the effects of climate change, such as rising sea levels, worsening droughts, and increasingly strong hurricanes, on communities and society, and tying this to the need to publicly cut ties with fossil fuel companies. There were other environmental themes used that did not directly include climate change, such as negative impacts of fossil fuels on biodiversity and ecosystems, but most other use of environmental themes came through uses of non-specific concepts like "environmental responsibility" or "environmental sustainability".

The major theme that was used the second most was the social category, which was used

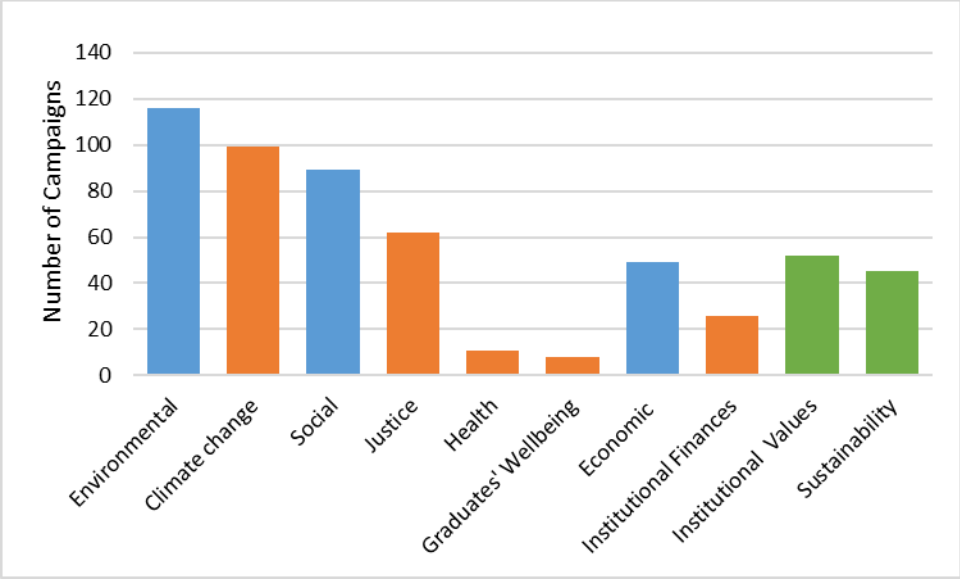

Figure 4.7 Major themes and subthemes in campaigns' descriptions. Each bar represents the number of campaigns using a particular theme or subtheme out of 144 total campaigns. Major themes are represented by orange bars with their respective subthemes following to the right in blue. The green bars represent themes not included in any of the major themes.

by 89 campaigns (61.8%). A common subtheme used within this was justice, which was mentioned or referenced by 64 campaigns (44.4%). This is a broad category that related to any description of disproportionate harms on certain groups of people and efforts to rectify those disproportionate harms. A breakdown of how justice was framed by campaigns will be described at the end of this section. Other subthemes that came up less commonly were health, mentioned by eleven campaigns, and the wellbeing of institutions' graduating classes, mentioned by eight campaigns. Health was often mentioned in relation to general negative impacts on health resulting from fossil fuel extraction and resulting environmental problems, like climate change. The wellbeing of graduating classes theme came directly from uses of the phrase "we believe such action on behalf of (institution name) will not only be a sound decision for our institution's financial portfolio, but also for the wellbeing of its current and future graduating classes, who deserve the opportunity to graduate with a future not defined by climate chaos." This comes from language commonly used in petitions created by college fossil fuel divestment campaigns on the

website campaigns.gofossilfree.org.

Economic themes were used the least of the major themes, being used by 49 campaigns (34.0%). The most common theme within this category was financial benefits that could result from the institution taking the actions being requesting, such as better performance of investments within the endowment due to fossil fuel companies being risky investments. This subtheme was used by 26 campaigns (18.1%). Other more minor economic themes included benefits to the development of clean energy from taking action and the financial cost to the United States from climate change, each mentioned by five campaigns.

Two themes that did not fit well within one of the major categories but were noteworthy were alignment with institutional values and sustainability. There were 56 campaigns (36.1%) that referenced that the changes they were seeking would be in-line with their institution's values. For example, some campaigns referenced how social responsibility is included in their institution's mission statement or mentioned their institution's past or current commitment to sustainability or social justice. Four of these campaigns also mentioned their institution's religious values, which were the only instances when religion came up among all of the campaign Facebook page descriptions. Also of note, the words "sustainability" or "sustainable" were directly used by 45 campaigns (31.3%). The concept of sustainability, broadly speaking could be used to describe themes used in most, if not all, of the campaigns' descriptions, but these campaigns showed a direct awareness of the concept in how they described themselves and what they stood for.

The way that campaigns framed the concept of justice was broken down further for those that used it in their descriptions. The results of this analysis are described in table 4.7. Of the 64 campaigns that used the theme of justice in their descriptions, 38 (59.4%) directly used an

environmental justice or climate justice perspective at some point. This includes campaigns that mentioned justice in the context of environmental issues and those that referenced the disproportionate effect of environmental problems, such as climate change, on certain groups of people or the need to rectify such disproportionate effects. This did not include campaigns that loosely used the word or concept of justice without specifically mentioning it in the context of environmental issues, even if an environmental justice perspective could be implied given the focus on divestment from fossil fuels. In fact, a loose, non-specific use of the concept of justice was quite common among campaigns, even when environmental issues were mentioned. An example of this type of language can be seen in the following passage:

> Students around the country are coming together to fight for justice. We want our college's endowments to divest from fossil fuel companies and reinvest in environmentally and socially responsible funds. Our communities, environment and future are threatened by rising global temperatures caused by the burning of fossil fuels.

Though justice is mentioned, as is the threat to communities from climate change and the need for more socially responsible investing, there is no recognition of what groups are most impacted and that could most benefit from more ethically-minded investing. Of the campaigns using justice, 34 (53.1%) were counted that did not mention any specific groups or types of people who are most negatively impacted by societal problems (e.g. people of color, poor people, women).

Of those campaigns that did point to specific groups of disadvantaged or marginalized people, the most common group mentioned was frontline communities, those communities who suffer the most direct and immediate impacts of environmental problems like climate change and pollution from fossil fuel extraction, which was mentioned by fourteen campaigns (21.9%). Justice for racial minorities was mentioned by thirteen campaigns (20.3%). However, this was

Table 4.7 Framing of Justice in Campaign Descriptions

	Number of Campaigns	% of All Campaigns	% of Campaigns Mentioning Justice
Environmental/climate justice	38	26.4%	59.4%
Justice for frontline communities	14	9.7%	21.9%
Racial justice	13	9.3%	20.3%
Economic justice	7	4.9%	10.9%
Gender-based justice/Justice for women	7	4.9%	10.9%
Human rights	7	4.9%	10.9%
Intergenerational justice	4	2.8%	6.3%
Just transition*	4	2.8%	6.3%
Justice for immigrants/refugees	2	1.4%	3.1%
Justice for African Americans	1	0.7%	1.6%
Justice for indigenous peoples	1	0.7%	1.6%
LGBTQ+ justice	1	0.7%	1.6%
Solidarity with local struggles	0	0%	0%

Based on 64 out of 144 total campaigns that referenced justice in their descriptions. Campaigns are counted in all categories they used themes related to.
*Only includes direct mention of phrase "just transition"

mostly through passing references to standing against racism or other racial justice struggles like the South African apartheid divestment movement, in acknowledgement of its role as a model for the fossil fuel divestment movement. Only three campaigns directly acknowledged the disproportionate impact of climate change or the fossil fuel industry on people of color. Likewise, the struggles of specific racial or ethnic groups received scant mention. For example, justice for African Americans and indigenous peoples were only referenced by one campaign each. Aside from racial justice, economic justice was referenced by seven campaigns (10.9%), who mentioned the struggles or disproportionate impacts faced by poor, low-income, or otherwise economically disadvantaged people. Justice for people who are marginalized due to their gender (including women) was also referenced by seven campaigns. Intergenerational justice was mentioned by four campaigns (6.3%), referencing the plight of younger or future generations who will have to deal with the impacts of major problems like climate change,

despite being less responsible for causing them than previous generations. Less commonly mentioned was justice for immigrants and refugees, which was mentioned by two campaigns, and justice for LGBTQ+ people, which was only mentioned by one campaign (though only obliquely through the phrase “justice for every gender”). Of note, no campaign mentioned specific struggles being faced by marginalized or vulnerable populations within the locality or region of their institution, such as local communities fighting fossil fuel projects near them.

Other concepts related to justice that were mentioned included human rights and just transition. The phrase “human rights” was used by seven campaigns (10.9% of those referencing justice), usually in relation to the human rights problems resulting from climate change or the business of the fossil fuel industry. The phrase “just transition” was used by four campaigns (6.3% of those referencing justice), describing the need for a justice-centered transition away from either fossil fuels or the extractive economy in general. Like human rights, the just transition theme was only counted in cases where campaigns directly used the phrase due to the breadth of factors that could be included within the scope of both of these. However, the idea of transitioning to a new, more just economy was described by a number of campaigns (though the equitable *means* of transitioning the economy, which is also important to the concept of a just transition, was less discussed), from transitioning to 100% renewable energy to building new economic systems based on social, environmental, and economic justice.

4.4 Online Survey

For the online survey portion of this study, surveys were sent by email to a contact address for campaigns at 159 institutions. Due to some emails bouncing, 152 campaigns received the survey. There were 22 campaigns that completed the survey, putting the response rate at 14.5%. This section covers the results of the online survey for the topics of each of the three

sections of the survey: background information on the campaigns, barriers faced by campaigns, and drivers experienced by campaigns.

4.4.1 Background Information

The background information section on the survey included questions on the involvement level of the individual taking the survey, the progress of the campaign, the type and makeup of the group or groups leading the campaign, and the goals of the campaign.

The online survey was only meant to be conducted on individuals involved with student-led campaigns, so it was asked whether the campaigns had been primarily led by students attending the institution it was located at. All campaigns confirmed this except for two. One campaign that answered no said that there had been a student and an alumni movement that had worked in tandem, and the other said that their campaign was partly led by students from other institutions within a consortium of colleges they were part of. Both of these campaigns were included due to the significant involvement of students in each. All participants also noted that they had been a student participant in the campaign at their institution, except for one who noted that they participated as an alum.

Only one participant responded that their campaign was currently inactive. Of the rest, sixteen said that their campaigns were active, while the others noted some form of continuing activity. Two of these others said their campaign was on hold and two said that they were continuing after achieving divestment (one to work on reinvestment and the other because their system had divested but not their campus). One other said they were working to relaunch their campaign after focusing on getting renewable energy on campus for about two years. In response to the question on the approximate total number of years campaigns had been active for, seventeen noted that their campaigns had been active for a total of at least 5 years, with a mean

of 6.6 years for all campaigns. The shortest amount of time given was 1 year, while the longest amount was 10 years for the campaign at University of Illinois at Urbana-Champaign (perhaps an error or misunderstanding of the question given that the college fossil fuel divestment movement is known to have started in 2010, about nine years before the period of the survey collection). As a note, survey participants may not have understood that they were not supposed to include years where the campaign was temporarily inactive in the total, as the question was not worded as clearly as it could have been. When asked about the level of progress their campaign had achieved, six participants selected that they had succeeded in getting their institution to divest from fossil fuels or make another major commitment involving investments. For those that had not achieved such a commitment, three campaigns marked that they had achieved a large amount of progress, seven campaigns noted achieving a moderate amount of progress, and six campaigns marked that they had achieved little progress. Participants listed a wide range of accomplishments that led them to the level of progress they had selected. For those that had marked that they had achieved a major commitment from their institution, 5 said that their institution had divested from fossil fuels, though two of these noted only achieving divestment from coal or coal and tar sands. The participant that noted achieving a major commitment but not fossil fuel divestment stated that their institution (Western Washington University) had changed investment firms and made a commitment to moving part of their investment portfolio into funds with high environmental, social, and governance (ESG) ratings. Other accomplishments described by multiple participants (four or five each) included other sustainable investing policies being implemented, having communication with administration, divestment being considered but rejected, receiving support from student government bodies, and achieving non-investment related goals such as transitions to renewable energy and

emissions reductions on campus.

The type and makeup of groups leading campaigns was explored in regards to the nature of the group, the number of people involved, and the gender and racial make-up of individuals running the campaigns. The descriptive statistics for these factors can be seen in table 4.8. Among the answers for the type of group leading the campaign, the top response was a registered student organization (RSO) focused on divestment, with seven participants (31.8%) selecting this. Following this, the next most common responses were being part of an RSO not focused on divestment and being part of a sub-group of a larger group, each being noted by four participants (18.2%). Following this, three participants (13.6%) noted that their campaign had been led by multiple groups. Other responses included a group not registered with their institution (2 participants), a class at their institution (1 participant), and an off-campus organization (1 participant). For the number of people typically involved in the campaign at one time, the top intervals selected were 6 – 10 people, selected by 9 participants (40.9%), and 11 – 15 people, selected by 8 participants (36.4%). Intervals above and below these two were selected less by participants, with 1 – 5 people and 16 – 20 people being selected by two participants each, and greater than 20 people only being selected by one participant. For the gender makeup of individuals involved with running campaigns, the most common response was an approximately equal involvement of males and females, which was selected by eleven participants (50.0%). Interestingly, nine participants (40.9%) described the gender makeup of their campaigns as "mostly female", while none described their campaigns as being made up of mostly males. Other responses, given by two participants, included "mostly AFAB" (assigned female at birth) and "mostly female and non-binary." As for the racial makeup of campaigns, nineteen participants (86.4%) reported the makeup of individuals running their campaigns to have been "mostly

white." Four of these campaigns also wrote that some people of color had been involved with leading their campaign. Two participants stated that the racial makeup of those leading their campaign had varied, though it had at least at one time been mostly white-led. One of these participants stated "It varies by year. Normally, it has been a mix of individuals of different races, but at the minute it is predominately white." The other participant in this category stated "previously was mainly white but now has larger group of POC (mainly Asian American)." Only one participant stated that those leading their campaign had been a "mix of different races", without specifying any one dominant race.

Participants were also asked to describe the goals of their campaign. The results of the answers given to this question are described in table 4.9. There were 21 participants (95.5%) who mentioned fossil fuel divestment among their goals. The only one who didn't was the participant from Western Washington University, who stated that their campaign's goal was "getting the Foundation to invest a significant portion of its portfolio within ESG criteria and move away from an investment firm with no ESG options." No participants mentioned focusing on divestment from any one type of fossil fuels, though one participant noted that their campaign had started out advocating for divestment from coal then expanded their demand to all fossil fuels. Six campaigns (27.3%) specified that they were calling for divestment from the top 200 fossil fuel companies, likely a reference to the Carbon Underground 200 list of the top fossil fuel companies by carbon emissions potential of their reserves (one participant specifically mentioned this by name). Only one participant, from Pomona College, mentioned divesting from industries other than fossil fuels, though this was just a vague mention of divesting "other unethical investments" in addition to fossil fuels. Three participants (13.6%) specified their campaigns were asking for divestment of both direct and indirect investments, while none

Table 4.8 Type and Makeup of Groups

	Number of Campaigns	% of Total
Type of Group		
RSO focused on divestment	7	31.8%
RSO not focused on divestment	4	18.2%
Subgroup of a larger group	4	18.2%
Multiple groups leading	3	13.6%
Non-registered	2	9.1%
Class at institution	1	4.5%
Off-campus organization	1	4.5%
Number of People Typically Involved		
6 – 10	9	40.9%
11 – 15	8	36.4%
1 – 5	2	9.1%
16 – 20	2	9.1%
> 20	1	4.5%
Gender		
Equal male/female	11	50%
Mostly female	9	40.9%
Mostly male	0	0%
Other	2	9.1%
Race		
Mostly white	19	86.4%
Has varied	2	9.1%
Mix of people of different races	1	4.5%

Campaigns are only counted for the one option they selected for each category. RSO = registered student organization.

specified only direct investments. Six participants (27.3%) listed a time frame in which divestment should be completed. Two of these gave a five-year time frame, one participant gave a two to three-year time frame, and three participants gave a specific date when divestment should be completed by (two of these were approximately five years from the survey date, while one was less than a year away). Seven participants mentioned a reinvestment goal (31.8%). The most common targets of reinvestment goals were unspecified more sustainable or equitable

investments (such as “socially responsible” or “environmentally sustainable” funds), however three participants mentioned the goal of reinvesting in communities or their city. This included reinvesting “back into communities” (Cornell University), into “community-based funds” (Harvard University), and into “greater Baltimore” (Towson University). One participant also mentioned renewable energy and energy efficiency as a possibility for reinvestment. Five participants (22.7%) mentioned goals relating to disclosure of investments or greater investment transparency by their institution. Four participants (18.2%) mentioned campus energy or emissions reductions goals that their campaigns had been working on. All of these included working towards carbon neutrality goals for their institution, and one also mentioned “fossil-free proposals for new buildings.” These describe specific goals that were listed by at least 10% of participants.

4.4.2 Barriers

For the barriers section of the survey, two main values were computed for each potential barrier asked about. First, the percentage of participants who gave each potential barrier a rating that was between one and five, indicating that they had experienced the factor in question, was found. Second, an average rating was found for each factor by finding the mean of all the ratings given by participants who gave the factor in question a rating that was between one and five. Each factor was also assigned one of three categories to help understand how groups of similar factors were being rated as barriers. These categories were collaboration factors, group factors, and institutional factors. Table 4.10 lists all the potential barriers asked about, the categories assigned to them, the number and percentage of participants who indicated their campaigns had experienced each, and the average rating calculated for each. These are listed in order from the factors with the highest percentage of campaigns experiencing them to the factors with the

Table 4.9 Goals of Campaigns Responding to Survey

	Number of Campaigns	% of Total
Goals		
Fossil fuel divestment mentioned	21	95.5%
Top 200 fossil fuel companies*	6	27.3%
Divestment from other industries**	1	4.6%
Direct and indirect investments	3	13.6%
Divestment timeframe given	6	27.3%
Reinvestment	7	31.8%
Investment disclosure/transparency	5	22.7%
Campus energy/emissions reductions	4	18.2%

Campaigns are counted in all categories they mentioned. Goals mentioned by less than 10% of campaigns are mostly not included.
* Likely a reference to the Carbon Underground 200 list of the top 100 coal and top 100 oil and gas companies by the carbon emissions potential of their reserves
** Campaigns advocating for divestment from industries other than the fossil fuel industry.

lowest percentage of campaigns experiencing them. Factors with an equal percent experiencing are listed in order from the highest average rating to the lowest average rating. As can be seen from the table, factors with higher percentages of campaigns experiencing them also tend to have higher average ratings as a barrier, so factors towards the top of the table can generally be thought of as the most common and strongest barriers.

To help understand how the categories of potential barriers compare to each other, the mean of the percentages of campaigns that experienced each factor and the mean of the average ratings for each factor (stated as "Average Rating" in table 4.11) were calculated for each category. The results of these calculations are listed in table 4.11. Institutional factors had the highest average percent experienced with 98.9% and the highest average of the rating scores at 4.11. This can be seen reflected in table 4.10, as the top three potential barriers listed ("financial concerns taking priority over environmental/social concerns in institutional decision-making", "decision-makers being unreceptive, unsupportive, or hostile", and "lack of opportunities for student input/involvement in decision-making") are all institutional factors. Only one of the

Table 4.10 Barriers Campaigns Face to Advancing Towards Their Goals

Factor	Category	Number Experienced	% Experienced	Average Rating*
Financial concerns taking priority over environmental/social concerns in institutional decision-making	Institutional	22	100%	4.41
Decision-makers being unreceptive, unsupportive, or hostile	Institutional	22	100%	4.32
Lack of opportunities for student input/involvement in decision-making	Institutional	22	100%	3.91
Lack of time among individuals in campaign	Group	22	100%	3.41
Difficulty maintaining adequate number of participants	Group	22	100%	3.14
Difficulty understanding institutional decision-making processes	Group	22	100%	2.68
Changes sought not being in line with approach to sustainability at institution	Institutional	21	95.5%	3.81
Difficulty getting a demographically diverse body of individuals involved	Group	21	95.5%	3.67
Decision-makers or campus stakeholders being unwilling to speak out politically	Collaboration	21	95.5%	3.14
Difficulty understanding financial component of divestment or finances/investments at institution	Group	21	95.5%	2.76
Lack of funding or resources for campaign	Group	20	90.9%	2.35
Difficulty finding support from groups on campus	Collaboration	20	90.9%	2.05
Lack of consistent leadership in campaign	Group	18	81.8%	2.39
Difficulty getting people to work together with different perspectives and views	Group	18	81.8%	2.11

Factor	Category	Number Experienced	% Experienced	Average Rating*
Campus stakeholders or community members being unsupportive	Collaboration	16	72.7%	2.38
Difficulty finding support from off-campus groups	Collaboration	14	63.6%	1.64

* Calculated from ratings given between 1 and 5, with "1" being a very small barrier or not a barrier at all and "5" being a very large barrier, by campaigns who have experienced a particular factor.

factors was not experienced by every campaign, with a percent experienced of 95.5%. All four institutional factors asked about also have higher average ratings than any factor of a different category, with ratings ranging from 4.41 to 3.81. Group factors had the next highest average percent experienced with 93.2% and the next highest average of the rating scores at 2.81. As such, the eight group factors are more spread out on table 4.10 with percentages experienced ranging from 100% to 81.8% and average ratings ranging from 3.67 to 2.11. Collaboration factors had the lowest average percent experienced with 80.7% and the lowest average of the rating scores at 2.30. This is reflected in table 4.10, with collaboration factors generally being further down and the lowest two factors on the table being from this category ("campus stakeholders or community members being unsupportive" and "difficulty finding support from off-campus groups").

Table 4.11 Results for Categories of Barriers

	Average % Experienced	Average Rating
Institutional factors	98.9%	4.11
Group factors	93.2%	2.81
Collaboration factors	80.7%	2.30

Twelve participants added additional comments on barriers their campaigns experienced that were not included in the questions asked. Factors that were listed by more than one participant included turnover of students and organizers (four participants), lack of ability to communicate with administration (two participants), and lack of support from administration (two participants). A full list of the comments on additional barriers not included in the questions can be seen in appendix C.

4.4.3 Drivers

For the drivers section of the survey, the percentage of participants who experienced each factor asked about and the average rating for each was calculated in the same way that was done

for the factors in the barriers section. Each factor was also assigned one of four categories to help understand how groups of similar factors were being rated as drivers. The categories were collaboration factors, group factors, institutional factors, and the added category for this section, strategy factors. Table 4.12 lists all the drivers asked about, the categories assigned to them, the number and percentage of participants who indicated their campaigns had experienced each, and the average rating calculated for each. These are listed in order from the factors with the highest percentage of campaigns experiencing them to the factors with the lowest percentage of campaigns experiencing them. Factors with an equal percent experiencing are listed in order from the highest average rating to the lowest average rating. As with the barriers questions, factors with higher percentages of campaigns experiencing them also tend to have higher average ratings as a driver, so factors towards the top of the table can generally be thought of as the most common and strongest drivers.

To help understand how the categories of potential drivers compare to each other, the mean of the percentages of campaigns that experienced each factor and the mean of the average ratings for each factor (stated as "Average Rating in table 4.13) were calculated for each category. As explained in section 3.6, only the top factor (in terms of percent experienced and average rating) for each of the sets of contrasting potential drivers listed in table 3.1 were included in these calculations. The results for each category are listed in table 4.13.

Strategy factors received the highest average percent experienced at 94.5%, and the highest of the average of the rating scores with 3.65. There were fifteen strategy factors that were asked about, five of which were excluded from the calculations for the results of for the categories of drivers due to being part of contrasting sets of factors. In table 4.12 the strategy factors can be seen to be mostly listed towards the top of the table, with the first six factors listed

Table 4.12 Drivers Campaigns Experience to Advancing Towards Their Goals

Factor	Category	Number Experienced	% Experienced	Average Rating*
Using mix of environmental, social, and economic arguments	Strategy	22	100%	4.36
Incorporating an environmental justice perspective into campaign	Strategy	22	100%	4.33
Using social arguments	Strategy	22	100%	4.23
Public protest events	Strategy	22	100%	4.05
Using a mix of working inside and outside of institutional decision-making channels	Strategy	22	100%	3.86
Working outside of institutional decision-making channels	Strategy	22	100%	3.86
Using a horizontal leadership approach	Group	22	100%	3.77
Using economic arguments	Strategy	22	100%	3.68
Use of social media	Strategy	22	100%	3.50
Availability of training or informational resources from outside organizations or other sources	Group	22	100%	3.27
Using environmental arguments	Strategy	22	100%	3.23
Working inside institutional decision-making channels	Strategy	22	100%	3.09
Using an interdisciplinary approach	Strategy	21	95.5%	3.10
Large number of individuals involved in campaign	Group	21	95.5%	3.05

Factor	Category	Number Experienced	% Experienced	Average Rating*
Strong support from campus stakeholders or community members	Collaboration	21	95.5%	3.05
Collaboration with student groups on campus	Collaboration	21	95.5%	3.00
Collaborations with or assistance from faculty, staff, or campus departments or offices	Collaboration	21	95.5%	3.00
Coverage of campaign by media outlets	Strategy	21	95.5%	3.00
Demographically diverse body of individuals involved in campaign	Group	21	95.5%	2.38
Using the strategy of escalation	Strategy	20	90.9%	3.60
Consistent leadership in campaign	Group	20	90.9%	2.90
Student government bodies passing measures supporting campaign's demands	Collaboration	19	86.4%	3.32
Collaborations with outside organizations	Collaboration	19	86.4%	3.26
Use of art, visual media, or auditory media to promote message	Strategy	19	86.4%	3.21
Encouraging individuals with a variety of perspectives and views to get involved	Group	19	86.4%	2.74
Intentionally disruptive and/or confrontational protests	Strategy	17	77.3%	3.47
Working with frontline communities impacted by climate change or fossil fuels	Collaboration	14	63.6%	2.71
Limiting involvement to individuals with similar perspectives and views	Group	14	63.6%	1.93
Environmental/social concerns being strongly considered in institutional decision-making	Institutional	13	61.9%**	2.31

Factor	Category	Number Experienced	% Experienced	Average Rating*
Decision-makers being receptive or supportive	Institutional	13	59.1%	2.85
Large availability of funding or resources for campaign	Group	13	59.1%	2.08
Strong opportunities for students input or involvement in decision-making	Institutional	11	50%	2.36
Using a vertical (hierarchical) leadership approach	Group	8	36.4%	1.75

* Calculated from ratings given between 1 and 5, with "1" being a very small driver or not a driver at all and "5" being a very large driver, by campaigns who have experienced a particular factor.

** One subject did not provide an answer for this factor, making the percentage out of 21 campaigns

Table 4.13 Results for Categories of Drivers

	Average % Experienced	Average Rating
Strategy factors	94.5%	3.65
Group factors	89.6%	2.88
Collaboration factors	87.1%	3.06
Institutional factors	57.0%	2.51

For factors tested within a category that were meant to directly contrast with each other, only the highest scoring factor in terms of both % experienced and rating was used.

on the table being strategy factors that were experienced by all campaigns. There were two sets of contrasting factors within this category. The first concerned the framing of arguments around environmental themes, versus social themes, versus economic themes, versus a mix of all three. All three approaches were experienced, and thus utilized, by all campaigns. However, the range of the average scores for each of these was greater than 1 score point. The top-rated option was using a mix of environmental, social, and economic arguments, with an average rating of 4.36. Following this was using social arguments with an average rating of 4.23. The third highest rated argument type was economic arguments, with an average rating of 3.68. Using environmental arguments was the lowest rated among these, with an average score of 3.23. The second set of contrasting strategy factors concerned using inside versus outside strategy, versus a mix of the two. Again, all three options were noted as being experienced by all campaigns. Working outside of institutional decision-making channels and using a mix of working inside and outside of institutional decision-making channels received equal average ratings at 3.86. Working inside institutional decision-making channels received a somewhat lower rating at 3.09.

Group factors received the second highest average percent experienced at 89.6%, though they had the third highest of the average of the rating scores with 2.88. There were nine group factors that were asked about, two of which were excluded from the calculations for the results of for the categories of drivers due to being part of contrasting sets of factors. There were two

sets of contrasting factors within this category. The first concerned whether a broad range of people are encouraged to get involved with a campaign or if it is limited to people with similar perspectives and views. For this, the approach of encouraging individuals with a variety of perspectives and views was used at some point by 86.3% of campaigns and received an average rating of 2.74, while the approach of limiting involvement to individuals with similar perspectives and views was used at some point by 63.6% of campaigns and received an average rating of 1.93. The second set of contrasting strategy factors concerned using a horizontal leadership approach versus a vertical, or hierarchical, leadership approach. A horizontal leadership approach was seen to have been used by every campaign and received an average score of 3.77. In contrast, using a vertical leadership approach was used by only 36.4% of campaigns and received a much lower score of 1.75, the lowest score of any potential driver tested.

Collaboration factors received the third highest average percent experienced at 87.1%, though they had the second highest of the average of the rating scores with 3.06. There were six collaboration factors asked about that ranged in percent experienced from 95.5% to 63.3% and ranged in average ratings from 3.32 to 2.71. Institutional factors received the lowest average percent experienced at 57.0% and the lowest of the average of the rating scores with 2.51. There were only three institutional factors asked about, but these can all be seen to be among the lowest ranked in table 4.12.

There were two participants that left additional comments on other drivers their campaigns experienced that were not included in the questions asked. One participant mentioned the passion of people involved and the sense of community within their campaign. The other mentioned that involvement of and mentions by politicians and other prominent people helped

their campaign. The full comments by these two participants are included in Appendix C.

CHAPTER 5

DISCUSSION

5.1 Introduction

This study sought to assess the fossil fuel divestment movement at higher education institutions in the United States in three overarching ways, pertaining to the three primary research questions described in Chapter 1. This chapter will discuss the findings for each of the primary research questions. Section 5.2 will discuss the key characteristics of higher education institutions where divestment campaigns occur that were identified from institutional data provided by Divest Ed. Section 5.3 will discuss the key characteristics of campaigns identified from the study of campaign Facebook pages and the online survey distributed to campaigns. Finally, section 5.4 will discuss the key barriers and drivers campaigns experience to advancing towards their goals that were identified from the online survey. Chapter 6 will conclude by synthesizing these findings and discussing implications for sustainability in higher education and for the movement in light of the findings.

5.2 Institutional Characteristics

The first research question asked what the characteristics are of higher education institutions in the United States where fossil fuel divestment campaigns have occurred. Particularly, it was sought to find how many institutions have divested and in what way, how many have active campaigns, what the geographic distribution of institutions where divestment activity has occurred is, and what types of institutions campaigns have occurred at. To address these questions, data was obtained and analyzed on institutions where campaigns have occurred and the nature of divestment activity at these institutions from Divest Ed, a program that focuses on coordinating and coaching college fossil fuel divestment campaigns in the United States. The

following describes the findings from the analysis performed on this data.

5.2.1 Divestment Activity

The numbers determined for divestment activity at institutions provide a key insight into the state of the college fossil fuel divestment movement in the United States today and how far it has come. Not only was the data collected just after the beginning of a new decade, nearly ten years after the college fossil fuel divestment movement began with the Swarthmore Mountain Justice campaign in 2010 (Bratman et al. 2016), but the data was also collected just after the national day of action for college fossil fuel divestment campaigns, Fossil Fuel Divestment Day, on February 13, 2020, which capped off a wave of resurgent activity in the movement (Divest Ed 2020).

The total number of institutions included in the study, 266, is the total amount of known higher education institutions in the United States where fossil fuel divestment activity has occurred, including those where campaigns have been organized and where fossil fuel divestment commitments have been made, according to Divest Ed. Because this only includes institutions where Divest Ed has been able to confirm information about divestment activity occurring, this number is undoubtably an underestimation. There have very likely been many more institutions where campaigns have existed, even for short periods of time, that information has been lost through time about. For some perspective, Grady-Benson and Sarathy reported in 2016 that there were currently about 400 fossil fuel divestment campaigns underway at colleges and universities in the United States. The list of institutions obtained from Divest Ed can likely be best thought of as containing the institutions with the most prominent campaigns that have existed throughout the movement's history, the institutions were divestment commitments have been made, and the most comprehensive list available of institutions with active campaigns

around the beginning of 2020. As such, the number institutions with currently active campaigns, which was found to be 119, is an important finding for the current state of the movement, especially as it includes any new campaigns that formed in response to Fossil Fuel Divestment Day.

The numbers of institutions that have made fossil fuel divestment commitments is also significant for the current state of the movement. There were 72 institutions that were determined to have divestment commitments. Of these, 55 have commitments to full divestment, meaning they have committed to divest from all fossil fuel companies (or the top 200 fossil fuel companies defined by the Carbon Underground 200), including if they have just divested all direct investments in these companies. There are seventeen institutions that were determined to have commitments to partial divestment, meaning they have committed to divest from only some fossil fuel companies, such as coal and tar sands companies. However, these numbers may be somewhat inflated. The website gofossilfree.org, which has an ongoing list of institutions (including but not limited to higher education institutions) that have committed to fossil fuel divestment, listed a total of 50 higher education institutions in the United States that had divested as of March 25, 2020. There are a couple of reasons for this discrepancy. The first is that Divest Ed's records contain several institutions noted as having divested that gofossilfree.org does not, possibly due to gofossilfree.org having a more stringent process of adding institutions that have divested and of what meets the qualifying criteria for an institution to be considered to have divested. The second reason is a difference in accounting systems. Divest Ed had two university systems marked as having fully divested, the University of Massachusetts System and the University of California System, where all of the Universities in the system were also marked as divested even though the divestment was for the system rather than for any of the Universities

within it, while gofossilfree.org only listed the system in each of these cases. With other systems that had divested, the institutions within them were not counted by Divest Ed, making this an important inconsistency to note. In addition, Divest Ed listed De Anza and Foothill Colleges as two separate institutions with commitments, though the two community colleges divested together with a single commitment by their joint-foundation. Adjusting for this extra-counting of commitments, the records from Divest Ed listed a total of 57 higher education institutions that have made unique divestment commitments, 40 of which have been for full divestment and 17 for partial divestment. These estimates are more in line with the accounting system of gofossilfree.org and likely more appropriate for an assessment of the total number of institutions that have divested.

Although a full accounting of the different types of full and partial divestment commitments that have been made was not able to be produced, the data that was obtained on these demonstrate that colleges and universities institute a variety of commitments in response to desires for fossil fuel divestment including divestment from indirect and direct fossil fuel investments, divestment of direct fossil fuel investments only, divestment from coal companies, and divestment from coal and tar sands companies. Previous research has explored these different mechanisms institutions use to divest, identifying routes that include divesting from all direct or direct and indirect fossil fuel investments, divesting from the Carbon Underground 200, and divesting from specific industries, such as coal (Healy and Debski 2016). However, an updated and more comprehensive addition to the literature on the mechanisms institutions use to divest and why would be useful. Another area that has been mostly untouched in the literature so far and very little data is available on in general is how institutions are deciding to reinvest, which will become increasingly of interest as more institutions make divestment commitments

and proceed further in the process of investments in fossil fuels.

Also of significance from this portion of the study, twelve of the seventeen institutions that were identified as having made partial divestment commitments still had active campaigns. This demonstrates that students and other stakeholders campaigning for divestment are not satisfied with their institution only divesting from some fossil fuel companies and will often continue to organize for more comprehensive divestment after this has been achieved.

5.2.2 Geographic Distribution

The geographic distribution analysis, which totaled the number of institutions where divestment activity has occurred for each of the Census Bureau's four regions and nine divisions (see figure 4.1 for a map of these areas), identified large disparities in numbers of institutions with divestment activity in different areas of the country. Divestment activity, including all institutions that have had campaigns or made fossil fuel divestment commitments, has been concentrated in the Northeast and West regions, with 39.5% and 27.1% of institutions with activity, respectively. The South and Midwest have seen smaller shares of divestment activity with 17.7% and 15.8%, respectively. The differences are even more stark when looking at the division scale. In the Northeast, New England and the Middle Atlantic have both had two of the highest levels of divestment activity, with 22.9% and 16.5%, respectively. The Pacific states (namely California, Oregon, and Washington) have also had a large concentration of activity with 20.7% of institutions. The South Atlantic states have come close to these numbers with 14.3% of institutions. However, divestment activity has been much less common in the states that fall between the east and west coasts. This is particularly true of the states in the South that are not along the east coast; the East South Central and West South Central divisions have only seen 1.9% and 1.5% of institutions with activity, respectively. The share of the institutions with

activity throughout the vast Mountain division has also been small at 6.4%. In the Midwest, the West North Central division has had a similar amount with 6.8% of institutions, while the East North Central has had somewhat more with 9.0% of institutions.

The distribution of institutions that have made divestment commitments was seen to follow a similar pattern but with more pronounced differences. Institutions making commitments have been largely concentrated in the Northeast, with 30 divested institutions, and the Pacific states, which has 28 divested institutions (again, primarily in California, Oregon, and Washington). The numbers of divested institutions in the other Census regions and divisions is far fewer. For example, the Midwest only has five institutions that have made commitments, and the Mountain states only have two institutions that have made commitments. The South has seven institutions that have made commitments, however these have all been in the South Atlantic states. The rest of the South, including as far west as Texas, was not found to have any institutions that have divested.

Some words of caution should be noted before making further conclusions. First, as stated in the last section, there are likely many more institutions that have had campaigns than the amount that was identified. Though the initial total of 249 institutions and later total of 266 institutions were considered to be the population of institutions where divestment activity has occurred from which samples were determined for the Facebook and online survey studies, these values really represent a sample of a larger population of unknown size. The total set of institutions obtained from Divest Ed is meant to be the best list of all institutions in the United States where divestment activity has occurred, but this list could still be biased. For example, personal and professional connections of those running the program have likely influenced the campaigns that the team at Divest Ed has been aware of. It is of particular note that the program

is based out of Cambridge, Massachusetts, which is located within both the top region and the top division where the most institutions with divestment activity were identified. It is likely that Divest Ed has had closer contact with institutions in the Northeast than other areas of the country, contributing to the high numbers in these regions. As discussed in the previous section, there was also some potential extra-counting of institutions with divestment commitments due to all institutions within a higher education system being counted as having divested when systems have made divestment commitments (or all institutions covered by a joint-foundation divesting), as was seen in a few cases. Among these institutions that were counted with others under the same commitment, five are in Massachusetts, while ten are in California. Assuming that these institutions have not made individual commitments that were not listed, a more consistent accounting approach could reveal the Pacific division to have 18 institutions with commitments and New England to have 15 institutions with commitments. However, this still does not change the fact of the Pacific and New England as being the divisions with the highest numbers of commitments and their respective regions as being those with the highest number of commitments as well.

Even with the potential for bias and accounting discrepancies, the geographic data give a clear indication of the areas of the country that have had a large amount of divestment activity and those that have had much less. While an analysis of the factors contributing to the geographic distribution of divestment activity in the United States may be beyond the scope of this study, some points are worth mentioning. A possible explanation for the distribution seen is simply that campaigns are more likely to occur is areas of higher population density, where there more higher education institutions for them to form at, more people to get involved, and networks are more easily formed between like-minded groups. Indeed, areas in the Northeast and

along the west coast have some of the highest levels of population density in the country, while the areas in the west, such as the Mountain region, have much lower population densities (U.S. Census Bureau 2010). The trends seen could also have to do with greater liberal political attitudes that have been seen in the Northeast and Pacific states (Jones 2019).

But while such natural factors as these may be pushing divestment campaigns and commitments to be concentrated in the areas that they are, this does not detract from the strategic loss of not having robust divestment activity in other areas of the country. One important aspect of this is that divestment activity has been largely non-existent in many of the areas of the country with the highest levels of fossil fuel extraction. For example, Wyoming, the top coal producing state in 2018, accounting for and 40% of coal mined in the country, and West Virginia, the second largest coal producer in 2018, have both had no know divestment campaigns. North Dakota, ranked second in the country for oil production in 2019, and ranking among the top ten states for coal and natural gas production in 2018, has also had no known campaigns. Perhaps the most stark example is the lack of divestment activity in the West South Central division, which includes the states of Arkansas, Louisiana, Oklahoma, and Texas. This area is a hotbed of fossil fuel extraction, from the oil and gas fields throughout Oklahoma to oil and gas drilling of the coast of Texas and Louisiana (Texas is also the top state for crude oil and natural gas production) (U.S. Energy Information Administration n.d.). Yet this collection of states has only had four known divestment campaigns at higher education institutions and no divestment commitments.

Also of important consideration is whether divestment campaigns are occurring in areas where marginalized or vulnerable populations exist. One way that this does not seem to be occurring is with regions of the country that are predominantly populated by particular minority

groups. Areas that are majority-Hispanic that tend to occur along the United States-Mexico border, areas with majority-black populations that tend to be clustered in the Southeast (of particular note, Mississippi and Alabama), and areas predominantly populated by indigenous people that mainly occur on or near reservations in the Midwest and West, have all been largely excluded from the college fossil fuel divestment movement, with almost no campaigns or commitments occurring in many of these areas (Schaeffer 2019). Ironically, the parts of the country where divestment activity has so far not been common may also be the areas that will be most negatively impacted by climate change in the coming years. Areas towards the Southeast portion of the United States have been projected to be the hardest hit economically by climate change, exacerbating an already disproportionate level of poverty in these areas compared with the rest of the country (Hsiang et al. 2017).

Considering the power and potential of the fossil fuel divestment movement to stigmatize the fossil fuel industry, empower young people to get involved in political activism, and even reinvest in marginalized communities, a beneficial future direction for the movement would likely be to expand into areas of the country where the fossil fuel industry is more dominant and where marginalized and vulnerable populations are more prevalent.

5.2.3 Institution Type

The results revealed some very basic characteristics of the types of institutions where fossil fuel divestment campaigns occur in the United States. The numbers of public and private institutions were very close, with only 18 more public than private institutions out of 266 total. In 2017, there were 1,626 public and 2,672 private degree-granting higher education institutions in the United States (National Center for Education Statistics n.d.). Thus, the proportion of public to private institutions with divestment campaigns seems to be running somewhat higher that the

proportion of all public to private institutions nationwide.

The results for the distribution of enrollment size revealed that approximately half of institutions where divestment campaigns have occurred (excluding totals for entire systems) have less than 10,000 students. While this may seem to tell a story of campaigns being more likely to form at smaller institutions, this notion does not hold up when looking at enrollment numbers of institutions nationwide. In 2017, 86.9% of degree-granting higher education institutions in the United States had enrollment sizes of less than 10,000 students. The fact that such a large proportion of divestment campaigns have occurred at institutions with enrollments above 10,000 (with several in the 20,000s, 30,000s, and some even higher) indicates that divestment campaigns may be more likely to form at larger institutions. This is also consistent with the proportion of institutions studied that are public being higher than for all institutions nationwide, as public institutions tend to have higher enrollments than private ones (National Center for Education Statistics n.d.).

A similar story seems to be true for the endowment sizes of institutions that have had divestment campaigns. Approximately half of institutions were found to have endowments of at least $500 million, and the mean for all institutions was $1.78 billion. A survey by U.S. News found the median endowment size of higher education institutions in the United States at the end of fiscal year 2018 was about $65.1 million. This suggests that divestment campaigns tend to occur at institutions with relatively large endowments. Campaigns occurring at wealthy private institutions that are among the institutions with the largest endowments in the country, such as Harvard, Yale, Stanford, and Princeton Universities, are particularly notable (Kerr 2019).

The results have suggested that divestment campaigns occur about equally at public and private institutions, and that campaigns tend to occur at institutions with relatively large

enrollment and endowment sizes compared with all institutions in the Untied States. This at least seems to be true for the institutions with the most prominent campaigns, as these are the ones that are most likely to have been included among those institutions studied. Indeed, though campaigns seem to occur at a wide range of colleges and universities, prominent campaigns occurring at prestigious, wealthy institutions seems to be a common thread in the movement, as is evidenced by the finding that all of the Ivy League and Seven Sisters institutions have had campaigns. Like with geographic distribution, these findings may have implications for who has access to the movement and who does not. Individuals who have the means to attend large, wealthy institutions may be more likely to participate in fossil fuel divestment campaigns, thereby building further power for groups that already have social advantages and excluding disadvantaged populations.

5.3 Campaign Characteristics

The second research question of this study asked what the characteristics of fossil fuel divestment campaigns at higher education institutions in the United States are. Of particular interest was what the type and makeup of groups leading campaigns is, what goals campaigns have, and what the key themes are that campaigns use in their arguments. A key factor that was sought to be understood through this portion of the study was how campaigns incorporate the concept of justice into what they are trying to accomplish and the language they use. To address these research goals, two methods were used. The primary method was the study of text from the "About" section of Facebook pages for campaigns at 144 institutions. Complimenting this was data from the online survey that received responses from campaigns at 22 institutions, which asked questions that were relevant for the aims of this portion of the study, some that sought the same information as the Facebook study and some that provided insight in other ways. While the

Facebook study had a much larger sample size, the survey was beneficial in that it allowed campaigns to directly answer questions that were posed about them, sometimes in their own words. The following three sections discuss the findings from the Facebook study and survey in terms of the results they provided about characteristics of campaigns.

5.3.1 Group Makeup and Type

One of the most basic characteristics of a campaign is who is taking part in it. The Facebook study found that of 88 campaigns that mentioned stakeholder groups involved, at least 93.2% had student participation. The rest mentioned other stakeholder types but did not necessarily imply that students were not involved. Other stakeholders were mentioned, including alumni, faculty, and staff, but much more seldom, with less than 15% of campaigns mentioning each. This result is not surprising, as students have often been recognized as the key leaders of the college fossil fuel divestment movement (Grady-Benson and Sarathy 2016, Bratman et al. 2016). However, it does provide data-based confirmation, which is important given the assumption built into this study that students are the main stakeholders organizing campaigns. It also provides evidence of alumni and faculty involvement (each mentioned by 14.8% of campaigns), which has been less recognized. Their importance, in fact, may be underrepresented by these numbers. For example, while faculty have sometimes felt constrained in their ability to have a voice on campus due to professional risks associated with speaking out, they have been noted as playing important supportive roles, such as writing open letters of support to the administration and advising students in their campaign efforts (Stephens, Frumhoff, and Yona 2018; Bratman et al. 2016). While receiving the support from others, students may be most able to conduct the on-the-ground organizing for divestment, which is why they tend to be seen as the face of the movement.

Good data was not received from the Facebook study on the type of group leading campaigns, however, the concrete group type that received the most mentions was campus organizations. The online survey was useful in exploring this further. At least half of the campaigns responding to the survey were part of a registered student organization on campus, most of which focused specifically on divestment. Most of the other answers could have implied the involvement of registered student organizations, such as those that answered having multiple groups involved and being a sub-group of a larger group, so registered student organizations seem a likely vehicle through which divestment campaigns tend to operate. Most of the campaigns that provided information on their Facebook pages about what the group they are part of focuses on mentioned a focus on fossil fuel divestment, with a smaller proportion being more broadly focused on climate action or environmental or sustainability issues. Perhaps most notable about this is what was not seen (either from what was directly stated or anecdotally from looking at the rest of the pages), that there was almost no groups leading campaigns that focused on other social issues or related fields of study. For example, there were no explicitly minority-led groups, groups focusing on racial justice, or groups of business or finance students that were seen. This finding mainly serves to reinforce the situation of fossil fuel divestment within the often white-led environmental arena. Data on the number of individuals involved in campaigns suggested most campaigns involve around six to fifteen people, though this is only based on responses from the 22 campaigns that responded to the survey.

Finally, the survey provided some interesting data on the gender and racial makeup of campaigns. Though half of the campaigns described having about equal numbers of males and females involved, most of the other campaigns described having mostly females involved. With only 22 campaigns responding, however, it is hard to know whether this female-driven trend has

applied more largely across the movement. The racial makeup of campaigns was more clear-cut with 86.4% of participants reporting that their campaigns had been mostly white-led, and only one participant that did not describe their campaign as being mostly white-led at least at some point. Again, the small sample size limits extrapolation of the results to the movement as a whole, but this contributes strongly to a narrative of the movement being predominantly white-led (Bratman et al. 2016, Grady-Benson 2014).

5.3.2 Campaign Goals

The goals campaigns described on their Facebook pages were fairly consistent overall, but with some differences on the specifics for divestment or additional things they were campaigning for. Of course, the majority described divestment from fossil fuels as their main goal. It is noteworthy that only one campaign was specifically seeking divestment from coal, rather than all fossil fuels, especially considering that institutions often opt-for only divesting from coal, as was seen in this and other studies. About a fifth of campaigns specified divesting from the top 200 fossil fuel companies (likely in reference to the Carbon Underground 200, if not stated directly), which is another strategy institutions use to divest (Grady-Benson and Sarathy 2016). A similar 27% of survey respondents mentioned this specification. It appears from the data that most divestment campaigns like to keep their demands fairly broad, at least publicly, without limiting the ways in which they are asking their schools to divest. Most campaigns did not specify on Facebook or on the survey whether they were asking for divestment of direct investments or both direct and indirect investments, however, when it was mentioned, this sentiment held true in that almost all campaigns mentioned both direct and indirect investments for both the Facebook study and the survey. Giving a timeframe for divestment was one of the more common specifications campaigns did make, with most of those that did on Facebook and

on the survey calling for divestment to be completed within about five years. Only a very small portion of campaigns on Facebook and on the survey mentioned that they were asking for divestment from things other than fossil fuel companies (such as prisons or weapons producers). It appears that most divestment campaigns prefer to maintain relative focus on divestment from the fossil fuel industry, rather than explore other harmful investments their institutions may have. This could be beneficial in maintaining focused pressure on institutions to divest from the particular industry of fossil fuels, but could also be limiting campaigns' ability to be intersectional and reach a variety of stakeholders.

Reinvestment was mentioned by about a third of both campaigns on Facebook and survey respondents. While divestment of course implies some eventual reinvestment into things other than fossil fuels, it is of note that this proportion of campaigns emphasized it as a key aspect of what they were seeking, in a sense indicating reinvestment as the positive other-side of divestment, through which the institution's money can go towards bettering society. However, specifically what campaigns were seeking their institutions to reinvest into was less clear. About three-fourths of campaigns mentioning reinvestment on Facebook only specified reinvested money to go towards vague alternative investments, such as "environmentally responsible funds" or "just solutions". The only more specific target for reinvestment that came up consistently was clean or renewable energy. Campaigns not having clearly stated reinvestment demands could be due to the strategic advantage of focusing on divestment rather than having another major ask to campaign for, or simply the fact that knowing the best way to reinvest can be significantly more complex than divestment (Bergman 2018). However, the lack of coherent narrative and goals around reinvestment, and even the strand of focus on techno-solutions to climate change like clean energy, could be a key blind spot to a justice-focused movement, where reinvestment could

be an opportunity to envision a more equitable economy and to place resources into the hands communities in need. The survey results told a slightly different story, with three campaigns mentioning a desire for reinvestment into communities, such as through "community-based funds." As the survey was conducted mostly with active campaigns in fall 2019, this could be a reflection of recent movement towards a focus on advocating for reinvestment in community-controlled economies, specifically centering marginalized populations, that has been advanced in-part by Divest Ed (Divest Ed n.d. b).

Though no other goal beyond divestment and reinvestment was mentioned by a large proportion of campaigns in the Facebook study or survey, the occasional mention of other things that campaigns were trying to achieve, such as promoting education on climate change, getting their institution to be more transparent about their investments, and encouraging their institution to transition to renewable energy or reduce emissions, demonstrates that these other types of goals and demands sometimes factor into divestment campaigns. It also demonstrates how divestment campaigns can be multi-functional, having a positive impact in other ways beyond just advocating for divestment.

In general, campaign's goals did not vary greatly from each other. Most described a broad demand for fossil fuel divestment, sometimes with common specifications like divesting from the Carbon Underground 200 or divesting within five years. Reinvestment demands also tended to be similar, either asking generally for reinvestment in more sustainable alternatives or in clean energy. These commonalities among goals may reflect "patterns of imitation", as identified by Maina, Murray, and McKenzie in the Canadian college fossil fuel divestment movement, in which campaigns often adopt similar goals, tactics, and language that spread among campaigns and are influenced by other social movements and key organizations in the

movement (2020). 350.org is particularly notable as an influence on the movement, given the organization's role in helping to spur its initial development (Bratman et al. 2020). This was often seen through parts of campaign's descriptions directly mirroring language that commonly occurs in petitions created by campaigns on the 350.org affiliated divestment website campaigns.gofossilfree.org, which often includes calls for divesting both indirect and direct fossil fuel investments and a five year goal of achieving divestment.

5.3.3 Key Themes

The analysis of key themes within campaigns' descriptions on Facebook provided a unique window into how a wide swath of the movement has framed their position on why they want their institutions to divest. With only around 180 words written on average, these descriptions certainly do not tell the whole story about the types of arguments any one campaign has centered in their work. But as a snapshot of 144 active and inactive campaigns, it does paint a picture of the major concerns, priorities, and language used in the movement so far. The primary way the analysis was broken down was by coding themes into the categories of environmental, social, and economic, reflecting the key aspects of the "triple bottom line" of sustainability (Selby and Kagawa 2010). Choosing the core aspects of sustainability as the framework for this analysis proved to be beneficial given that most themes commonly used fit well into the three categories, as well as the fact that nearly a third of campaigns specifically used the word "sustainability" or "sustainable."

Overall, environmental themes were used the most, by 80.6% of campaigns, followed by social at 61.8%, and then economic at 34.0%. This overall analysis was admittedly slightly arbitrary given that some concepts were difficult to classify (for example, "impact on communities" could imply environmental, social, or economic impacts) and the way that

concepts were keyed out could have been different than other researchers may have chosen to do so. However, the results are illustrative of the multi-faceted nature of the divestment movement, and even the climate movement in general. Unsurprisingly, environmental themes came up frequently, particularly climate change. Social themes, such as justice and health, also came up frequently, alluding to a key focus that is often given to the impacts of climate change on humans' wellbeing. Economic arguments came up somewhat less frequently, but were still used by about a third of campaigns. Almost a fifth of campaigns mentioned the financial impact on their institution by continuing to invest in fossil fuels. Given the barrier divestment campaigns experience of financial concerns taking priority by higher education decision-makers found by this and other studies, this may simply reflect campaigns adapting to a language that they believe administrators are most likely to take seriously, but regardless it was a key theme that was used (Healy and Debski 2016, Bratman et al. 2016). This broad spectrum of themes that campaigns used was also supported by the results of the survey. Specifically, every survey participant reported that their campaigns used environmental, social, and economic arguments. In addition, using a mix of environmental, social, and economic arguments received the highest average rating as a driver to campaigns advancing towards their goals of any factor asked about. One other theme used by over a third of campaigns in their Facebook descriptions was that divestment is in line with their institution's values or mission, which speaks to campaigns' belief that the moral values that their institutions have been built on, whether environmental, social, or economic-related, should extend to the management of investments.

It was decided to look particularly at how campaigns frame arguments of justice because it has often been mentioned that justice is a key part of the college divestment movement (Grady-Benson and Sarathy 2016, Bratman et al. 2016, Healy and Debski 2016), yet a study analyzing

this has not been done on campaigns across a large swath of the movement before. Justice was essentially defined as any mention of disproportionate negative impacts on certain groups of people or calls to rectify such disproportionate impacts. This theme was found to be utilized by approximately 43% of campaigns in their Facebook descriptions, supporting the notion of it being an important part of the college divestment movement, though perhaps not centered by all of the movement. Much of this was directly in reference to the disproportionate impacts of climate change or other environmental problems on certain groups of people. However, who the groups are that are on the receiving end of injustice were not specified by about half of campaigns who used a justice perspective. There are two ways to look at this. One is that campaigns opt to give a brief and all-inclusive description for why they are seeking divestment on their Facebook pages. For the sake of brevity and not favoring any particular group that is harmed by fossil fuels (since climate change and related issues are indeed *very* broad in terms of the range of people that are impacted) campaigns give a general, nonspecific description of why justice is important for divestment. The other is that campaigns have been failing to recognize some of the groups that are truly most impacted by fossil fuels due to their position within economic, social, and political systems that have rendered them vulnerable for generations. This seems to hold some truth in the lack of recognition given to the struggles of some groups. For example, though race was mentioned by about 9% of all campaigns, only three campaigns explicitly acknowledged the disproportionate impact of climate change or the fossil fuel industry on people of color. Specific racial or ethnic groups were mentioned even less; such as indigenous peoples, who were only mentioned by one campaign. In contrast, Maina, Murray, and McKenzie found that Canadian college fossil fuel divestment campaigns often utilized valuable connections with indigenous frontline communities and activists, and nearly 30% of these campaigns used

messaging showcasing indigenous environmental concerns (2020). Economic justice and gender-based justice were also only described by about 5% of all campaigns each.

Though justice for frontline communities, mentioned by 14 campaigns, was one of the more common frames used for justice, it was surprising that no campaigns mentioned local frontline communities being impacted by fossil fuel extraction, climate change, or other environmental problems. This is especially true given the fossil fuel divestment movement's origins as a solidarity tactic used by students at Swarthmore College to draw attention to nearby Appalachian communities impacted by mountain-top removal (Bratman et al. 2016). This also ties in with the lack of intersectionality in goals listed by campaigns, such as the small percentage of campaigns asking for divestment from industries other than fossil fuels, like prisons and weapons manufacturers, and the lack of reinvestment goals aimed at benefiting communities that have been subject to injustice. These issues may circle back to who is involved in the movement. The fossil fuel divestment movement at higher education institutions has been noted as a tactic of privilege because of its involvement of largely white individuals who have had the advantages of being able to attend (often well-regarded) colleges and universities (Grady-Benson 2014). This is likely reflected in campaigns' lack of tendency to articulate specific struggles faced by groups of people impacted disproportionately by environmental problems and the fossil fuel industry's extractive business model.

This does not necessarily tell the whole story, as data was only collected from short passages on campaigns' Facebook pages. Participants responding to the online survey all reported incorporating an environmental justice perspective into their campaigns, and rated this as the second highest of any potential driver asked about. About 64% of campaigns also indicated that they had worked with frontline communities. However, working with frontline

communities only received an average rating of 2.71 out of 5 for being a driver, possibly indicating that though several campaigns had contact with frontline communities it was not a key element of their campaign. In addition, about 96% of campaigns indicated experiencing difficulty getting a demographically diverse body of students involved with their efforts, and this was the factor with the fifth highest average rating as a barrier. Developing fossil fuel divestment campaigns centered on justice for the most marginalized groups of society may continue to be a challenge for student activists, even as justice remains a core value of the movement. These problems are surely not isolated to the United States college fossil fuel divestment movement, as the environmental movement in general has long experienced tensions in trying to move from its conservation-based origins to more of a focus on inclusion and justice (Bratman et. al 2016, Schlossberg and Collins 2014). However, for the college fossil fuel divestment movement to develop it is important to critically explore the ways in which it may not be fully realizing its apparent goal of being a movement centered on justice.

5.4 Barriers and Drivers

The major purpose of the online survey sent to fossil divestment campaigns at higher education institutions around the country was to address the third research question of this study, which asked what the barriers and drivers are that campaigns experience to advancing towards their goals. Ultimately, this portion of the study was limited in the small response rate that was generated, only returning 22 completed surveys. This affected the ability to have broad representation across the movement, and to perform statistical analyses on the data. There were two particular problems with the research methods that would likely be changed if the study were to be performed again. The first was that, as was seen by the results of the institutional characteristics study, at least about half of the campaigns in the overall population are now

inactive. Though it was hoped that individuals from these inactive campaigns would still see the email solicitation sent to them and fill out the survey, many of the accounts that these emails were sent to may no longer have been checked. A better method may have been to obtain verified contacts addresses for individuals who have been involved in specific campaigns and send the email to these accounts or contact them another way. Sending the survey to campaign Facebook pages through Facebook's messaging service may have also worked better if individuals connected to these pages still receive notifications from them. However, these methods would have been more time consuming and it may not have been possible to contact as many campaigns. The second problem was that the survey was very long, with 64 questions total. Data from Qualtrics indicated that only 58% of those who opened the survey completed it. Though some questions would have had to have been removed, allowing for less individual data to be obtained, a shorter, more concise survey would have likely helped to generate more responses.

Despite the problems noted above, the survey was useful in obtaining detailed qualitative data from a set of mostly well-established campaigns who lent valuable insight into the difficulties and positive factors that effect a campaign's forward trajectory. Almost all of these campaigns were active or expected some kind of continued activity. Most of these campaigns had been active for at least five years, and five of these campaigns had gotten their institution to make a divestment commitment. About three-fourths of the campaigns typically had between six and 15 individuals involved at one time. Therefore the results should be viewed in light of these characteristics that the campaigns participating possessed.

5.4.1 Barriers

The category of barriers that received the highest levels of campaigns experiencing them

and the highest average ratings as barriers by campaigns was institutional factors. It was evident that campaigns thought of these as the largest barriers because all four factors that were mentioned had higher average scores than any other factors asked about. These factors were:

- Financial concerns taking priority over environmental and social concerns in institutional decision-making
- Decision-makers being unreceptive, unsupportive, or hostile
- Lack of opportunities for student input/involvement in decision-making
- Changes sought not being in line with approach to sustainability at institution

On one hand it is likely that institutional factors were considered the largest barriers because of the institutional-dependent nature of the divestment movement. Campaigns seek to change something within the institution, so if a barrier to institutional change comes up, they can't succeed. On the other hand, the barriers mentioned may reflect key institutional problems that prevent students from creating change on campuses, particularly in relation to sustainability goals. The notions of decision-makers not being receptive to student calls for change and students lacking a voice in campus decisions have been noted as barriers to student sustainability movements (Murray 2018). Meanwhile, financial concerns taking top priority at institutions and divestment not being in line typical approaches to sustainability, are characteristics of the neoliberal configuration of today's higher education institutions, where institutions seek to maximize financial returns above all else, while the notion of sustainability is relegated to minor "greening the campus" changes that do not challenge the problematic economic systems that have resulted in problems like climate change (Selby and Kagawa 2010, Healy and Debski 2016). Studies on reasons given by higher education institutions that have rejected divestment also back these findings up, suggesting that they are not just based on students' perceptions of

administrators' priorities. In an analysis of 46 institution's publicly stated reasons for divestment rejection, Healy and Debski found that 78% cited costs and/or risks to the endowment, while 65% argued that divestment would not have a substantial effect on fossil fuel companies or mitigating climate change (2016). This extended a study by Grady Benson and Sarathy that found similar results (2016).

Factors relating to the dynamics of groups leading campaigns were the second most commonly experienced and second highest rated among the categories of barriers. Some of the top barriers included lack of time among individuals in campaigns, difficulty maintaining adequate number of participants, and difficulty understanding institutional decision-making processes. These have all been noted as barriers student sustainability movements encounter (Murray 2018). The challenge of maintaining adequate numbers of participants, may be one of the eternal great challenges of student movements, particularly with consistent turnover of students and other on campuses, which was noted by four participants in the space for barriers not mentioned to be written and has been seen in other student movements (Murray 2018, Duram and Williams 2015). Also of note was the high scoring barrier of having difficulty getting a demographically diverse body of individuals involved in campaigns, which was discussed in section 5.3.3.

Factors relating to collaboration with groups and individuals outside of campaigns ranked as the lowest experienced and rated among the categories of barriers. The only factor in this category that was had at least a moderate average rating (above 3) was decision-makers or campus stakeholders being unwilling to speak out politically. Reservations to speaking about divestment for fear of professional repercussions has at least been noted for faculty, so this is not surprising (Stephens, Frumhoff, and Yona 2018; Bratman et al. 2016). Factors relating to finding

support from campus groups, off-campus groups, or campus and community stakeholders did not score highly as barriers, indicating that finding support on campus and in the community may not be challenging for most divestment campaigns or it may not be consequential if it is not found.

5.4.2 Drivers

The category of drivers that were most experienced by campaigns and that received the highest scores as drivers on average were factors relating to strategies used by campaigns. The factor the received the highest average score among all potential drivers listed on the survey was using a mix of environmental, social, and economic arguments, which was experienced by all campaigns. This contrasted with individual options for using environmental, social, and economic arguments, which also were experienced by all campaigns, but each received at least somewhat lower scores. Interestingly, using environmental arguments scored lower than any of the other individual options, though as discussed in section 5.3.3, the main takeaway is likely that campaigns find it useful to use a mixture of the three types of arguments. Incorporating an environmental justice perspective also scored highly, as did using public protest events, both of which were used by all campaigns. Of note, intentionally disruptive and/or confrontational protests received an average rating that was slightly lower than public protest events in general and was stated to have been used by 77.3% of campaigns. This is in line with notions of divestment campaigns often using aggressive direct-action style tactics like sit-ins and occupations, though evidently these are not used by all campaigns (Healy and Debski 2016, Bratman et al. 2016). The approach of using a mix of working both inside and outside of institutional decision-making channels also scored relatively highly and was used by all campaigns. Working outside of institutional decision-making channels received the same score as an individual option, while working inside of institutional decision-making channels received

a somewhat lower score. Overall, these results seem to suggest that campaigns use both inside and outside tactics (e.g. meeting with administrators while also holding public protests to increase pressure on decision-makers), which has been noted as an effective strategy for divestment campaigns (Bratman et al. 2016). There were several other strategies that scored as at least moderate drivers and were used my almost all campaign including use of social media, using an interdisciplinary approach, and using the strategy of escalation.

Factors relating to group dynamics and collaboration with groups and individuals outside of the campaign faired similarly in terms of number of campaigns experiencing them and average ratings as drivers. Interestingly, using a horizontal leadership approach had the highest average rating among group factors and was reported as being used by all campaigns, while using a vertical, or hierarchical, leadership approach was the lowest rated factor of any potential driver mentioned and was used by only about 36% of campaigns. As far as I know, horizontal leadership structure has not been explored in the academic literature on the college fossil fuel divestment movement before, so this preference for non-hierarchical leadership is seemingly a novel finding. Other group factors that had at least moderately high scores included availability of training or informational resources from outside organizations or other sources and having a large number of individuals involved in the campaign. Encouraging individuals with a variety of perspectives and views to get involved was used by more campaigns and scored higher than keeping involvement limited to those with similar perspectives and views, though neither of these had average scores of over 3 out of 5 as drivers. Collaboration factors that were experienced by almost all campaigns and had at least moderate average scores as barriers included strong support from campus stakeholders or community members, collaboration with student groups on campus, and collaborations with or assistance from faculty, staff, or campus

departments or offices. These attest to the strong local campus and community support that campaigns seem to often receive.

There were only three institutional factors mentioned as potential drivers, which were all restated versions of three of the institutional factors used for the barriers section. These were environmental and social concerns being strongly considered in institutional decision-making, decision-makers being receptive or supportive, and strong opportunities for students input or involvement in decision-making. All three of these were indicated as being experienced by less than two-thirds of campaigns, reflecting how not experiencing these were all found to be common barriers. Interestingly, the campaigns that did experience these as drivers did not rate them highly as such on average. Healy and Debski's analysis of higher education institutions' publicly stated reasons for divestment when commitments have been made included alignment of divestment with institutions' values and a desire to take leadership on climate change as top stated reasons, showing these types of institutional factors can be drivers for successful campaigns (2016). Based on the results seen for the barriers section it is likely, however, that the low ratings given for institutional factors on the survey does not indicate that these are not useful when campaigns experience them, but more likely that they are rarely experienced, making them not key drivers that are useful in campaigns advancing towards their goals.

CHAPTER 6

CONCLUSION

6.1 Summary

In 2010, students at Swarthmore College began organizing the first fossil fuel divestment campaign in solidarity with Appalachian communities impacted by mountaintop removal mining. Two years later, Bill McKibben and 350.org helped ignite a widespread movement of students demanding their colleges and universities directly address some of the main perpetrators of the climate crisis by divesting from fossil fuel companies, which in turn became a key element of a rapidly expanding global climate movement (Bratman et al. 2016, Bergman 2018). As ten years of college students organizing for fossil fuel divestment approaches, the movement in the United States is in a period of renewed growth but also has a chance to reflect on where it has been so far and how to best approach its next stage. Higher education institutions also have an opportunity to consider what lessons the divestment movement has had for how sustainability issues can and should be approached institutionally, especially as the climate crisis continues to accelerate.

At this time, the literature on fossil fuel divestment at higher education institutions remains small and a study has yet to be published that analyzes the full scope of campaigns and institutions across the United States that have been involved in the movement. This study sought to do just that in order to determine what the key characteristics of institutions where fossil fuel divestment campaign have occurred at are, what the key characteristics of campaigns that have occurred are, and what the main barriers and drivers campaigns have experienced to advancing towards their goals have been. Throughout the study, a critical approach to sustainability in higher education and of the college fossil fuel divestment movement in the United States itself

was used to examine how each can do better to facilitate the systemic change fossil fuel divestment aims to achieve. In the case of the college fossil fuel divestment movement, campaigns' approach to the concept of justice was particularly assessed, as this has been described as essential tenet of the movement (Bratman et al. 2016, Grady Benson and Sarathy 2016).

Institutions where campaigns have occurred were identified using records provided by Divest Ed, a program of the organization Better Future Project that works to coordinate and coach college fossil fuel divestment campaigns across the country. Following this, three overarching methods were used to answer the research questions posed. First, data on institutions where campaigns have occurred was obtained from internal records used by Divest Ed and analyzed to understand characteristics of institutions involved in the movement. Second, an analysis of text from the "About" section of campaign Facebook pages was conducted to understand the characteristics of campaigns. Third, an online survey was sent to active and inactive campaigns around the country to obtain information on the barriers and drivers campaigns face, as well as additional data on campaign characteristics.

Institutional data was collected just after Fossil Fuel Divestment Day on February 13, 2020, the largest single day of action ever for the college fossil fuel divestment movement (Divest Ed 2020). From 266 institutions where divestment campaigns or divestment commitments have occurred that were identified, 119 institutions were found to have currently active campaigns. There were also found to be at least 57 institutions that have made divestment commitments, with varying degrees of the extent to which fossil fuel companies were committed to be divested. Analysis of the spatial distribution of institutions that have had divestment activity revealed that institutions that have had campaigns and institutions that have made

commitments have been concentrated in the Northeast and along the West Coast, while large areas of the county, such as much of the South and Mountain states, have had very little divestment activity. This raises strategic questions for the movement, such as whether it is reaching areas of the country most impacted by fossil fuel extraction, as well as areas predominantly populated by particular minority groups. Campaigns were found to often occur at institutions with large enrollment numbers and large endowment sizes, with about equal numbers of public and private institutions that have had campaigns, though the proportion of public to private institutions with campaigns was larger than the total proportion of public to private higher education institutions in the United States.

Campaigns were found to be made up largely of students, with some additional stakeholders, such as alumni and faculty, participating. Evidence pointed to campaigns organizing most often through on-campus organizations focused on divestment or broader environmental issues, and to being predominantly white-led. Campaigns were found to mostly keep their demands for fossil fuel divestment broad, though often including some common specifications, such as to divest within a particular timeframe or to divest from the Carbon Underground 200 list of top fossil fuel companies. Reinvestment was listed as a goal by about a third of campaigns, though campaigns' targets for reinvestment were most often abstract notions of sustainable alternative investments, indicating a key area where a more clearly defined narrative could be beneficial for the movement. Campaigns were found to mostly focus on fossil fuel divestment, though they occasionally include other goals, such as educating the public on environmental issues or getting their institutions to transition to renewable energy or reduce emissions. Campaigns were found to a mix of environmental, social, and economic themes in their arguments, reinforcing the divestment movement as fitting well within the context of

sustainability. Campaigns were found to often use the theme of justice, however, at least in the descriptions they write about themselves on Facebook, their use of justice tends to be fairly nonspecific and to fail to acknowledge the specific groups of people most unjustly impacted by climate change and fossil fuel extraction, such as racial minorities and poor people. A lack of goals and actions of campaigns centered on justice, such as solidarity with local frontline communities, was also identified. These issues may point to challenges associated with a movement for justice that is often led by privileged, white individuals.

The online survey was limited in the low response rate it received, however it did provide useful information on barriers and drivers experienced by a number of well-established campaigns. Institutional factors, such as financial concerns taking top priority and decision-makers being unreceptive to student demands, were found to be the most common and strongest barriers experienced by campaigns, indicating key institutional problems that may limit student sustainability movements. Some factors relating to group dynamics were also found to be important barriers, including lack of time of participants and difficulty maintaining adequate numbers of participants. Factors relating to difficulties collaborating with individuals or groups outside of campaigns were not found to be major barriers. Factors relating to strategies and tactics used by campaigns were found to be the most experienced and strongest drivers. These included things like using a mix of environmental, social, and economic arguments and using an environmental justice approach. Some factors relating to group dynamics and collaborations were found to be important barriers, such as using a horizontal leadership approach and strong support from campus stakeholders and community members. Institutional factors were experienced least often and also scored the lowest as drivers, again likely indicating that campaigns are often faced with strong institutional barriers to achieving their goals.

The findings summarized above may have important implications for higher education institutions, as well as the divestment movement in general, which is discussed next.

6.2 Implications for Sustainability in Higher Education

The college fossil fuel divestment movement has been ongoing for nearly ten years now. Since then, over 50 higher education institutions have committed to some type of divestment from fossil fuels, including some notable major institutions like the University of California System and Yale University. Evidence has been produced to show that divestment can be done without harming endowment value, or even benefiting it (Ryan and Marsicano 2020). More importantly, fossil fuel divestment has been seen to play an important role in shifting public discourse around climate change toward questioning the legitimacy of the fossil fuel industry and toward the need for a full-scale transition to renewable energy (Bergman 2018, Schifeling and Hoffman 2017). With the increasing crisis of climate change it is more important than ever for higher education institutions to be leveraging their power in in the most impactful ways possible.

This speaks to the need for sustainability planning at higher education institutions to shift from moderate efforts to make the campus more "green" to directly working to solve the greatest sustainability challenges of the day, including by challenging the forces and systems that are at the root of these problems (Healy and Debski 2016). The divestment movement has demonstrated a way to do this, while also empowering young people and incorporating another factor that has not been common in sustainability planning and discourse in higher education: justice (Bergman 2018, Healy and Debski 2016). Students are leading the way in creating a sustainability framework that attempts to center action that addresses injustices that are being imparted on the most the most vulnerable people in society. Some institutions have already taken the step of listening to and acting upon calls to divest. Others have not but are having their

sustainability discourse shifted more forcefully by students increasing the pressure on administrators to take action through highly public campaigns (Healy and Debski 2016, Bratman et al. 2016).

This research has indicated that there may be some key institutional barriers to students achieving their goals of getting their institutions to divest. Some of these are related to institutions' neoliberal attitudes that favor balancing the budget over environmental and social concerns (Huckle and Wals 2015), while others are related to students having a lack of voice on campus. Administrators may want to think about how to address these concerns to allow student movements with important goals for helping society to have a fair shot at achieving the changes they want to see made.

6.3 Implications for the Movement

Over the last decade, college students and others campaigning for fossil fuel divestment at higher education institutions in the United States have played an important role in advancing the climate movement, including by helping to bring a justice-based perspective more into mainstream environmental discourse (Healy and Debski 2016, Bergman 2018). With 119 active campaigns and a recent spurt of divestment wins, plus a massive nationwide day of action in early 2020, there is every indication that this movement will continue to grow and have success (Divest Ed 2020). However, there is also always room for improvement and this study revealed some key areas where the movement may be able to benefit from development.

On the scale of the movement as a whole, campaigns have remained fairly concentrated in the Northeast and West Coast. There have been plenty of campaigns elsewhere, but there have also been large portions of the country that have been mostly left out of the movement, including major parts of the South and western half of the country. This represents a deficiency in the scale

of the movement and who it is able to reach, as well ignoring many areas where fossil fuel extraction actually occurs where campaigns could be beneficial in creating opposition or aiding frontline resistance (U.S. Energy Administration n.d.). Those thinking strategically about the movement on a large scale may want to consider how to build connections in these areas to initiate and support campaigns.

Reinvestment is an area that has not yet been well developed within the movement. Many campaigns have not included it as a key goal or have only discussed it very generally, however it may carry great power in allowing articulation of the alternative option to the extractive economy that fossil fuels are based in and beginning to put resources towards that. It could also allow transfer of huge wealth from corporations towards communities in need who have long been marginalized. This is the basis for some of the work that is starting to develop within the movement, though developing a cohesive message and specific options for institutions to reinvest in may take some time (Divest Ed n.d. b).

The study provided some evidence that campaigns may be limited in how they frame arguments about justice in the abstract, rather than recognizing the groups of people who are most impacted by climate change and other environmental and social problems, such as poor people, people of color, and indigenous peoples. Limited evidence was also found of the ways that campaigns apply a justice perspective towards specific goals and actions to mitigate the injustices marginalized groups face. This area could be further developed, for example by focusing more on solidarity actions with frontline communities, targeting communities in need for reinvestment, and coalition building with social justice groups.

Fossil Fuel Divestment Day on February 13, 2020 showed promising signs of a revived and refocused movement. Campaigns at 59 institutions held actions throughout the day,

including rallies, sit-ins, and demonstrations. A key focus of the day was solidarity with frontline communities, indigenous peoples, and people of color. A number of campaigns voiced support specifically for the Wet'suwet'en people in their fight against TransCanada's Coastal GasLink Pipeline in British Columbia, raising issues of police violence and attacks on indigenous sovereignty. The day was considered a success by divestment organizers and the largest day of action ever for student-led divestment campaigns (Divest Ed 2020, Engelfried 2020). The college fossil fuel divestment movement continues to hold significant power to shape public discourse on environmental problems and extractive industries, empower young people to get politically involved, and provide solidarity and support for marginalized and vulnerable communities. At the start of a new decade it is currently in a phase of growth and renewed opportunity, but with the dedication of new generations of young activists it is likely to continue advancing sustainability discourse and action at higher education institutions towards a justice-based paradigm.

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APPENDIX A

LIST OF INSTITUTIONS STUDIED

The following table contains a full list of all higher education institutions used in this study. All institutions listed were used for the study of institutional characteristics (see section 3.3), and noted from this study are the state each institution is located in (excepted are institutions in Washington, D.C., notated as "DC"), the status of fossil fuel divestment and the status of the campaign at each institution (as of February 26, 2020). Institutions that were used in the study of campaign Facebook pages (section 3.4) and the online survey study (section 3.5) are indicated by a check mark in the Facebook and Survey columns, respectively.

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
Allegheny College	PA	Not Divested	Inactive	✓	
American University	DC	Not Divested	Active	✓	
Amherst College	MA	Not Divested	Inactive	✓	
Antioch University	OH	Not Divested	Inactive		
Auraria Higher Education Center (Auraria Campus)	CO	Not Divested	Inactive	✓	
Barnard College	NY	Partial	Active	✓	
Bates College	ME	Not Divested	Inactive	✓	
Bellevue College	WA	Not Divested	Active		
Boston College	MA	Not Divested	Active	✓	✓
Boston University	MA	Partial	Active	✓	
Bowdoin College	ME	Not Divested	Active	✓	
Brandeis University	MA	Not Divested	Active	✓	
Brevard College	NC	Full	Inactive	✓	
Brown University	RI	Not Divested	Inactive	✓	✓
Bryn Mawr College	PA	Not Divested	Active	✓	
Bucknell University	PA	Not Divested	Active		
California Institute of Technology	CA	Not Divested	Inactive		
California Institute of the Arts	CA	Full	Inactive	✓	

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
California State University - California Polytechnic San Luis Obispo	CA	Not Divested	Inactive	✓	
California State University - California State Polytechnic University	CA	Not Divested	Active		
California State University - Chico State University	CA	Full	Inactive		
California State University - Humboldt State University	CA	Full	Inactive		
California State University - San Jose State University	CA	Not Divested	Inactive		
California State University Long Beach	CA	Not Divested	Active		
California State University -San Francisco State University	CA	Partial	Inactive	✓	
California State University System	CA	Not Divested	Inactive	✓	
Carleton College	MN	Not Divested	Active	✓	✓
Carnegie Mellon University	PA	Not Divested	Inactive		
Cascadia College	WA	Not Divested	Active		
Chatham University	PA	Full	Inactive		
Clark University	MA	Not Divested	Active	✓	
Clarkson University	NY	Not Divested	Active	✓	
Colgate University	NY	Not Divested	Active		
College of Saint Benedict	MN	Not Divested	Inactive		
College of the Atlantic	ME	Full	Inactive		
College of the Holy Cross	MA	Not Divested	Inactive	✓	
Colorado College	CO	Not Divested	Inactive	✓	
Colorado Mountain College	CO	Not Divested	Inactive		
Columbia University	NY	Partial	Active	✓	
Cornell University	NY	Not Divested	Active	✓	✓
Creighton University	NE	Partial	Active		
Dartmouth College	NH	Not Divested	Active	✓	

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
Davidson College	NC	Not Divested	Inactive	✓	
De Anza College	CA	Full	Inactive		
DePauw University	IN	Not Divested	Inactive	✓	
Dickinson College	PA	Not Divested	Active	✓	
Doane University	NE	Full	Inactive		
Drake University	IA	Not Divested	Inactive		
Drexel University	PA	Not Divested	Active	✓	
Duke University	NC	Not Divested	Active		
Eckerd College	FL	Not Divested	Inactive	✓	
Emerson College	MA	Not Divested	Active	✓	
Emory University	GA	Not Divested	Active		
Foothill College	CA	Full	Inactive		
Fordham University	NY	Not Divested	Inactive	✓	
Fort Lewis College	CO	Not Divested	Inactive	✓	
Framingham State University	MA	Not Divested	Inactive		
George Washington University	DC	Not Divested	Active	✓	
Georgetown University	DC	Full	Inactive	✓	✓
Goddard College	VT	Full	Inactive		
Gonzaga University	WA	Not Divested	Active	✓	
Green Mountain College	VT	Full	Inactive	✓	
Grinnell College	IA	Not Divested	Inactive		
Gustavus Adolphus College	MN	Not Divested	Inactive	✓	
Hamilton College	NY	Not Divested	Inactive		
Hampshire College	MA	Full	Inactive		
Harvard University	MA	Not Divested	Active	✓	✓
Haverford College	PA	Not Divested	Inactive		
Hobart & William Smith Colleges	NY	Not Divested	Inactive		
Indiana University Bloomington	IN	Not Divested	Active	✓	
Ithaca College	NY	Not Divested	Active	✓	
James Madison University	VA	Not Divested	Inactive	✓	
Johns Hopkins University	MD	Partial	Active	✓	✓
Kalamazoo College	MI	Not Divested	Active	✓	
Lehigh University	PA	Not Divested	Active	✓	

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
Lesley University	MA	Full	Inactive	✓	
Lewis & Clark College	OR	Full	Inactive	✓	
Loyola Marymount University	CA	Not Divested	Active		
Loyola University Chicago	IL	Not Divested	Active		✓
Loyola University Maryland	MD	Not Divested	Active		
Loyola University New Orleans	LA	Not Divested	Active	✓	
Macalester College	MN	Not Divested	Inactive	✓	
Marquette University	WI	Not Divested	Active		
Maryland Institute College of Art	MD	Not Divested	Active		
Massachusetts College of Art and Design	MA	Not Divested	Inactive		
Massachusetts Institute of Technology	MA	Not Divested	Active	✓	✓
Michigan State University	MI	Not Divested	Active		
Middlebury College	VT	Full	Inactive	✓	
Mount Holyoke College	MA	Not Divested	Active	✓	
Naropa University	CO	Full	Inactive		
Nevada System of Higher Education	NV	Not Divested	Inactive		
Nevada System of Higher Education - University of Nevada, Las Vegas	NV	Not Divested	Inactive	✓	
Nevada System of Higher Education - University of Nevada, Reno	NV	Not Divested	Inactive		
New York University	NY	Not Divested	Active	✓	
Northeastern University	MA	Not Divested	Active	✓	
Northern Arizona University	AZ	Not Divested	Active	✓	
Northland College	WI	Full	Inactive	✓	
Northwestern University	IL	Not Divested	Active	✓	
Occidental College	CA	Not Divested	Inactive	✓	
Ohio State University	OH	Not Divested	Inactive		
Ohio University	OH	Not Divested	Active		

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
Oregon State University	OR	Partial	Active	✓	
Pennsylvania State University	PA	Not Divested	Inactive	✓	
Pensacola State College	FL	Not Divested	Active		
Peralta Community College System	CA	Full	Inactive		
Pitzer College	CA	Full	Inactive	✓	
Pomona College	CA	Not Divested	Active	✓	✓
Portland Community College	OR	Full	Inactive		
Portland State University	OR	Not Divested	Inactive	✓	
Pratt Institute	NY	Full	Inactive		
Prescott College	AZ	Full	Inactive		
Princeton University	NJ	Not Divested	Active	✓	
Purdue University	IN	Not Divested	Active		
Reed College	OR	Not Divested	Active	✓	
Rhode Island School of Design	RI	Full	Inactive	✓	
Roanoke College	VA	Not Divested	Inactive	✓	
Rochester Institute of Technology	NY	Not Divested	Active		
Rutgers University New Brunswick	NJ	Not Divested	Active	✓	
Saint Lawrence University	NY	Not Divested	Active	✓	
Saint Louis University	MO	Not Divested	Inactive		
Saint Mary's College of California	CA	Not Divested	Inactive	✓	
Salem State University	MA	Full	Inactive	✓	
Santa Clara University	CA	Not Divested	Active		
Seattle Colleges - North Seattle College	WA	Not Divested	Active		
Seattle Colleges - Seattle Central College	WA	Not Divested	Active		
Seattle Colleges - South Seattle College	WA	Not Divested	Active		
Seattle Colleges - System	WA	Not Divested	Active		
Seattle University	WA	Full	Inactive		✓
Simmons University	MA	Not Divested	Active		

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
Smith College	MA	Not Divested	Active	✓	✓
Southern Illinois University	IL	Not Divested	Active		
Southern Oregon University	OR	Not Divested	Inactive		
St. Olaf College	MN	Not Divested	Active		
Stanford University	CA	Partial	Active	✓	
State University of New York - Stony Brook University	NY	Not Divested	Inactive		
State University of New York Binghampton	NY	Not Divested	Active	✓	
State University of New York Brockport	NY	Not Divested	Inactive	✓	
State University of New York Buffalo State	NY	Not Divested	Active	✓	
State University of New York College of Environmental Science and Forestry	NY	Full	Inactive		
State University of New York Cortland	NY	Not Divested	Inactive		
State University of New York Geneseo	NY	Not Divested	Inactive		
State University of New York New Paltz	NY	Full	Inactive		
State University of New York Plattsburgh	NY	Not Divested	Active	✓	
State University System of Florida - Florida Gulf Coast University	FL	Not Divested	Inactive		
State University System of Florida - Florida State University	FL	Not Divested	Inactive	✓	
State University System of Florida - University of Florida	FL	Not Divested	Active	✓	
State University System of Florida - University of North Florida	FL	Not Divested	Inactive		
State University System of Florida - University of South Florida	FL	Not Divested	Inactive	✓	

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
Sterling College	VT	Full	Inactive		
Stevens Institute of Technology	NJ	Not Divested	Inactive		
Stonehill College	MA	Not Divested	Inactive		
Swarthmore College	PA	Not Divested	Active	✓	
Syracuse University	NY	Full	Inactive	✓	
Temple University	PA	Not Divested	Active		
The New School	NY	Full	Inactive		
Thomas Jefferson University	PA	Not Divested	Inactive	✓	
Tufts University	MA	Not Divested	Active	✓	
Tulane University	LA	Not Divested	Active		✓
Union College	NY	Not Divested	Active		
Unity College	ME	Full	Inactive		
University of Alabama at Birmingham	AL	Not Divested	Active		
University of Arizona	AZ	Not Divested	Inactive		
University of California Berkeley	CA	Full	Inactive	✓	✓
University of California Davis	CA	Full	Inactive	✓	
University of California Irvine	CA	Full	Inactive		
University of California Los Angeles	CA	Full	Inactive	✓	
University of California Riverside	CA	Full	Inactive		
University of California San Diego	CA	Full	Active	✓	
University of California San Francisco	CA	Full	Inactive		
University of California Santa Barbara	CA	Full	Inactive	✓	
University of California Santa Cruz	CA	Full	Inactive	✓	
University of California System	CA	Full	Inactive	✓	
University of Chicago	IL	Not Divested	Active	✓	
University of Cincinnati	OH	Not Divested	Active	✓	

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
University of Colorado Boulder	CO	Not Divested	Inactive		
University of Colorado Denver	CO	Not Divested	Inactive	✓	
University of Colorado System	CO	Not Divested	Inactive	✓	
University of Dayton	OH	Full	Inactive		
University of Denver	CO	Not Divested	Active		✓
University of Georgia	GA	Not Divested	Inactive	✓	
University of Hawaii	HI	Full	Inactive	✓	
University of Illinois at Urbana-Champaign	IL	Not Divested	Active		✓
University of Kansas	KS	Not Divested	Active	✓	
University of Kentucky	KY	Not Divested	Active	✓	
University of Louisville	KY	Not Divested	Active		
University of Maine - University of Southern Maine and Maine School of Law	ME	Partial	Inactive		
University of Maine at Augusta	ME	Not Divested	Inactive		
University of Maine at Farmington	ME	Not Divested	Inactive		
University of Maine at Fort Kent	ME	Not Divested	Inactive		
University of Maine at Machias	ME	Not Divested	Inactive		
University of Maine at Orono	ME	Not Divested	Inactive		
University of Maine at Presque Isle	ME	Not Divested	Inactive		
University of Maine System	ME	Not Divested	Inactive	✓	
University of Mary Washington	VA	Full	Inactive		
University of Massachusetts Amherst	MA	Full	Inactive		
University of Massachusetts Boston	MA	Full	Inactive		

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
University of Massachusetts Dartmouth	MA	Full	Inactive		
University of Massachusetts Lowell	MA	Full	Inactive		
University of Massachusetts Medical School	MA	Full	Inactive		
University of Massachusetts System	MA	Full	Inactive	✓	
University of Miami	FL	Not Divested	Inactive	✓	
University of Michigan	MI	Partial	Active	✓	
University of Minnesota	MN	Not Divested	Active		
University of Missouri	MO	Not Divested	Active	✓	✓
University of Missouri Kansas City	MO	Not Divested	Active	✓	
University of Missouri System	MO	Not Divested	Active		
University of Montana	MT	Not Divested	Active	✓	
University of Nebraska Lincoln	NE	Not Divested	Inactive	✓	
University of New England	ME	Not Divested	Inactive	✓	
University of New Mexico	NM	Not Divested	Inactive	✓	
University of North Carolina - Appalachian State University	NC	Not Divested	Inactive	✓	
University of North Carolina - North Carolina State University	NC	Not Divested	Active		
University of North Carolina Asheville	NC	Partial	Active	✓	
University of North Carolina Chapel Hill	NC	Not Divested	Inactive	✓	
University of North Carolina Greensboro	NC	Not Divested	Inactive	✓	
University of North Carolina System	NC	Not Divested	Active	✓	
University of North Carolina Wilmington	NC	Not Divested	Active	✓	

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
University of Notre Dame	IN	Not Divested	Active	✓	
University of Oregon	OR	Full	Inactive		
University of Pennsylvania	PA	Partial	Active	✓	
University of Pittsburgh	PA	Not Divested	Active	✓	✓
University of Puget Sound	WA	Partial	Active		
University of Rhode Island	RI	Not Divested	Inactive	✓	
University of Richmond	VA	Not Divested	Inactive	✓	
University of Rochester	NY	Not Divested	Inactive	✓	
University of Southern California	CA	Not Divested	Active		
University of Texas at Austin	TX	Not Divested	Active		
University of Texas System	TX	Not Divested	Inactive		
University of Utah	UT	Not Divested	Inactive	✓	
University of Vermont	VT	Not Divested	Active	✓	
University of Virginia	VA	Not Divested	Inactive	✓	
University of Washington	WA	Partial	Inactive	✓	
University of Washington Bothell	WA	Not Divested	Active		
University of Washington Tacoma	WA	Not Divested	Active		
University of Wisconsin Eau Claire	WI	Not Divested	Inactive		
University of Wisconsin Madison	WI	Not Divested	Active		
University of Wisconsin Oshkosh	WI	Not Divested	Inactive		
University of Wisconsin Stevens Point	WI	Not Divested	Inactive	✓	
University of Wisconsin System	WI	Not Divested	Inactive		
University System of Maryland - Towson University	MD	Not Divested	Active	✓	✓

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
University System of Maryland - University of Maryland College Park	MD	Not Divested	Active		
University System of Maryland System	MD	Full	Inactive	✓	
University System of New Hampshire - Keene State College	NH	Not Divested	Inactive		
University System of New Hampshire - System	NH	Not Divested	Inactive		
University System of New Hampshire Durham	NH	Not Divested	Inactive	✓	
Vanderbilt University	TN	Not Divested	Active	✓	
Vassar College	NY	Not Divested	Active	✓	✓
Vermont State Colleges - Castleton University	VT	Not Divested	Active		
Vermont State Colleges - Northern Vermont University	VT	Not Divested	Active		
Vermont State Colleges System	VT	Partial	Inactive		
Virginia Commonwealth University	VA	Not Divested	Inactive	✓	
Virginia Polytechnic Institute and State University	VA	Not Divested	Active	✓	
Warren Wilson College	NC	Full	Inactive		
Washington University in St. Louis	MO	Not Divested	Active	✓	✓
Wellesley College	MA	Not Divested	Active	✓	
Wesleyan University	CT	Not Divested	Active	✓	
Western Kentucky University	KY	Not Divested	Active		
Western Oregon University	OR	Partial	Inactive		
Western Washington University	WA	Not Divested	Active	✓	✓
Whitman College	WA	Full	Inactive	✓	
Willamette University	OR	Not Divested	Inactive	✓	
Williams College	MA	Not Divested	Inactive	✓	

Institution Name	State	Divestment Status	Campaign Status	Facebook	Survey
Woods Hole Oceanographic Institution	MA	Not Divested	Active		
Worcester Polytechnic Institute	MA	Not Divested	Active	✓	
Worcester State University	MA	Not Divested	Inactive	✓	
Yale University	CT	Partial	Active	✓	

APPENDIX B

ONLINE SURVEY TEXT

The following survey is being conducted as part of a master's thesis project by a student at Southern Illinois University Carbondale. The purpose of this project is to study the characteristics of campaigns within the fossil fuel divestment movement at higher education institutions in the United States, as well as the barriers and drivers student-led campaigns in this movement have experienced to advancing towards their goals. Responses to the survey will help create a better understanding of the fossil fuel divestment movement at higher education institutions and of student-led social movements in general.

Potential fossil fuel divestment campaigns to survey for this study were identified from records provided by Divest Ed, a program of the organization Better Future Project. Campaigns identified were contacted through a primary contact email address identified either from records provided by Divest Ed or through internet research on campaigns that have been identified by the program.

One individual who has been involved with each student-led campaign contacted and is knowledgeable about the history and strategies used by the campaign is requested to complete the survey. This individual must also be at least 18 years of age to participate. If you have not been involved with a student-led fossil fuel divestment campaign at a higher education institution in the United States then it is not requested that you take this survey.

The survey consists of three sections and a total of 64 questions. It will take approximately 20 minutes to complete. Participation in the study is entirely voluntary and can be withdrawn at any time. Participants may also skip any questions they do not wish to answer. The identity of the individual taking the survey will not be inquired about nor recorded in any way. Any records that could potentially be used to determine the identity of participants will remain confidential throughout the duration of the study and after it has been completed by being kept in secure, password protected electronic locations.

Completion and return of this survey indicates voluntary consent to participate in this study. Further questions about the research may be directed to the contacts listed below.

Thank you for your time and participation.

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This project has been reviewed and approved by the SIUC Human Subjects Committee. Questions concerning your rights as a participant in this research may be addressed to the Committee Chairperson, Office of Sponsored Projects Administration, Southern Illinois University, Carbondale, IL 62901-4709. Phone (618) 453-4533. E-mail siuhsc@siu.edu

Part 1: Background Information

1. What is the name of the higher education institution where your fossil fuel divestment campaign is/was located?

   _____

2. What is the current status of your campaign?
   a. Active
   b. No longer active because objectives have been achieved
   c. No longer active because factors have prevented it from continuing
   d. On hold, but likely to continue in the future
   e. Other (please explain):

      _____

3. Approximately how many years in total has your campaign been active? If it is no longer active, then write the approximate number of years in total it was active in the past.

   _____

4. What would you describe as the overall goals of your campaign (include specific changes you are/were trying to achieve at your institution)?

   _____

5. How would you describe the level of progress your campaign has achieved?
   a. Succeeded in getting institution to divest from fossil fuel companies or make other major commitment involving investments
   b. No major commitments from institution involving investments, but a large amount of progress has been/was made towards achieving goals
   c. Moderate amount of progress has been/was made towards achieving goals
   d. Little progress has been/was made towards achieving goals
6. Briefly explain what accomplishments your campaign has made to get to the level of progress you indicated in the previous question. If your campaign has succeeded in getting your institution to divest or make another major commitment involving investments explain what that commitment was.

   _____

7. Has your campaign been primarily run by students attending the institution where your campaign has been located at?
   a. Yes
   b. No (please explain): _____
8. What type of group has been responsible for leading your campaign? If there have been multiple groups leading the campaign together select "Other" and explain.
   a. A registered student organization on campus specifically focused on divestment

b. A registered student organization on campus that focuses on other issues and activities in addition to divestment
c. A student government body on campus
d. A campus sustainability council or sustainability committee
e. A group of students focusing on divestment as a class project
f. An off-campus organization
g. An informal group or collection of individuals
h. Other (please explain):

_____

9. Which of the following describes your affiliation with the institution where your campaign is/was located during the time that you have been involved with the campaign?
    a. Student
    b. Faculty
    c. Staff
    d. Administrator
    e. Alum
    f. Community member
    g. Other (please explain): _____

    _____

10. Which of the following best describes how you have been involved with your campaign?
    a. Active participant
    b. Supporter
    c. Adviser or mentor
    d. Other (please explain): -

    _____

11. How many people have been/were actively involved with running your campaign on average at a given time?
    a. 1 – 5 people
    b. 6 – 10 people
    c. 11 – 15 people
    d. 15 – 20 people
    e. Greater than 20 people
12. How would you describe the makeup of individuals that have been involved with running your campaign in terms of gender?
    a. Mostly female
    b. Mostly male
    c. Approximately equal involvement of females and males
    d. Other (please explain):

    _____

13. How would you describe the makeup of individuals that have been involved with running your campaign in terms of race (e.g. mostly white, mostly black, mix of individuals of different races, etc.)?

    _____

Part 2: Barriers

For items 14 – 29, rate on a scale from 1 – 5 how much of a **barrier** the listed factors have been to your campaign advancing towards its goals, if experienced, with "1" being a very small barrier or not a barrier at all and "5" being a very large barrier. If any of the factors have not been experienced by your campaign, mark "0".

Note: Questions 14 – 29 include "0", "1", "2", "3", "4", and "5" as multiple choice options.

14. Difficulty getting/maintaining an adequate number of participants in the campaign
15. Difficulty getting a demographically diverse body of individuals involved (individuals of different races, ethnicities, genders, etc.)
16. Difficulty getting individuals to work together well who have differing perspectives and views
17. Lack of consistent leadership within the campaign
18. Lack of time among individuals involved in the campaign
19. Lack of funding or resources available to the campaign
20. Difficulty understanding institutional decision-making processes
21. Difficulty understanding the financial component of divestment or how finances or investing works at your institution
22. Lack of opportunities for students to provide input or directly be involved in institutional decision-making
23. Decision-makers being unreceptive, unsupportive, or hostile in engagements with the campaign or in response to its demands
24. Financial concerns taking priority over environmental and social concerns in institutional decision-making
25. Changes sought by campaign not being in line with typical approach to sustainability at institution (e.g. divestment is more politically-oriented, justice focused, etc.)
26. Campus stakeholders (students, faculty, staff, etc.) or community members being unsupportive of campaign
27. Decision-makers or stakeholders on campus being unwilling to or feeling unable to speak out politically
28. Difficulty finding support or assistance from groups or organizations on campus
29. Difficulty finding support or assistance from groups or organizations from outside your institution
30. Describe any major barriers not mentioned above that your campaign has experienced to advancing towards its goals.

    _____

Part 3: Drivers

For items 31 – 63, rate on a scale from 1 – 5 how much of a **driver** (i.e. something helpful) the listed factors have been to your campaign advancing towards its goals, if experienced or used in your campaign's strategy or tactics, with "1" being a very small driver or not a driver at all and "5" being a very large driver. If any of the factors have not been experienced by your campaign and have not been used in the campaign's strategy or tactics, mark "0".

Note: Questions 31 – 63 include "0", "1", "2", "3", "4", and "5" as multiple choice options.

31. Having a large number of individuals involved in the campaign
32. Having a demographically diverse body of individuals involved in the campaign (individuals of different races, ethnicities, genders, etc.)
33. Encouraging individuals with a variety to perspectives and views to get involved in the campaign
34. Keeping involvement in the campaign limited to individuals who share similar perspectives and views
35. Consistent leadership within the campaign
36. Using a horizontal (collective) leadership approach within the campaign
37. Using a vertical (top-down/hierarchical) leadership approach within the campaign
38. Large availability of funding or resources for the campaign
39. Availability of training or informational resources relating to divestment or organizing campaigns from outside organizations or other sources
40. Strong opportunities for students to provide input or directly be involved in institutional decision-making
41. Decision-makers being receptive or supportive in engagements with the campaign or in response to its demands
42. Environmental and/or social concerns being strongly considered in institutional decision-making
43. Strong support from campus stakeholders (students, faculty, staff, etc.) or community members
44. Collaborations with student groups on campus
45. Collaborations with or assistance from faculty, staff, or campus departments or offices
46. Collaborations with organizations from outside of the institution
47. Working or collaborating with frontline communities impacted by climate change or fossil fuels
48. Student government bodies passing measures supporting your campaign's demands
49. Using an interdisciplinary approach (i.e. collaborating with people or using resources from a variety of fields of study or work)
50. Incorporating an environmental justice perspective into campaign
51. Using environmental arguments for communicating why the changes you are/were campaigning for should be implemented at your institution (reducing impacts of fossil fuel use on ecosystems, wildlife, biodiversity, etc.)
52. Using social arguments for communicating why the changes you are/were campaigning for should be implemented at your institution (reducing impacts of fossil fuel use on human welfare, promoting environmental justice, protecting indigenous rights, etc.)
53. Using economic arguments for communicating why the changes you are/were campaigning for should be implemented at your institution (financial benefit to institution, growing economy through transition to renewable energy, etc.)
54. Using a mix of environmental, social, and economic arguments for communicating why the changes you are/were campaigning for should be implemented at your institution
55. Working inside institutional decision-making channels (holding meetings with decision-makers, passing measures through campus decision-making bodies, etc.)
56. Working outside of institutional decision-making channels (holding public protests, distributing information to the public, etc.)
57. Using a mix of working inside and outside of institutional decision-making channels

58. Using the strategy of escalation to push your campaign's demands (i.e. increasing the frequency and aggressiveness of actions to apply increased pressure until specific demands are met)
59. Public protests events (marches, rallies, demonstrations, etc.)
60. Intentionally disruptive and/or confrontational protests (sit-ins, protests at board meetings, blockading entryways, etc.)
61. Use of social media for campaign activities (communication, promotion, recruitment, etc.)
62. Use of art, visual media, or auditory media to promote message
63. Coverage of campaign by media outlets (newspapers, television news shows, radio shows, online news outlets, etc.)
64. Describe any major drivers not mentioned in the questions above that your campaign has experienced or utilized in advancing towards its goals.

    _____

APPENDIX C

ADDITIONAL COMMENTS ON BARRIERS AND DRIVERS FROM ONLINE SURVEY

Question:

Describe any major barriers not mentioned above that your campaign has experienced to advancing towards its goals.

Answers Received:

“Student apathy and disinterest have been an issue”

“Lack of administrative support for sustainability measures, lack of willingness of trustees to meet and discuss.”

“Our university purposely makes it difficult for student voices to be heard because of the history of activism on our campuses (public comment early in the morning / hours away / on school days; "meetings" with administration only lasting 10 minutes).”

“Frequent turnover in student leadership and activists, geographical dispersion of alums makes contact difficult.”

“lack of contact with the Board of Trustees and not having information regarding the location and times of their meetings.”

“Institutional memory - passing on information about the campaign from one class to the next since students cycle through the university so quickly.”

“getting rejected basically killed our campaign for two years and it has been VERY difficult to start back up”

“Motivating students to form horizontal or non-hierarchical leadership within the campaign
The short length of institutional memory once students graduate
Economics students/department supporting fossil fuel investment”

“Just to note, we are non-hierarchical so consistent leadership can be an issue, but we also intentionally do not have any except facilitators for meetings and working groups.”

“MIT accepts a significant amount of money from the fossil fuel industry (and individuals involved with fossil fuels, including David Koch) for sponsored research projects and research consortia. Many faculty members and decision-makers at MIT are wary of divestment out of a fear that fossil fuel companies would retaliate by withdrawing funding.”

“sustainability of individual organizers, people with very limited time, institution benefiting from student turnover, very little support from administration”

“co-mingled funds”

Question:

Describe any major drivers not mentioned in the questions above that your campaign has experienced or utilized in advancing towards its goals.

Answers Received:

“Passion of people involved! A lot of our forward motion is just from grit from a few people. Also the feeling of community among campaign members.”

“Involvement of or mentions by politicians and other prominent celebrities and alumni.”

VITA

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Bachelor of Science, Biological Sciences, December 2017

Special Honors and Awards:

Gamma Theta Epsilon International Geographical Honor Society
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Thesis Paper Title:

The U.S. Fossil Fuel Divestment Movement: Towards a Justice-Based Paradigm of Sustainability at Higher Education Institutions

Major Professor: Dr. Leslie Duram