Looking Beyond Fossil Fuel Divestment: Combating Climate Change in Higher Education

Robin Xu

Abstract

The fossil fuel divestment movement is altering the landscape of climate activism on US campuses. Student-run divestment campaigns are now pushing for college Boards of Trustees to withdraw investments from the top 100 public coal companies and top 100 public oil and gas companies. Despite student fervor, however, divestment has remained a controversial tactic. Why has the movement not enjoyed widespread success, despite heavy student pressure? This chapter examines the hypothesis that pushing for divestment alone will not achieve broad success because it does not appeal to a wide enough range of motives that may persuade people to engage in pro-environment behavior. This chapter will study the stated motives for why a selection of colleges have agreed or declined to divest. A detailed analysis of how these stated motives fall into a theoretical framework of motives for pro-environment behavior reveals the motives to which divestment successfully appeals, as well as the motives to which it fails to appeal. The purpose of detecting gaps where divestment fails to appeal is to identify areas that can be better addressed by a multi-pronged approach to climate activism. This chapter concludes with a brief suggestion of other actions that might be included in a holistic climate action plan.

Keywords

Climate change · Student activism · Fossil fuel divestment · Sustainability

R. Xu (✉)
Department of Environmental Analysis, Pomona College, 101 N. College Way, Claremont CA 91711, USA
e-mail: rx002011@pomona.edu

W. Leal Filho and M. Zint (eds.), *The Contribution of Social Sciences to Sustainable Development at Universities*, World Sustainability Series,
DOI 10.1007/978-3-319-26866-8_3

1 Introduction: Motives for Pro-environment Behaviors

Secretary-General Ban Ki Moon of the United Nations has recognized anthropogenic climate change as the defining challenge of our age (Rosenthal 2007). It seems natural that college students would be eager to take up this challenge, as universities have been the breeding ground for activism on other defining challenges like inequality, apartheid, and war. As the best and brightest of the upcoming generation, how are students responding to the climate crisis?

One effort, led by the non-profit 350.org, is the movement for fossil fuel divestment. According to Gofossilfree.org, the movement calls for institutions to "immediately freeze any new investment in fossil fuel companies, and divest from direct ownership and any commingled funds that include fossil fuel public equities and corporate bonds within five years." Since the movement's inception in 2011, its public face has been the college student. All across the United States, student-run campus divestment campaigns are pushing for trustees to commit to an endowment investment policy that excludes the top 100 public coal companies and top 100 public oil and gas companies according to the potential carbon dioxide emissions of their reported reserves. Despite student fervor, however, divestment has remained contentious. As of September 2014, only 13 colleges have agreed to divest (gofossilfree.org/commitments). Numerous others have declined to divest, or declined to officially consider the issue.

Why has the movement not enjoyed widespread success, despite heavy student pressure? To help answer this question, this chapter explores how a theoretical model based on findings from the field of psychology can inform the creation of more effective and unified climate action on college campuses. The purpose of this chapter is to examine the hypothesis that pushing for fossil fuel divestment alone will not achieve broad success on campuses because it does not appeal to a wide enough range of motives that psychology research has shown might persuade people to engage in pro-environment behavior, defined loosely here as behaviors that contribute to the ability of humanity to live within the regenerative capacity of the Earth's ecosystems.

In the literature, explanations for why people engage in pro-environment behavior fall into two major camps. One camp posits that this behavior is galvanized by "pro-social" motives such as concern for humans, other species, and the planet. The other camp follows a rational choice model that predicts that humans will maximize self-interest (Ones and Dilchert 2013). Empirical research conducted by Ones and Dilchert (2012) further breaks these blocs down by investigating environmental-related behaviors and then chronicling the discrete motives that each test subject gives for engaging in pro-environment behaviors. The motives were then classified into the categories within the Taxonomy of Environmental Motives shown in Fig. 1.

– The **environmental concern** motive involves a concern for preventing harm to the Earth's ecosystems and other species. Thus, tactics that emphasize healing and protecting nature are most successful in appealing to this motive.

Fig. 1 Taxonomy of environmental motives (This graphic, created by the author, is a representation of the findings of Ones and Dilchert (2012), available at http://greenfive.org/aashe/greenfive-handout.pdf)

– The **altruism** motive involves a concern for preventing harm to other humans. Tactics that emphasize protecting humans, including future generations, are most successful.
– The **responsibility** motive involves a concern for fulfilling a responsibility. Tactics that create real or perceived obligations, for example through rules that require pro-environment behaviors, are most successful.
– The **health and safety** motive involves a concern for one's own health and safety. Tactics that point out how pro-environment behaviors can also be safer and healthier are most successful.
– The **financial and self-interest** motive involves a concern for one's own gain. Tactics to financially justify pro-environment behaviors are most successful. Apart from financial gain, for colleges the self-interest motive commonly involves gaining positive press.
– The **convenience** motive involves engaging in behaviors that easily fit into the subject's preferred routines and habits. Thus, tactics that increase the ease of engaging in pro-environment behaviors are most successful.
– The **ability and support** motive involves engaging in behaviors because the subject knows how, and because there is strong support from surrounding institutions. Thus, tactics that increase knowledge of pro-environment behaviors and their integration into institutional cultures are most successful.

The idea that examining motives is key to changing behaviors for the benefit of the environment also appears in community-based social marketing. Informed by psychology research on behavior change, community-based social marketing is a strategy for identifying the barriers to switching from environmentally harmful behavior to pro-environment behavior (McKenzie-Mohr 2011). These barriers vary from person to person, and are also activity specific: for example, the barriers to composting are different from the barriers to divesting.

The barriers identified in community-based social marketing can be conceptualized as the *inverse* of the motives identified by Ones and Dilchert. When motives are strong enough, they incite pro-environment behavior; when barriers are strong enough, they prevent pro-environment behavior. Community-based social marketing reinforces the research done by Ones and Dilchert by asserting that neither a self-interest strategy nor a strategy that attempts to change attitudes is adequate. Instead, a successful campaign to foster pro-environment behavior must focus on overcoming each decision-maker's barriers for the target behavior (McKenzie-Mohr 2011). This is just another way of saying that a successful campaign must appeal to each decision-maker's strongest motives for engaging in the target behavior.

2 Stated Motives of Institutions

Using the Taxonomy of Environmental Motives as a theoretical framework, this chapter will examine the stated motives of a selection of colleges that have released an official decision on divestment.[1] A "stated motive" is defined here as a reason offered in a public statement from institution administrators for why they have agreed or declined to divest. A detailed analysis of how these stated motives fall into the taxonomy will reveal the motives to which divestment appeals and those to which it fails to appeal. Table 1 summarizes these findings.

The purpose of detecting gaps that a singular focus on divestment leaves open is to identify areas that can be better addressed by a multi-pronged approach to climate activism. Not all campuses will accept divestment; it depends on whether or not the arguments in favor of divesting match a particular campus's strongest motives for pro-environment behavior. Therefore, campus climate activism will not be successful if it loses sight of actions other than divestment. This chapter will conclude with a brief index of suggested actions to create a flexible, multi-pronged strategy that may go a long way in improving the chances for success in campus climate activism.

[1]This is not intended to be an exhaustive examination of all colleges that have made a decision on divestment. Rather, it examines a selection of colleges, building off of the work of Jessica Grady-Benson's *Fossil Fuel Divestment: The Power and Promise of a Student Movement for Climate Justice (2014)*, the primary existing scholarly work on the young divestment movement at the time of this chapter's writing. Grady-Benson documented 24 rejections as of early 2014, and the number of rejections has continued to grow since then. Due to time constraints, this chapter does not examine a complete list of rejections, and instead chooses samples from Grady-Benson's list. However, the number of successes is much smaller, so this chapter does examine a complete list of successes up to September 2014, drawn from the official list on Gofossilfree.org, available at http://gofossilfree.org/commitments/. The press releases and official letters themselves are publically available online and were found using a search engine.

Table 1 Summary of stated motives

	Successes: agree to divest	Rejections: decline to divest
Environmental concern	NONE: divestment proponents acknowledge its lack of direct environmental impact	Divestment lacks direct environmental impact, so other actions with direct impact are preferable
Altruism	NONE: divestment proponents acknowledge its lack of direct impact on protecting humanity from climate instability	Divestment lacks direct impact on protecting humanity from climate instability, so other actions with direct impact are preferable
Responsibility	• Colleges have a duty to educate the public about the climate problem	
	• If colleges have an existing policy dictating responsible investment choices, they have a duty to adhere to it	
	• If divestment is in the best interest of the endowment, divesting aligns with fiduciary duty	
	• Colleges do not have a duty to make an ideological statement using their endowment because it may interfere with their primary duty, that of academia	• If divestment is not in the best interest of the endowment, it does not align with fiduciary duty
Financial and self-Interest	• Divestment is financially beneficial because it will reduce risk related to climate change: "stranded asset risk" argument	• Divestment would entail high financial risks and costs from potential increased risk in the portfolio and transaction costs incurred from reallocating assets
	• Divestment will cause little or no financial harm to the endowment	
Convenience	NONE	Tied to the discussion of transaction costs, divestment is difficult to integrate into routine investment behavior
Health & safety	NONE	NONE
Ability & support	NONE	NONE

The limits of this work should be duly noted. This paper stems from an interdisciplinary thesis in Environmental Analysis, not sociology or psychology. Therefore, this work does not attempt to debate the merits of the research that created the taxonomy in Fig. 1 or its supporting arguments. I recognize that there are a variety of other ways to conceptualize motives for environmental-related behavior; I have chosen the taxonomy in Fig. 1 to undergird my own analysis simply because it organizes motives into categories in a straightforward and easily understandable way.

In addition, although it is my hope that this analysis may be helpful to climate activists within other institutional contexts, this work's scope is limited to investigating colleges in the United States only.

2.1 Successes

Among selected colleges that have agreed to divest, the most frequent stated motive offered is social and environmental **responsibility**. Unity College President Stephen Mulkey asserts that, as educators, colleges have a responsibility to educate people misled by denial campaigns about the true nature of the climate problem. Donald Gould, a trustee and chair of the investment committee at Pitzer College, agrees: "…the academy has a duty to educate not only its students but also society at large. Divestment is an educational statement, not a political one." Similarly, Sterling College president Matthew (Derr 2013) writes, "[Colleges] have an obligation to speak out on the critical environmental and social issues facing our country."

The **responsibility** motive also arises in another form, the duty of colleges to adhere to their existing investment policies. In a few cases, colleges could interpret their prevailing mandates in favor of divestment. Stanford University divested from coal partly because its 1971 Statement on Investment Responsibility allows trustees to factor in whether or not "corporate policies or practices create substantial social injury" when deciding where to invest. Likewise, (Hampshire College 2012) interpreted divestment to align with existing Environmental, Social and Governance investment guidelines to seek out businesses that prioritize social benefit and long-term sustainability. Similarly, for (Green Mountain College 2013), divestment aligned with the commitment to socially responsible investments outlined in its strategic plan "Sustainability 2020." When existing policies can be interpreted in favor of divestment, divestment appeals to the **responsibility** motive.

Closely related is the argument, though contentious, that divestment yields financial benefits in the long run. Although Pitzer trustee Don Gould is a notable exception, college trustees usually define their fiduciary duty as an obligation to act in the financial best interest of the endowment.[2] Fiduciary duty is a form of responsibility; thus, when proponents argue that divestment is in the financial best interest of the endowment, they appeal simultaneously to the **responsibility** and **financial and self-interest** motives.

Also known as the "stranded asset risk" argument, the financial argument in favor of divestment asserts that divesting reduces long-term risk to the endowment. This argument claims that fossil fuel stocks are currently overvalued because valuation methodologies do not take into account that 60–80 % of fossil fuel reserves

[2]Cornell University Law School's Legal Information Institute defines fiduciary duty as "a legal duty to act solely in another party's interests." In this case, trustees are subject to a legal duty to act solely in the interests of the endowment on behalf of donors.

will be rendered 'unburnable' if the world enforces measures to keep global warming under 2 °C (Carbon Tracker Initiative 2013). Thus, fossil fuel companies are wasting billions of dollars to find and develop stranded assets, fossil fuels that will never be used. Investments in fossil fuels will become increasingly risky and unpredictable in the future as stranding occurs.

Several colleges have cited this argument. For instance, Thomas Van Dyck, financial advisor for the University of Dayton, states, "Fossil fuel companies have a valuation that assumes every single drop of oil, everything they have in the ground, will be taken out. More and more people are understanding the…valuation risk associated with owning fossil fuel companies." However, despite scattered successes, the stranded asset risk argument remains highly contentious. It hinges on the assumption that the global regulatory atmosphere will become increasingly hostile to carbon-intensive energy sources, severely restricting future fossil fuel use. Even some proponents of divestment, such as (Don Gould 2014), question the viability of this assumption: "'Stranded assets' is…wishful thinking…. [It is] asserting that just because we need to change to cleaner energy that we will change. The evidence, frankly, does not favor that to date" (quoted in Grady-Benson 2014, p. 100). Although a few colleges have stated that the **financial and self-interest** motive—in the form of the stranded asset risk argument—has contributed to their decision to divest, it is not a motive to which the divestment action consistently appeals.

The **financial and self-interest** motive can also be conceptualized as the inverse of a barrier that is overcome. Many colleges divest because they believe it will cause little harm to the endowment. Don Gould asserts, "The proceeds from divestment will be reinvested in something [and] historically, [fossil fuel] companies' stock performance has been roughly in line with the rest of the stock market." Likewise, Unity College's estimates show that "divesting is consistent with maintaining a return that will continue to beat the market averages under current prices." Press releases from both University of (Dayton 2014) and the (Foothill-De Anza Community Colleges 2013) also indicate that they expect no significant effect on investment returns. However, there are conflicting opinions on the anticipated financial effects of divestment and many colleges have rejected divestment on just the opposite view. The next section of this chapter will examine this viewpoint in detail.

It appears, then, that the dominant motive in favor of divestment is **responsibility**. Social and environmental responsibility comes up as a stated motive for almost all who agree to divest. Adhering to existing investment policies and fiduciary duty are also forms of **responsibility**.

Divestment also appeals to **financial and self-interest** in a few cases, but the financial argument is contentious, which limits its appeal. The **financial and self-interest** motive is also invoked when colleges do not believe divestment involves much financial cost or risk.

2.2 Rejections

When examining the stated motives of colleges that reject divestment, it is useful to conceptualize *motives* as the inverse of *barriers*, as each motive most likely involves a barrier to pro-environment behavior rather than any motive to cause environmental harm.

Among these colleges, the **financial and self-interest** motive poses as the most common barrier. Many believe divestment entails high financial risks and costs. Tufts University estimates that their endowment would decrease $75 million in market value over five years, Swarthmore College estimates losses of $10–15 million in endowment income annually, and Pomona College estimates a total decrease of $485 million over ten years. Grady-Benson (2014) identifies three major sources of risk and cost from divestment: potential increased risk in the portfolio, the difficulties of divesting, and transaction costs.

Divestment causes potential increased risk in colleges' portfolios because it constrains the use of diversification, a widely accepted risk management technique. A diversified portfolio contains a variety of investments in different asset classes that are not perfectly correlated. On average, the investments that do well will neutralize those that do poorly, which acts as a buffer against unsystematic financial risk. In the context of divestment, Haverford College president Daniel Weiss states, "A portfolio that excludes a major asset class will under-perform a more fully diversified portfolio." Constraining diversification by avoiding investments in fossil fuel companies could raise potential risk.

The way that endowments are structured also poses difficulties to divesting. Decades ago, colleges used to invest directly in individual companies, which made it easier to divest from certain companies. However, endowment structures have changed in response to evolving markets and standards of investing. Tufts president Tony Monaco offers an explanation of the difficulties that institutions face today:

> …Our endowment, like those at many other universities, makes extensive use of commingled or pooled funds, in which multiple investors hold a "slice" of an investment portfolio…. investors cannot dictate the guidelines of the commingled fund; they can only choose whether or not to invest under guidelines specified by the fund manager. Because of this "in-or-out" choice, if we decided to begin a process of divesting today, Tufts would have to turn over about 60 percent of its current investments and find substitute managers…

Similarly, Bates College estimates that divestment would require liquidating one-third to one-half of their endowment, and expresses concern that reallocating such a large proportion of assets would result in unacceptably high transaction costs. While transaction costs can be construed as the **financial and self-interest** motive, it is also a permutation of the **convenience** motive. Discussions of transaction costs indicate that colleges believe divestment is difficult to integrate into their routine investment behavior.

Discussions of risks and costs often come hand-in-hand with discussions of fiduciary duty. When colleges believe that divestment is not in the best financial interest of the endowment, they conclude that divestment does not align with fiduciary **responsibility**. For example, the Investment Policy Subcommittee at Bryn Mawr College states that divestment does not align with its responsibility “to provide a return on the investments over time…to preserve the purchasing power of the endowment for future generations.” Similarly, President Clayton (Spencer 2014) of Bates states, “The Board of Trustees has a fiduciary responsibility to protect our ability from generation to generation to offer the high quality liberal arts education envisioned by our founders.” Likewise, Middlebury College President Ronald Liebowitz asserts that “given its fiduciary responsibilities, the board cannot look past…the uncertainties and risks that divestment would create.”

The **responsibility** motive also poses as a barrier when colleges do not feel that it is their responsibility to make a political or ideological statement using their endowment. According to Tulane University president Scott Cowen, “[endowment funds] are given to the university with the understanding that they will be managed…apart from any political positions…” Some colleges express that risking their endowment is not an appropriate way to fulfill their responsibility to combat climate change, and, in fact, places their ability to fulfill responsibilities in unnecessary jeopardy. Daniel Weiss believes divestment would harm Haverford’s educational mission: “because [divestment] would likely depress endowment value going forward…it would undermine our ability to achieve our core goal of [education]…” In addition, Harvard University president Drew (Faust 2013) warns, “Conceiving of the endowment not as an economic resource, but as a tool to inject the University into the political process or as a lever to exert economic pressure for social purposes, can entail serious risks to the independence of the academic enterprise.” Thus, when colleges believe that divestment may interfere with their primary duty, that of academia, the **responsibility** motive poses as a barrier.

A large number of colleges express dissatisfaction with divestment’s minimal direct impact on slowing climate change. In these cases, the **environmental concern** and/or **altruism** motives pose as barriers because colleges believe that divesting will not reduce the negative consequences of unfettered climate change on humanity, other species, and/or the Earth’s ecosystems. Bryn Mawr’s Investment Policy Subcommittee states: “…divestment will not accomplish the larger and central goal of reducing the use of fossil fuels.” Likewise, Pomona’s President Oxtoby points out that it is “unclear that divestment would have anything more than a symbolic impact in fighting climate change.” The Swarthmore Board of Managers also believes “[divestment] is far from our best option…for having real impact on the fossil fuel industry.”

It is widely understood that divestment will cause negligible financial disturbance to fossil fuel companies. Brown president Christina H. (Paxson 2013) asserts, “It is clear that divestiture would not have a direct effect on the companies in question…. divestiture would not reduce profits even if Brown’s holdings were orders of magnitude larger.” Furthermore, as Harvard’s President Faust states, “Universities own a very small fraction of the market capitalization of fossil fuel companies. If we and others were to sell our shares, those shares would no doubt find other willing buyers.”

The divestment movement itself acknowledges the minimal direct impact of divestment and asserts that divestment is not an economic strategy, but a social and political one. The movement does not expect to directly reduce greenhouse gas (GHG) emissions or change the behavior of fossil fuel companies, but rather to galvanize climate action by protesting the immorality of the fossil fuel industry, especially its practice of lobbying for special breaks from the government. When colleges withdraw as investors to express their disapproval of fossil fuels, the movement claims that it sends a powerful moral message to policymakers and the public (Grady-Benson 2014).

Colleges commonly argue is that it is hypocritical to attempt to stigmatize fossil fuel companies while continuing to rely heavily on their products. (Davidson 2014) College dpresident Carol Quillen questions "the integrity of making a symbolic gesture while continuing to power campus with…fossil fuels." Harvard's President Faust also finds it inconsistent to boycott a whole class of companies while extensively relying on their products. Swarthmore's Board of Managers agrees: "Divestment's potential success as a moral response is limited…so long as its advocates continue to turn on the lights, drive cars, and purchase manufactured goods, for it is these activities that constitute the true drivers of fossil fuel companies' economic viability." It is clear that the divestment movement's argument about sending a moral message does not appeal sufficiently strongly to these colleges.

The **environmental concern** and/or **altruism** lack-of-impact barriers are often coupled with discussions of costs and risks in order to assert that high or unpredictable costs outweigh minimal benefits. Pomona's President (Oxtoby 2013) finds that the minimal impact of divestment on climate change makes it "hard to make the case that it would be worth the significant cost to future Pomona students." Swarthmore's Board of Managers also assesses that divestment "would have no measurable effect on halting climate change and at the same time would pose an unacceptable risk to the College's finances…. the cost of divestment would far outweigh any potential benefit."

The lack-of-impact barriers are especially apparent when colleges decline to divest, and instead commit to other actions with a more tangible impact. For example, instead of divesting, Haverford's Board of Managers will conduct a review of campus sustainability measures to identify future improvements. (Middlebury 2013) will develop stronger Environmental, Social and Governance guidelines and increase the amount of the endowment dedicated to ESG investments. Tufts will establish a Sustainability Fund, strengthen its climate change education and research, promote interest for sustainability on campus, and harness the policy expertise of faculty and students to engage with policymakers about climate change (president.tufts.edu/recommendations-of-the-tufts-divestment-working-group).

Some colleges that currently prefer other actions, however, do not preclude the possibility of divesting in the future. "At this point, we're not prepared to commit to divest from fossil fuels, but I would never say never," says President Mills of Bowdoin College. At Pomona College, John Jurewitz, an energy economics professor, has proposed an alternative plan that first targets energy efficiency measures and then pushes for a federal carbon tax. For Jurewitz, divestment must be accompanied by these essential steps (Haas 2013). This line of thinking—reduction of carbon footprint first, divestment second—indicates that pushing for other actions to combat climate change may actually help to further the divestment movement in the long run. Some colleges resistant to divesting now are likely to consider it in the future within the context of a holistic climate action plan.

3 Gaps in Stated Motives

As shown by the variety of responses, the issue of divestment remains contentious. What are the gaps left open by a singularly divestment-centered approach?

It is apparent from the above examination of stated motives that both sides most commonly consider the divestment question using the **responsibility** and/or **financial and self-interest** motives. When these motives are sufficiently strong, colleges choose to divest. When these motives are either not sufficiently strong, or are construed instead as barriers, they decline to divest. If divestment alone is not successful, a multi-pronged approach might be, if it includes actions that appeal more strongly to the target campus's **responsibility** and/or **financial self-interest** motives.

Stated motives also reveal that divestment often does not appeal to **environmental concern** and/or **altruism**. Many colleges believe it will be ineffective in creating real impact to slow climate change. This is a large gap, so an approach that includes actions appealing to these two motives will be more widely successful than divestment alone. This inference is supported by the instances discussed above, in which colleges decline to divest, but commit to other actions with more tangible impacts.

Colleges that have agreed to divest do not mention **convenience** as a motive. Therefore, it appears that divestment may not be easy, but those strongly motivated to divest for other reasons will divest regardless of whether or not it is easy. The above examination of stated motives also does not explicitly find **convenience** as a barrier for colleges that decline to divest. Instead, the difficulties of divesting are tied up in the discussion of transaction costs, and colleges seem more concerned about the high transaction costs of divesting than the actual difficulties it entails. Therefore, actions that do not have high transaction costs will appeal more successfully to the **convenience** motive than divestment does.

It should be noted that divestment is not necessarily all-or-nothing. One potential compromise is for colleges to divest to the extent that it does not involve unacceptably high transaction costs—for instance, to avoid fossil fuel holdings except those embedded in large index fund vehicles, and then compensate for their remaining fossil fuel investments by increasing purchases of clean energy funds. There are many creative strategies for partial divestment that would avoid unacceptably high transaction costs, and this type of compromise might be effective if the **convenience** motive poses as a main barrier to divestment.

It is also evident that **ability and support** is not a strong motive in the face of other barriers. The taxonomy in Fig. 1 construes **ability and support** as having the knowledge necessary to do something, as well as institutional or cultural support in favor of doing it.

However, despite being well informed about divestment, many colleges still decline to divest, and some also disregard student referendums that show widespread support for divestment. These colleges often justify their actions by citing extremely high barriers in the form of costs, risks, and/or responsibilities. Therefore, it appears that the **ability and support** motive is not effective when other barriers are high. However, it is important to capitalize on **ability and support** for actions for which high barriers are not a problem.

Finally, both sides of the debate disregard the **health and safety** motive. An approach that includes actions that appeal to this motive would take advantage of a category that remains untapped by the divestment movement.

4 Conclusion: Looking Beyond Divestment

The above analysis shows that pushing for divestment alone leaves open a variety of gaps that are either completely unaddressed or inadequately addressed. This finding suggests that there is much room for improvement in campus climate and sustainability activism. Rather than focusing exclusively on divestment, campus climate activists should craft adaptable plans by matching specific tactics to each target college's strongest motives for pro-environment behavior. This is especially important when targeting colleges that have already declined to divest. Trying a different set of motives might spur trustees and administrators to take actions other than divestment, rather than doing nothing.

These implications are reinforced by the fact that even colleges that have already agreed to divest recognize the importance of a multi-pronged approach. For example, (Prescott College 2014) sees divestment as a logical next step after developing a Climate Action Plan to minimize campus GHG emissions through investments in energy conservation, renewable energy, and carbon offsets. Similarly, Naropa University regards divestment as a fitting complement to its Statement of Commitment to the Practice of Sustainability, which commits to goals like zero waste, climate neutrality, and 100 % renewable energy. When asked to consider divestment, Pitzer's Board of Trustees instead went above and beyond, committing to a holistic climate action plan of which divestment is only one part. Other aspects include reducing the college's carbon footprint by 25 %, establishing a campus Sustainability Task Force, and exploring investments in offsite renewable energy projects (Grady-Benson 2014). These colleges have chosen to place divestment within the context of other actions to fight climate change.

Moving forward, crafting a broader portfolio of demands for holistic climate action on campuses will keep the conversation open for an ongoing and escalating push against climate change. The following list provides a starting point for crafting such a plan:

(1) **Work towards campus climate neutrality**, or eliminating net GHG emissions by minimizing emissions and then neutralizing remaining emissions.

- **ACUPCC**: American College and University Presidents Climate Commitment is a framework within which colleges create a climate action plan with a target date for campus climate neutrality. The large number of signatories makes ACUPCC an industry standard and source of knowledge sharing between peer institutions.
- **Minimize campus GHG emissions**:
  - Strive for energy conservation through behavioral changes in campus occupants and energy efficiency upgrades in facilities.
  - Install on-site renewable energy production.
  - Minimize new construction and adhere to green construction standards.
  - Support sustainable commuting.
- **Neutralize remaining emissions**:
  - Purchase renewable electricity products and/or Renewable Energy Certificates.
  - Purchase carbon offsets or create a carbon offset program.
  - Purchase and retire cap-and-trade carbon allowances, where applicable.

(2) **Create internal financial mechanisms** within the college to underwrite initiatives to combat climate change.

- **Loan-disbursing green revolving funds**: A green revolving fund underwrites initiatives by providing loans that must be repaid. Once the loan is repaid, the original seed money is then free to be loaned to another project. A green revolving fund is most appropriate for initiatives that generate high savings, such as energy- and resource-efficiency investments.
- **Grant-disbursing funds**: It can be more palatable to use grants to underwrite initiatives that have an uncertain payback period or might not break even, but still have educational and/or environmental value.

(3) **Integrate environmental education** into the college's institutional culture.

- **General education**: Most colleges have some type of mandatory general education, and incorporating climate education can ensure that all students become familiar with climate issues.
- **Curriculum infusion**: Incorporating climate issues into existing classes on other subjects can ensure that students studying a wide variety of subjects are exposed to climate issues.

- **Peer education programs**: Leverage social networks within the student body to spread awareness about climate issues by allowing students who are already interested and well versed in these topics to engage their peers.

It is commonly understood that the role of higher education is to establish the values of the world's next generation of leaders. If climate change is indeed the defining issue of this age, it is vital for leaders in coming decades to be dedicated to a variety of pro-environment behaviors including, but not limited to, divestment. Therein lies the true significance of this work: improving the strategies used on college campuses in anticipation of training sustainability leaders for the wider world. Future research on the motivations behind engaging in pro-environment behaviors, perhaps with a more narrow focus on specific age groups or institutional contexts, could be useful to further inform climate and sustainability activism. Given the dearth of scholarly literature on the young fossil fuel divestment movement, future research on this topic would also be beneficial, for example, exploring the intersection between the literature on sustainability and the literature on social movements to discover how to harness the energy behind this limited movement and channel it towards a broader sustainability goal.

References

An Open Letter on Divestment (2013) 11 September, available at http://www.swarthmore.edu/board-managers/open-letter-divestment. Accessed 10 Oct 2014

Carbon Tracker Initiative News and Events (2013) Wasted Capital and Stranded Assets Press Release. 19 April, available at http://www.carbontracker.org/in-the-media/wasted-capital-and-stranded-assets-press-release/. Accessed 8 Oct 2014

Davidson L (2014), Trustees reject students' call to divest from fossil fuels. DavidsonNews.net, 1 March, Available at http://davidsonnews.net/blog/2014/03/01/college-trustees-reject-divestment-referendum/. Accessed 13 Oct 2014

Derr M (2013) Why sterling college divested from fossil fuels. The Huffington Post, 6 February, Available at http://www.huffingtonpost.com/matthew-derr/college-fossil-fuel-divestment_b_2632391.html. Accessed 1 Oct 2014

Faust D (2013) Fossil fuel divestment statement. 3 October, Available at http://www.harvard.edu/president/fossil-fuels. Accessed 12 Oct 2014

Foothill-De Anza Community College District Stories (2013) Foundation votes to divest from fossil fuel investments. 24 October, Available at http://www.fhda.edu/stories/storyReader$303. Accessed 8 Oct 2014

Gould DP (2014) Why we said goodbye to fossil-fuel investments. The Chronicle of Higher Education, 28 July, Available at http://chronicle.com/article/Why-We-Said-Goodbye-to/147929/. Accessed 1 Oct 2014

Grady-Benson J (2014) Fossil fuel divestment: the power and promise of a student movement for climate justice. B.A. thesis, Pitzer College

Green Mountain College News and Events (2013) Green Mountain College Board Approves Divestment of Fossil Fuel Holdings. 14 May, Available at http://www.greenmtn.edu/news_events/new_releases/green-mountain-college-board-approves-divestment-of-fossil-fuel-holdings.aspx. Accessed 5 Oct 2014

Haas W (2013) Joint panel tackles divestment campaign. The Student Life, 15 February 15, Available at http://tsl.pomona.edu/articles/2013/2/15/news/3585-joint-panel-tackles-divestment-campaign. Accessed 14 Oct 2014

Hampshire College News and Events (2012) Hampshire College Adopts Environmental, Social and Governance (ESG) Investing Guidelines. 3 January, Available at https://www.hampshire.edu/news/2012/01/03/hampshire-college-adopts-environmental-social-and-governance-esg-investing. Accessed 5 Oct 2014

Letter from Cowen SS (2014) 23 April, Available at http://www.divesttulane.org/uploads/2/4/6/6/24661412/reponse_from_president_cowen_and_the_board_of_tulane_university.pdf. Accessed 13 Oct 2014

Letter from Holland CR (2013) 27 August, Available at http://news.brynmawr.edu/files/2013/08/August_27_2013BMCDivest-1.pdf. Accessed 10 Oct 2014

McGarry M (2012) Mills says college will not divest from fossil fuels. The Bowdoin Orient, 7 December, Available at http://bowdoinorient.com/article/7814. Accessed 11 Oct 2014

McKenzie-Mohr D (2011) Fostering sustainable behavior: an introduction to community-based social marketing, 3rd ed. New Society Publishers, Vancouver

Middlebury News Stories (2013) Middlebury College Statement on Divestment, 28 August, Available at http://www.middlebury.edu/newsroom/archive/524638/node/459563. Accessed 10 Oct 2014

Monaco T (2014) Statement on divestment from fossil fuel companies. 12 February, Available at http://president.tufts.edu/2014/02/statement-on-divestment-from-fossil-fuel-companies/. Accessed 10 Oct 2014

Naropa Press Releases (2013) Naropa University Divests from Fossil Fuels. 31 October, Available at http://www.naropa.edu/media/naropa-press-releases/press-2013/naropa-divests-from-fossil-fuels.php. Accessed 13 Oct 2014

Ones DS, Dilchert S (2012) Employee green behaviors. In: Jackson SE et al (eds) Managing human resources for environmental sustainability. Wiley, Hoboken

Ones DS, Dilchert S (2013) Measuring, understanding, and influencing employee green behaviors. In: Huffman AH, Klein SR (eds) Green organizations: driving change with I-O psychology, New York, NY

Oxtoby DW (2013) President david Oxtoby's letter to community on divestment decision. 24 September, Available at http://www.pomona.edu/news/2013/09/files/oxtoby-divestment-letter.pdf. Accessed 10 Oct 2014

Paxson CH (2013) Coal Divestment Update. 27 October, Available at http://brown.edu/about/administration/president/2013-10-27-coal-divestment-update. Accessed 10 Oct 2014

Prescott College Experience News and Events (2014) Prescott College Commits to Fossil Fuel Divestment Resolution. 28 February, Available at http://www.prescott.edu/experience/news/fossil-fuel-divestment-resolution.html. Accessed 8 Oct 2014

Rosenthal E (2007) Ban calls climate change 'Defining Challenge of Our Age. The New York Times, 17 November, Available at http://www.nytimes.com/2007/11/17/world/europe/17iht-climate.1.8372066.html?pagewanted=all&_r=0. Accessed 16 Sept 2014

Spencer C (2014) President Clayton Spencer's statement on climate change and divestment. 21 January, Available at http://www.bates.edu/president/2014/01/21/statement-on-climate-change-and-divestment/. Accessed 10 Oct 2014

Stanford Report (2014) Stanford to divest from coal companies. 6 May, Available at http://news.stanford.edu/news/2014/may/divest-coal-trustees-050714.html. Accessed 1 Oct 2014

Unity Focus (2012) President Stephen Mulkey Announces Unity College's Fossil Fuel Divestment. 9 November, Available at http://www.unity.edu/unity-focus/president-stephen-mulkey-announces-unity-college-s-fossil-fuel-divestment. Accessed 1 Oct 2014

University of Dayton News (2014) Dayton Divests. 23 June, Available at https://www.udayton.edu/news/articles/2014/06/dayton_divests_fossil_fuels.php. Accessed 1 Oct 2014

Weiss D (2014) Fossil fuels divestment. Available at http://www.haverford.edu/fossilfuelsdivestment/. Accessed 10 Oct 2014

Author Biography

Robin Xu works at Pomona College's Sustainability Integration Office, conducting research, monitoring and reporting, and program development to inform the campus's current and future sustainability initiatives. She is receiving dual baccalaureate degrees in Environmental Analysis and Politics from Pomona College in 2015. As a result of her liberal arts education, she has a wide variety of academic interests, including international climate politics, U.S. environmental law, smart growth and New Urbanism, economic development theory, critical race theory, and post-colonial thought. In 2014, she moved to Cape Town, South Africa for one semester to participate in the Globalization, Environment, and Society program hosted by the University of Cape Town's Environmental and Geographical Sciences department. There, she conducted research on the potential for lasting infrastructure changes in Cape Town after the 2010 FIFA World Cup to constitute investments in social capital and health. In 2013, she completed an internship at the Centers for Disease Control and Prevention, where she studied the intersections between climate change, public health, and the built environment.