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Growing the Green Giant: Ecological Threats, Political Threats, and U.S. Membership in Sierra Club, 1892–Present

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Abstract: A growing body of research examines questions related to the emergence of environmental organizations and the growth of the environmental organizational field in the United States, but we need to know more about why particular environmental organizations grow or decline in terms of membership size over time. In this article, we draw on both qualitative and quantitative data to assess factors contributing to the growth of the Sierra Club, one of the United States' oldest and largest environmental organizations. First, through an analytic narrative that synthesizes insights from secondary accounts of the history of the Sierra Club, we identify a variety of ecological and political threats that have led to growth in the Sierra Club from its founding in 1892 to the present day. Then, through time-series analyses of quantitative data, we show that two particular types of environmental and political threats—growth in carbon dioxide emissions and the presence of Republican Presidents—have led to growth in the Sierra Club from 1960 (when it began mass recruitment of members) to 2016. We contextualize these findings within the broader social scientific literature on neoliberalism and its consequences for environmental degradation and environmental mobilization. Overall, our findings provide support for threat-based models of mobilization and hold significant implications for research on environmental organizations.



Citation: Coley, Jonathan S., and Jessica Schachle. 2021. Growing the Green Giant: Ecological Threats, Political Threats, and U.S. Membership in Sierra Club, 1892–Present. *Social Sciences* 10: 189. <https://doi.org/10.3390/socsci10060189>

Academic Editor: David L. Feldman

Received: 27 April 2021

Accepted: 18 May 2021

Published: 24 May 2021

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Keywords: advocacy organizations; social movements; political sociology; Sierra Club; environmental sociology; neoliberalism

1. Introduction

Partly due to the adoption of neoliberal political-economic policies, the world has witnessed rising global temperatures that increasingly threaten the safety and well-being of billions of people (Xu et al. 2020). A growing body of research assesses factors that have led to the emergence of new environmental organizations in the United States that seek to challenge destructive environmental policies (e.g., Brulle et al. 2007; Carmichael et al. 2012; Johnson and Frickel 2011; Longhofer and Schofer 2010; McLaughlin and Khawaja 2000; Stretesky et al. 2011). Scholars have shown, for example, that the number of environmental organizations in the United States grew from just a handful at the beginning of the twentieth century to over 26,000 national, regional, and local environmental organizations by the end of the twentieth century (Carmichael et al. 2012). However, we need to know more about the factors that affect the size of any given environmental organization. The question is important, given that environmental organizations often require a large number of members who can donate funds, contact policymakers, and participate in protests as a way to promote sustainability and (potentially) create a more livable planet.

In this article, we address the topic of environmental organization size by focusing on the case of the Sierra Club from its founding in 1892 to the present day. Sometimes referred to as the “Green Giant” of environmental organizations (Burrell 2019), the Sierra Club is the oldest environmental organization in the United States, and in recent years has ranked third in terms of membership, fourth in terms of its budget, and first in terms of its staff size (Inside Climate News 2015). The Sierra Club currently maintains an active

membership base in all 50 U.S. states and engages in activities ranging from nature hikes to grassroots protests to litigation and lobbying. Although the organization had modest beginnings, attracting only 182 members at its founding, the organization now boasts hundreds of thousands of members in the United States alone (Turner 1991). Still, as with most organizations, its membership levels have ebbed and flowed over time, and it is pertinent to investigate what might account for these variations.

To explain variations in the size of the Sierra Club over time, we draw on theories from the field of social movement studies, particularly theories that focus on the role of *threat* in mobilization. Specifically, although much early theorizing in social movement studies suggested that activists mobilize when they perceive political opportunities to bring about change (McAdam 1982, 1996), recent work in social movement studies suggests that activists also mobilize when they perceive threats either to themselves or to their surroundings (see Adler et al. 2014; Almeida 2003, 2019; Bergstrand and Robertson 2020; Coley 2021; Crockett and Kane 2012; Dodson 2016; Einwohner 2003; Gillham et al. 2019; Jasper 1997; Johnson and Frickel 2011; Maher 2010; Martin and Dixon 2010; McKane and McCammon 2018; Owens et al. 2015; Shriver et al. 2021; Van Dyke and Soule 2002). For example, ecological threats, such as declines in wildlife populations and increases in air pollution, were associated with the emergence of new environmental organizations during the last decades of the twentieth century (Johnson and Frickel 2011). Might threats similarly explain the size of specific environmental organizations like the Sierra Club?

We assess the role of threats in Sierra Club membership levels from 1892 to the present by analyzing both historical accounts about the Sierra Club and quantitative data on Sierra Club's membership levels. Specifically, we first synthesize insights from secondary accounts of the history of the Sierra Club, presenting an analytic narrative (Pedriana 2005) that highlights the various ecological and political threats that have played a role in the growth of the Sierra Club over time. We then analyze quantitative data on Sierra Club membership nationwide from 1960 (when the Sierra Club began its mass recruitment of members) to 2016. Our time-series analyses show that, even after controlling for other factors emphasized in the social movements literature (such as human and financial resources) (Edwards and McCarthy 2004; McCarthy and Zald 1977), two particular political and ecological threats—the presence of Republican Presidents and growth in carbon dioxide emissions—best explain membership in the Sierra Club.

The article makes several contributions to scholarly literature. First, we contribute to the growing body of research and theory on the mobilizing effects of threat. Although much scholarship has assessed threat-based theories of mobilization, prior literature has generally applied threat-based theories to the question of why social movements or advocacy organizations emerge, why individual people join social movements or advocacy organizations, and why the number of organizations in a particular advocacy sector has grown over time; here, we examine the impact of political and ecological threats on a single advocacy organization's size. Second, we contribute to the empirical literature on environmental organizations. Specifically, by analyzing extensive mixed-methods data on Sierra Club's membership levels over time, we provide a unique window into the growth of one of the country's largest environmental organizations. Finally, we contribute practical insights into factors associated with environmental organizational growth. We elaborate on these contributions in the conclusion, but first, we provide background on neoliberal policies that have created the environmental and political challenges that the Sierra Club seeks to address; discuss our theoretical expectations; and describe and analyze our mixed-method data on the growth of the Sierra Club.

2. Background: Situating the Rise of the Sierra Club within the Neoliberal Turn

Before reviewing theories that might explain the rise of the Sierra Club, it is necessary to first situate the rise of the Sierra Club within the historical period in which it is operating—specifically, a period marked by the rise of neoliberalism (Harvey 2005; Hess 2012). According to Harvey (2005, p. 2) neoliberalism is a dominant political-economic ideology

that “proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade.” Neoliberalism sees the primary role of the state as guaranteeing private property rights and reducing regulations on business (Harvey 2005).

As numerous environmental sociologists and political economists have pointed out, neoliberalism’s valorization of profit-seeking behaviors and prioritization of private business rights has had disastrous consequences for the environment (see, e.g., Gould et al. 2004; Harvey 2005; Hess 2012; Speth 2009; Wright and Rogers 2015). Under a neoliberal political-economic framework that stresses short-term profit-seeking, corporations have little incentive to spend time and efforts minimizing carbon dioxide emissions or shifting to the use of renewable resources; rather, corporations commonly rely on fossil fuels for energy, which creates negative externalities for future generations (Gould et al. 2004; Wright and Rogers 2015, p. 75). The burning of fossil fuels has in turn been linked to excessive carbon dioxide emissions that have led to rising global atmospheric temperatures, increases in extreme weather events, rising sea levels, and destruction of natural habitats (Wright and Rogers 2015, pp. 90–91). Although governments have at times committed to reducing specific environmental harms caused by unfettered profit-seeking—such as through the 1987 Montreal Protocol that was designed to protect the ozone layer—sociologist Brian Gareau and colleagues have shown that such environmental treaties did little to dislodge neoliberalism as the reigning political-economic philosophy and, in fact, sometimes included special protections for major U.S. businesses that limited the effectiveness of these treaties (Gareau and DuPuis 2009; Gareau 2017; Gareau and Lucier 2018).

Neoliberal ideology has also had significant political implications in the United States. As Harvey (2005, p. 1) argues, a key economic turning point for the United States occurred in 1980, when Republican Ronald Reagan was elected President of the United States after promising to “curb the power of labour, deregulate industry, agriculture, and resource extraction, and liberate the powers of finance both internally and on the world stage.” Subsequent Republican Presidents, such as George W. Bush, questioned the basic scientific evidence regarding anthropomorphic climate change and actively promoted the further burning of fossil fuels (Harvey 2005, pp. 172–75; Hess 2012). Neoliberal political policies have thus exacerbated environmental degradation.

As we will show later in the paper, Sierra Club’s most dramatic growth has occurred during the United States’ neoliberal turn, with a promise to combat environmentally destructive policies. Nevertheless, it should also be noted that environmental organizations such as the Sierra Club have been criticized for themselves failing to challenge neoliberal principles that underlie recent global climate change agreements (Speth 2009). For example, Ciplet and Roberts (2017, p. 148) point out that the recently proposed Paris Climate Agreement to cut global carbon dioxide emissions, which is supported by the Sierra Club, prioritizes market-based approaches to cutting carbon dioxide emission and promotes “governance by disclosure, in which the primary obstacles to sustainability are understood as “imperfect information” and onerous regulatory structures that inhibit innovation” (see also criticisms by Weikmans et al. 2020). Speth (2009) argues that this embrace of neoliberal reforms is partly what has led to the seeming paradox where the environment has continued to rapidly deteriorate even as the Sierra Club and other environmental organizations have rapidly grown. Thus, the growth of the Sierra Club—the subject of this article’s investigation—is not itself a panacea to environmental disaster. Nevertheless, a large membership base is still arguably a necessary (if insufficient) condition for the Sierra Club and other environmental organizations to be able to push for major environmental change. In the next sections, then, we review past literature on potential ecological and political factors that might have contributed to the rise of the Sierra Club, and we analyze mixed-methods data on the rise of the Sierra Club. We return to questions about how Sierra Club might more effectively use its membership base in the discussion section.

3. Theorizing the Role of Ecological Threats and Political Threats in the Rise of the Sierra Club

3.1. Overview of Literature on Mobilizing Effects of Threat

To assess factors influencing the size of the Sierra Club, we draw on a growing body of research and theory on the mobilizing effects of threat from the field of social movement studies. Although we believe that Sierra Club itself is best characterized as an advocacy organization that uses tactics as diverse as lobbying, litigation, direct action, and recreational excursions to pursue its aims¹, we follow [Andrews et al. \(2010\)](#) and [Baggetta et al. \(2013\)](#) by drawing on social movement theory to better understand the dynamics of the Sierra Club. Specifically, in the spirit of analogous theorizing ([Vaughan 2014](#)), we believe that social movements scholarship helpfully foregrounds the role of macro-level opportunities and threats that can help scholars understand the work of environmental advocacy organizations like the Sierra Club (see similar arguments by [Andrews and Edwards 2004](#); [Coley 2013](#)).

Within the field of social movement studies, researchers in the 1980s and 1990s tended to emphasize the role of political opportunities in mobilization. [McAdam \(1982\)](#), for example, showed that the emergence of pro-civil rights Presidents and Supreme Court justices inspired mass civil rights mobilization during the 1950s and 1960s. However, a growing body of work highlights the importance of threats—“the probability that existing benefits will be taken away or new harms inflicted if challenging groups fail to act collectively” ([Almeida 2003](#), p. 347)—to mobilization. Threats that have played a role in mobilization include political threats ([McKane and McCammon 2018](#)), economic threats ([Dodson 2016](#); [Gillham et al. 2019](#)), lethal threats ([Einwohner 2003](#); [Maher 2010](#)), social threats ([Van Dyke and Soule 2002](#)), religious threats ([Coley 2021](#)), moral threats ([Adler et al. 2014](#); [Crockett and Kane 2012](#)), and ecological threats ([Johnson and Frickel 2011](#)).

In some ways, the idea that both opportunities and threats inspire mobilization presents a puzzle: if social movements or advocacy organizations can emerge and grow when a political or social system seems conducive *or* unconducive to change, does the openness of a system to change have much explanatory power in analyses of mobilization? Social scientists often address this puzzle by arguing that opportunities and threats explain mobilization by different types of groups (see discussion in [Coley 2021](#)). Specifically, theories emphasizing opportunities may best explain mobilization by groups that generally lack rights or resources but then begin to perceive opportunities to gain those rights or resources (as in the case of the Southern civil rights movement discussed by [McAdam 1982](#)). Conversely, theories emphasizing threats may best explain mobilization by groups that have access to rights or resources but are at risk of losing them ([Van Dyke and Soule 2002](#)).

We argue that the environmental movement best represents a case where people who have long enjoyed resources (natural resources) are mobilizing because those natural resources are increasingly under threat, and thus anticipate that threats are linked to the growth of the Sierra Club over time. Below, we highlight two types of threats—ecological threats and political threats—that we believe are particularly associated with the size of the Sierra Club.

3.2. Ecological Threats

Past studies have clearly shown that ecological threats can inspire mobilization. [Johnson and Frickel \(2011\)](#) find a strong link between ecological threat—which they define as “costs associated with environmental degradation as it disrupts (or is perceived to disrupt) ecosystems, human health, and societal well-being” (p. 305)—and the emergence of environmental organizations. Specifically, they show that declining wildlife populations are linked to the formation of wildlife protection organizations and that increasing air pollution is linked to the formation of environmental public health organizations. Why have scholars found such links between ecological threat and mobilization? Phenomena such as climate change (for example) already actively threaten many people’s lives, as climate change has been linked to powerful hurricanes, wildfires, and rising sea levels. Thus, some

people might join an environmental organization because they believe they have no other options. Additionally, scholars such as [Jasper \(1997\)](#) and [Bergstrand and Robertson \(2020\)](#) have highlighted the idea that the potential of future ecological disruptions often triggers powerful emotions (such as fear and sadness) that, when channeled by social movement leaders, can inspire social movement mobilization.

We thus first consider whether ecological threats might help explain the growth of Sierra Club over time. At the time of the organization's founding in 1892, issues related to deforestation and extinction of wildlife seemed to be core concerns for Sierra Club members ([Turner 1991](#)). By the 1960s, however, a scientific consensus about global warming began to emerge, and over the following decades, the reality of anthropogenic global warming (resulting primarily from increases in carbon dioxide emissions amid a global neoliberal turn) would likely have been increasingly concerning to potential Sierra Club members ([Peterson et al. 2008](#)). Still, ecological threats such as climate change have steadily grown over time, yet as we will go on to show, Sierra Club has experienced ebbs and flows in membership. To theorize why Sierra Club membership might periodically decline despite the ever-increasing threat of climate change, among other ecological threats, we also emphasize the role of political threats.

3.3. Political Threats

Political threats also mobilize people ([McKane and McCammon 2018](#)). [Brechin and Freeman \(2004\)](#), for example, document a spike in environmental concern during Republican presidencies, likely because Republican Presidents (particularly since Ronald Reagan) have embraced neoliberal economic philosophies and have thus generally prioritized energy exploration and deregulation over environmental protection ([Harvey 2005](#); [Hess 2012](#)). Political threats can lead to mobilization because partisanship has become increasingly central to people's identities, and importantly, partisans are increasingly "motivated by negative, often angry, feelings about the other party and not their own policy preferences" ([Mayer 2019](#), p. 86), a phenomenon known as negative partisanship.

We thus also consider whether political threats might play a role in explaining the growth of the Sierra Club over time. We add, however, that we expect that political threats will play the biggest role in mobilization in the late twentieth century and into the early twenty-first century. This is because neoliberal ideas only became dominant during this time period ([Harvey 2005](#)) and thus there was less contrast between the Republican and Democratic Presidents' approaches to the environment in the early twentieth century ([Lynch 2001](#)).

4. Current Study

Based on our review of prior literature, the sections that follow examine the role of ecological and political threats in the size of the Sierra Club. We do so in two ways. First, we draw on secondary accounts to construct an analytic narrative of the history of the Sierra Club from 1892 to the present. We document a variety of distinct ecological and political threats (among other factors) that seemed to inspire increases in Sierra Club's membership throughout its history. Second, using a unique quantitative dataset, we employ time-series analysis to assess whether ecological and political threats played significant roles (net of demographics-related factors) in the growth of the Sierra Club from 1960 to 2016. We provide more details about our data and methods, along with the analyses themselves, in the following sections.

5. Historical Analysis of Sierra Club Membership, 1892–Present

5.1. Data and Methods

To understand the factors influencing the size of the Sierra Club over time, we begin by synthesizing evidence culled from secondary accounts of the history of the Sierra Club. We first identified and read the most significant major historical books and articles on the Sierra Club.² After reading each work, we wrote detailed analytic memos detailing information

contained in each work that corresponded to two primary themes: (a) general historical information on Sierra Club's major milestones, successes, battles, and controversies; and (b) any direct evidence about how such events may have impacted Sierra Club's membership levels in any given year. We then synthesized insights from our sources to produce an analytic narrative (Pedriana 2005) that emphasizes the role of environmental and political threats in the history of the Sierra Club.

For the purpose of this historical analysis, we also occasionally refer to historical membership statistics provided to us by Sierra Club itself. Although Sierra Club did not maintain annual membership statistics for the first few decades of its existence, it was able to provide us with information on the number of members who were part of Sierra Club at its founding in 1892, along with the number of people who were members of Sierra Club at the start of most decades in the twentieth century. This information is provided in Table 1. Sierra Club began to keep annual membership records in the latter decades of the twentieth century. Figure 1 thus plots Sierra Club's annual membership statistics for each year from 1960 through 2016.

Table 1. Number of Sierra Club Members at the Start of Each Decade ¹.

Year	Members	Major Events in Corresponding Decade
1892	182	Battle for Yosemite, first issue of <i>Sierra Club Bulletin</i>
1900	Unknown	First Annual High Trip, Battle for Hetch Hetchy
1910	Unknown	World War I, Battle for Hetch Hetchy, Creation of National Park System
1920	1500	Expansion of the Club to the east coast
1930	2900	Battle for King's Canyon
1940	3500	World War II, Battles for King's Canyon and Mineral King
1950	6772	Battles for Colorado River and Dinosaur National Monument
1960	16,066	Battle for the Grand Canyon, Tension over Diablo Canyon, Decision to Relax Membership Requirements
1970	114,336	Battle for Mineral King, first Earth Day
1980	181,773	Presidency of Ronald Reagan, Sierra Club's most rapid growth begins
1990	629,532	Disagreements over Immigration, Increase in visibility of ecological problems
2000	641,679	Presidency of George W. Bush, Dispute over Arctic National Wildlife Refuge
2010	605,889	Presidency of Donald Trump, Dispute over Keystone XL Pipeline

¹ Note: Sierra Club was founded in 1892. Data are not available for 1900 or 1910.

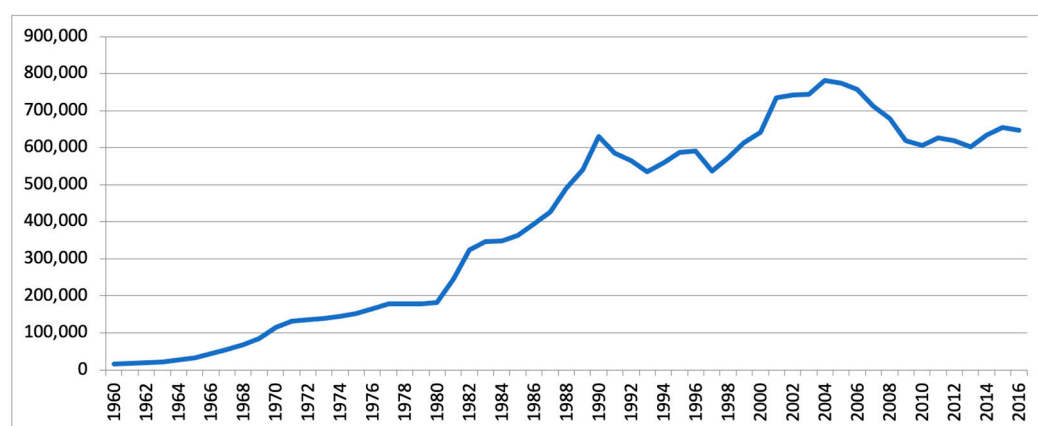


Figure 1. Number of Sierra Club members, 1960–2016.

5.2. Analysis

Sierra Club was founded in 1892, attracting 182 initial members (Table 1). The 1890s had been marked by several concerning environmental events. For example, the declining population of buffalos had led Wyoming to enact a ten-year closed season of buffalo hunting. Additionally, the census of 1890 showed that the wild frontier was shrinking due to the expansion of the United States (Turner 1991, p. 22) (*ecological threat*). These major events are said to have inspired John Muir, a Scottish immigrant, to establish the Sierra Club with the intention of being the voice for the Sierra Nevada (Worster 2008).³ The

Sierra Club began as an environmental activist club that was stationed in California, but its mission quickly spread across the United States as environmental issues became more apparent (LeConte 1917; Strong 1977, 1992).

Within a year of its founding, the Sierra Club would face its first battle: the fight for Yosemite. With the expansion of the United States, demands for natural resources had begun to grow. Specifically, timber, mining, and livestock companies began to eye the Yosemite as a potential avenue of resources. These companies produced a bill for Congress that proposed that the protected land within the Yosemite National Park should be reduced to allow more land to be allotted for the use of resources (Turner 1991, p. 23) (*political threat*). When the Sierra Club heard of this bill, members overwhelmingly voted that the Club should allocate their resources towards fighting the bill. The bill was voted down twice, which ensured that Yosemite was safe for the present moment (Turner 1991, p. 23).⁴

After the publicity surrounding the Sierra Club's fight over Yosemite State Park began to wane, membership started to subside because the Club was no longer prominent in newspapers. To help curb the decline in memberships, in 1893, the Sierra Club began issuing its *Sierra Club Bulletin*, which was packed with scientific reports and retellings of nature trips (Turner 1991, p. 49). Newsletters, articles and books would quickly become a focal point for the Sierra Club in their mission to preserve the Sierra Nevada and inform the public of the possible threats that came with deforestation (*ecological threats*). These writings would become the cornerstone of Club membership recruitment tactics as they provided the necessary frames to inspire insurgency among members (Reber and Berger 2005). Essentially, establishing frameworks around saving the environment proved to be an incentive, which facilitated the recruitment and mobilization of members (Grunig 1989). Around this time, the Sierra Club also began sponsoring an annual trip into Sierra Nevada. The purpose of these trips was to establish commonalities between members, fortify member engagement and interest for the mountains and wilderness, and ultimately train conservation activists (Perry et al. 1975). According to Turner (1991, p. 60), the creation of the High Trips helped establish a new avenue for member recruitment, and it signaled a rebirth for the Sierra Club.

Both the High Trips and the trip narratives would prove to be useful in the battle for Hetch Hetchy. In the early 1900s, San Francisco was miles away from any reliable water source, and politicians proposed Hetch Hetchy to be the site of a reservoir that would serve the San Francisco area (*political threat*). President Theodore Roosevelt approved of the measure, but Sierra Club leaders wrote letters to the President protesting the implementation of the reservoir in Hetch Hetchy.⁵ However, politicians seemed divided on the fate of Hetch Hetchy. To create a bigger divide between politicians, the Sierra Club organized a High Trip to Hetch Hetchy and some members crafted informational pamphlets to distribute to all of the members of Congress. These actions put pressure on Congress to provide more means of funding to the upkeep of Hetch Hetchy (Turner 1991, p. 70). In the end, more politicians sided with San Francisco and upheld the idea that resources should be developed in an informed and calculated manner rather than through strict conservation. In 1913, President Woodrow Wilson approved the bill for a reservoir to be built in Hetch Hetchy. Note that membership data are not available for these years, so it is difficult to say how this episode impacted Sierra Club's membership. It is possible that Sierra Club's membership actually declined in these years due to World War I. However, at the end of the war, some members found themselves on the east coast. These members established a branch on the east coast in 1919, which helped to expand the reach of the Sierra Club (Perry et al. 1975).

Membership increased very slowly after the end of World War I and until the end of World War II. Specifically, Sierra Club had just 1500 members in 1920, 2900 members in 1930, and 3500 members by 1940 (Table 1). As with World War I, evidence indicates that World War II had a temporary detrimental effect on membership rates for the Sierra Club. Indeed, over 1000 members found themselves in war zones, sharing their skills with soldiers in mountainous regions (Turner 1991, p. 125). Still, Sierra Club engaged in

some notable activism during these years, including its battle to establish King's Canyon National Park during the 1930s. Sierra Club's effort to promote King's Canyon National Park involved not only traditional tactics such as lobbying and letter writing but also the creation of its first movie (Turner 1991, pp. 124–25).

After World War II ended, resources became a hot commodity within the United States. Dwight B. Eisenhower, who served as President from 1953 to 1961, favored economic gains over environmental conservation and thus fueled a surge in memberships (Young 2008) (*political threat*). Additionally, the Sierra Club fought high-profile environmental battles throughout the 1950s (Andrews et al. 2010; Young 2008). The first of these battles was focused on the Colorado River, where there was a proposal for power and water storage dams. The second major environmental battle during this time focused on the potential of dams being built at the Dinosaur National Monument. Club members relied on their previous tactics of assembling a nature excursion, petitioning various environmental magazines (e.g., *Life*, *National Geographic*) to run stories in their magazine over these topics, as well as publishing their own stories outlining the environmental devastation that would occur from these developments. These actions inspired a mass of people to write letters to their Congress members. When faced with these tactics, Congress realized they had little support from their constituents, and dropped the plans for both Dinosaur and the Colorado River (Turner 1991, p. 145). Overall, Sierra Club's membership levels steadily rose amid these battles, increasing from 6772 in 1950 to 16,066 by 1960 (Table 1).

The 1960s—a decade famous for social movement activity in the United States—were a time of increasing interest in environmental activism (Turner 1991, p. 179). The Sierra Club capitalized on the increasing interest in environmental activism by making itself much more accessible to potential members during the 1960s. Specifically, whereas the Sierra Club had previously required that potential members be vetted by two current members, by 1960, this requirement was dropped (Manzo and Weinstein 1987). This led the Sierra Club's membership levels to soar from 16,066 in 1960 to 114,336 by 1970 (Table 1). It is true that many Sierra Club members began to voice concerns with the organization's leaders during the 1960s. One notable focal point of distrust arose over plans to construct a nuclear plant in Northern California (*ecological threat*). Originally, Northern California's Pacific Gas and Electric Company proposed that a nuclear power plant should be installed in Nipomo Dunes. When the Sierra Club suggested that the company seek land elsewhere, the company enlisted the help of the Sierra Club to scout a location for the nuclear plant. The plant suggested Diablo Canyon, and after a successful vote, the Sierra Club endorsed this location (Turner 1991, p. 180). At the time of the vote, members were only concerned about the location of the plant not interfering with the local environment, as they were not aware of the long-term effects that would be created through the installation of a nuclear plant. However, after Sierra Club members visited the plant, the majority wanted to draft a resolution that would withdraw the Sierra Club's support for the plant. The directors at the time thought that withdrawing support would tarnish the reputation of the Sierra Club. After this decision, many members accused the directors of serving corporate interests over member interests (Turner 1991, p. 179). Still, Sierra Club's rapidly increasing membership levels suggest that this episode did not lead large numbers of people to leave Sierra Club. Indeed, there were no years between 1960 and 1970 when membership levels dropped (Figure 1).

Membership in the Sierra Club grew further throughout the 1970s, partly because this decade was fraught with several environmental issues. The first of these battles took place at Mineral King. Specifically, Walt Disney petitioned the Forest Service to build a ski resort in the Mineral King region of California (Turner 1991, p. 188). Because they had hosted previous excursions to the region, the Sierra Club knew that Mineral King would be too small for the ski resort that Disney proposed, and the region was prone to avalanches (Turner 1991, p. 188) (*ecological threat*). The Sierra Club sued the Forest Service on the grounds that the Park Service leased more land than was available, and that Mineral King was a game reserve (Turner 1991, p. 189).⁶ In 1978, Congress expanded

Sequoia National Park to include Mineral King. During their high-profile fight for Mineral King, the Sierra Club also fought to preserve the timber at Admiralty Island, mobilized volunteer crews to clean up oil spills in California, and advocated against the building of the Trans-Alaskan Pipeline (Turner 1991, pp. 194, 204) (*ecological threats*). Perhaps the two greatest takeaways from the 1970s, though, were when Nixon signed into law the National Environmental Policy Act and the declaration of Earth Day (Turner 1991, p. 197). The implementation of Earth Day further stoked public interest in environmental issues and helped boost membership in the Sierra Club (Mitchell et al. 1991). Notably, this is a case of how a *political opportunity* may have played a positive role in Sierra Club's increasing membership levels. Overall, Sierra Club's membership rose from 114,336 in 1970 to 181,773 by 1980 (Table 1).

As shown in Figure 1, Sierra Club membership grew exponentially in the 1980s. Arguably, the greatest contributor to the steep rise in Sierra Club membership was the election of Republican president Ronald Reagan, who took office in 1981 (*political threat*). As a major proponent of neoliberal political-economic ideology (Harvey 2005), Reagan had campaigned on reducing the amount of federal spending that was allocated to environmental preservation (Turner 1991, p. 220; Mitchell et al. 1991). Additionally, when Reagan was first sworn into office, his administration planned to slash funds for the EPA and allow more energy exploration and urban development on public lands (Turner 1991, p. 280). All of these actions could be perceived as threats to environmental security, and the Sierra Club was able to capitalize on perceived threats or public outrage (Young 2008). Indeed, Sierra Club gained nearly 65,000 members from 1980 to 1981 alone, and another 80,000 members from 1981 to 1982 alone. As Reagan's re-election neared, Sierra Club issued its first-ever presidential endorsement to Reagan's opponent, Walter Mondale, in 1984. By 1990, Sierra Club had 629,532 members, an increase of 447,759 members over the start of the previous decade (Table 1).

Membership in the Sierra Club did begin to plateau in the 1990s. Indeed, by 2000, membership climbed only slightly to 641,679 members, an increase of just 12,147 over 1990. Sierra Club's stalling membership during this time likely had much to do with the election of Bill Clinton, a Democrat, who served as President from 1993 to 2001. Although he famously adopted Republicans' neoliberal goal of ending the era of "big government", Clinton was friendlier to environmental causes than his Republican predecessors; for example, he signed the Kyoto Treaty to lower carbon emissions, although the U.S. Senate ultimately failed to ratify the treaty. Thus, Sierra Club no longer "benefited" from the same perception of threat associated with Republican Presidents. Additionally, Sierra Club did face some internal struggles during the 1990s, particularly related to the Sierra Club's ambivalent stance on immigration (King 2008). Some members argued that immigration had detrimental effects on already dwindling resources, while others said that the Club should not take a stance on immigration for fear of tarnishing the Club's reputation. In the end, the Sierra Club forwent any official stance on immigration (King 2008).

However, membership began to surge again in the 2000s, particularly following the election of George W. Bush as President (*political threat*). Bush not only had close ties to oil and gas industries—leading him again to favor energy production over environmental preservation—but also expressed skepticism toward the basic science of climate change. He also embraced neoliberal political-economic goals of shrinking the size of government and promoting free trade and private enterprise (Harvey 2005). The Sierra Club fought the Bush administration on a number of fronts, including the administration's (unsuccessful) proposals to allow oil drilling in the Arctic National Wildlife Refuge and logging in the Giant Sequoia National Monument (Sierra Club 2012). As many Sierra Club members increasingly turned to direct action, the Sierra Club was also successful in stopping the construction of dozens of new coal plants (*ecological threats*). As during Reagan's terms in office, Sierra Club's membership surged during Bush's first term. For example, membership rose by over 90,000 members from 2000 to 2001 alone. Numbers continued to rise throughout Bush's first term in office and reached their all-time high in 2004 (Figure 1). However,

they declined slightly during Bush's second term in office and—paralleling a trend that occurred once Bill Clinton became President—membership in Sierra Club dropped by nearly 60,000 members from 2008 to 2009 when President Barack Obama, a Democrat, took office (Figure 1). By 2010, Sierra Club had 605,889 total members (Table 1).

In the 2010s, during Obama's remaining years in office, membership stayed relatively steady and even rose in certain years (Figure 1). Although Obama was much friendlier to the environmental movement than Bush, and had continually expressed a commitment to combating climate change, including by committing the United States to the Paris Climate Agreement, the Sierra Club did fight some battles during these years. For example, Sierra Club mobilized members to oppose the Keystone XL pipeline, which would have run from Alberta, Canada, to Texas (Sierra Club 2012) (*ecological threat*). Although we lack exact membership data after 2016, membership appears to have surged again following the election of Donald Trump as President (*political threat*). Specifically, in a lawsuit filed by Sierra Club, the organization reported it had “over 750,000 members nationally” in 2017, Trump's first full year in office (Sierra Club v. Scott Pruitt 2017, p. 3). Like Bush, Trump expressed skepticism over the basic science of climate change. He also promised to revive the Keystone XL pipeline proposal and to expand oil drilling into the Arctic National Wildlife Refuge. Finally, following the recent election of Joe Biden, a Democrat, as President, Sierra Club's most notable initiatives include continued opposition to the construction of oil pipelines and coal plants, along with advocacy in favor of the Green New Deal, which would entail significant federal government support for a clean energy transition (Sierra Club 2021).

5.3. Summary of Findings

A number of ecological and political threats have played a role in the growth of the Sierra Club since its founding in 1892. In terms of ecological threats, the Sierra Club has actively mobilized to combat deforestation and the construction of new dams, oil pipelines, nuclear power plants, and coal plants. Political threats (which would exacerbate ecological threats) have likely been even more consequential for Sierra Club's growth, as membership in Sierra Club appears to have surged during the Presidencies of Ronald Reagan and George W. Bush, who embraced neoliberal economic thinking. Beyond such threats, it should be noted that the Sierra Club's decision to drop its requirement that new Sierra Club members be sponsored by existing members (Manzo and Weinstein 1987) played a critical, path-dependent role in the Sierra Club's growth beginning in the 1960s. In the next section, we provide a time-series analysis of Sierra Club's growth starting in those years.

6. Quantitative Analysis of Sierra Club Membership, 1960–2016

6.1. Data and Methods

To further assess influences on Sierra Club's membership levels, we also analyze quantitative data. Using data provided to us by the Sierra Club, we constructed a dependent variable measuring the number of Sierra Club members at the end of a given year. Although the Sierra Club was first established in 1892, and although we have some limited data on the number of Sierra Club members for select years in the first half of the twentieth century, the Sierra Club itself did not begin keeping track of its annual membership levels until 1950. We begin our analysis with 1960 because that is when the Sierra Club no longer required that new members be sponsored by existing members and thus began its mass recruitment of members (Manzo and Weinstein 1987).⁷ Note that the dependent variable is simply an indicator of how many people were dues-paying members of the Sierra Club; to be a member does not imply any level of involvement in the Sierra Club other than paying membership dues. Data sources and descriptive statistics for all variables are provided in Table 2.

Table 2. Descriptive Statistics ¹.

Variable	Description	Source	Mean	SD	Min	Max
Sierra Club Members	Number of Sierra Club Members	Sierra Club	402,060.90	259,564.60	16,066	782,287
U.S. Carbon Emissions	Amount of CO ₂ emissions (million tonnes per year)	Carbon Dioxide Information Analysis Center (2016)	1330.23	249.75	786	1674
Republican President	Presence of Republican President	U.S. Election Atlas (2021)	0.51	0.5	0	1
Republican Senate	Republican-controlled U.S. Senate	U.S. House of Representatives (2021)	0.35	0.48	0	1
Republican House	Republican-controlled U.S. House	U.S. House of Representatives (2021)	0.32	0.47	0	1
Number of Unemployed People	Number of People Unemployed and Searching for Work	Federal Research Bank of St. Louis (2021)	7,244,069	2,784,587	2,797,417	14,807,750
Number of College Graduates	Number of People with Bachelor's Degree or Above	Snyder (1993), U.S. Census Bureau (2017)	33,062,246	19,145,588	7,617,000	71,900,000
Number of White People	Number of People Who Identify as White	Center for Disease Control (2021a, 2021b)	204,400,622	31,448,892	158,831,732	252,702,814
U.S. Population	Number of People Residing in United States	U.S. Census Bureau (2021)	249,409,621	42,535,974	180,671,158	323,405,935

¹ Note: Variables are measured for years 1960–2016.

We include three sets of independent variables. First, to assess the role of environmental threats, we include a variable indicating the level of U.S. carbon dioxide emissions (in million tonnes of CO₂) per year. Second, to assess the role of political threats, we include variables indicating (a) the presence of a Republican President, (b) Republican control of the U.S. Senate, and (c) Republican control of the U.S. House in every given year. Finally, to assess the role of demographic changes, we include variables that indicate (a) the average number of people who were unemployed but were actively searching for work, (b) the number of college graduates, and (c) the number of white people for every year in our dataset.

Because we would expect that the United States' steadily growing population would represent a positive influence on Sierra Club's membership levels, we also include a control variable indicating the size of the U.S. population in any given year.

We provide results from OLS regressions. Because Dickey–Fuller tests suggest the presence of a unit root, we first-difference the dependent and (continuous) independent variables, such that we measure how *changes* in U.S. carbon dioxide emissions and the various demographic measures each year are positively or negatively associated with *changes* in the number of Sierra Club members each year. First-differenced variables not only yield more conservative estimates (thus increasing confidence in the association between significant independent variables and the dependent variable) but also help to “eliminate spurious relationships by removing mutual trends in variables” (Jacobs and Myers 2014, p. 758). Additionally, to address overdispersion in our count data and reduce the serial correlation between our variables, we log all continuous variables. Logarithmic transformations facilitate the substantive interpretability of the findings, because when both independent and dependent variables are logged, the point estimates represent elasticities, which are

easily interpretable. For example, a coefficient of 0.7 would indicate that a 10 percent change in an independent variable is linked to a 7.0 percent increase in the number of Sierra Club members.

6.2. Findings from Time-Series Analyses

Table 3 provides results from our time-series analyses. Model 1 includes the environmental threat variable, Model 2 includes the political threat variables, Model 3 includes the demographic variables, and Model 4 represents the saturated model. Note that all of the models also include the control variable (U.S. population size).

Table 3. Estimates of First-Differenced Determinants of Sierra Club Members, 1960–2016 ¹.

	Model 1 <i>b</i> (se)	Model 2 <i>b</i> se	Model 3 <i>b</i> se	Model 4 <i>b</i> se
U.S. Carbon Emissions (log)	0.665 † (0.348)			0.823 * (0.369)
Republican President			0.042 * (0.016)	0.045 ** (0.015)
Republican Senate			0.005 (0.016)	0.011 (0.016)
Republican House			0.012 (0.024)	0.018 (0.023)
Number of Unemployed (log)			−0.010 (0.094)	0.132 (0.101)
Number of College Graduates (log)			1.099 (0.720)	1.299 † (0.658)
Number of White People (log)			0.797 (0.775)	0.243 (0.731)
U.S. Population (log)	3.101 (3.572)	5.204 (3.477)	4.013 (3.591)	3.482 (3.326)
Constant	0.012 (0.017)	0.006 (0.017)	−0.011 (0.021)	−0.015 (0.019)
<i>R</i> ²	0.088	0.153	0.089	0.316

¹ Note: N = 56. † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$ (two-tailed). Dependent variable and all continuous independent variables are logged. All variables are first-differenced.

Model 1 of Table 3 shows that increases in U.S. carbon emissions are positively associated with changes in Sierra Club membership (with significance at the $p < 0.10$ level). Specifically, Model 1 shows that a 10 percent increase in U.S. carbon emissions is associated with a 6.65 percent increase in Sierra Club members.

Model 2 of Table 3 includes political threat variables that we might expect to be associated with increases in Sierra Club membership levels. The model shows that the presence of a Republican President is associated with an increase in Sierra Club members ($p < 0.05$). However, Republican control of the U.S. Senate and Republican control of the U.S. House of Representatives are not associated with an increase in Sierra Club membership, suggesting that would-be Sierra Club members are more threatened by Republican control of the White House than by Republican control of either chamber of the U.S. Congress.

Model 3 of Table 3 includes several demographic variables that we might expect to be associated with increases in Sierra Club membership. Because membership in the Sierra Club requires people to pay membership dues, we might expect rises in unemployment levels to be significantly and negatively associated with Sierra Club membership. However, this variable is nonsignificant. Because members of environmental organizations are often more educated and more likely to be white than members of the general public

([Devall 1970](#); [Taylor 1997](#)), we might also expect these variables to be positively and significantly associated with Sierra Club membership. However, both of these variables are nonsignificant in this model. Note that this does *not* refute the idea (borne out by previous research) that Sierra Club members are indeed mostly highly educated and white; it simply means that changes in the overall number of college graduates and number of white people in the United States do not directly predict increases in membership in the Sierra Club in this model.

Model 4 of Table 3 represents the saturated model. We find that, again, increases in U.S. carbon emissions are positively associated with changes in Sierra Club membership ($p < 0.05$); specifically, a 10 percent increase in U.S. carbon emissions is associated with an 8.23 percent increase in Sierra Club members. Additionally, the presence of a Republican President is positively and significantly associated with changes in Sierra Club membership ($p < 0.01$). Finally, in this saturated model, the number of college graduates in the United States becomes a marginally positive and significant predictor of Sierra Club membership ($p < 0.10$). Specifically, a 10 percent increase in the number of college graduates in the United States is associated with a 12.99 percent increase in Sierra Club membership.

6.3. Summary of Findings

Overall, results from time-series analyses provide further support for the idea that both environmental and political threats are associated with increases in Sierra Club membership. Even net of demographic trends, increases in U.S. carbon emissions and the presence of Republican Presidents seem to have inspired people to join the Sierra Club from 1960 to 2016. Since Sierra Club dropped its requirement that new members be sponsored by existing members in 1960, and thus moved toward mass recruitment of members in that year ([Manzo and Weinstein 1987](#)), we effectively control for Sierra Club's shift in membership recruitment in these models.

7. Discussion

In this article, we analyzed the factors affecting the size of one of the country's largest environmental organizations, Sierra Club, from its founding in 1892 to the present day. Drawing on historical accounts and quantitative data on the Sierra Club, and informed by social movements research on the mobilizing effects of threat, we highlighted the role of ecological threats and political threats in the growth of the Sierra Club.

Through an analytic narrative drawing on secondary accounts of the history of the Sierra Club, we first identified a number of environmental battles and political threats that affected Sierra Club's membership levels. The Sierra Club itself was indeed founded due to concerns over deforestation and the endangerment of wildlife in the American West, particularly in California. The organization engaged in early battles related to the preservation of Yosemite State Park that likely inspired temporary spikes in membership. In more recent decades, Sierra Club's most notable spikes have occurred due to the election of Republican Presidents, especially Ronald Reagan, George W. Bush, and Donald Trump, who prioritized neoliberal goals of energy exploration and deregulation rather than environmental preservation. Recent Republican presidents, especially George W. Bush and Donald Trump, have also voiced skepticism about the science of climate change. Beyond such ecological and political threats, we note that Sierra Club's decision to drop its requirement that potential members be "sponsored" by existing members—and instead allow anyone willing to pay dues to become members of Sierra Club—led to significant increases in its membership levels. Additionally, the recreational excursions sponsored by the Sierra Club have attracted many people to the Sierra Club throughout its history.

Through a time-series analysis of Sierra Club membership levels from 1960 to 2016, we further assessed the role of ecological and political threats in Sierra Club membership. Specifically, our analyses showed that net of demographic variables that are often emphasized in the extant literature, increases in carbon dioxide emissions and the presence of Republican Presidents best explain why the Sierra Club has experienced growth over

the past few decades. Note that framing work by the Sierra Club and other environmental organizations likely drew such ecological and political threats to potential members' attention (Snow and Benford 1988).

Our analysis holds implications for the growing body of research on the role of threat in mobilization (Adler et al. 2014; Almeida 2003, 2019; Bergstrand and Robertson 2020; Coley 2021; Crockett and Kane 2012; Dodson 2016; Einwohner 2003; Gillham et al. 2019; Johnson and Frickel 2011; Maher 2010; Martin and Dixon 2010; McKane and McCammon 2018; Owens et al. 2015; Shriver et al. 2021; Van Dyke and Soule 2002). Prior research has shown that a variety of threats (including economic, political, religious, moral, and ecological threats) have played a role in the initial formation of social movement or advocacy organizations, the growth of social movement or advocacy organization sectors, and individual participation in protests. We contribute to this growing body of literature by examining the role of two types of threats (ecological and political threats) on a single organization's size over a period of nearly 130 years. Indeed, longitudinal analyses of social movement or advocacy organization size are quite rare, because not all social movements or advocacy organizations maintain membership records, and few social movements or advocacy organizations provide such membership data to researchers. Our article thus represents a relatively unique application of threat-based theories of mobilization. Given related literature on the topic (e.g., Johnson and Frickel 2011), we suspect that ecological and political threats have likely fueled the growth of environmental organizations beyond the Sierra Club. Additionally, since the effects of climate change are already being felt in the Global South (Xu et al. 2020), we would also suspect that ecological threats would be efficacious in generating mobilization in other countries outside the United States. However, we caution that future research is needed to address the generalizability of our research to other advocacy organizations and to countries outside the United States.

Our article also contributes to the empirical literature on the Sierra Club. A sizeable number of historical and social science accounts on the history of Sierra Club (e.g., Andrews et al. 2010; Baggetta et al. 2013; Cohen 1988; Devall 1970; Grunig 1989; Hardin 1982; LeConte 1917; King 2008; Manzo and Weinstein 1987; Mitchell et al. 1991; Perry et al. 1975; Reber and Berger 2005; Strong 1977, 1992; Taylor 1997; Worster 2008; Young 2008). We benefited from the insights in these studies in our own analysis of the history of the Sierra Club, but we contribute to social scientific knowledge on the Sierra Club through a unique quantitative analysis of its membership levels from 1960 to 2016. Our quantitative analyses complement the work in this literature by showing that political and ecological threats played a role in Sierra Club's growing size even net of demographic variables emphasized in the broader social movements and advocacy organizations literature.

We do note some limitations to our analysis. For example, in our analytic narrative of the history of the Sierra Club from 1892 to the present, we lack annual membership numbers for Sierra Club in the first few decades of its founding. Although we had access to information on Sierra Club's membership levels at the start of most decades, more specific annual numbers would have helped us better assess the possible role of specific environmental struggles (like the battle for Yosemite) in Sierra Club's growth trajectory. Additionally, in our quantitative analysis, by focusing on national-level factors influencing the size of the Sierra Club from 1960 to 2016, we are unable to assess the influence of state- or local-level factors, as well as individual club-level factors, that might have played a role in the growth and periodic declines of the Sierra Club. Studies by Andrews et al. (2010) and Baggetta et al. (2013) have shown that the characteristics of individual Sierra Club leaders, and the organizational structure of the different clubs that make up the larger Sierra Club organization, can influence mobilization patterns at the local level. We are unable to assess such dynamics here. Finally, in our quantitative analyses, we are unable to explicitly account for the framing work that likely contributed to people's perceptions of the political and ecological threats that, in turn, led to mass mobilization (Snow and Benford 1988).

We also caution against equating Sierra Club's growth with any fundamental shifts in the United States' environmental policies. As we noted in Section 2, the neoliberal

political-economic ideology that has enabled corporations' environmentally destructive behaviors and that has been embraced by recent Republican Presidents is still the dominant political-economic ideology in the United States today. Indeed, as environmental sociologists and others have pointed out, recent global climate change frameworks and environmental treaties have embraced market solutions to environmental reform and have failed to fundamentally challenge neoliberal political-economic ideology (Ciplet and Roberts 2017; Gareau and DuPuis 2009; Gareau 2017; Gareau and Lucier 2018; Weikmans et al. 2020). Additionally, environmental organizations like the Sierra Club themselves often adopt the rhetoric typical of "green neoliberalization" (Olson and Gareau 2018). This has led to the paradox identified by Speth (2009) in which the world continues to careen toward environmental disaster even as the environmental movement has grown in size and sophistication. The background literature we reviewed thus suggests that Sierra Club's growth by itself is not itself a panacea to environmental degradation. If Sierra Club desires to meet this environmental moment, it arguably must rise to the occasion by also challenging the neoliberal thinking undergirding global environmental reforms.

Despite such limitations and caveats, we believe our article not only holds the aforementioned scholarly implications for the literature on advocacy organizations, but also practical implications for the ongoing work of environmental organizations such as the Sierra Club. Specifically, the results suggest that the Sierra Club and other environmental organizations may achieve further growth by drawing further attention to ecological and political threats. Such diagnostic framing (Snow and Benford 1988) not only helps to establish a rationale for people to join an organization, but may also trigger emotions that can play roles in people's decisions to join advocacy organizations (Bergstrand and Robertson 2020; Jasper 1997). Of course, in a crowded organizational sector where numerous other advocacy organizations are also competing for potential members, on-the-ground organizing and resource mobilization must likely also accompany organizations' framing work (Ryan and Gamson 2006). Clearly, Sierra Club's ability to appeal to potential members who felt threatened by various ecological and political threats has played a major role in its growth from 1892 to the present.

Author Contributions: Conceptualization, J.S.C.; methodology, J.S.C.; software, J.S.C.; validation, J.S.C.; formal analysis, J.S.C.; investigation, J.S.C. and J.S.; resources, J.S.C. and J.S.; data curation, J.S.C. and J.S.; writing—original draft preparation, J.S.C. and J.S.; writing—review and editing, J.S.C. and J.S.; visualization, J.S.C.; supervision, J.S.C.; project administration, J.S.C. Both authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data sources indicated in Table 2.

Acknowledgments: The authors thank David Hess, Quan Mai, and the anonymous reviewers for providing feedback on this manuscript.

Conflicts of Interest: The authors declare no conflict of interest.

Notes

- ¹ Following Andrews and Edwards (2004), we conceptualize the advocacy organization as a synthesis of the concepts of interest groups, social movement organizations, and nonprofit organizations, all of which are "groups and organizations that make public interest claims either promoting or resisting social change that, if implemented, would conflict with the social, cultural, political, or economic interests or values of other constituencies and groups" (p. 485).
- ² After consulting an existing bibliography on the history of Sierra Club (Proffitt 1992), we focused most heavily on the following sources: LeConte (1917) "The Sierra Club", Strong (1977) "The Sierra Club—A History", Cohen (1988) *The History of the Sierra Club, 1892–1970*, and Turner (1991) *Sierra Club: 100 Years of Defending Nature*. We refer also to articles

that we identified through Google Scholar (e.g., Andrews et al. 2010; Baggetta et al. 2013; Devall 1970; Grunig 1989; Hardin 1982; King 2008; Manzo and Weinstein 1987; Mitchell et al. 1991; Perry et al. 1975; Reber and Berger 2005; Taylor 1997; Worster 2008; Young 2008), as well as information provided by Sierra Club itself (Sierra Club 2012, 2021).

- ³ Given his role in founding the Sierra Club, Muir has long been celebrated as a pioneer of the United States environmental movement. Although his accomplishments in the field of environmentalism are notable, it is important to add that Muir has recently come under renewed scrutiny for his racist and White supremacist views (Fears and Mufson 2020).
- ⁴ Interestingly, although Sierra Club did receive media attention during the fight for Yosemite, some members were unhappy that the organization took such a political turn and left in protest (Young 2008).
- ⁵ Once again, indicating some initial dissension over Sierra Club's purpose, some members were unhappy that Sierra Club opposed the Hetch Hetchy reservoir, since it would affect their own access to water. Thus, a few Sierra Club members wrote letters to newspapers denouncing the actions of Muir and other Sierra Club members (Turner 1991, p. 70).
- ⁶ The lawsuit was filed in June of 1969, though most of Sierra Club's work on this issue took place in the 1970s (Turner 1991).
- ⁷ Such a starting point allows us to avoid an ahistorical time-series analysis (Isaac and Griffin 1989). It also means that our analysis effectively controls for Sierra Club's shift in membership recruitment (Manzo and Weinstein 1987).

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