

## Working Paper

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# Bill McKibben's Influence on U.S. Climate Change Discourse: Shifting Field-level Debates Through Radical Flank Effects

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## **Bill McKibben's Influence on U.S. Climate Change Discourse:**

### **Shifting Field-Level Debates through Radical Flank Effects**

#### **Abstract**

This paper examines the influence of radical flank actors in shifting field-level debates by increasing the legitimacy of pre-existing but peripheral issues. Using network text analysis, we apply this conceptual model to the climate change debate in the U.S. and the efforts of Bill McKibben and 350.org to pressure major universities to “divest” their fossil fuel assets. What we find is that, as these new actors and issue entered the debate, liberal policy ideas (such as a carbon tax), which had previously been marginalized in the U.S. debate, gained increased attention and legitimacy while the divestment effort itself gained limited traction. This result expands theory on indirect pathways to institutional change through a discursive radical flank mechanism, and suggests that the actual influence of Bill McKibben on the U.S. climate debate goes beyond the precise number of schools that divest to include a shift in the social and political discourse.

## **Bill McKibben's Influence on U.S. Climate Change Discourse:**

### **Shifting Field-Level Debates through Radical Flank Effects**

*“...we need to view the fossil-fuel industry in a new light. It has become a rogue industry, reckless like no other force on Earth. It is Public Enemy Number One to the survival of our planetary civilization.”* (McKibben, 2012: 57)

*“...every new position, in asserting itself as such, determines a displacement of the whole structure and that, by the logic of action and reaction, it leads to all sorts of changes in the position-takings of the occupants of the other positions.”* (Bourdieu, 1993: 58).

In 2012, environmental activist Bill McKibben published a radical broadside against the fossil-fuel industry and its contributions to climate change in *Rolling Stone* magazine (McKibben, 2012). The first quote above is representative of his extreme position. The second quote challenges us to look deeply at the social and field-level consequences of such extreme positioning. That is what this paper seeks to do: examine the field-level influence that Bill McKibben has had on public discourse over climate change in the United States. More specifically, we examine the introduction of the “divestment” issue into what had become an extremely contested debate.

Modelled on past successful campaigns for divestment from Apartheid South Africa, Sudan, and Northern Ireland as well from the tobacco industry in the United States (Apfel, 2015), McKibben called upon investors (most notably those managing college and university endowments) to liquidate their stocks, bonds, and investment funds from companies associated with the extraction of fossil fuels. In a coordinated move, 350.org, the environmental non-profit group that he helped organize, launched its *Go Fossil Free: Divest from Fossil Fuels! Campaign*

with a stated goal to “revoke the social license of the fossil fuel industry” by “keeping carbon in the ground” (350.org website). With the help of activist college students, the movement sought to stigmatize fossil fuel companies such that future cash flows would become uncertain and share prices would be negatively and materially impacted.

In the ensuing four years, the obvious metrics by which the movement could be judged point to failure. They “have persuaded only a handful of big institutions to sell off the coal, oil and gas holdings in their endowments. They’ve had little or no direct effect on publicly-traded oil companies like Chevron and ExxonMobil, and none on the government-owned oil companies of Saudi Arabia, Venezuela, Iran and Iraq that are shielded from chants of rag-tag college students telling them to ‘leave it in the ground’” (Gunther, 2015). Some have assessed the financial impact of fossil-fuel divestment to be minimal (Ritchie & Dowlatabadi, 2014).

However, in terms of shifting the public debate over climate change, this movement may have had a pronounced effect. By staking out the “radical flank” (Haines, 1984), McKibben and 350.org presented an extreme position in comparison to others in the climate change debate. Namely, where others argued for industry-wide controls on carbon (through a carbon price) without demonizing any particular industry, McKibben’s radical flank employed an extreme discursive strategy of portraying the fossil-fuel industry as a public enemy and calling for it to be exterminated. In short, the campaign expanded the spectrum of the climate change debate and shifted its central focus.

This example illustrates an important gap in our understanding of institutional change. While social movements engage in field-level debates over contested issues (like climate change), seeking to gain legitimacy for their interests and arguments (Lounsbury, Ventresca, & Hirsch, 2003), much of the literature has focused on direct interactions between activists and

firms, such as managerial responses to boycotts (Eesley & Lenox, 2006; King, 2008), or the legitimization of alternative business models (Sine & Lee, 2009; Vasi, 2011). But social movement actors can shift field-level debates through less direct means, as when they remain on the fringe of such debates and compel change by the strategic introduction of extreme and radical issues. This indirect effect shifts the structure of field-level debates, giving legitimacy to certain issues and ideas by bringing them closer to the center through a “radical flank” effect (Haines, 1984, 1988; Gupta, 2002; Truelove & Kellogg, 2016; Baron, Neale & Rao, 2016).

This kind of field restructuring becomes particularly important in deeply polarized and stalled debates. In such contexts, fields become inflexible or at their extreme, ossified. The direct transmission of movement issues becomes exceedingly difficult because incumbents hold strongly to an issue position and defend it against any challenge (Amenta et al, 2010; Heberlein, 2012; Hoffman, 2011). Each faction in a well-worn debate rejects ideas associated with rivals because the messenger matters as much as the message (Hoffman, 2015). The concept of radical flank effects helps to understand how institutional change is possible in these inhospitable conditions, and adds insights into the dynamics by which field-level debates shift through more indirect tactics than are commonly studied.

In the rest of this paper, we present our theoretical model for the role of radical flank effects in shaping field-level debates, building upon and extending the concept as first developed by Haines (1984). We then describe the empirical context of the U.S. climate change debate and the divestment movement, present the data, methodologies and results of our longitudinal network text analysis, and discuss the implications of this work for both theorizing new dimensions of institutional change and understanding the shifting climate change debate in the United States.

## **Theorizing Radical Flank Effects on Field-level Debates**

The organizational field is “a community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside the field” (Scott, 1995: 56). It may include constituents such as the government, critical exchange partners, sources of funding, professional and trade associations, special interest groups, and the general public – any constituent which imposes a coercive, normative, or mimetic influence on the field (DiMaggio & Powell, 1983; Scott, 1995). The concept of an organizational field helps us to understand how organizations define themselves and make decisions in relation to collective meanings and enduring patterns of interaction (DiMaggio & Powell, 1983). Organizational action becomes a reflection of the perspectives defined by the group of members which comprise the institutional environment (Scott, 1995). This social dynamic commonly leads to the reproduction of organizational outcomes.

But fields also contain divergent perspectives on specific issues (Dutton & Ashford, 1993), taking the form of lively and contested debate (Hoffman, 1999). In this case, the field is not a collective of homogenous actors, but an intertwined constellation of actors who hold differing perspectives and competing logics with regard to their individual and collective purpose (McCarthy & Zald, 1977; Fligstein & McAdam, 2012). Rather than locales of isomorphic dialogue, it is a contested “field of struggles” (Bourdieu & Wacquant, 1992) where constituents are “engaged in a war” (Calhoun, 1993: 86). The essence of a field then is its ability to serve as the “relational space” where organizations have the opportunity to involve themselves with one another (Wooten & Hoffman, 2008), defining their position in relation to others and encouraging

the maintenance and even intensification of divergent identities (Meyer & Staggborg, 1996; White, 1981).

Within such conflictual domains, organizational self-interests and agency (Covaleski & Dirsmith, 1988; DiMaggio, 1988) allow some actors to act strategically towards institutional pressures and become what has been called institutional entrepreneurs (DiMaggio, 1988; Fligstein, 2001; Lawrence, 1999). Numerous studies have sought to clarify the means by which these actors assert their interests to create, maintain, and disrupt field-level debates (Lawrence and Suddaby, 2006) through a set of strategic responses and tactics (Lawrence and Suddaby, 2006; Oliver, 1991), as influenced by the internal interests and conflicts of their membership (Greenwood and Hinings, 1996). But, these actors do not always work alone, and increasing attention has been given to the role of social movements in spurring changes in field-level debates (Davis et al, 2005; King & Pearce, 2010), by either challenging practices through naming and shaming tactics (Eesley & Lenox, 2006; King, 2008) or supporting the construction of new practices by mobilizing entrepreneurs (Rao, 2009; Sine & Lee, 2009; Vasi, 2011). These literatures offer fairly purposeful strategies and tactics that are geared towards the direct influence of field-level norms and beliefs. But not all institutional agency is so targeted and directly consequential.

In this paper we seek to examine the indirect dynamics by which certain social movement actors shift field-level debates, not by asserting the legitimacy or dominance of their own issues, but rather by legitimating the issues of others as a byproduct of their presentation of more extreme positions that make prior ideas seem reasonable in comparison.



## **The Radical Flank Effect and Institutional Change**

The ability of field-level movements to operate as change agents is often influenced by the presence of more radical groups that alter the scope, form, and structure of debate (Haines, 1984). Freeman (1975) for example, has argued that mainstream reformist women's organizations, such as the National Organization for Women (NOW), would have been dismissed as extreme in the late 1960s had it not been for the actions and rhetoric of more radical lesbian and socialist feminists whose presence improved NOW's standing and bargaining position. Others have applied this concept and similar argumentation to domains as varied as private politics (Baron, Neale & Rao, 2016), technology development (Truelove & Kellogg, 2016), homeless advocacy (Cress & Snow, 2000), activism targeting governments (Downey & Rohlinger, 2008), and corporate social change (Den Hond & De Bakker, 2007).

In this paper, we seek to apply and extend this concept within the domain of the public debate over the issue of climate change. We begin by defining radical flanks as comprising both *actors* and the *issues* that they espouse. The mechanism that these actors trigger is based on the differentiation of social movements into factions that lie along a spectrum from radical to moderate positions or from confrontational to collaborative postures (Hoffman, 2009; Downey & Rohlinger, 2008). As such, the term "radical" is not meant as a descriptor of violent tactics per se, but rather that the discursive issues that the actors present are on the extreme end of the debate spectrum, hence radical. This differentiation can yield both negative and positive outcomes (Gupta, 2002), both of which may be present to varying degrees among multiple audiences within field-level debates.

First, a *negative radical flank effect* is the creation of an associative effect between radical and moderate groups and a backlash among opposing groups. In such cases, all members

of a movement are viewed by opposing interests in the same way as the more visible radical members, thus delegitimizing movement activities and goals and “threatening the ability of moderate groups to take advantage of the resources available from supportive third parties” (Haines, 1984, 32). “Even if moderates and radicals embrace considerably different goals and tactics, their coexistence and common identification as members of the same movement field reflects badly on the moderates and harms their ability to achieve their objectives” (Gupta, 2002, 6). Often, this negative effect can be driven by more violent or illegal actions, such as when an environmental extremist group creates headlines for a terrorist act.

Second and conversely, a *positive radical flank effect* is the creation of a comparison effect (Haines, 1984) where members of a social movement are viewed in contrast to other participants and the extreme positions from some members make other organizations seem more palatable to movement opponents and bystanders (McAdam, 1992). They do this in one of two ways. “[T]he radicals can provide a militant foil against which moderate strategies and demands are redefined and normalized — in other words, treated as ‘reasonable.’ Or, the radicals can create crises which are resolved to the moderates’ advantage” (Haines, 1984: 32). For example, when Martin Luther King Jr. first began speaking his message in the 1960s, it was perceived as too radical for the majority of white America. But when Malcolm X entered the debate, he extended the radical flank and, as a result, made King’s message look moderate by comparison. Similarly, Russell Train, second administrator of the EPA, articulated the positive radical flank effect in the 1970s when he quipped, “Thank God for the David Browsers of the world. They make the rest of us seem reasonable” (U.S. EPA, 1993).<sup>i</sup>

Although much cited, little research has tested the radical flank model and the primary evidence supporting it concerns foundation funding for civil rights organizations (for an

exception, see Truelove & Kellogg, 2016). Such research has found that funding increased for older civil rights groups because an expansion of the radical flank made the erstwhile radicals *appear* more moderate in comparison (Freeman, 1975; Snow & Cross, 2011; Haines, 1984). But, more than changes in financial resources, cultural and institutional consequences are also plausible because of the interpretive dynamic underlying radical flank mechanisms. Studies of institutional change, for example, point to the ways in which the emergence of new actors and the issues they espouse triggers incumbents to revise their strategies and relationships (Fligstein & McAdam, 2012). For example, the participation of insurance companies and investors in the field-level debates about environmental protection in the mid-1990s led manufacturers to adopt more proactive stances that included cooperation with moderate environmental non-governmental organizations (NGOs) (Hoffman, 1999).

The relational principle that underlies the radical flank effect also fits with early institutional theories in which conflict is a central element of field level dynamics, and vested interests become sources of inertia (Hirsch & Lounsbury, 1997; Selznick, 1949). In this early work, the field is not a discrete set of direct resource ties, but is instead a relational space that attends to how each organization's position is defined by its relationship to the entirety of the field (Wooten and Hoffman, 2008). Hargrave and Van de Ven (2009), for example, examine the writings of Chicago community organizer Saul Alinsky to illustrate how the actions of some institutional actors are dependent on the actions of other actors in disruptive periods. In one telling description, Alinsky writes, "The real action is in the enemy's reaction...the enemy properly goaded and guided in his reaction will be your strength" (Hargrave & Van de Ven, 2009: 132). Recalling the idea that opened this paper: "...every new position, in asserting itself as such, determines a displacement of the whole structure and that, by the logic of action and

reaction, it leads to all sorts of changes in the position-takings of the occupants of the other positions” (Bourdieu, 1993: 58). By linking radical flank theory to the disruption of field-level structures, we theorize two outcomes from a positive radical flank effect. If there is no radical flank effect or a negative one, then the data will fail to support these expectations.

Our first anticipated outcome is the elevation of formerly peripheral issues. We expect that the emergence of a radical flank will cause greater attention to flow to previously radical issues. For clarity, we refer to these eclipsed positions as “peripheral” issues. A radical flank softens opposition to peripheral issues, making them appear to be a moderate alternative to the issues introduced by the new radical actors (Haines, 1984; Snow & Cress, 2000; Baron et al, 2016). This acceptance translates into greater attention, which is the key resource in the arena of public discourse (Hilgartner & Bosk, 1988) and the lifeblood of social movements (Lipsky, 1968). As mainstream actors engage with a previously peripheral issue, it becomes accepted as a necessary perspective to consider and from which to judge alternative issues (Bail, 2012). What was once marginalized, now becomes a touchstone in the debate.

Our second anticipated outcome is the adoption and translation of radical issues. We also expect that the emergence of a radical flank will cause central and mainstream actors to attempt to domesticate radical issues by translating them into concepts that fit more readily with the rhetoric of their own field-level positioning. This process has two mechanisms. First, powerful incumbents may respond to social movements by seeking to coopt them and integrate movement concerns in a way that neutralizes their disruptive potential (Gamson, 1975). Second, critical voices closer to the center of a debate may make use of radical ideas to elaborate their own positions in order to maintain their position as challengers. For example, since the emergence of a protest wing of the civil rights movement, the NAACP has managed concerns about appearing

too conservative by incorporating more radical issues where possible. This dynamic is occurring most recently in reaction to the Black Lives Matter movement and the NAACP's adoption of the theme "Our Lives Matter, Our Votes Count" for its annual convention.<sup>ii</sup>

### **Divestment and the Climate Change Debate**

The focus of our study centers on the U.S. debate over climate change from 2011-2015, a period of conflict that approximates a "field of struggles" (Bourdieu & Wacquant, 1992) or institutional war (Calhoun, 1993), as the views of scientists and the public were (and still are) at significant variance (Funk & Rainie, 2015).

On the one hand, the scientific community had reached a consensus that "Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia...It is extremely likely that human influence has been the dominant cause" (IPCC, 2014). This "consensus statement" has been endorsed by nearly 200 scientific agencies around the world, including the scientific agencies of every one of the G8 countries (Joint National Science Academies, 2005).

On the other hand, surveys showed that only 63% of Americans "believe that global warming is happening," only 49% believe global warming – if it is happening – is caused mostly by human activities, and 30% believe it is due mostly to natural causes (Leiserowitz et al, 2013). Social scientists have found that the traditional demographics for climate change belief mirror those for environmental concern in general, but that political party affiliation is the strongest correlate. In studies based on Gallup data, the percentage of Republicans who believe that "the effects of global warming have already begun" declined from 49% in 2001 to a low of 29% in 2010 before oscillating between 34-41% from 2011-2016; the corresponding percentage for

Democrats increased from 61% in 2001 to a high of 76% in 2008 and has since bounced between 63-75% (Dunlap, McCright, & Yarosh, 2016; McCright & Dunlap, 2011). Moreover, partisan divides have expanded over time on several related questions about the existence, causes, scientific certainty, and threat of global warming (Dunlap et al, 2016).

This partisan split has created a social and institutional debate that some view as becoming intractable: opposing sides debate different issues, seek only information that supports their position and disconfirms the other's, and begin to demonize those that disagree with them (Hoffman, 2011, 2015). With time, positions could become relatively rigid and exclusive, thickening boundaries among cultural communities, as in "abortion politics" where "no amount of scientific information...can reconcile the different values" (Pielke, 2007: 42).

Such polarization has yielded a stalemate in the political debate over appropriate responses and the marginalization of liberal policy ideas, most notably a carbon price. In 2009, House voting on the American Clean Energy and Security Act (otherwise known as the Waxman-Markey Bill), which would have established an emissions trading program for greenhouse gases, fell largely along party lines with most Republicans opposed. In March 2011, every one of the 31 Republican members of the House Energy and Commerce Committee declined to vote on the simple idea that climate change exists. In the 2012 U.S. Presidential election, all four of the Republican primary candidates presented climate science as inconclusive or wrong. In the 2016 Presidential election, eight of the 11 Republican candidates did the same and the elected Republican President has questioned the reality of the issue.

Into this standstill, Bill McKibben and 350.org introduced the divestment issue. This radical flank movement mobilized students to pressure their colleges or universities to liquidate their investments in fossil fuel companies in order to mitigate climate change. As such, the

divestment idea staked out a more extreme position in the environmental debate by calling for the cessation of fossil fuel investments and ultimately their use, rather than the more moderate call for increased adoption of renewable energy or cleaner forms of fossil fuels. McKibben argued that the campaign's goal was to stigmatize fossil fuel companies, so that they would lose their social license to operate. It was an intervention at a time when politicization had created strongly divided camps that were unwilling to consider the other's positions. As such, this particular context presents an "extreme case," one in which the process of theoretical interest is more transparent than it would be in other cases (Eisenhardt, 1989). It is thus well-suited to build our knowledge of the ability of the radical flank effect to indirectly trigger field-level change in a deeply polarized and entrenched field where more direct tactics are unlikely to succeed.

### **Data**

In order to test our model of radical flank effects on field-level debates, we compiled a dataset of news coverage about climate change. We collected all news articles from LexisNexis that mentioned either "climate change" or "global warming" and that relate to the U.S. from the start of the divestment campaign in 2011 to 2015. We kept only the articles that came from U.S. news sources that were present across the time period in order to avoid biases due to changes in the sources available in LexisNexis. The result was a final dataset of 42,072 articles encompassing the U.S. climate change debate as reported in nearly 300 newspapers. The top three sources were the *New York Times*, *Washington Post*, and *San Jose Mercury News*.

Given the large volume of text, we developed a series of computational text analytic methods to map the influence of the radical flank. We sought to examine changes over time in the actors and issues connected to climate change in order to test how the emergence of a radical

flank affected the broader debate. As detailed below, we assessed trends in the prevalence of particular actors and issues, as well as in the network positions of these entities using computer-assisted text analysis (Brier & Hopp, 2010; Popping, 2000) and more specifically network text analysis (Carley, 1997; Martin, Pfeffer, & Carley, 2013).

To identify *actors*, we processed our corpus with a named entity recognition program which we designed to match the data. By searching for proper names and acronyms, this program generated a list of persons and organizations. We then inductively coded the 1,250 most common actors into eight types: academic, business, celebrity, government, media, NGO, religious, and other. After dropping the celebrity and other categories, in order to reduce references to climate change from entertainment articles and other noise in the data, we focused our analysis on 1,027 prominent actors from the remaining six groups. We identified Bill McKibben and 350.org as the core actors in the radical flank. We also considered the role of Naomi Klein, who prominently advanced an anti-capitalism message (Klein, 2014), and we analyze this comparison in the discussion.

To measure the prevalence of key *issues*, we drew on the literature and our subject knowledge to create a list of thirty-two issues from across the ideological spectrum. Shown in Table 1, there were eight issues that were commonly linked to the conservative position on climate change (McCright & Dunlap, 2000), fourteen issues that were commonly linked to the liberal position, and ten issues that we associated with the radical flank. The assignment of these issues to ideological positions was specific to the climate change debate in the U.S., where the conservative position was anchored in denial, the liberal position was associated with policy response, and the emergent radical position called for the abolition of fossil fuels. We tracked each issue with multiple phrases that we matched against the corpus. For example, the “cap and



trade” issue could have been matched with the eponymous phrase, “carbon permits,” or “carbon trading.”<sup>iii</sup>

INSERT TABLE 1 ABOUT HERE

### **Methods**

Our analysis followed three steps. First, we traced the emergence of the radical flank in the debate by examining counts of articles which included the central radical actors (McKibben and 350.org) or issue (divestment), as well as the percentage of divestment articles that also included McKibben or 350.org. For this step, we used months as the unit of observation and then smoothed the scores into three-month moving averages. Second, we examined how the radical message of divestment dispersed into the broader debate. In order to detect the additional actors and issues that became linked to divestment, we calculated the overlap between divestment and other actors at the sentence-level, using a window of plus/minus one sentence to count co-occurrences. Third, we investigated shifts in the overall shape of the debate. For this step, we used calendar quarters as the unit of observation and constructed networks of actors and issues, creating ties when two items co-occurred in more than one sentence. Results were consistent with Jaccard and Dice measures of association, as well as article-level and paragraph-level measurement windows.

We then created and analyzed network diagrams to visualize the shifting positions of the radical flank and liberal actors and issues. Based on our finding (reported below) that business and academic actors were the key interlocutors with the divestment campaign, we simplified our analyses by constructing separate networks for business and academic actors. Each set of

networks also included NGOs and ideological issues. The results from each set are similar, so we focus on the business networks and note differences from the academic networks where relevant. We visualized the networks in Gephi with the ForceAtlas 2 algorithm, which is a standard network layout algorithm that balances two forces: repulsion between nodes and attraction between edges. To improve clarity, we included labels for key types of nodes only, and used the Label Adjust algorithm to reduce overlapping labels. We made no manual adjustments to the graphs. To more precisely understand changes over time, we also computed trends in the eigenvector centrality for key actors and issues from the network data. The eigenvector measure is well-suited to capturing overall network position because it calculates a node's centrality based on the centrality of the nodes that are linked to it. We also scaled the size of nodes and labels by this measure in our network diagrams in order to more clearly present the key findings.

If a positive radical flank effect is detected, increased attention to the radical flank should trigger the movement of liberal issues from the periphery into the center of the debate, as well as a translation and similar movement for radical issues due to incumbents' attempts to domesticate the challengers. Empirically, we should observe a connection between the entry of the radical flank into the network and more central positioning and greater eigenvector centrality scores for liberal and radical issues. If a negative radical flank effect is detected, the emergence of the radical flank should have the opposite effect: diminished attention to liberal and radical issues, which are collectively marginalized as extreme.

## **Results**

We present our results in the same order outlined above. First, we chart the emergence of the radical flank. Second, we examine the spreading engagement with the core radical issue of

divestment. Third, we analyze network data to investigate how the radical flank relates to changing positions for liberal and radical issues in the climate change debate. We conclude the section by providing supplemental evidence on the robustness of the findings.

### **Emergence of the Radical Flank**

News attention to the key components in the radical flank (Bill McKibben, 350.org, and divestment) generally grew across 2011-2015 (see Figure 1). Although the divestment campaign began in 2011, news stories connecting divestment to the radical flank did not appear until the fall of 2012. This media development followed an expansion in the campaign that spring and the publication of McKibben's widely-read *Rolling Stone* article that summer (McKibben, 2012), which received more than 5,000 comments and over 120,000 likes on Facebook (Nisbet, 2013).

INSERT FIGURE 1 ABOUT HERE

### **Spreading Engagement with the Divestment Issue**

As the divestment issue became more prominent in the climate change debate, it also entered into wider domains detached from the actors that introduced it. November 2012 was the peak of the association between the radical actors and divestment, when almost 75% of divestment articles also featured McKibben or 350.org (see Figure 1). But by 2013, less than one-third of articles discussing climate change and divestment included mentions of McKibben or 350.org. By 2015, this figure dropped to 12% as the preponderance of attention to divestment occurred outside of the radical flank.

Table 2 displays the top ten actors who became most associated with divestment outside of the radical flank. We identified this group using Jaccard scores calculated across the time period. The Jaccard measure captures the frequency with which two items co-occur, controlling for how often each item occurs overall. Especially prominent are targets of the divestment campaign from business and academic backgrounds. For example, attention focused on fossil fuel companies like Exxon Mobil and Chevron, and universities like Stanford and Harvard.

INSERT TABLE 2 ABOUT HERE

### **Shifts in the Climate Change Debate**

Examining networks of issues, businesses, and NGOs, Figures 2-4 depict dramatic changes in the climate change debate. Each node is an actor or issue, sized by eigenvector centrality and labeled for issue nodes. At the start of the time period (2011 Q1 in Figure 2), before the radical flank gained extensive attention, business actors occupy the center of the network, and NGO actors and liberal issues are spread outside the center. Bill McKibben and 350.org are peripherally attached. Corresponding to the results in Figure 1, divestment is not part of the conversation. The most central issues are two liberal ones (national security and cap and trade) together with a conservative issue (hoax). Social justice and capitalism are the most prominent radical issues, albeit positioned on the periphery. By the fourth quarter of 2012 (Figure 3), after the divestment campaign and McKibben's *Rolling Stone* article had begun to draw considerable popular attention, the main components of the radical flank (McKibben, 350.org, and divestment) have clustered off the center of the network. Moreover, there is a distinct movement of select liberal issues into the center, particularly carbon tax, severe weather,

and carbon pollution. Eigenvector centrality scores for liberal issues grow 97% on average across the two graphs, including 134% for carbon tax and 39% for cap and trade, indicating that these issues have become more influential in the discussion.

One year later (2013 Q4 in Figure 4), the evolution of the radical flank has progressed to the point that the radical flank cluster expands with ties to the additional radical issues of carbon bubble and “stay in the ground.” Another radical issue, stranded assets, also emerges but is detached from the radical flank cluster. At the same time, the core liberal issues from the prior diagram become further entrenched in the center of the network, and additional liberal issues such as carbon price, carbon capture, adaptation, and mitigation become noticeably more connected. There is a further 62% increase in the average eigenvector centrality of liberal issues from 2012 Q4. Also, conservative issues increasingly drift out towards the periphery across the three figures. Together, this pattern is consistent with both of our expectations for a positive radical flank effect: the emergence of the radical flank is associated with greater attention to liberal issues, which now appear more mainstream, and also the growth of new variants of the radical position that align better with incumbent positions, a point we unpack in the discussion.

INSERT FIGURE 2 ABOUT HERE

INSERT FIGURE 3 ABOUT HERE

INSERT FIGURE 4 ABOUT HERE

In network diagrams not shown, the corresponding academic networks follow the same temporal evolution of the emergence of a radical flank linked to growing centrality for liberal issues. One difference is that the clustering trend among liberal and radical issues is stronger in

the academic network, perhaps indicating greater ideological coherence. There are also minor variations in the positioning of individual issues. For example, island nations and carbon budget occupy a more central place in the academic network, while cap and trade and carbon bubble are more central to the business network.

To better understand this progression, we analyzed trends in the eigenvector centralities of key actors and issues in the business networks depicted above. Figure 5 charts trends in the average centrality of the radical flank (McKibben, 350.org, and divestment) as well as of liberal and conservative issues. Prior to the second half of 2012, conservative and liberal issues share a moderate level of centrality, while the radical flank occupies a more peripheral position. Transitioning from 2012 into 2013, the radical flank and liberal issues rise dramatically to dominate the network. Despite a slump from 2014 Q4 to 2015 Q2, these two groups hold a more elevated place in the network throughout the remainder of the time period. Interestingly, the correlation between these two trends is 0.57, while the conservative-liberal association is nonexistent ( $r = 0.01$ ) and the radical flank and conservative trends are negatively correlated ( $r = -0.28$ ). In the corresponding academic networks, the radical flank-liberal association is nearly identical ( $r = 0.50$ ), while the conservative-liberal correlation becomes strongly negative ( $r = -0.49$ ) and the conservative-radical flank opposition intensifies ( $r = -0.52$ ). These associations provide additional evidence for a positive radical flank effect, where the growing attention to radicals triggers the greater inclusion of eclipsed critical ideas.

INSERT FIGURE 5 ABOUT HERE

There are other noteworthy trends. Table 3 focuses on key radical actors and issues. The centrality of McKibben and 350.org grow to a peak in 2013, while divestment shows persistent growth throughout. Also interesting is the emergence of additional radical issues following divestment, such as stranded assets and carbon bubble. Table 4 examines trends in key liberal issues. There is general growth in the prominence of issues such as carbon pollution, carbon tax, carbon price, and carbon budget. On the other hand, carbon capture peaks in 2013, and cap and trade ebbs over time.

INSERT TABLE 3 ABOUT HERE

INSERT TABLE 4 ABOUT HERE

To summarize, these analyses provide evidence for how a positive radical flank effect reshaped the public debate around climate change. They connect the emergence of a radical flank, consisting of both radical actors and their core issue, and the dissemination of this issue beyond the flank to subsequent increases in the centrality of liberal as well as radical issues in the debate. Concurrent with the development of the radical flank, liberal issues moved into the center of the conversation and new radical issues, such as stranded assets and carbon bubble, developed.

### **Robustness Analyses**

The foregoing analyses are consistent with our argument that the development of a radical flank led to a repositioning of previously neglected critical issues towards the center of the climate change debate (anticipated outcome 1) and the adoption and translation of radical

issues by incumbent actors (anticipated outcome 2). However, it remains possible that some alternative explanation led to the concurrent elevation of the radical flank and liberal issues, as well as of the secondary radical issues that we attribute to a mainstreaming of the divestment concept. We could not identify any obvious alternative events that occurred during the key turning point from 2012 Q4 to 2013 Q4 (the year following McKibben's *Rolling Stone* article and the emergence of the radical flank). This period falls between the two major climate policy meetings in 2009 in Copenhagen and 2015 in Paris as well as between two major U.S. policy initiatives, the failed U.S. Senate cap and trade bill in 2009 and the release of the EPA Clean Power Plan in 2015.<sup>iv</sup> On the activist front, the major battle over the Keystone XL pipeline spans 2008-2016, but peaked in activity in late 2014 to early 2015, as evident in Google search data. Public opinion is an important mediator of social movement outcomes (Amenta et al, 2010), but in the U.S. partisan polarization around climate change changed little or intensified from 2011-2015 for most questions (Dunlap et al, 2016). In addition, overall concern about climate change dipped during the recession around 2009-2010, but was remarkably consistent across the surrounding years from 2006-2016.<sup>v</sup> The lack of clear alternative drivers reflects the dormancy of climate change politics at the time, which may have motivated McKibben and 350.org to develop the radical flank.

Another possible explanation for our results is change in the composition of journalists and newspapers. However, we could not find evidence of this dynamic. We limited our sample to newspapers that span the time period in order to control for this type of change, and within the sample there is little trending in composition. Using the index of dissimilarity,<sup>vi</sup> the distribution of newspapers shifts on average by 18% from quarter to quarter with very little variation across quarters in this pattern. Individual newspaper shares were also fairly consistent. The top



newspaper, *The New York Times*, accounts for between 7-10% of the articles each quarter; the top ten newspapers range from 31-40% of articles with no clear trend; and the average standard deviation across newspapers is 0.14%. There is more churn in journalists but two facts mitigate concerns about composition change here. First, the percentage of articles without a credited journalist is steady at around 36%. Second, the largest share of articles by a journalist in a quarter is 1.4% (belonging to Juliet Eilperin of the *Washington Post* in 2011 Q4), and the percentages decline exponentially. This distribution reduces the impact of individual journalists on the results, although there could still be a group movement in types of journalists that we are unable to detect.

We also examined a matched sample approach as a more rigorous test of causality. To conduct this test, we split our data into two groups: articles from newspapers that paid attention to liberal issues but not the radical flank prior to 2014 (control group), and articles from newspapers that paid attention to both (treatment group). We excluded articles from newspapers that ignored liberal issues in order to make the two samples more similar. Although the newspapers in the control group had fewer articles about climate change (6,630 vs. 34,078), this group referenced liberal issues at a 42% higher rate per article than the treatment group. To compensate for the fewer articles in the control group overall, we constructed a network based on the entire year of 2013 vs. Q4 of 2013 for the treatment group, resulting in networks derived from 1,207 and 1,567 articles respectively. Results were also consistent when both networks were based on one quarter or the entire year.

The results support our expectations for the radical flank. Figures A1 and A2<sup>vii</sup> compare the networks of businesses, NGOs, and issues from the two samples. In the combined network, we observed substantial consolidation of liberal issues near the network's center (see Figure 5).

This pattern is more evident in the treatment network (Figure A1) than in the control network (Figure A2). The eigenvector centrality scores confirm this observation: on average, the scores for liberal issues are 25% greater in the treatment group. Further, in the treatment group, the eigenvector centrality for carbon tax is twice as large, and carbon price and carbon budget are part of the conversation whereas they are missing in the control network, while less challenging issues, such as carbon capture (46% greater) and national security (23% greater), are disproportionately central in the control group. Overall, by considering prominent alternative explanations and investigating a matched comparison, this section reinforces the argument that the development of a radical flank contributed to the growing prominence of liberal issues in the climate change debate.

### **Discussion**

The divestment campaign started by Bill McKibben and 350.org scored a major victory in May 2014 when Stanford University became the first major university to divest its \$18.7 billion endowment of stock in coal-mining companies. But on the whole, it has achieved far less success in stigmatizing fossil fuel companies and depressing stock values. Its more important successes may be measured in terms of changing the debate over climate change by staking a position on the radical flank. By demanding the elimination of fossil fuels, the divestment campaign expanded rapidly as a topic in worldwide media (Apfel, 2015), disrupted a polarized debate, and reframed the conflict by redrawing moral lines around acceptable behavior (Seidman, 2015). Our evidence suggests that this shift enabled previously marginalized liberal policy ideas such as a carbon tax and carbon budget to gain greater traction in the debate, while also supporting the translation of the radical position into new radical issues like stranded assets

and unburnable carbon, which in turn spread into wider circles. Although these latter concepts are still radical in implication, they adopt the language of financial analysis, which makes them more legitimate within business circles. Thus, the battle cry of divestment becomes a call for prudent attention to financial risk, and the carriers of the message shift from grassroots activists to financial institutions and investors. This secondary effect provides an interesting extension to the radical flank model.

Overall, these findings provide a striking example of how institutional change is possible in deeply polarized fields with entrenched incumbent positions through an indirect tactic. Although activism around climate change has made considerable progress through more direct routes of pursuing reforms at individual organizations and seeding the economy with new business models (Vasi, 2011), field-level changes are necessary. A radical flank approach may be able to disrupt field inertia and create room for these changes by redefining the terms of the debate into topics that more organizations could embrace (Beer, 2016).

An additional insight from our findings is that radical and moderate positions are interdependent within institutional debates. This challenges more atomized notions of institutional agency and entrepreneurship where individual organizations or movements act to counter specific and discrete pressures from organizational fields (Oliver, 1991; Greenwood & Hinings, 1996; Lawrence & Suddaby, 2006). Instead, we find possibilities for a more symbiotic dynamic, where radicals strengthen the negotiating position of moderates, who in turn provide a pathway for central issues to move towards radical goals (cf., Truelove & Kellogg, 2016). However, even in this situation, tensions are likely to arise as rivalries for movement leadership emerge.

Moreover, it is notable that the radical flank we observe gained prominence in part because climate politics were so mired in polarization, and that even as the field-level debate progressed in the news media, underlying public opinion remained deeply divided (Dunlap et al, 2016). Ultimately, a successful radical flank is likely to produce wider cultural support (Haines, 1988), but its immediate effect may be to motivate an opposing radical flank (Meyer & Staggenborg, 1996). This dynamic is apparent in the election of a new administration that openly dismisses the idea of climate change and plans to dismantle his predecessor's climate policy initiatives. Going forward, it will be important to see whether progress in the public debate reverts to its state prior to the radical flank or whether changes persist and moderate any attempts to reverse U.S. climate policy.

Can all radical flank actors have such impact? That is not clear from our analysis. For example, we included Naomi Klein within our sample. Her book *This Changes Everything: Capitalism vs. the Climate* called for “shredding the free-market ideology that has dominated the global economy for more than three decades” (Klein, 2014). The effect of this radical stance is far less notable. Capitalism was already a central issue in the climate change debate prior to Klein's book, and we found little evidence of a restructuring of the surrounding conversation in terms of either the associated actors or issues. This may be an example of an actor moving too far away from the mainstream to influence the central field-level debates. While Klein's book came out at a time when the financial crisis left many Americans suspicious of the institution of capitalism (Buttonwood, 2014) and Presidential candidate Bernie Sanders gained traction in public opinion over the merits of a shift towards socialism, many within America may not see a dismantling of the capitalist system and the market economy as credible ideas. Such an overly ambitious movement fringe also carries the risk of provoking a negative radical flank effect,

where the broader movement loses credibility. For example, many who dismiss the reality of climate change used Klein's arguments as proof for what they had been arguing all along: that the climate change movement is, at its heart, anti-development, anti-capitalist, socialist or even communist (Oreskes & Conway, 2010).

A key theoretical point also emerges from the McKibben-Klein comparison: the importance of synchronization between challengers and reformist elites for field-level change. The divestment campaign benefitted from the translation of its critique into the conventional language of business. Powerful actors who were critical of existing business practices reframed the divestment challenge as a matter of financial risk from stranded assets and unburnable carbon - all more politically palatable concepts. This move allowed the divestment message to broaden its domain of influence and gain more attention, especially among dominant business actors. Although it may be too early to tell, a similar act of translation would seem unlikely for Klein's anti-capitalism message.

### **Practical Implications**

The radical flank effect and the findings we have presented offer some critical insights for social change actors. The existence of a positive radical flank effect provides an interdependency between radical and moderate factions that could be strategically exploited (Baron et al, 2016; Downey & Rohlinger, 2008). More broadly, this paper suggests expanding activists' theories of change to consider indirect pathways. Social movements typically achieve influence by gaining attention from the news media and thereby winning support from critical bystanders who movement targets care about (Lipsky, 1968). A conventional approach might collapse these goals into a plan to directly challenge targets, as when a labor campaign elicits

public support to unionize a workplace. Instead, our analysis suggests the value of distinguishing between changing the public discourse and challenging targets. Although the divestment campaign chose an objective that is largely impossible to fulfill, as divestment will be unlikely to undermine the valuations of fossil fuel companies, this objective also provided leverage to expand the boundaries of the public debate and enhance the position of progressive issues. In addition, campaigners should consider the political landscape and their positioning in evaluating the tradeoffs between direct and indirect tactics. Our study suggests that the latter may be especially useful in highly polarized and inertial fields like U.S. climate politics. In these conditions, direct challenges are likely to meet unyielding resistance, while a more indirect route may open up space for incumbents to positively re-evaluate activist positions.

## **Future Research**

This research opens up future questions on the mechanisms behind radical flank effects, a concept that has received far too little empirical development to date. To begin, research into radical flanks would benefit from additional methods to identify these mechanisms. This aspect is especially challenging because the effect is indirect and it is not clear which actors are most likely to respond to it. Recent work suggests that either moderate incumbents (Truelove & Kellogg, 2016) or more deeply opposed incumbents (Baron et al, 2016) may be more disposed to react to a radical flank threat by cooperating with moderate challengers.

Beyond methodological considerations, conceptual and theoretical questions remain for further examination. How does a radical flank gain attention? Conditional on attention, what determines when the radical flank will have a negative or positive effect? Our study reinforces the point made by Bail (2012) that commanding the attention of prominent targets, such as

powerful businesses and universities, propels cultural changes. The question remains of why attention might valorize rather than delegitimize the radical flank. We suggest that the translation of radical issues by core actors could be part of the explanation. When incumbents adopt the radical flank's issues, generally after transforming them to some degree, field-level change is accelerated. Without this sympathetic attraction from dissident or adventurous factions within the elite, attention may remain stigmatizing and the radical flank becomes an object of scorn to define one's self against rather than a provocateur to selectively incorporate (we might expect that violent or illegal behavior would lead to this outcome). A challenge in doing this research is the collection of data about multiple radical flanks to identify the contexts that trigger positive versus negative variants. Research designs with longer timeframes and more richly textured information about interpretive processes would also be helpful.

In conclusion, our analysis of how the radical flank spurred field-level change in the debate around climate change in the U.S. suggests the value of paying more attention to indirect routes to field restructuring, especially in polarized and entrenched fields. We also believe that this perspective is more consistent with original conceptions of the organizational field, as an interconnected and comingled domain in which identity and freedom of action are intimately tied to the presence of others that occupy that domain (Bourdieu, 1993; White, 1992). Rather than directly agitating for changes from unyielding opponents, a radical flank can reconfigure polarized fields by inciting the closer juxtaposition of eclipsed challengers and incumbents.

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<sup>i</sup> David Brower led the transformation of the Sierra Club from a regional hiking club into a national protest organization, and persistently pushed the environmental movement to take more aggressive positions.

<sup>ii</sup> Lartey, J. (2016, July 18). "NAACP considers role alongside Black Lives Matter at annual convention." *The Guardian*.

<sup>iii</sup> We also considered using a purely inductive approach to identify key issues in the debate but the results were swamped with meaningless noise.

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<sup>iv</sup> The Obama administration instituted a suite of less prominent environmental regulations during this time period, including rules on automobile efficiency and power plant mercury emissions (McCarthy & Copeland, 2016).

<sup>v</sup> For example, in 2008, 76% of Democrats to 42% of Republicans in Gallup data agreed that “the effects of global warming have already begun” and these numbers were 75% and 41% in 2016 (Dunlap et al, 2016); a Pew report shows that 77% of Americans said “there is solid evidence that the earth has been getting warmer” in 2006 and 67% agreed with this in 2013, after dipping to 57% in 2009 (Pew Research Center, 2014); and Yale survey data finds that 62% of Americans were somewhat or very worried about global warming in November 2008 while 61% shared this position in November 2016 (Leiserowitz et al, 2017).

<sup>vi</sup> The index of dissimilarity is the sum of the absolute differences between the percentages for each entity across two time periods, divided by two. It ranges from zero when there is no change to one hundred when there is complete turnover. In effect, the index summarizes the reallocations that would be necessary to equalize the distributions between time periods.

<sup>vii</sup> To conserve space, Figures A1 and A2 are available online at: <http://www.toddschifeling.com/supplemental-files/>.



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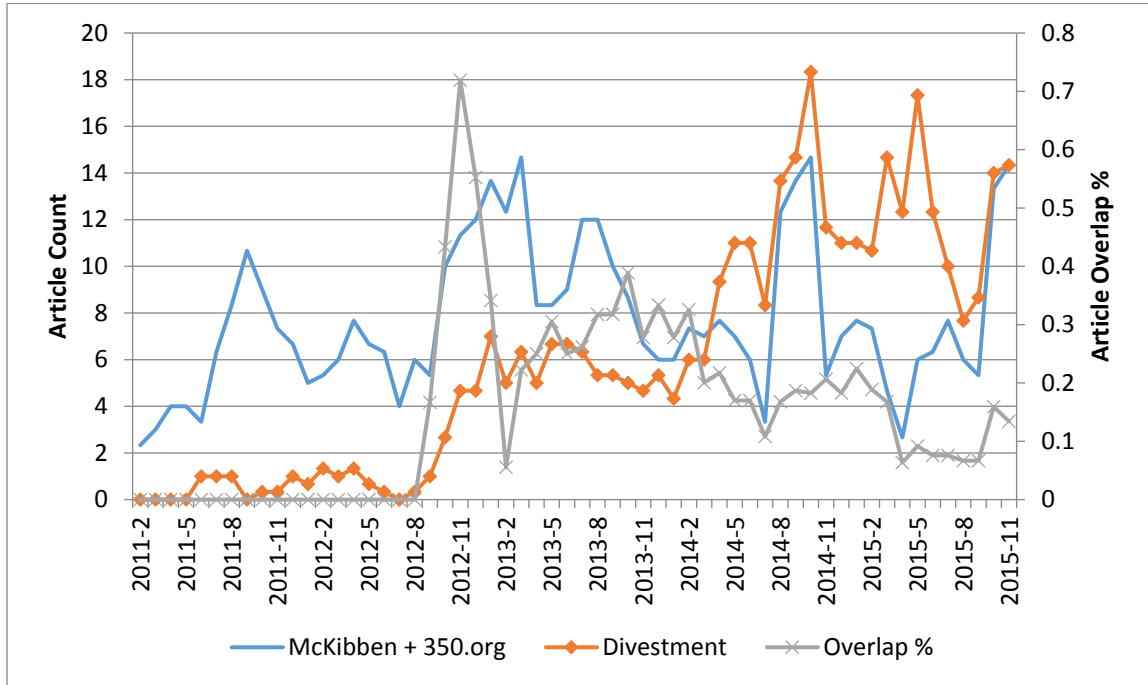
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## Figures

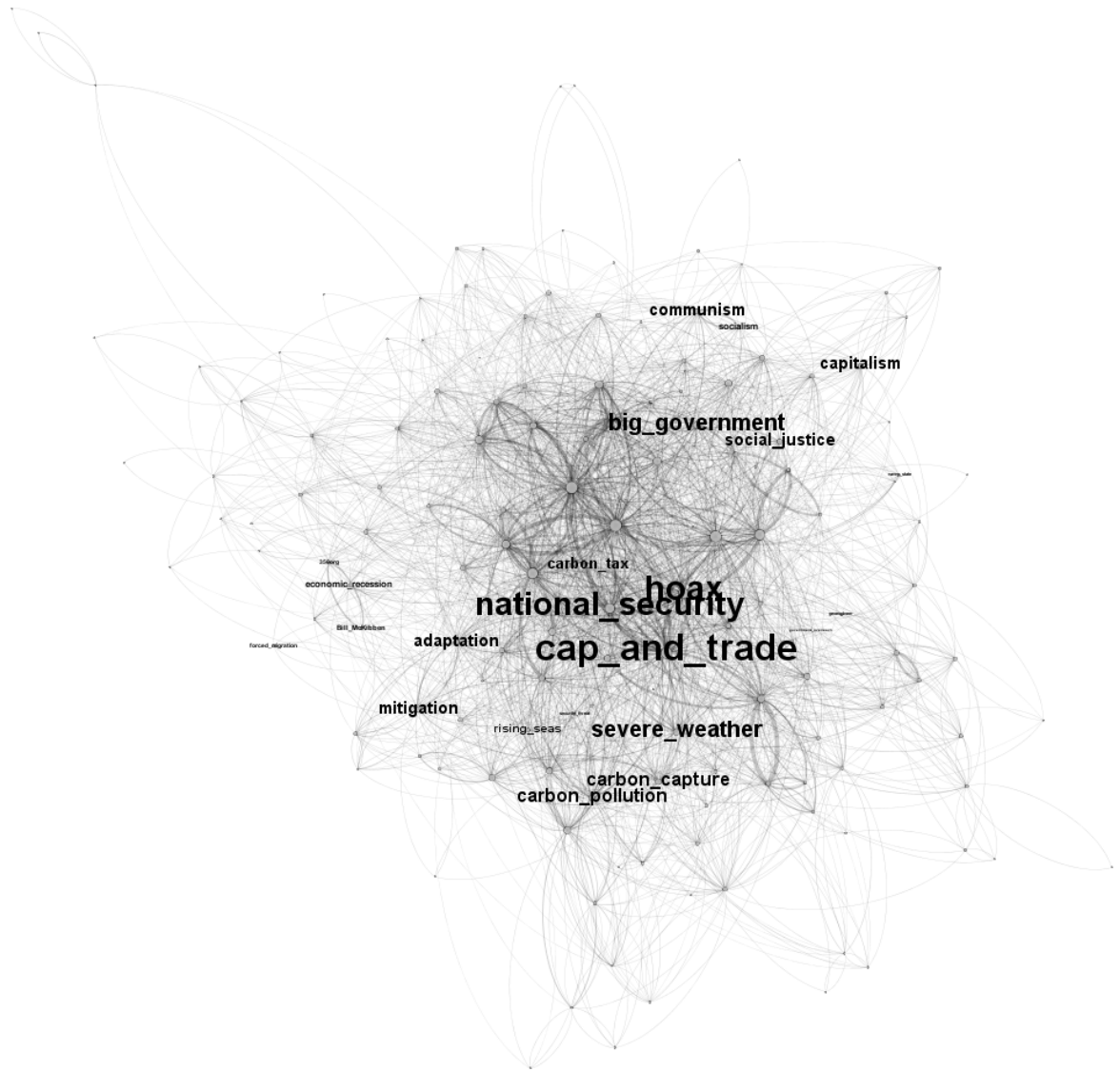
Figure 1 – Evolution of the Radical Flank



Note: data are smoothed with a three-month window.



Figure 2 – Climate Change Discussion Network among Businesses, NGOs, and Issues, 2011 Q1



Note: issues are labeled, and all nodes and issues are scaled by eigenvector centrality.

Figure 3 – Climate Change Discussion Network among Businesses, NGOs, and Issues, 2012 Q4

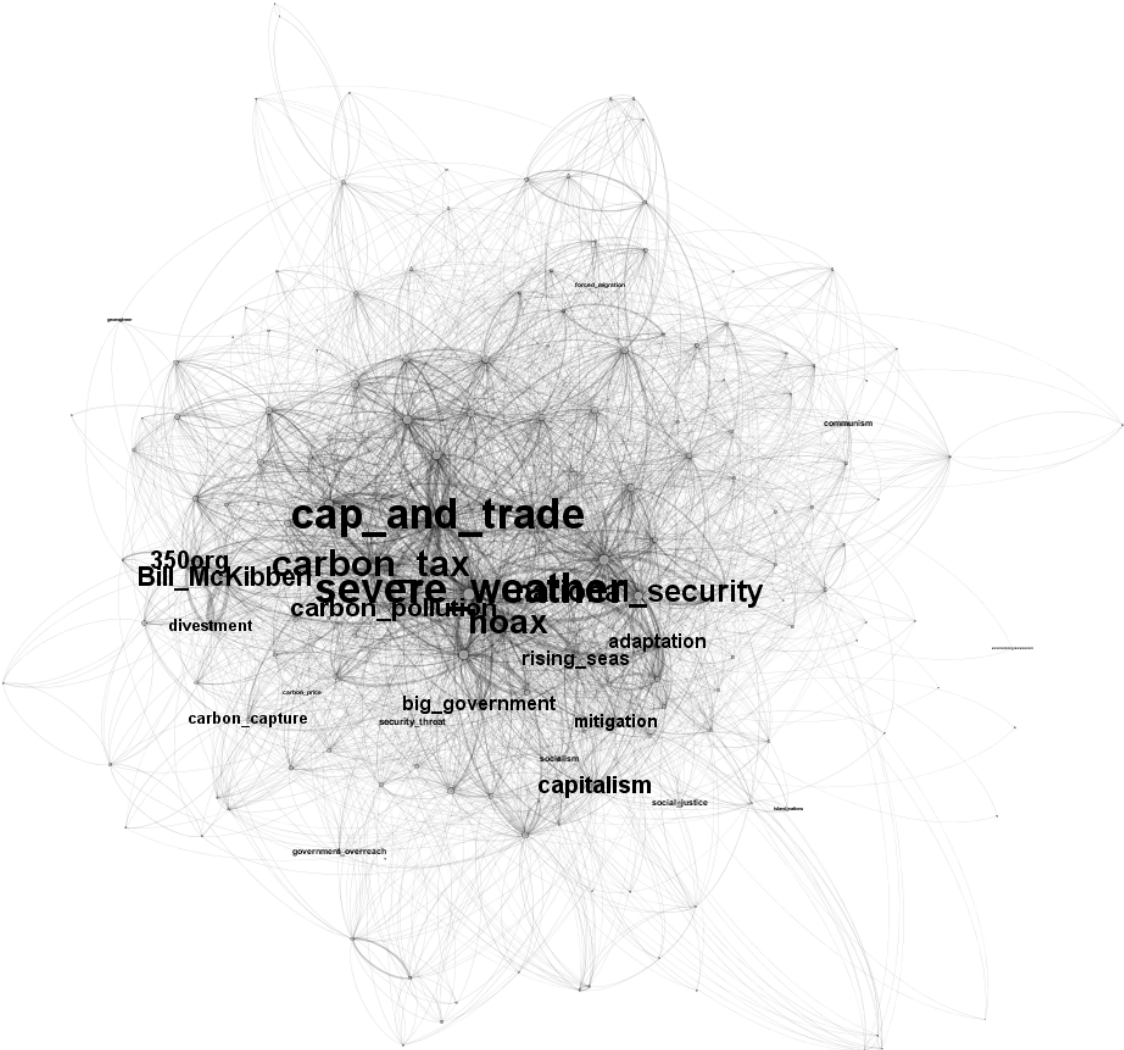


Figure 4 – Climate Change Discussion Network among Businesses, NGOs, and Issues, 2013 Q4

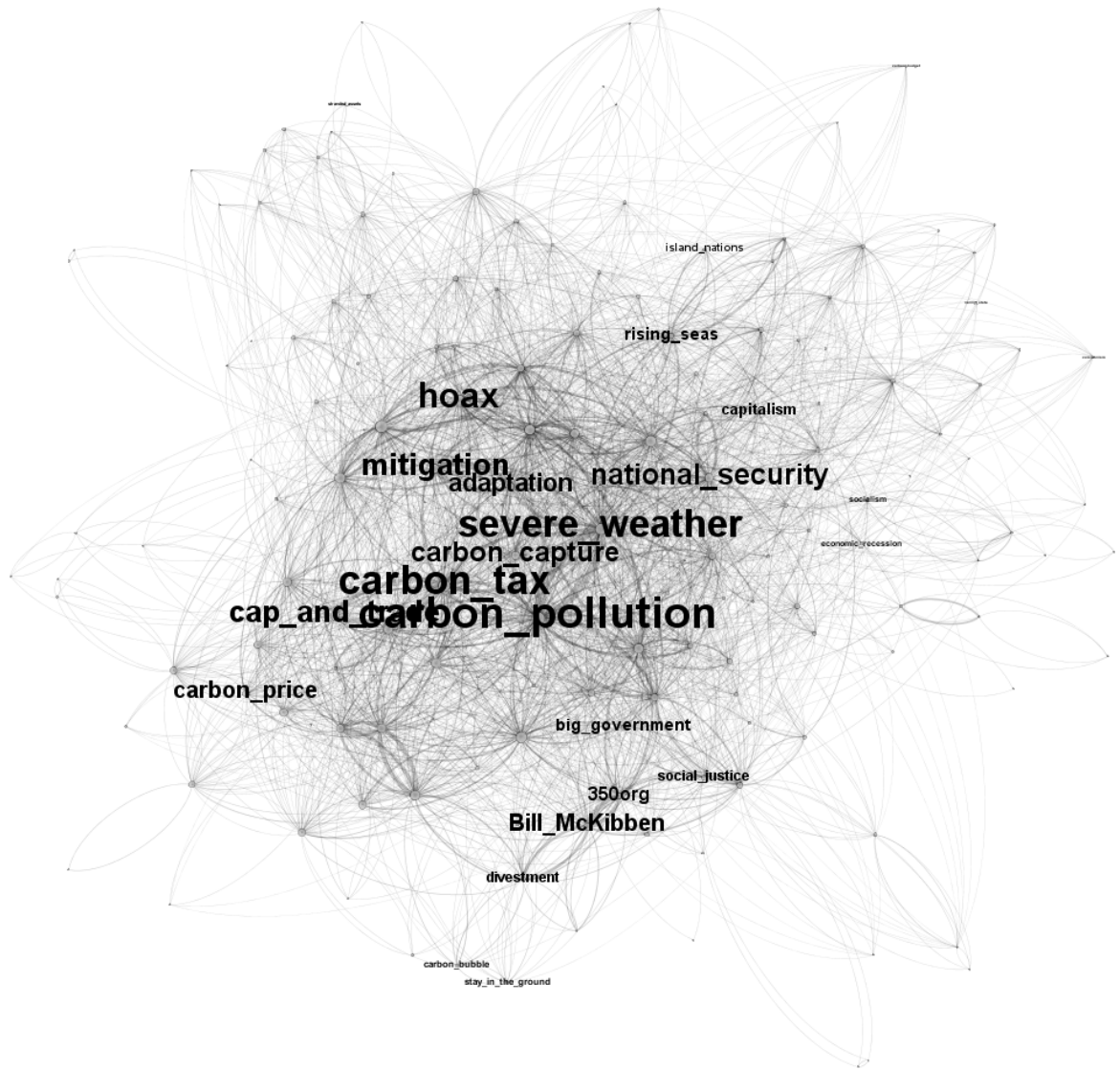
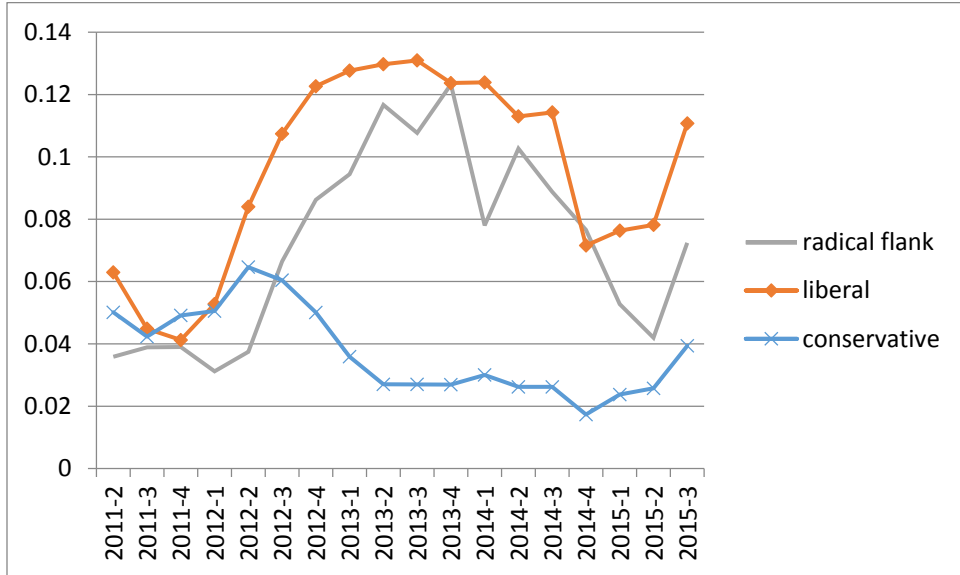


Figure 5 – Trends in Average Eigenvector Centrality of the Radical Flank, Liberal Issues, and Conservative Issues



Note: data are smoothed with a three-month window.

## Tables

Table 1 - List of Key Issues across the Ideological Spectrum

Ideology	Issue
conservative	geoengineer
conservative	hoax/fraud
conservative	big government
conservative	communism
conservative	economic recession/economic depression
conservative	government overreach
conservative	nanny state
conservative	socialism
liberal	adaptation
liberal	carbon budget
liberal	cap and trade/carbon permits/carbon trading
liberal	carbon capture
liberal	carbon price
liberal	carbon tax/carbon fee
liberal	mitigation
liberal	carbon pollution
liberal	forced migration
liberal	global instability
liberal	national security
liberal	rising seas/rising oceans
liberal	security threat
liberal	severe weather/extreme weather
radical	capitalism
radical	carbon bubble
radical	divestment/divest
radical	rogue industry
radical	stay in the ground/keep in the ground/remain in the ground
radical	stranded assets
radical	unburnable carbon
radical	generational justice
radical	island nations
radical	social justice/social equity/social injustice/social inequity

Table 2 – Actors Most Associated with Divestment outside of the Radical Flank

rank	actor	type	Jaccard association
1	Stanford University	academic	0.046
2	Harvard University	academic	0.031
3	Exxon Mobil	business	0.020
4	Chevron	business	0.015
5	MIT	academic	0.014
6	Peabody Energy	business	0.014
7	Yale University	academic	0.013
8	NextGen Climate Action	NGO	0.012
9	Standard Oil	business	0.012
10	University of California	academic	0.012

Table 3 – Trends in Eigenvector Centrality of Key Radical Actors and Issues

year	350.org	Bill McKibben	divestment	carbon bubble	stay in the ground	stranded assets	unburnable carbon
2011	0.033	0.044	0.016	0.000	0.002	0.000	0.000
2012	0.064	0.078	0.023	0.000	0.000	0.000	0.000
2013	0.134	0.123	0.073	0.006	0.006	0.001	0.000
2014	0.086	0.097	0.096	0.003	0.008	0.012	0.003
2015	0.049	0.045	0.070	0.000	0.013	0.013	0.000

Table 4 – Trends in Eigenvector Centrality of Key Liberal Issues

year	cap and trade	carbon budget	carbon capture	carbon pollution	carbon price	carbon tax
2011	0.237	0.000	0.033	0.044	0.001	0.101
2012	0.303	0.000	0.047	0.131	0.010	0.178
2013	0.203	0.002	0.118	0.358	0.032	0.271
2014	0.211	0.008	0.041	0.349	0.014	0.215
2015	0.170	0.005	0.040	0.218	0.010	0.169