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Framing divestment: A decade of media discourse on fossil fuel divestment in higher education

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Abstract:

The fossil fuel divestment movement has emerged as a significant force in climate activism. This study presents a comprehensive analysis of public discourse on fossil fuel divestment in higher education, offering novel insights into the complex interplay between key actors, drivers, and actions that shape institutional responses. Drawing on a dataset of 3,474 news articles spanning a decade, we employ a mixed-methods approach combining quantitative content analysis with qualitative interpretation. Our findings reveal distinct framing patterns across stakeholder groups, highlighting a notable disconnect between student demands and institutional responses. We identify how higher education institutions strategically reframe fossil fuel divestment demands through alternative narratives, illuminating the challenges of implementing sustainability in higher education. Theoretically, this work extends social movement and sustainability transitions literature by demonstrating how competing narratives influence institutional change processes. We contribute to these theories by elucidating the role of media framing in legitimizing or delegitimizing climate activism strategies. Practically, our analysis offers actionable insights for activists and decision makers navigating the complex landscape of institutional responses to climate action. Our findings have notable implications for understanding how framing strategies can be leveraged to drive sustainability transitions in higher education and beyond, offering a timely contribution to debates on the role of institutional change for sustainability.

Keywords: Fossil fuel divestment; Higher education; Text Analysis; News Media; Framing

1. INTRODUCTION

Curtailling fossil fuel combustion remains a top priority for government and inter-governmental climate change mitigation initiatives (IPCC, 2023) — yet, fossil fuel combustion and global emissions continue to rise (Andrew et al., 2022; Green, 2018; Lazarus and van Asselt, 2018). This inertia stems not only from the fossil fuel industry’s pervasive economic influence, from energy systems to agriculture and manufacturing, but from its continued legitimization — a process in which higher education institutions (HEIs) play a pivotal role. Through research partnerships, infrastructure investments, and institutional prestige, universities perpetuate a system that normalizes fossil fuel dependence (Hiltner et al., 2024; Jiang et al., 2024).

In response, fossil fuel divestment (FFD) has emerged as a critical intervention point within these institutions (Ansar et al., 2013). Moving beyond financial ties, FFD campaigns expose the contradictions inherent in universities championing sustainability while bankrolling climate disruption (Campus Climate Network, n.d.). Drawing on strategies from historical divestment movements (Hunt et al., 2017), FFD has become the fastest-growing campaign of its kind, mobilizing activists and investors globally (Gransauil et al., 2022; Stand.Earth, 2023; Strauch et al., 2020).

The movement’s success hinges not just on institutional wins — but on narratives. How do media frames on FFD shape public perception and institutional responses? To answer this, we analyze 3,474 news articles over a decade, employing mixed methods to map relationships between key actors (students, leadership), drivers (moral, financial), and actions (divestment, carbon neutrality).

Our study advances literature on campus mobilization by examining how media legitimizes or marginalizes FFD demands—a gap underscored by recent scholarship (Barron et al., 2023;

Bratman et al., 2016; Gibson and Duram, 2020; Gwin, 2020; Healy and Debski, 2017; Hiltner et al., 2024; Kinol et al., 2023; Maina et al., 2020; Quigley et al., 2020; Ramani et al., 2023; Ryan and Marsicano, 2019; Stephens et al., 2018). By linking discourse analysis to sustainability transitions (Geels and Verhees, 2011; Rosenbloom et al., 2016), we reveal how narratives redefine institutional power dynamics, offering activists and practitioners a blueprint for leveraging discourse in the climate crisis.

2. LITERATURE

2.1 Theoretical Framework: The Battle for Narratives

The FFD movement's rise began with a seismic shift in discourse: Bill McKibben's framing of the fossil fuel industry as "Public Enemy Number One", was not merely a critique but a shift in the industry's decades-long positioning as a neutral economic actor (Ayling and Gunningham, 2017; Schifeling and Hoffman, 2017). While building on growing academic and public discourse critiquing the industry's role in manufacturing doubt about climate science (Oreskes and Conway, 2010; Supran and Oreskes, 2017), McKibben's framing served as a decisive catalyst for the FFD movement (Ayling and Gunningham, 2017; Hoffman, 2002). As it stands — over a decade later — the fossil fuel industry is closer to being viewed as a global "enemy" than a neutral player in the public climate debate (Green, 2018; Mangat et al., 2018; Paterson, 2021).

Drawing from social movement theory (Morris, 2000; Oberschall et al., 1994), which examines how collective action generates social or political change, this shift in public perception demonstrates that movements succeed through their ability to construct resonant frames that redefine problems (climate change) and solutions (divestment). Social movement theory posits

that effective collective action emerges when groups mobilize resources, leverage political opportunities, and build compelling narratives that challenge existing power structures while fostering collective identity (Benford and Snow, 2000; McAdam, 2017). By framing fossil fuels as both a moral failure and a financial risk, the FFD movement confronts the industry's complicity and turns divestment from a radical demand into a mainstream imperative (Feldman and Hart, 2021; Taylor and Gunby, 2016).

Media framing methodologies (Entman, 1993) and agenda-setting theory (Scheufele and Tewksbury, 2007) demonstrate how media selectively present issues — highlighting certain aspects while obscuring others, to shape public discourse. This selective presentation manifests through both ‘enabling frames’ that promote action by emphasizing benefits, feasibility, and moral imperatives, and ‘inhibiting frames’ that constrain action by highlighting costs, barriers, and uncertainties. For the FFD movement, these framing strategies determined whether divestment was portrayed as a moral obligation or an economic gamble (Bergman, 2018; Blondeel, 2019). Frames gain traction when they align with audience values (credibility) and perceived urgency (salience) (Benford and Snow, 2000). The movement's success thus relies on media's ability to shift the Overton Window — expanding the range of politically acceptable ideas — and legitimize demands for divestment, as seen in the normalization of divestment discourse (Nosek, 2023; Schifeling and Hoffman, 2017; Schwartz et al., 2023).

Finally, sustainability transitions theory explores how societal systems undergo large-scale transformations towards more sustainable states. The FFD movement underscores a core tenet within this theory: systemic change requires not just policy or technology, but discursive transformation (Geels and Verhees, 2011; Rosenbloom et al., 2016). By challenging fossil fuels' social license, the movement has redefined what constitutes responsible investment and ethical

institutional practice (Hunt and Weber, 2018; Trinks et al., 2018). Media framing facilitated this transition by amplifying narratives linking divestment to financial prudence and climate justice while marginalizing counter-frames (Blondeel, 2019; Nosek, 2023). This discursive shift expanded the range of politically viable climate policies, illustrating how movements and media collaboratively reshape societal norms and enable sustainability transitions (Mangat et al., 2018; Schifeling and Hoffman, 2017).

2.2 Fossil Fuel Divestment in Higher Education

Universities have emerged as critical battlegrounds in the fight for divestment (Hiltner et al., 2024; Kinol et al., 2023; Stein, 2023). As sites of knowledge production, financial investment, and student activism, they became proxies for broader societal values (Hestres and Hopke, 2020; Piggot, 2018). The FFD movement's resonance lay in reframing divestment as a rejection of institutional hypocrisy: how could universities champion sustainability while funding fossil fuels? (Campus Climate Network, n.d.). Media coverage of campus campaigns—whether framing student protests as “visionary” or “naïve” — directly influenced institutional responses, illustrating how localized actions catalyzed global shifts (Holder et al., 2023; Taylor and Gunby, 2016). Victories like Cambridge's 2023 divestment pledge validated the movement's frames, creating a ripple effect across sectors (Bergman, 2018; Schwartz et al., 2023).

Literature on FFD in HEIs, to date, has examined the positionality of select stakeholders and drivers in decision-making processes, typically through qualitative interviews with activists, advocates, and administration. Healy and Debski (Healy and Debski, 2017), for example, examined the approaches divestment campaigns undertook to motivate leadership in favour of

divestment. Several such studies have similarly attempted to examine the rationales, languages, and factors used to mobilize FFD (Beer, 2016; Grady-Benson and Sarathy, 2015; Gwin, 2020; Stephens et al., 2017).

However, research on FFD action in HEIs has largely been presented through the lens of select stakeholders at specific institutions to inform research around the motivations and tactics that have led to successful or unsuccessful campaigns (Gibson and Duram, 2020; Grady-Benson and Sarathy, 2015; Healy and Debski, 2017; Maina et al., 2020). There thus remains an opportunity to present a more holistic view of FFD campaigns, through news media discourse. Furthermore, Bergman (2018) cites the media's role in the rise of FFD as an unexplored opportunity for further research owing to an apparent advantage of FFD in the media relative to similar environmental movements.

Based on this existing but disparate literature, this study examines the interplay between three dimensions; action (divestment, responsible investing, and carbon neutrality), actors (student, faculty, alumni, and leadership), and drivers (motivations and demonstrations), by which news media frames discourse on FFD. Specifically, we ask the following questions:

RQ1: What associations exist between key stakeholders (students, faculty, alumni, leadership) and specific actions (divestment, responsible investing, carbon neutrality) in news media coverage of fossil fuel divestment?

RQ2a: What associations exist between motivations (moral, financial) and actions in news media coverage of fossil fuel divestment?

RQ2b: What associations exist between forms of demonstration (obedient, disobedient) and actions in news media coverage of fossil fuel divestment?

RQ3a: What associations exist between motivations and key stakeholders in news media coverage of fossil fuel divestment?

RQ3b: What associations exist between forms of demonstration and key stakeholders in news media coverage of fossil fuel divestment?

These questions (summarized in Figure 1) operationalize the theoretical interplay between framing, stakeholder agency, and institutional change. By mapping how media amplifies or silences specific actor-action-driver relationships, we illuminate the mechanisms through which discursive struggles translate into material outcomes—a gap highlighted in sustainability transitions and divestment literature (Bergman, 2018; Rosenbloom et al., 2016).

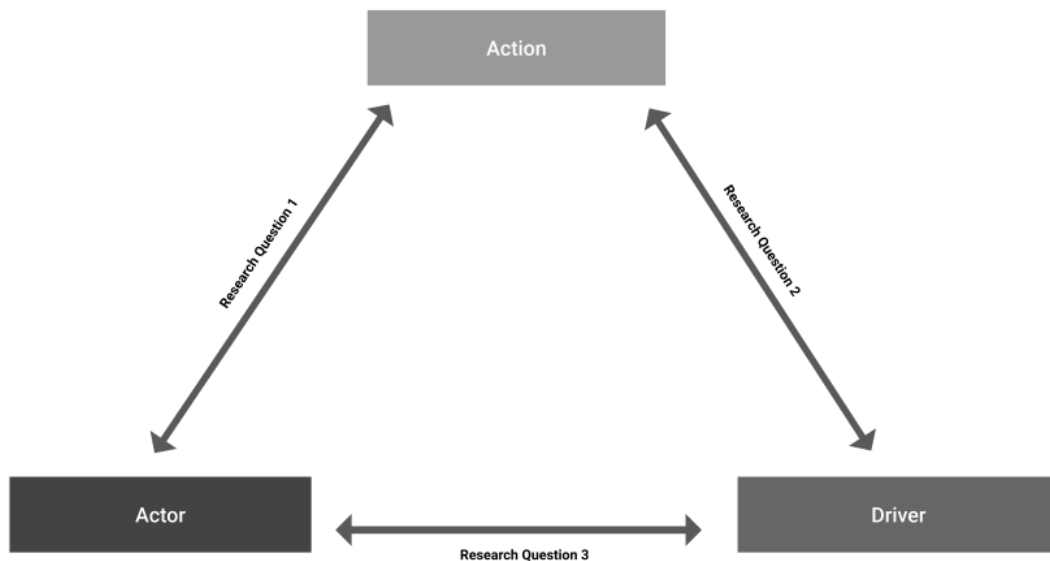


Figure 1: Framework of Research Questions. Key actions, actors and drivers are deductively identified through existing literature on fossil fuel divestment in higher education institutions. Three research questions are undertaken to examine the correlations between these factors.

2.3 The Actors, Actions, and Drivers of Fossil Fuel Divestment

2.3.1 The Key Actors in Higher Education

Little research on the FFD movement effectively encapsulates the diversity of stakeholders involved in the FFD movement, such as the various sectors (e.g., finance, academia, energy) and occupations (e.g., students, investors) of whom FFD stakeholders represent (Bergman, 2018; Maina et al., 2020). While FFD campaigns are by and large grassroots and student-driven (Maina et al., 2020), they are strongly supported by on-campus organizations like student unions, faculty, and alumni (Gwin, 2020; LeQuesne et al., 2016; Maina et al., 2020; Stephens et al., 2018). One group of stakeholders that appears to have been largely neglected in existing analyses of stakeholders is HEI leadership (e.g. President, Deans, Chancellors). This is particularly important as inadequate commitments, as well as outright rejection from university leadership, inspire further pressure and escalation from activists (Gill, 2020; Grady-Benson and Sarathy, 2015; LeQuesne et al., 2016). Our study thus examines news framing in the context of four key actors; students, faculty, alumni, and leadership.

2.3.2 The Moral and Financial Motivations for Fossil Fuel Divestment

FFD can be seen simultaneously as a financial imperative to adapt to increased climate-related financial risk and at the same time, a non-state climate governance intervention which seeks to politicize the fossil fuel industry. Divestment commitments of varying degrees on university campuses draw on both moral and/or financial arguments (Ayling and Gunningham, 2017; Bratman et al., 2016; Healy and Debski, 2017; Maina et al., 2020; Stephens et al., 2018). It is, therefore, relevant for us to examine the framing of these two leading motivations.

Financially, traditional growth and revenue productions for fossil fuel resources remain misaligned with the constraints of the global carbon budget (Leaton et al., 2013; McGlade and

Ekins, 2015; Weber et al., 2020). Even under managed transition scenarios, financial risks associated with ‘unburnable’ carbon, are estimated to be in the trillions of dollars (IEA, 2021; Leaton et al., 2013; NGFS, 2024). Studies to date indicate that fossil-free investment portfolios are competitive with or outperform conventional portfolios (Abid et al., 2023; Henriques and Sadorsky, 2018; Hunt and Weber, 2018; Ryan and Marsicano, 2019; Trinks et al., 2018) and HEI proponents often point to similar losses by their institutions — a professor at Cornell University points out that “divestment ten years ago would have earned Cornell \$47 million” (Shalloway, 2015).

The moral case conversely focuses primarily on the climate imperative. Moss (2017) asserts that by profiting off operations that harm the climate, institutions that hold shares in fossil fuels are complicit in the damages of those companies. Further, poor and marginalized communities, particularly countries that contribute the least to carbon emissions, experience the worst effects of climate change (Levy and Patz, 2015). In addition, fossil fuel companies globally have been accused of gross human rights violations, including direct and indirect negative health impacts (Hansen et al., 2013; Savaresi, 2020; Whitmee et al., 2015). We thus examine how moral and financial motivations for FFD appear in news discourse, and how these motivations are framed in the context of key actors and actions.

2.3.3 Obedient and Disobedient Demonstrations in Higher Education

Stakeholders can convey the moral and financial motivations for FFD through obedient or disobedient forms of demonstrations. Demonstrations can range from letters and negotiations to sit-ins and strikes, respectively (Maina et al., 2020).

On university campuses, disobedient demonstrations strikes have taken the form of coordinated refusals to attend classes and pay tuition, which can be effective in disrupting school

operations if widely adopted by students (Lukacs, 2012; Maina et al., 2020), however they can also strain communication with university leadership (Williams and McGreevey, 2004). Other forms of disobedient demonstrations include protest, sit-ins and occupation of buildings, which typically feature large groups of people singing chants and demands and holding placards with polarizing slogans (Maina et al., 2020). Furthermore, alumni have also mobilized economic protest tactics by withholding donations to universities that have not committed to divestment (Maina et al., 2020).

Obedient demonstrations in contrast include actions that target the discourse of fossil fuels and climate change (Gibson and Duram, 2020). Debates, expert panel discussions, radio segments, petitions, open letters, and the use of posters and provocative art, such as murals or chalk creations, all have the effect of engaging a target audience and centring the ideas and positions of activists (Maina et al., 2020). During the pandemic, digital forms of advocacy have also included webinars on climate justice and on lessons learned from past successful campaigns (Divest Canada, 2021). In some cases, activists will also opt for referendums in open, formal processes (Maina et al., 2020). We again delve deeper into these tactics by examining their framing by select stakeholders and their potential to contribute to select outcomes.

2.3.4 Actions by Higher Education Institutions

FFD itself can come in several forms; Healy and Debski (Healy and Debski, 2017) frame divestment commitments in three groups, targeted (divestment from a specific industry like coal), selective (divestment from an established group of firms like the Carbon Underground 200), or inclusive (divestment from all fossil fuel companies).

In addition to FFD however, HEIs increasingly adopt a plethora of investment strategies framing the decision as an amicable alternative to FFD (Smith and Smith, 2016). These investment

strategies do have merit; responsible investment for example could be perceived as a more holistic solution, given that FFD focuses solely on fossil fuels (Langley et al., 2021). Responsible investing strategies may also consider environmental, social, and governance indicators in investment decisions or commit the HEI to be a signatory to commonly accepted frameworks like the United Nations Principles for Responsible Investing. However, responsible investments are often seen as insufficient by students calling for total FFD, as evidenced by the criticism and resistance they elicit from FFD proponents (Healy and Debski, 2017).

The question of whether to divest from or to engage with fossil fuel firms is also a frequent point of contention (Chambers et al., 2020; Dordi et al., 2022; Gorman, 2017), stemming in part from an active debate about the efficacy of divestment in driving institutional change in the fossil fuel industry (Reynolds and Ciplet, 2023). Critics argue that through divestment, investors concede their position to influence the business direction of the divested firm.

Finally, a plethora of HEIs are now examining carbon-neutral investment platforms, which, in contrast to divestment, aim to decarbonize the entire portfolio over the medium to long term (Karlin, 2021). Certainly, these actions are not mutually exclusive; in Canada, the “Investing to Address Climate Change” Charter (Voinigescu, 2020) requires signatories to adopt a responsible investing approach and regularly measure the carbon intensity of their investment portfolios with target reductions. Some of the signatories of the Charter have also already or recently committed to divestment. We will examine the framing of each action in the news since each action is met with a variety of feedback from stakeholders.

3. DATA AND METHOD

Divestment campaigns take a variety of approaches to catalyze action, as indicated by the literature; however, there is no central database on which tactics are adopted, by whom, and whether they have been successful in influencing decision makers. In the absence of this primary data on divestment campaigns and their efficacy, we turn to tertiary news media as a proxy to examine the range of tactics, stakeholders and outcomes involved in the FFD movement.

We adopt a content analysis in this study, which examines the frequency of certain words, themes, or concepts in text data (Shelley and Krippendorff, 1984) to document how notable stakeholders and positions are framed in news media (Jenkin et al., 2011; Kwan, 2009). Though called for by FFD scholars (Bergman, 2018), content analysis methodology has yet to be applied to communication channels concerning FFD. While content analysis has been used to study FFD through social media (Gibson and Duram, 2020) and conduct a comparative historical analysis of anti-Apartheid and fossil fuel divestment campaigns (Hunt et al., 2017), the method has not specifically been applied to understand how news media frames the movement's key actors, drivers, and actions. The method, however, has been applied to understand the public discourse on related issues, such as climate change (Metag, 2016; Shehata and Hopmann, 2012; Thistlethwaite et al., 2019), sustainable finance (Strauß et al., 2023; Strauß, 2021), public health (Jenkin et al., 2011) and social and environmental movements (Andrews and Caren, 2010; Gleason, 2013; Stein, 2009; Vliegenthart et al., 2005). Some scholars assert that the news media determines the fate of social movements to generate social change (Andrews and Caren, 2010). Given that divestment announcements in the news media have been shown to affect the share price of fossil fuel stocks (Becht et al., 2023; Dordi and Weber, 2019; Monaco, 2022), there is evidence to support this claim.

3.1 Data Collection

The research examines excerpts of news articles exported from the Nexis Uni database, a repository of publications from over 10,000 news, legal, and business sources. The query¹ identifies news articles with a combination of the words synonymous with “divestment”, “higher education”, and “fossil fuels”. For scoping, we required that the article be published in English, reference the root word *divest** in the headline of the article, reference some synonym related to higher education in the leading paragraph, and reference some form of fossil fuels in the body of the article. We further scoped the query by time and by source, removing duplicates and narrowing the search to news articles spanning from January 1, 2012, to June 30, 2021. This time period captures the inception of the divestment movement, including Bill McKibben’s seminal call in *Rolling Stone* and the first divestment campaign at Swarthmore College. Collectively, this resulted in 3,799 articles, which were subsequently exported from the Nexis Uni database. Finally, since news media editors’ and individual reporters’ preference for “newsworthy” items might lead to the underrepresentation of certain information, the inclusion of nonprofessional student newspapers reduces the potential effect of selection and description biases (Earl et al., 2004).

Articles were imported to R for preprocessing and analysis. We used Gruber’s (2021) *LexisNexisTools* package to import the articles and identify near-duplicate articles in the sample. The package’s similarity detection algorithm identifies near-duplicates using a combination of word similarity and relative word order measures (Ordonez-Ponce et al., 2022). Replicating the thresholds applied by Gruber (2018), articles sharing high word similarity (>0.97) and low relative

¹ ("fossil fuel*" OR coal* OR oil* OR gas* OR carbon*) AND headline(divest*) AND hlead("higher education*" OR "post second*" OR universit* OR college*) or (campaign or movement)

distance (<0.2) were classified as duplicates and removed from the sample. The final sample of articles examined in our corpus was 3,474.

Our dataset comprised 3,475 articles from 645 unique news sources, including both student newspapers (27.0%) and mainstream media outlets (73.0%). The coverage spanned multiple geographical regions, with most sources originating from North America (73.6%), followed by the United Kingdom (13.0%), and Australia/New Zealand (6.7%). A detailed breakdown of the news sources and their distribution is provided in Supplementary Table 1.

3.2 Analysis

We opt to conduct a quantitative statistical analysis of frequency and complement the findings with a qualitative review of select illustrative examples. Before delving into the analysis, we note that examining the entire article can impose a lot of noise – an article can, for example, mention multiple stakeholders or multiple drivers and actions across its length. Consequently, we split the article string into sentence strings. This narrower focus of examining sentences as opposed to the entire article allows for a more nuanced analysis of the context in which the feature is framed. Thus, this analysis evaluates the sentences that directly relate to the topic of investigation. Consequently, our corpus includes 113,638 unique sentences.

To identify the key stakeholders, drivers, and actions, we take a deductive and iterative text mining approach. Our deductive terminologies are initially based on existing literature on the topic (sections 2.2-2.3 above), however, an independent and randomized review of a small subset of articles by all authors led to the inclusion of select synonymous terms. The ‘leadership’ stakeholder, for example, included the terms leadership, board, senate, director, trustee, president,

and chief. Similarly, we learned through this process that terms related to 'engagement' predominantly appeared in the context of stakeholder relations (e.g., "engaging students in dialogue") rather than as an investment strategy (e.g., "engaging with fossil fuel companies"). To maintain methodological rigor and minimize false positives in our initial query, we opted to exclude engagement-related terms and focus on more precise action-oriented terms that directly related to institutional investment decisions. Our categorization of key stakeholders, drivers, and actions, as well as the proxy terms and total counts, are presented in Table 1 below.

Table 1: Frequency of terms

Topic	Proxy	Frequency
Actor		
Student	student; youth; campaign; movement	21,214
Alumni	alum	1,232
Staff	staff; faculty; profess	4,896
Leadership	leadership; board; senate; director; trustee; president; chief	12,462
Action		
Divest	dives	29,536
Responsible Investing	responsible invest; sustainable invest; UNPRI; ESG; reinvest	1,540
Neutrality	carbon neutral; decarbon	1,172
Driver		
Moral	moral; climate; health; justice; ethic	13,527
Financial	finan; profit; strand; risk; return	7,839
Obedient	letter; petition; signature	2,753
Disobedient	protest; sit in; demonstration; strike; occup	3,896

A collection of terms is deductively identified through the literature to identify proxy terms for the actors, actions, and drivers examined. This list of terms is then complemented with an inductive analysis of a random sample of articles, by all four authors. Through this process, we identify four actors, three actions, four drivers, and a collection of synonymous terms. The number of times these words appear across the sample is presented in the Frequency column.

In a content analysis method similar to that applied by Carlson et al., (1993), we test for non-random association between categorical variables by applying the chi-square test of independence. The goodness of fit is tested on a comparative frequency matrix to identify abnormal deviations between the expected and observed distribution of terms. Pearson residuals

are included to identify the direction of significant correlation between the categorical variables examined.

This analysis tells us whether there is a correlation between a select stakeholder and action, for example, but the result does not explain how the discourse is framed. We thus complement the statistical analysis with qualitative illustrations of sentences from our sample.

To conduct the complementary qualitative review, we applied a filter across the 113,638 unique sentences in the corpus to identify sentences that included the keywords examined by each research question, respectively. For example, to examine moral arguments used by students, the corpus was filtered to sentences that included (student; youth; campaign; movement) AND (moral; climate; health; justice; ethic). The number of sentences examined in each case is presented in the frequency matrices in Tables 2, 3, and 4. The authors then manually reviewed each sentence to examine the context of the relationship and identify illustrative examples that exemplified the relation between the objects examined. Examples from different news sources, over time, and across institutions, were selected to provide a holistic overview of the relationship.

4. RESULTS

4.1 Descriptive Results

Our analysis examines 3,474 articles spanning from January 1, 2012 to June 31, 2021. This captures the entirety of the FFD movement, from inception (Bill McKibben's 'Global Warming's Terrifying New Math' publication in the Rolling Stone) to the end of our study period. Figure 2, on news discourse of FFD in HEI, appears to have two peaks; one spanning from 2014 to 2016, which saw nearly four articles published per day, and another smaller peak from 2019 to 2021.

The sample includes several different news sources indexed by Nexis Uni, including official University newspapers (such as The Harvard Crimson, The Columbia Spectator, and The McGill Tribune), prevalent newspapers (such as The Guardian, The New York Times, and The Globe and Mail) and distribution channels (such as Postmedia and the Canadian Press).



Figure 2: Number of Articles Over Time. This figure presents the average number of articles per day, over the course of 2012 to 2021. We calculate the rolling average over 180 days to smoothen the curve. The rolling average count is presented on the y-axis. The year is presented on the x-axis.

As extrapolated in the method, articles are separated into 113,638 unique sentences for more granular analysis. We conduct a deductive content analysis based on the stakeholders, actions, and drivers (presented in Table 1), to examine which topics appear in greatest frequency.

By stakeholder, discourse on students is the most prevalent in the sample, appearing in 21,214 sentences. Discourses on leadership and faculty, and alumni appear in 8,846, 4,896, and 1,232 sentences, respectively. In instances where a sentence includes two or more stakeholders,

the sentence is included as a separate entry for each stakeholder. The act of divestment is most prevalent in the sample, referenced in 29,536 sentences, followed by discourse on responsible investment and carbon neutrality. We also find that the moral case appears more frequently than the financial case, at 13,527 and 7,839, respectively. ‘Obedient’ forms of demonstration in the form of letters, petitions, and signatures also appear slightly less frequently than disobedient forms of demonstrations such as sit-ins and protests, in 2,753 and 3,323 sentences respectively.

4.2 Relationships between Actors and Actions

To answer our first research question, we examine how stakeholders are framed alongside select actions. We find that there is a statistically significant correlation between action and stakeholder ($p < 0.01$, Cramer’s $V = 0.066$). The chi-square residuals presented in Table 2 indicate that news media discourse more frequently associates carbon neutrality and responsible investing with leadership, carbon neutrality with faculty, and divestment with students.

Table 2: Research Question 1 - Frequency Tables and Residuals of Stakeholder and Action

Frequency Table				Residuals			
Actor	Action			Actor	Action		
	Divest	Neutrality	RI		Divest	Neutrality	RI
Alumni	518	6	20	Alumni	0.17	-0.61	-0.45
Leadership	4,733	124	302	Leadership	-2.05	5.97	6.38
Staff	1,778	48	73	Staff	-0.40	4.08	-0.48
Student	9,669	72	323	Student	1.60	-5.90	-4.25

The frequency table to the left presents the number of sentences that includes a select actor and a select action. The residuals table to the right is calculated using the Pearson residuals. The residuals inform abnormal deviations between the frequency that is expected and that is observed.

Turning to the content of the articles, ‘responsible investing’ appears to be a commonly accepted frame by which leadership engages with the topic. An article in the Los Angeles Times (Bachher and Sherman, 2019), for example, highlights that “In 2018, the [University of California] Board of Regents publicly changed the university’s investment policy to explicitly include ESG in investment decision-making.” Leadership at several institutions, such as Columbia University, Tufts University, and the University of Waterloo, also chose to establish ad-hoc ‘responsible investing’ sub-committees to address the question of divestment.

Responsible investing mandates were often complemented by long-term decarbonization or carbon neutrality pledges; the Board of Trustees at the University of Pittsburgh, for example, “unanimously approved a formal socially responsible investing process and committed to carbon neutrality by 2037” (Fitchett, 2020). Other institutions have used language around carbon neutrality as a substitute for divestment. Hanes (2020) writes that at McGill, “despite every campus or faculty group that has considered the matter endorsing divestment, including the Senate, the board of governors opted to slash its carbon footprint instead: by 58 percent in 2025 with a goal of being carbon neutral by 2040.”

Faculty actors have also been ardent advocates for action on University investments, given their direct role as beneficiaries of the pension fund. In a case similar to that of McGill, Harvard University “agreed to go carbon-neutral while refusing to budge from its longstanding opposition to divesting from fossil fuels, despite years of pressure from students, faculty and climate activists” (Richardson, 2020). The University of Waterloo also gained the support of “more than 2,100 students, faculty and staff, [who] asked the university to divest its endowment and pension plans completely from fossil fuels and to transition to a carbon neutral portfolio.” (Williams, 2020).

Student activists consistently rejected partial measures as insufficient alternatives to full divestment. For instance, when Concordia University established a \$5 million sustainable investment fund in 2014, Divest Concordia quickly dismissed it as inadequate (Seidman, 2015), calling it a flat-out rejection of student calls for full divestment from fossil fuels (Seidman, 2014). Similarly, at Georgetown University, when the Committee on Investments and Social Responsibility suggested strategic divestment and corporate engagement as alternatives to full divestment, student activists maintained their demand for complete withdrawal from fossil fuel investments, citing that “partial divestment is an insufficient tactic, and, in light of the challenges at hand, is ideologically inconsistent with the CISR’s mandate to align Georgetown’s investments with its ethical standards” (Hung, 2015). These responses demonstrate how student groups viewed partial measures as attempts to deflect their core demand without addressing their fundamental concern about institutional complicity with the fossil fuel industry.

Our analysis of framing by stakeholders exposes a disconnect between leadership’s prioritization of responsible investing and carbon neutrality and the demands of students and faculty across many institutions. Although these solutions are legitimate in their own right (Langley et al., 2021), student stakeholders find these solutions to be inadequate, as they don’t directly address the root cause of the climate crisis – the fossil fuel industry (Grady-Benson and Sarathy, 2015; Healy and Debski, 2017). Responsible investing, for example, is perceived as a short-term solution that addresses non-financial factors in investment decisions without directly targeting the fossil fuel industry. Carbon neutrality, in contrast, is perceived as a long-term solution that, akin to greenwashing, lacks clear pathways to achievement.

4.3 Relations between Actions and Drivers

Moral and Financial Motivations

We begin by examining the relation between actions and financial or moral motivations and find that there is a statistically significant correlation between this drive and action ($p < 0.01$, Cramer's $V = 0.063$). The chi-square residuals presented in Table 3 indicate that news media discourse more frequently associates moral motivations with carbon neutrality. Though the other residuals are not significant, discourse on divestment and responsible investing tend to favour a financial case.

Table 3: Research Question 2 - Frequency Tables and Residuals of Action and Drivers

Frequency Table			Residuals		
Action	Driver		Action	Driver	
	Financial	Moral		Financial	Moral
Divest	2,360	3,961	Divest	0.50	-0.38
Neutrality	39	160	Neutrality	-4.03	3.08
RI	137	206	RI	0.91	-0.70

Action	Driver		Action	Driver	
	Disobedient	Obedient		Disobedient	Obedient
Divest	1,276	1,180	Divest	-0.03	0.03
Neutrality	38	9	Neutrality	2.74	-2.85
RI	24	46	RI	-2.06	2.14

The frequency table to the left presents the number of sentences that includes a select action and a select driver. The top rows present the results of the financial and moral motivation. The bottom rows present the results of the disobedient and obedient demonstrations. The residuals table to the right is calculated using the Pearson residuals. The residuals inform abnormal deviations between the frequency that is expected and that is observed.

Calls for carbon neutrality and decarbonization are more often framed as a moral case, such as in reference to the climate crisis. Much of the discourse surrounding carbon neutrality describes

carbon neutral operations at HEIs or global neutrality of carbon emissions, to which end sustainable finance and divestment are said to be useful tools. For instance, the University of Edinburgh calls its divestment decision “part of a range of activities the University is undertaking to tackle the climate crisis and the latest step in the University’s pledge to become carbon neutral by 2040” (The University of Edinburgh, 2021). Rutgers University similarly noted, “that divestment from fossil fuels is aligned with the University’s goal of carbon neutrality” (Devlin, 2021).

Similarly, moral and climate-driven arguments underpin divestment campaigns. The University of Vermont said that their 2020 decision to divest from fossil fuels “is the right thing to do, given the school’s history and longstanding commitment to sustainability”, with president Suresh Garimella saying that “as we work to have a tangible effect on emissions, divesting brings attention to the global need for governments, organizations and individuals to aggressively confront the challenge of climate change” (Associated Press, 2020). Climate protection seems to be the main focus of moral arguments, though health and justice (especially racial justice) is mentioned several times.

We also find a similar framing for the financial motivation; put succinctly by a student regarding American University’s decision to divest: “The moral and environmental aspects of divestment motivated the Board’s decision [...] while the legal and financial situation finally evolved enough to allow it to happen” (Papsun and Heller, 2020). The student activist group Fossil Free Guelph similarly noted, after their University’s divestment commitment, that it “had focused its campaign for years on the moral and emotional arguments for divestment. But it found it was the economic argument for divestment that was most persuasive, particularly this year, as oil prices and the fortunes of many related companies have plummeted” (Friesen, 2020). We see

by examining the motivations of each action that while moral and climate-driven arguments provide a substantial foundation for arguments for divestment and carbon neutrality, in news media coverage, financial arguments frequently appear alongside discussions of divestment outcomes.

Obedient and Disobedient Demonstrations

The second driver examined is in relation to the types of demonstration, finding again a statistically significant correlation between action and driver ($p < 0.01$, Cramer's $V = 0.098$). The chi-square residuals presented in Table 4 indicate that news media discourse more frequently frames disobedient demonstrations with neutrality and obedient demonstrations with responsible investing.

Table 4: Research Question 3 - Frequency Tables and Residuals of Action and Drivers

a) Frequency Table			b) Residuals		
Actor	Driver		Actor	Driver	
	Financial	Moral		Financial	Moral
Alumni	55	143	Alumni	-1.04	0.72
Leadership	967	1526	Leadership	6.02	-4.13
Staff	349	689	Staff	0.94	-0.65
Student	1176	3062	Student	-4.86	3.33

Actor	Driver		Actor	Driver	
	Disobedient	Obedient		Disobedient	Obedient
Alumni	110	196	Alumni	-3.58	3.62
Leadership	547	623	Leadership	-1.80	1.82
Staff	202	516	Staff	-8.43	8.52
Student	1,358	838	Student	7.48	-7.55

The frequency table to the left presents the number of sentences that includes a select actor and a select driver. The top rows present the results of the financial and moral motivation. The bottom rows present the results of the disobedient and obedient demonstrations. The residuals table to the right is calculated using the Pearson residuals. The residuals inform abnormal deviations between the frequency that is expected and that is observed.

Carbon neutrality frequently appears in lieu of FFD as a response to disobedient demonstrations. McGill, for example, following years of protest, refused divestment for the third time, proposing a strategy for decarbonization instead (The McGill Tribune Editorial Board, 2020). In other instances, carbon neutrality was used as a strategy for placating student demands and pre-empting further protest. “We think it was to pre-empt this [protest], but going carbon neutral by 2035, that’s not enough”, said a divestment activist in response to Cornell’s announcement one day prior to a planned protest (Kamis and Badjate, 2020).

On obedient demonstrations, letters are often utilized, signed by or in reference to responsible investing advisory groups to reject divestment in favour of responsible investing (Buch, 2021; Zhao, 2019). These letters also often refer to other obedient actions, such as creating committees and working groups established to study the issue and deliver a recommendation. At the University of Pittsburgh, a letter was sent announcing their intention to “... develop strategies that could be used for socially responsible investments, though [the] letter in late August did not mention a divestment” (Schackner, 2019). Rather than explore divestment, their “chief financial officer is working toward the goal of presenting the environmental, social and governance criteria to the investment committee” (Schackner, 2019).

4.4 Relationships between Actors and Drivers

Moral and Financial Motivations

We finally examine the two drivers in this analysis, beginning with the financial and moral case, in relation to key actors. We find that there is a statistically significant correlation between actor and driver ($p < 0.01$, Cramer’s $V = 0.107$). The chi-square residuals presented in Table 4

indicate that news media discourse more frequently frames the financial case with leadership and more frequently frames the moral case with students.

The collective moral responsibility to transition away from fossil fuels is widely framed as the basis for HEI students' arguments for FFD. A 2013 article in the Los Angeles Times identifies the moral driver as critical to the early groundswell of student divestment campaigns in the United States — “[student activists] insist that colleges need to take the moral stance. They say it is hypocritical to teach about global warming and ecological protection while investing in firms the students contend are hastening climate change” (Gordon, 2013). Two dominant strands of students' moral debate in favour of divestment emerge in the news media discourse, namely, (1) that divesting from fossil fuels is a necessary action to mitigate climate change and reduce environmental harm (Brooks, 2015; Farrow, 2015; Fossil Free Brown, 2015; Mathiesen, 2015; The Phoenix, 2020), and; (2) investing in fossil fuels contributes to, and even makes investors complicit in the injustices of the fossil fuel industry (Dunsmith et al., 2012; Lasuik, 2017; Oalican and Jalil, 2020; Reynolds and Huyler, 2021; Schonfeld, 2020).

The moral case for divestment is also frequently associated with faculty, albeit to a lesser extent than its association with students. Faculty at Harvard University (Stephenson, 2014), Stanford University (Palumbo-Liu, 2020), Cornell University (Cornell Chronicle, 2013), Seattle University (Sewake, 2015), the University of Chicago (Andrew, 2015), University of Victoria (Watts, 2019), and numerous Australian metropolitan universities (Grieve, 2020), to name a few, have appealed to morality when voicing their support for divestment.

Relative to faculty, students, and alumni, the financial case is more frequently associated with HEI leadership. Still, the moral argument appears more often than the financial argument. It appears that leadership's use of each argument is situational. For example, where divestment is

accepted, both the financial and moral reasons for divestment are lauded by leadership. “Divestment from fossil fuels will enable SOAS to fulfil its responsibilities as an ethical investor, while continuing to ensure that the School’s investments deliver a financial return ... the harmful social and environmental impacts of climate change [are] becoming increasingly clear,” said Dr. Paul Webley, Director of SOAS University of London, upon the University’s announcement that it would divest in fossil fuels (SOAS University of London, 2015). Where divestment is rejected by a postsecondary institution, leadership tends to omit any mention of morality and opts to justify their decision using finances. When it announced its rejection to divest in 2016, University of Toronto President Meric Gertler was concerned with “looking for investments that offer our beneficiaries the best possible return” (Weber, 2016). Similarly, former Harvard University President Drew Faust defended the University’s resolution against divestment by explaining that divestment would politicize the University’s endowment and reduce its investment returns (Kansra and Weinstock, 2013). Thus, while faculty, students, and alumni positions are framed on moral grounds, positions presented by leadership are context-dependent.

Obedient and Disobedient Demonstrations

The second is in relation to the types of demonstration. We find again that there is a statistically significant correlation between stakeholder and driver, with a notably high Cramer’s V ($p < 0.01$, Cramer’s V = 0.257). The chi-square residuals presented in Table 4 indicate that news media discourse more frequently frames disobedient demonstrations with students and obedient demonstrations with faculty, alumni, and leadership.

News framing on student demonstrations leans toward disobedient forms of protest, ranging from sit-ins (Mathiesen, 2015; Statler, 2015) to hunger strikes (Escobar, 2020; Taylor, 2018) and ‘die-ins’ (Devore, 2020). These demonstrations, however, are frequently “in response

to what [students] described as delayed action on the issue of fossil fuel divestment.” (Hill, 2015). Student campaigns do not rely on disobedient demonstrations alone; a petition signed by 1500 students at Tufts University and a student referendum reported that 74% of the student body supported divestment, yet it wasn’t until a three-day sit-in that the University agreed to meet with their students (Zheng, 2015). Thus, students believe achieving divestment requires confrontation. A student at Middlebury College in Vermont, for example, said: “we know it is going to be a fight, but we are prepared for the fight” (Rose-Smith, 2014). Disobedient demonstrations at HEIs often lead to the arrests of students (Feld, 2015; Ramachandran, 2015). Disobedient forms of protest certainly taint an institution’s reputation, yet in several instances, protests were formative in urging response or bringing student voices to the fore of university governance/decision-making processes (Fitchett, 2020; Oatley, 2013; Statler, 2015).

However, positions taken by faculty and alumni in news media vary. Actors are sometimes supportive of student demonstrations (Mathiesen, 2015; Oprescu, 2019), supporting ‘obedient’ open letters calling for divestment; a 2015 analysis of 30 open letters to administrators calling for divestment found over 4,550 faculty had taken such positions, representing all major disciplines and fields (Stephens et al., 2018). However, faculty also appear to be hesitant to openly criticize or demonstrate against their administration.

The tension between university stakeholders’ views on divestment is evident in the responses that divestment decisions have elicited among faculty and leadership at certain HEIs. When student divestment activists at Oxford University occupied an administrative building in response to its decision to defer action on divestment, the University’s former Director of Finance joined the sit-in (Mathiesen, 2015). Faculty and members of administration have even resigned from their positions in protest of divestment decisions, such as two members of McGill’s Board

of Governors in 2019, who “... could not maintain solidarity with a Board that places the university in ethical jeopardy...” (Oprescu, 2019). The year after, McGill also saw the resignation of a tenured professor just seven days after the Board’s third refusal of divestment in 7 years (Mignacca, 2020). In stark contrast however, when the University of Guelph’s Board of Governors divested from fossil fuels, the University’s Chancellor resigned citing incompatible business interests with the decision (Friesen, 2020).

5. DISCUSSION

Our analysis of news media framing of FFD in HEIs provides important insights into the dynamics of climate activism and institutional change. These findings contribute to ongoing debates about the role of the FFD movement in influencing HEI action on climate change — and more broadly on the role of discourse and framing in driving institutional change.

Our results speak directly to positions forwarded by Healy and Debski (2017), Bratman et al. (2016), Maina et al. (2020), and Ramani et al. (2023) among others, that examine the factors and approaches that have contributed to HEI mobilization for divestment in recent years. Our findings also complement recent work mapping fossil fuel industry influence in higher education (Hiltner et al., 2024), illuminating how institutional resistance to divestment promotes non-transformative solutions that enable continued fossil fuel dependence. We extend this work by examining 1) how FFD is framed in news media, a gap in existing research (Bergman, 2018), 2) the relations between an array of actors, drivers, and actions to provide a holistic view of the complex interactions at play in FFD discourse, and 3) how the framing of discourse builds legitimacy for institutional change (Geels and Verhees, 2011).

Our analysis first reveals patterns in how news media frames different stakeholder positions and institutional responses to FFD campaigns, revealing a clear disconnect between the framing of leadership's priorities and those of students and faculty (Karter et al., 2019). We find that while students predominantly employ moral framing, emphasizing the ethical imperative of divesting from fossil fuels, HEI leadership tends to combine moral and financial frames to support their respective positions. More, we identify a pattern where HEIs often respond to FFD demands with alternative frames such as responsible investment or carbon neutrality.

The disconnect we observe between student demands and institutional responses may be due to several factors. First, it reflects broader challenges in implementing sustainability in higher education (and organizations more broadly); including balancing the educational mission, research priorities, competing stakeholder interests, and operational realities when addressing sustainability challenges (Leal Filho et al., 2020; Lozano et al., 2015). The strategic reframing of FFD solutions by HEIs may represent an important mechanism by which HEIs navigate competing stakeholder demands, from students to trustees. We posit that these competing priorities may manifest across organizational change processes beyond HEIs. Our analysis further extends this understanding by highlighting how competing priorities are reflected in media discourse. Second, the findings contribute to discussions about the role of economic rationality in sustainability transitions (Geels, 2014) and suggests that effective framing strategies may need to balance moral imperatives with financial pragmatism. The tendency for HEI leadership to frame rejection of FFD primarily in financial terms, while accepting it on both moral and financial grounds, speaks to the complex motivations underlying institutional decision-making.

Finally, our analysis of demonstration tactics reveals that disobedient forms of protest are more frequently associated with carbon neutrality commitments, while obedient demonstrations

are linked to responsible investing initiatives. Qualitative statements, however, indicate that both forms of demonstration are important in driving outcomes. While disobedient forms of demonstration can attract attention and put the issue of divestment on the proverbial table, switching tactics to obedient forms appears best suited for the final stages of voting, advisory group recommendations, and coalition building. This nuanced understanding of the relationship between activist tactics and institutional responses advances our knowledge of how social movements can influence organizational change processes (Soule, 2012).

5.1 Contribution to theory and practice

This study contributes to social movement and sustainability transitions theory in several ways. First, the study extends our understanding of the resonance of news framing in the context of FFD (Benford and Snow, 2000). While studies draw on social movement theory to explore the direct and indirect effects of FFD on institutional change (Bergman, 2018), the role of news media in framing public discourse and ultimately influencing public perception (Geels and Verhees, 2011) is not explored in the context of the FFD movement. We exemplify how news media can serve to legitimize or delegitimize social movements — and how select framings can serve to strengthen the resonance of social movements and build support for institutional change. Second, the study extends our understanding of how public discourse and framing drive institutional change. It demonstrates how competing narratives can coexist and influence each other within institutional contexts, extending work by scholars such as Rosenbloom et al. (2016) on the role of competing narratives in energy transitions.

Finally, while our study focuses on FFD in HEIs, the insights gained have broader implications for understanding sustainability transitions and institutional change in other contexts. The framing strategies and stakeholder dynamics identified in our research may be applicable to divestment and social movement campaigns, or more broadly, could inform advocacy strategies in other areas of sustainability. The tension between incremental and radical approaches to change, as evidenced in the framing of leadership versus student priorities, is likely to be present in various organizational contexts grappling with sustainability challenges.

Based on our findings we offer several practical recommendations for stakeholders involved in FFD campaigns and related social movements.

For students and advocates, develop a dual-pronged communication strategy that emphasizes both moral imperatives and financial prudence. While moral arguments are crucial for building grassroots support, our findings suggest that financial arguments may be more persuasive to institutional decision-makers. Consider a strategic escalation of tactics, beginning with obedient forms of demonstration and potentially progressing to more disruptive actions if initial approaches are unsuccessful. However, be aware that disobedient demonstrations may hinder idealized outcomes. Finally, engage with faculty allies to broaden the base of support and leverage their influence within institutional governance structures.

For decision makers, our finding suggest the need to better align institutional responses with stakeholder expectations. Rather than defaulting to responsible investment or carbon neutrality frames when faced with divestment demands, leadership should develop comprehensive responses that address both the moral imperatives raised by students and the financial considerations that our analysis shows to be persuasive in successful cases. The data indicates that

proactively engaging diverse stakeholders in discussions about institutional change management can help bridge this framing gap.

For faculty, our analysis reveals their unique position in FFD campaigns – while they show strong support through obedient demonstrations like open letters, they are often hesitant to openly criticize administration. This suggests faculty can be most effective by serving as mediators between students and leadership, helping translate moral arguments into financially-sound proposals. Our findings about the complementary roles of different stakeholder groups indicate that faculty can leverage their institutional knowledge and credibility to help develop evidence-based assessments of divestment impacts that speak to both moral and financial concerns.

5.2 Limitations and Future research

While our study provides valuable insights into the dynamics of FFD campaigns in HEIs, it is important to acknowledge its limitations. News media as a proxy for stakeholder positions and campaign tactics may not capture the full complexity of on-the-ground dynamics. Framings portrayed by news media represent the views of the journalist and may, thus, not appropriately represent the framings used by stakeholders themselves. We mitigate this limitation in three ways. First, while the views of university administration and faculty might be more prominent in mainstream publications, the inclusion of student newspapers, which are frequently written by or in partnership with key campus stakeholders, provides diversity in viewpoints. This partly overcomes some of the potential framing biases that may arise from external reporters and provides a more holistic overview of how FFD is framed in HEIs. We make note of existing studies that use news media to identify key stakeholders and examine their perspectives on a relevant issue (Jenkin

et al., 2011, 2020). This study adopts a similar approach to examining the perspectives of pre-selected stakeholders on a set of actions and drivers. Finally, we make a concerted effort not to ascribe a preferred framing to a stakeholder unless explicitly cited in the qualitative portion of the analysis. Future research could complement our approach with in-depth case studies or stakeholder interviews to provide a more nuanced understanding of divestment campaign processes.

Second, due to the nature of the news data and methodology adopted, which includes all discourse over time rather than restricting our search to explicit commitments, our analysis does not distinguish between successful and unsuccessful campaigns or examine how framing strategies have evolved over time. Future studies could address these gaps by conducting comparative analyses of divestment outcomes across institutions, expanding the dataset beyond the first ten years of the movement, and investigating the temporal dynamics of framing strategies.

Finally, we are cognizant that not all HEIs are comparable; a tactic that works at one institution might not work at another. There is consequently the opportunity for future researchers to use this methodology to conduct a deeper examination comparing divestment discourse at select institutions, of successful campaigns, and over time.

6. CONCLUSION

The FFD movement has created a powerful template for challenging institutional complicity in systems of harm. The movement's success in shifting public discourse around fossil fuel investments has opened new possibilities for examining other forms of institutional entanglement with contested industries and practices. Recent campus movements calling for divestment from companies profiting from conflict zones demonstrate how the FFD playbook —

from stakeholder mobilization to tactical escalation between obedient and disobedient demonstrations — can be adapted to confront different manifestations of institutional power. These movements similarly grapple with administrations that frame resistance through financial and reputational concerns while building coalitions that emphasize moral imperatives.

Our findings thus underscore the power of media framing and narrative control in catalyzing social change and offer valuable insights into how social movements can navigate institutional structures and leverage public discourse to achieve transformative change. This research not only provides guidance for current and future social movements but also opens avenues for further investigation into framing tactics that catalyze social transformations. Future research could examine how the legitimacy-building strategies and stakeholder dynamics identified in FFD campaigns translate to other contexts where institutions face mounting pressure to align their investments with their proclaimed values.

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Supplementary Table 1: Distribution and Scope of News Sources in Dataset

Category	Count	Percentage	Examples
Total Dataset			
Unique news sources	645	100%	
Total articles	3,475	100%	
Source Type Distribution			
Student newspapers	174	27.0%	Harvard Crimson, Columbia Spectator, Cornell Daily Sun
Non-student newspapers	471	73.0%	The Guardian, Targeted News Service, ClimateWire
Articles by Source Type			
Student articles	1,472	42.4%	
Non-student articles	2,003	57.6%	
Geographical Distribution			
International media	42	6.5%	The Guardian, Financial Times, Reuters
National media	148	22.9%	The New York Times, Wall Street Journal, Globe and Mail
Regional / local media	281	43.6%	Boston Globe, Burlington Free Press
Student media	174	27.0%	See student newspapers above
Geographical Distribution			
North America	475	73.6%	US and Canadian publications
United Kingdom	84	13.0%	British national and regional press
Australia / New Zealand	43	6.7%	Australian Financial Review, New Zealand Herald
Europe (non-UK)	31	4.8%	Deutsche Welle, Le Monde
Other	12	1.9%	Asian, African, South American outlets

Notes: 1) Student newspapers are defined as publications directly affiliated with colleges or universities; 2) Article counts include both print and online versions; 3) Some sources may have multiple regional editions counted separately; 4) Dataset predominantly includes English-language sources.