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Defeating Kyoto: The Conservative Movement's Impact on U.S. Climate Change Policy*

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ABSTRACT

We argue that a major reason the United States failed to ratify the Kyoto Protocol to ameliorate global warming is the opposition of the American conservative movement, a key segment of the anti-environmental countermovement. We examine how the conservative movement mobilized between 1990 and 1997 to construct the "non-problematicity" of global warming. After we describe how conservative think tanks mobilized to challenge the global warming claims of mainstream climate science, we examine how these countermovement organizations aligned themselves with prominent American climate change skeptics known for their staunch criticism of mainstream climate research and their affiliations with the fossil fuels industry. We then examine how the efforts of these conservative think tanks were enhanced by the shift in the political opportunity structure created by the 1994 Republican takeover of Congress. This study demonstrates how a powerful countermovement effectively challenged the environmental community's definition of global warming as a social problem and blocked the passage of any significant climate change policy.

Since the early 1980s a robust international consensus about the reality and seriousness of climate change emerged, as evidenced by several comprehensive reports from the National Academy of Sciences (National Research Council 1983, 2001), World Climate Program (1985), and Intergovernmental Panel on Climate Change (1990, 1995, 2001). By the early 1990s the environmental community in the United States—the environmental movement, sympathetic climate scientists, and environmental policy-makers—successfully defined climate change, or anthropogenic (human-induced) global warming,[1] as a legitimate social problem. Reflecting the growing worldwide consensus on the seriousness of global warming, delegations from more than 160 nations met in Kyoto, Japan in December 1997 to develop the Kyoto Protocol[2] designed to reduce carbon dioxide emissions—the major contributor to global warming. The United States general public appears to see global warming as a real problem and supports efforts to help ameliorate the problem. According to two 1998 nationwide polls by the Program on International Policy Attitudes (1998: 1), "an overwhelming majority of the US public embraces the idea that global warming is a real problem that requires action" and "a strong majority of Americans favors Senate ratification of the Kyoto Treaty."

However, on July 25, 1997, the United States Senate unanimously (95-0) passed *Senate Resolution 98* (also referred to as the Hagel-Byrd Resolution) which notified the Clinton Administration that the Senate would not ratify any treaty that would: (a) impose mandatory greenhouse gas emissions reductions for the United States without also imposing such reductions for developing nations or (b) result in serious harm to our economy. Thus, at the end of the Clinton Administration, the Kyoto Protocol lay dormant with little likelihood of being ratified by the Senate. Then, in March 2001, President George W. Bush first renounced any plans to establish carbon dioxide emissions reductions for U.S. power plants and subsequently announced that the U.S. has no intention of abiding by the Kyoto Protocol—provoking international dismay and hostility.

This is a significant puzzle. Despite the growing consensus within the scientific community regarding global warming, the success of the environmental community in getting global warming on the national agenda, and the receptive nature of public opinion, it nevertheless appears that claims about the existence of global warming became more contested in the United States policy arena in the late 1990s—with the result that effective policy-making ground to a halt. Some commentators point to the growth of a diverse array of anti-environmental forces in general (e.g., Helvarg 1994; Austin 2002), while others specifically identify the intense lobbying by the American fossil fuels industry (e.g., Gelbspan 1997; Levy and Egan 1998; Newell 2000) and the heightened mobilization of different segments of the American conservative movement (e.g., Luke 2000; McCright and Dunlap 2000). In this study, we examine how major conservative think tanks mobilized as countermovement organizations between 1990 and 1997 to effectively challenge the legitimacy of global warming as a

social problem. More broadly, we follow Freudenburg's (2000: 106) call for analyses of the "social construction of *non*-problematicity" of environmental problems by analyzing how these conservative think tanks were able to define—or, more accurately, re-define—global warming as non-problematic.

Whereas the bulk of the social problems literature focuses on the social construction of "problems" (Spector and Kitsuse 1977), emphasizing the claims-making activities of those seeking recognition of the problematic status of putative negative conditions, Freudenburg (2000) calls for increased attention to the manner in which powerful interests (typically defending the status quo) manage to define such conditions as non-problematic. In following his lead, we extend the emerging non-problematicity literature in three ways. First, we identify a different type of non-problematicity than is typically studied. While most of the limited research on non-problematicity demonstrates how social groups prevent specific issues from even entering the political agenda by employing the second dimension of power[3] (Bachrach and Baratz 1970), our case identifies the reactive tactics used by a countermovement to neutralize an issue that has already been placed on the national agenda.

Second, following McCright and Dunlap (2000), we conceptualize the public global warming debate as a social movement phenomenon in order to provide theoretical guidance for our case study. In the process, we employ three major concepts from social movement theorizing—framing, mobilizing structures, and political opportunity structure (McAdam, McCarthy, and Zald 1996a; Tarrow 1998)[4]—as well as recent ideas on "Ideologically Structured Action" (e.g., Zald 2000a, 2000b) to solve the puzzle of the delegitimation of global warming as a major problem within the policy arena. Third, we extend McCright and Dunlap's (2000) study in two crucial ways. They describe the content of the specific global warming counter-claims and the general anti-environmental counter-frame promoted by leading conservative think tanks in the American conservative movement, but fail to examine (1) *how* these conservative think tanks promoted these counter-claims and (2) the *extent of the impact* that these countermovement organizations achieved in the global warming policy arena. This paper seeks to fill both voids by identifying the strategic activities performed by conservative think tanks as mobilizing structures and by demonstrating how a shift in the political opportunity structure—the 1994 Republican takeover of Congress—enhanced their impact in Congressional hearings and in the national print media.

As stated above, there is a broad consensus within the international community of relevant scientists, particularly those involved in the Intergovernmental Panel on Climate Change (IPCC), regarding the reality of climate change. The most prestigious "arbiters" of scientific evidence, including the National Academy of Sciences (NAS) in the United States and the Royal Society in the United Kingdom, endorse this consensus. In the mid-1990s, the IPCC (1995: 22) claimed, "the balance of evidence suggests a discernible human influence on global climate." In a recent review of

climate change evidence, requested by the Bush Administration, the NAS reports that the 20th century experienced a global mean surface air temperature increase of between 0.7 and 1.5°F and that "most of the observed warming of the last 50 years is likely to have been due to the increase in greenhouse gas concentrations" (National Research Council 2001: 3). Furthermore, the NAS report largely supports the results of IPCC climate change simulations that predicted a global mean surface air temperature increase of 2.5 to 10.4°F between 1990 and 2100. The NAS claims that such a temperature increase "could well have serious adverse societal and ecological impacts by the end of this century" (National Research Council 2001: 4).

Obviously, the current state of our knowledge may prove inadequate and even fallacious in the future, but it seems reasonable to tentatively accept this mainstream consensus as the benchmark by which to compare the conservative movement's counter-claims about global warming. Analysts of the social construction of social problems often privilege, at least implicitly if not explicitly, one view of reality over another—a practice identified by Woolgar and Pawluch (1985) as "ontological gerrymandering." Such a practice is especially common in analyses of environmental problems, where proponents of constructionist analyses seldom deny that some claims have more validity than do others (e.g., Hannigan 1995) and thus engage in "contextual constructionism" (Best 1989).

We do not deny that the claims of "mainstream" climate science are beyond challenge. Indeed, numerous analysts have deconstructed the notion of global warming (e.g., Ross 1991; Taylor and Buttel 1992; Boehmer-Christiansen 1994). Most of these analyses were conducted a decade or so ago when the evidence supporting anthropogenic climate change was more uncertain than it is now, or when global warming was still what Cole (1992) would call a "frontier" finding (Dunlap and Catton 1994). Now that climate change has became more of a "core" finding, deconstructionist analyses are less common. This trend is consistent with Rosa and Dietz's (1998) argument that constructionist analyses decline in efficacy as knowledge claims move from the frontier to the core of science. It also parallels a broader trend away from strong constructionist analyses of environmental problems, noted by Benton (2001), toward contextual constructionism. For these reasons, we explicitly choose to privilege the science claims of mainstream climate science—as represented by the IPCC and endorsed by the U.S. NAS and the U.K. Royal Society—while problematizing the counter-claims of the conservative movement. Nonetheless, we attempt to analyze the conservative movement's claims and claims-making activities as accurately and objectively as possible, and readers can decide whether we are successful in this regard.

In the following sections, we briefly review the non-problematicity literature before identifying the anti-environmental orientation of the conservative movement. After delineating our methodological techniques, we then describe the general mobilizing activities of major conservative

think tanks and identify the substantial connections between these countermovement organizations and a small group of sympathetic scientists known for their public criticism of the global warming evidence. We then document the increase in visibility for these scientists in Congressional hearings and major newspaper articles on global warming after the 1994 Republican takeover of Congress. In our conclusion, we return to the concept of non-problematicity by identifying several contextual factors that facilitated the social construction of global warming's non-problematicity. Finally, we briefly demonstrate the continuing influence of the conservative movement's counter-claims on the Bush administration's climate-related activities.

THE SOCIAL CONSTRUCTION OF NON-PROBLEMATICITY

In an industrial capitalist society where the political economy is characterized by the "treadmill of production," Schnaiberg (1994) maintains that corporate actors employ consciousness-lowering activities that challenge environmentalists' claims that environmental problems are serious, are the result of the production system, and can be alleviated without unreasonable costs. In line with those theorists who study non-decisionmaking and the creation of non-issues associated with the second dimension of power (e.g., Bachrach and Baratz 1970), Freudenburg (2000) argues that analyzing efforts to define ecological degradation or technological risks as non-problematic provides insights into the use of indirect forms of power by dominant interests. Indeed, Freudenburg (2000) and colleagues (e.g., Freudenburg and Pastor 1992; Freudenburg and Gramling 1994) lead the way in identifying and analyzing how certain environmental conditions become defined as non-problematic through consciousness-lowering activities.[5]

The most robust finding gleaned from this burgeoning body of literature is that powerful interests engage in strategic tactics ranging from outright manipulation of information (Molotch 1970; Crenson 1971) to more subtle "diversionary reframing" (Freudenburg and Gramling 1994; Krogman 1996) to define certain negative environmental conditions as non-problematic. Molotch (1970) documents how oil companies and the Nixon administration manipulated information to diffuse local opposition to offshore drilling and delegitimate protest groups in Santa Barbara, California, while Crenson (1971) clarifies how U.S. Steel in Gary, Indiana, at first effectively prevented the issue of air pollution from even being introduced into the policy arena, later successfully impeded the public's attempts to raise the issue, and ultimately weakened the final draft of pollution control legislation that was eventually enacted.

In their study of offshore oil drilling politics in California and Louisiana, Freudenburg and Gramling (1994) argue that representatives of the oil industry and the U.S. Minerals Management Service, the primary federal agency for regulating offshore oil activities, employed diversionary reframing to change the nature of the public debate on offshore oil drilling. By heavily promoting the

benefits of drilling and diverting attention away from the criticisms mounted by challenging groups, these dominant interests were able to question the legitimacy of these challengers and their claims. In her analysis of the framing dispute over wetlands regulation in Louisiana, Krogman (1996: 371) argues that the regulated community had "greater interpretive dominance" than regulatory and environmental interests because it was more skillful at diversionary reframing. Not only do scholars identify how powerful groups utilize diversionary reframing in inter-organizational conflicts, but they also identify similar dynamics in intra-organizational conflicts. For instance, in her examination of genetic testing and workplace safety, Draper (1991) argues that management's ability to control genetic testing and expectations regarding it explains the prevalence of genetic monitoring in the workplace and the fact that the burden of proof is regularly on workers to identify attendant risks.

Some scholars examine the range of factors that facilitate the construction of non-problematicity by corporate interests, including the rationalities inherent in a public arena (Wynne 1982) and the crescive nature of some environmental conditions (Beamish 2002). In his examination of the public debate regarding the proposal by British Nuclear Fields Ltd. to construct a thermal oxide reprocessing plant in Windscale, Great Britain, Wynne (1982) argues that the decision to support the building proposal was made effectually before the inquiry even commenced since the rationalities and scientific meanings in the inquiry process highly favored the interests of nuclear industrialists. In his study of the failure to recognize a Unocal oil spill in Central California for nearly forty years, not only does Beamish (2002) indict the hierarchical structure and organizational culture of Unocal and the self-monitoring and self-reporting mandates in environmental legislation, but he also argues that passivity and inaction further stemmed from the fact that this oil spill was a crescive problem: a creeping event that develops so slowly as to elude most people's perceptions.

Most of these case studies document how powerful interests succeed not only in keeping environmental problems and technological risks off the political agenda but also in preventing such conditions from even becoming widely defined as problems in the first place. The current study differs from existing analyses of the use of the second dimension of power in the social construction of non-problematicity. By the early 1990s the environmental community had established global warming as a legitimate social problem on the national policy agenda (as evidenced by public opinion and the Clinton Administration's endorsement of the Kyoto Protocol), and this would not have occurred if anti-environmental forces had effectively exercised the second dimension of power as traditionally conceived. The "anti-environmental countermovement" (McCright and Dunlap 2000; Austin 2002) subsequently mobilized to challenge the legitimacy of global warming, as detailed below. Thus, we examine a somewhat different aspect of non-problematicity than emphasized by

Freudenburg and his colleagues—namely, how a countermovement attempts to delegitimate a putative problem once it has already gained a place on the agenda.

THE CONSERVATIVE MOVEMENT AND ANTI-ENVIRONMENTALISM

Although a diverse array of anti-environmental forces operates in the United States (e.g., Helvarg 1994; Austin 2002), the American conservative movement[6] is a critical segment of this countermovement (e.g., Luke 2000; McCright and Dunlap 2000; Austin 2002). While Luke (2000) suggests that opposition to global environmental policy-making in general and the Kyoto Protocol in particular comes from a varied conglomerate of conservative groups (e.g., wise use, property rights, etc.), McCright and Dunlap (2000) argue that conservative think tanks are the most influential anti-environmental countermovement organizations at the national level.

Conservative think tanks have played a key role in the rise of the conservative movement since the late 1970s (Jenkins and Eckert 1989; Himmelstein 1990; Stefancic and Delgado 1996), and many scholars document how these countermovement organizations helped to alter specific national policies and the policy environment more broadly. Saloma (1984), Jenkins and Eckert (1989), and Diamond (1995) all note that the rise of supply-side economics illustrates the powerful capacity of conservative think tanks to transport ideas into policies. Blumenthal (1986: 306-310) documents how ideas and financial support from corporate foundations, especially the John M. Olin Foundation, and conservative think tanks, particularly the Heritage Foundation and the Marshall Institute, facilitated the advancement of the Strategic Defense Initiative—more popularly known as "Star Wars"—as President Reagan's favored alternative to traditional Cold-War nuclear armament. In an in-depth study of the impact of conservative think tanks, Stefancic and Delgado (1996) examine several successful conservative campaigns such as immigration reform, limits on affirmative action, welfare revisionism, and official English. All of these substantial victories alert observers to the fact that the conservative movement readily and regularly mobilizes through conservative think tanks to protect its interests when it sees those interests being threatened.

In this context, it is not surprising that the conservative movement turned its attention to global warming. Despite assertions that environmentalism represents a new ideology that is orthogonal to traditional liberalism-conservatism (e.g., Paehlke 1989), studies consistently find conservatism to be negatively related to pro-environmental attitudes and actions among the general public and especially among political elites, such as members of Congress (Dunlap, Xiao, and McCright 2001). A key reason is that pursuit of environmental protection often involves government action that is seen as threatening economic libertarianism, a core element of conservatism. Yet, most environmental protection up to the present—such as regulations designed to control air or water

pollution—was accomplished without posing a major threat to industrial capitalism, despite protestations from the corporate sector.

In contrast, the emergence of global warming and the possibility of large-scale social change resulting from efforts to ameliorate it are seen as far more threatening to American industry, prosperity, lifestyles, and the entire "American way of life" than are traditional pollution control measures (e.g., Bailey 1993). Growing concern over global warming clearly poses a threat to the conservative movement's ideology and material interests. Specifically, the characterization of global warming as a major problem and the consequent possibility of an internationally binding treaty to curb carbon dioxide emissions are seen as direct threats to sustained economic growth, the free market, national sovereignty, and the continued abolition of governmental regulations—key goals promoted by the conservative movement. Given the success of the conservative movement in other policy areas in recent years (Blumenthal 1986; Diamond 1995; Stefancic and Delgado 1996), it seems reasonable to assume that the conservative movement would vigorously oppose internationally binding climate policies by challenging the environmental community's claims about the seriousness of global warming and consequent need for ameliorative action.

Indeed, McCright and Dunlap (2000) argue that conservatives often strongly defend a traditional frame about humans and nature that some call the Dominant Social Paradigm or "DSP" (Dunlap and Van Liere 1984) and others call Manifest Destiny (Brulle 2000). Both the DSP and Manifest Destiny constitute a worldview in which modern societies are seen as able to control nature, making it difficult to accept that global warming poses an unprecedented danger to our nation. By systematically analyzing the thematic content of 224 documents on global warming produced and/or circulated by fourteen influential conservative think tanks between 1990 and 1997, McCright and Dunlap (2000) identify three major counter-claims through which the conservative movement challenged the framing of global warming by the environmental community. First, the conservative movement claimed that the evidentiary basis of global warming is weak, if not wrong. Second, conservatives argued that the net effect of global warming would be beneficial should it occur. Third, conservatives argued that the policies proposed to ameliorate the alleged problem of global warming would do more harm than good. These three counter-claims comprised the conservative movement's response to the environmental community's call for ameliorative action on global warming.

Unfortunately, with their sole emphasis on framing processes, McCright and Dunlap (2000) only examine the content of the conservative movement's counter-claims regarding global warming. They do not empirically examine how the conservative think tanks promoted such counter-claims or the impact of these countermovement organizations in the global warming policy arena. Utilizing two other social movement concepts (mobilizing structures and political opportunity structure), we

perform both analyses. Not only do we examine the roles performed by influential conservative think tanks, and specifically their relationships with scientists known for their public skepticism toward global warming, but we also assess the impact that these countermovement organizations achieved in Congress and the national print media before and after a sizable shift in the political opportunity structure—the 1994 Republican takeover of Congress.

METHODS AND DATA COLLECTION

We examine a purposive sample of fourteen conservative think tanks that McCright and Dunlap (2000) argue are the most influential in the global warming policy arena. Table 1 lists these countermovement organizations that performed activities regarding global warming between 1990 (when global warming was firmly placed on the nation's agenda) and 1997 (the year of the Kyoto Conference). We systematically searched each think tank's official Internet web site to gather all information on each one's activities between 1990 and 1997 designed to promote the conservative movement's position on global warming.[7] Of particular importance are the associations between these think tanks and the leading American "climate change skeptics"[8] who regularly challenge the seriousness of global warming. We examine how these scientists performed roles akin to "occupational activists"[9] (Mazur 1981) for these countermovement organizations. An analysis of the activities of conservative think tanks and their affiliations with the skeptics provides a rich description of the conservative movement's efforts to construct global warming's non-problematicity.

Table 1: Influential Conservative Think Tanks Addressing Global Warming Between 1990 and 1997

Conservative Think Tank	**Official Web Site**
American Enterprise Institute (AEI)	www.aei.org

Cato Institute	www.cato.org
Citizens for a Sound Economy Foundation (CSEF)	www.csef.org
Claremont Institute	www.claremont.org
Competitive Enterprise Institute (CEI)	www.cei.org
Foundation for Research on Economics and the Environment (FREE)	www.free-eco.org
Heartland Institute	www.heartland.org
Heritage Foundation	www.heritage.org
Hoover Institution	www-hoover.stanford.edu
Marshall Institute	www.marshall.org
National Center for Policy Analysis (NCPA)	www.ncpa.org
National Center for Public Policy Research (NCPPR)	www.nationalcenter.org
Pacific Research Institute (PRI)	www.pacificresearch.org
Reason Public Policy Institute (RPPI)	www.reason.org

Because of their close ties to conservative think tanks, we examine the attention that climate change skeptics received in Congressional hearings on global warming and in the national print media

between 1990 and 1997. For this study, the American climate change skeptics are Sallie Baliunas, Robert Balling, Jr., Richard Lindzen, Patrick Michaels, and S. Fred Singer. Baliunas is an astrophysicist at the Harvard-Smithsonian Center for Astrophysics, while Balling is Director of the Office of Climatology at Arizona State University. Lindzen is an atmospheric scientist at Massachusetts Institute of Technology, Michaels is Virginia's State Climatologist, and Singer is a retired professor of environmental science at the University of Virginia. This list of the skeptics is constructed from several sources. First, all of the scientists in the list are self-identified "skeptics" regarding anthropogenic climate change who challenge what they perceive as the false consensus of "mainstream" climate science. Balling, Lindzen, Michaels, and Singer signed the Leipzig Declaration, a petition that declared there is no scientific consensus on the existence of global warming. In addition, Balling, Baliunas, Lindzen, and Singer signed the Anti-Global Warming Petition, a special project of the Oregon Institute of Science and Medicine that criticized all proposed policies to ameliorate global warming because of the assertion that global warming will not altogether be a bad phenomenon should it occur. Three analyses of opposition to global warming policies (Ozone Action 1996a, 1996b; Rowell 1996; Gelbspan 1997) also identify these five as prominent American climate change skeptics.

We first determine the impact of the skeptics in major Congressional hearings on global warming. A search of the *Congressional Information Service Annual Abstracts* using the term "greenhouse effect" identifies all Congressional hearings on global warming between 1990 and 1997.[10] Budgetary hearings and hearings where global warming was only tangentially addressed are dropped. The goal is to identify those crucial hearings where the status of global warming as a social problem was the primary concern. Therefore, the roll call of witnesses testifying at those hearings should help identify the claims-makers who gained access to a crucial policy arena when the issue of global warming was being considered. This search yields thirty-seven Congressional hearings that dealt primarily with the issue of global warming.[11] The unit of analysis here is the individual Congressional testimony by those invited to testify, and there was a total of 287 testimonies presented over the course of these thirty-seven hearings. The Congressional Information Service lists the primary affiliation of each witness, and this is taken to be the affiliation of record. By identifying all the expert witnesses testifying at these hearings, we can examine the pattern of climate change skeptic appearances over the time period of study.

Another means of determining the impact of the skeptics is to examine the visibility that these scientists gained in the mass media compared to that of "elite" climate scientists, leading representatives of the mainstream view that global warming is occurring and represents a serious problem. We do this by comparing citation counts of the five skeptics with those of a similar number

of leading climate scientists in seven of the most widely circulating newspapers in the United States. The following five scientists are the "elite climate scientists" used in this study: Stephen Schneider, former Senior Scientist at the National Center for Atmospheric Research (now at Stanford University) and recipient of the 1992 MacArthur Fellowship for his ability to integrate and interpret the results of global climate research; F. Sherwood Rowland, Nobel Laureate in Chemistry in 1995 with Mario Molina for research on the thinning of the ozone layer; Bert Bolin, recipient of the 1988 Tyler Prize for Environmental Achievement and Chairman of the IPCC from 1988 to 1997; James E. Hansen, Director of the NASA Goddard Institute for Space Studies in New York, known for his Congressional testimony about global warming in 1986 and 1988; and Benjamin Santer, atmospheric scientist at Lawrence Livermore National Laboratory and lead author of the famous 1995 *Second Assessment Report* from IPCC Working Group I that claimed anthropogenic global warming is already occurring.

The eight most widely circulating newspapers based on daily circulation figures are listed in the *Market Share Reporter* (Gale Research Inc. 1998) as: *Wall Street Journal*, *USA Today*, *New York Times*, *Los Angeles Times*, *Washington Post*, *New York Daily News*, *Chicago Tribune*, and *Newsday*. In order to look at the full range of years in this study, only those major national papers that are archived by NEXIS back to January 1990 are selected. Thus, *New York Daily News* is dropped and the remaining seven major national newspapers are used. The following Boolean search string is used to conduct the searches of each newspaper's archive: *"global warming" or "greenhouse effect" or "climate change" and "name of scientist" and date after 12-31-1989 and date before 1-1-1998*. The unit of analysis here is the individual newspaper article.

RESULTS

MOBILIZING ACTIVITIES OF CONSERVATIVE THINK TANKS

Mobilizing structures are "those agreed upon ways of engaging in collective action which include particular 'tactical repertoires,' particular 'social movement organizational' forms, and 'modular social movement repertoires'" (McCarthy 1996: 141). Much of the research in this area centers on the crucial roles that social movement organizations (SMOs) perform in social movements. Allen (1992) argues that conservative think tanks are professional SMOs that wield considerable influence within the conservative movement as a result of the increased flow of financial resources from private foundations typically managed by corporate families (see also Himmelstein 1990; Diamond 1995). Opponents of global warming policies within the conservative movement mobilized largely through existing conservative think tanks that maintain sizable staffs of fellows and experts to perform a wide range of claims-making activities (see Luke 2000; Austin 2002). We describe these diverse activities that influential conservative think tanks performed when mobilizing to challenge the legitimacy of global warming. Of particular interest is the extent to which these conservative think

tanks enlisted the assistance of prominent American climate change skeptics as credentialed experts or occupational activists (Mazur 1981).

General Mobilizing Activities

Many conservative think tanks have publishing capacities (e.g., Cato Press and American Enterprise Institute Press), providing them with perceived legitimacy in the eyes of the general public and allowing them to advance science-related positions outside of the peer-reviewed scientific community. As described by McCright and Dunlap (2000), the fourteen conservative think tanks in this study produced and/or circulated 224 documents on global warming between 1990 and 1997. These documents include policy studies, books, press releases, and opinion-editorial essays. In general, as the stakes rose on the verge of the Kyoto conference, the conservative movement stepped up mobilization efforts and published more documents that challenged the legitimacy of global warming as a problem.

Members of conservative think tanks also promoted their global warming counter-claims in 1997 through television programs and radio advertisements. For example, conservative think tank fellows appeared on television programs ranging from a special three-part British anti-environmental documentary series *Against Nature* to such American shows as *Firing Line Debate* on PBS and the *700 Club* on the Christian Broadcasting Network. Also, Citizens for a Sound Economy Foundation (CSEF) produced two one-minute radio advertisements through its Campaign for Sound Science on Global Warming. Each of the advertisements made light of environmentalists' "apocalyptic" imagery in an attempt to dismiss any legitimate claims about the existence of global warming as ridiculous. Finally, on December 1, 1997, at the same time that U.S. officials were beginning to debate the proposed climate treaty in Kyoto, the Competitive Enterprise Institute (CEI) released a one-minute radio advertisement in an attempt to undermine public support for the proposed treaty. In this advertisement, CEI evoked people's memories of the 1970s' energy crises to help undercut public support for policy-makers in Kyoto.

Conservative think tanks also sponsored policy forums, public speeches, and press conferences in 1997 to present their counter-claims on global warming to policy-makers and the general public. Elected officials were invited to these public events, and summarized transcripts of these events were regularly disseminated to a wide range of policy-makers—demonstrating that these professional SMOs regularly gained an audience with elite policy-makers and media outlets. The American Enterprise Institute (AEI) hosted two policy forums devoted entirely to global warming, while also dedicating an entire day of its Annual Policy Conference to answering questions regarding the legitimacy of global warming, the ideology of the environmental movement, and proposed global environmental policies. The Cato Institute also held a policy forum where Patrick Michaels, a skeptic

and Cato Senior Fellow in Environmental Studies, and William O'Keefe, Chairman of the industry led Global Climate Coalition, harshly criticized the IPCC's (1995) *Second Assessment Report* that asserted human influence was detected in atmospheric warming.

David Ridenour, Vice-President of the National Center for Public Policy Research (NCPPR), further attacked the IPCC in a public speech held on the West side of the U.S. Capitol Building on October 30, 1997. In concluding his speech, Ridenour (1997) symbolically indicted government-funded climate scientists on charges of unethical, immoral, and illegal behavior: "The balance of evidence—to use the U.N.'s lingo—now suggests that some scientists will do anything to ensure that their access to federal grants for global warming research continues." Furthermore, the National Center for Policy Analysis (NCPA) held two press conferences on global warming in 1997: one featuring skeptic Robert Balling on June 13 for members of the House of Representatives and another featuring skeptic Sallie Baliunas of the Marshall Institute on September 29 for members of the Senate. Finally, CEI also hosted a press conference that featured skeptic Patrick Michaels on July 15 in the Main Ball Room of the National Press Club.

A particularly crucial activity through which members of conservative think tanks presented their global warming counter-claims to policy-makers was their presence at Congressional hearings on global warming. This is perhaps the clearest evidence that the leaders of these professional SMOs were able to gain a direct audience with elite policy-makers. Between 1990 and 1997, fellows from conservative think tanks delivered testimony at eight major Congressional hearings on global warming. Fellows from the Cato Institute, Marshall Institute, and Hoover Institution delivered a total of nine testimonies: three in hearings between 1990 and 1994 and six in hearings between 1995 and 1997. This increase in testimonies provided by conservative think tank fellows after 1994 supports the expectation examined later that the conservative movement made successful use of the window of opportunity created by the 1994 Republican takeover of Congress.

Finally, five conservative think tanks created special *ad hoc* projects designed specifically to challenge the legitimacy of global warming. NCPA created its Global Climate Change Project, NCPPR established its Global Warming Information Center, and CSEF created its Campaign for Sound Science on Global Warming to direct each think tank's respective activities regarding the issue. In August 1996, CEI published the *Environmental Briefing Book for Congressional Candidates*, which included a concise two-page description of its official position on global warming. This was patterned after the Heritage Foundation's (1980) *Mandate for Leadership* and Cato Institute's (1994) *Handbook for Congress*. Finally, AEI initiated a special program on global environmental policy in 1997—including a monograph series by AEI Press—to critique the Kyoto Conference and the globalization of environmental policy in general. The existence of these special

projects at several leading conservative think tanks is indicative of the increased emphasis that the conservative movement placed on mobilizing against global warming and other environmental issues in recent years. Through these new special projects and the other activities described earlier, the conservative movement vigorously promoted its general anti-environmental frame and its specific counter-claims challenging the legitimacy of global warming.

Utilization of Scientific Expertise

Professional SMOs of all persuasions rely upon the authority of expertise by maintaining considerable staffs of credentialed scientists to perform a range of claims-making activities. These in-house experts are typically expected to write policy studies, attend press conferences, give speeches, and present Congressional testimony on behalf of the SMO.[12] While conservative think tanks have always defended the conservative movement's interests regarding economic and defense policy, these think tanks recently began to draw upon and supplement such expertise in order to defend the movement's interests in policy areas related to environmental issues.

The conservative movement's growing interest in scientific/technological issues was facilitated by the establishment of a "scientific-technological elite" within the conservative policy-planning network years earlier when the movement was developing and lobbying for the "Star Wars" project (Blumenthal 1986: 310). These scientific advocates in the conservative movement, such as Frederick Seitz, Robert Jastrow, and Bruce Ames at the Marshall Institute, played a visible role in the movement's opposition to the treatment of ozone depletion as a social problem. In the past decade, several conservative think tanks enlisted the services of scientists sympathetic to their interests on such issues as pesticide exposure and environmental carcinogens. Some of these more well-known scientists, who are often critical of the "mainstream," peer-reviewed scientific community, include Michael Fumento, Steven Milloy, and Michael Sanera. It thus appears that the utilization of sympathetic scientists is becoming a distinct mobilization strategy for conservative think tanks, one that complements the roles played by occupational activists in defending industry positions—e.g., nuclear scientists who promote nuclear power—in scientific controversies (Mazur 1981).

The conservative think tanks in this study enlisted the aid of the five leading American climate change skeptics identified earlier in several ways. Perhaps the most telling evidence is that, except for Robert Balling, each of the skeptics served as a fellow for at least one conservative think tank. Sallie Baliunas was a Robert Wesson Fellow in Scientific Philosophy and Public Policy at the Hoover Institution and the Chair of the Science Advisory Board at the Marshall Institute. Richard Lindzen served on the Science Advisory Board of the Marshall Institute, and Patrick Michaels was a Senior Fellow in Environmental Studies at the Cato Institute. Along with being an advisory editor for the Cato Institute's quarterly magazine *Regulation*, Fred Singer was also a Senior Fellow at the

Heritage Foundation, a Distinguished Visiting Fellow at the Hoover Institution, and later a Robert Wesson Fellow in Scientific Philosophy and Public Policy at the Hoover Institution.

Along with formally serving as think tank fellows, these climate change skeptics also wrote twenty of the 224 documents discussed earlier: seventeen works written specifically for use by the think tanks and three works reprinted by the think tanks. Baliunas authored seven original works for three conservative think tanks: four policy studies and one speech for the Marshall Institute, a policy paper for the Heartland Institute, and a speech for NCPA. Balling wrote five original works for three think tanks: a book and a chapter in an edited book for the Pacific Research Institute (PRI), a policy study and a chapter in an edited book for CEI, and a speech for NCPA. Lindzen contributed both an original article in Cato's *Regulation* and a revision of that article in an edited book for PRI. Michaels wrote five documents for two conservative think tanks: a policy study for the Marshall Institute and a book, two speeches, and a *Washington Post* op-ed essay for the Cato Institute. Finally, Singer authored an op-ed essay in the *Wall Street Journal* that was reprinted by NCPA. Interestingly, none of the think tanks circulated reprints of the peer-reviewed climate science articles or even unpublished research papers authored by any of the skeptics. They relied instead on reprinting contributions of these scientists to popular media or to their in-house publications.

Another way that members of conservative think tanks aligned themselves with the skeptics was by citing these scientists as experts in other global warming documents produced by these countermovement organizations. Ignoring those twenty documents written by climate change skeptics, a content analysis of the remaining 204 documents found that sixty-two (30.4%) cited at least one of the skeptics as an expert scientific source. Baliunas was the least cited skeptic with only seventeen citations in thirteen documents. Although he was not a fellow at any of the think tanks, Balling was the most widely cited skeptic with 92 citations in twenty-one documents. The fact that nearly seventy percent of these documents do not utilize the scientific authority of the skeptics is not surprising, given the paucity of citations in most conservative think tank documents.

Besides contributing to the body of written documents debunking global warming either as authors or sources of expertise, three skeptics also appeared at public events sponsored by conservative think tanks in 1997. Balling spoke at the June 13th press conference for members of the House of Representatives sponsored by NCPA. Michaels directed a Cato Policy Forum with William O'Keefe of the Global Climate Coalition in 1997 and also appeared at the July 15th CEI press conference at the National Press Club. Finally, Baliunas spoke at the September 29th press conference sponsored by NCPA for members of the Senate. Thus, the conservative think tanks relied not only upon the scientific opinion of these skeptics, as evidenced in the citation patterns, but also sought the direct personal involvement of these scientists.

Groups involved in scientific controversies often employ sympathetic professional scientists to give their positions the requisite scientific legitimacy only credentialed experts can provide (Mazur 1981). As Nelkin (1984) argues, the end result is that expertise itself becomes a mere resource to be exploited for political and economic gain. These conservative think tanks gained apparent legitimacy by utilizing the services of sympathetic scientists in promoting their "scientifically based" counter-claims on global warming. Indeed, we doubt whether these conservative think tanks could have promoted counter-claims cloaked in scientific literacy without enlisting the expertise of trained scientists. By publicly promoting the ideas of the climate change skeptics outside of traditional scientific channels (e.g., peer-reviewed conference papers and journal articles), conservative think tanks engaged in what Austin (2000: 83) describes as an "end-run around established scientific norms." In view of this, and given the sizable change in the political opportunity structure created by the 1994 Republican takeover of Congress, it is important to examine whether the skeptics experienced an increase in visibility in recent years.

IMPACT OF CHANGE IN POLITICAL OPPORTUNITY STRUCTURE

The underlying importance of the concept of political opportunity structure (POS), or what Tarrow (1998: 76-77) defines as the "consistent—but not necessarily formal or permanent—dimensions of the political environment that provide incentives for collective action by affecting people's expectations for success or failure," is that this broad set of political constraints and opportunities shapes social movement mobilization, form, and success. Following the advice of McAdam (1996), we study the effects of a shift in one specific dimension of the POS. We examine whether a sweeping increase in the presence of elite allies in the state—the 1994 Republican takeover of Congress—facilitated the success of key conservative think tanks in their efforts to construct the non-problematicity of global warming. Prior to the 1994 federal elections, the Republican Party held 41.5% of all Congressional seats (40.9% in the House and 44% in the Senate). After the 1994 elections, Republicans held 52.9% of all Congressional seats (52.9% in the House and 53% in the Senate)—a 27.5% increase in representation (29.2% increase in the House and 20.4% increase in the Senate). We suggest that this sizable replacement of Democrats by Republicans in both houses offered the conservative movement a "window of opportunity" to achieve increased visibility for its anti-global warming campaign, especially in the form of increased skeptic testimony in Congressional hearings on global warming and (via alteration of the nation's political climate) increased visibility of the skeptics in the national print media.

This shift in the POS is quite significant for two reasons: (1) it is a shift in the "governing coalition" (Sabatier and Jenkins-Smith 1993) and (2) it presents an opportunity to examine the utility of Zald's (2000a, 2000b) concept of "Ideologically Structured Action" (ISA). As the result of what

voting scholars term a "realigning election" (Asher 1976), the 1994 "Republican Revolution" was a major shift in the nation's governing coalition as the Republicans went from the minority party to the majority party in both houses virtually overnight. As the majority party, the Republicans gained several advantages through which they were better able to establish their own legislative agenda: e.g., control over which bills will and will not receive floor consideration, control over all committee chairmanships, and ability to convene hearings and compose witness lists.

This particular shift in the POS takes on even greater significance given Zald's (2000a, 2000b) reminder of the considerable overlap between social movement activities and institutionalized politics. Zald (2000a, 2000b) argues that social movement scholars should broaden their focus to also include institutionalized political channels (party politics, administrative bureaucracies, etc.) since the ideologies of movement actors and politicians often coincide and social movement actors regularly move in and out of elected or bureaucratic positions. Zald (2000b: 34) claims that this widened focus especially facilitates our understanding of countermovements, since they are often able to wield power within institutionalized channels through conventional forms of claims-making and may even be embedded within the state apparatus. In our case, the circulation of actors between conservative think tanks and formal state positions (almost always as representatives of the Republican party) and vice versa is well documented (e.g., Blumenthal 1986; Himmelstein 1990). Also, it is reasonable to assume that the heightened mobilization of conservative think tanks in the conservative movement—an elite countermovement committed to protecting the industrial capitalist order—actually facilitated the success of the 1994 Republican Revolution. Thus, this shift in the POS provides an opportunity to demonstrate the utility of Zald's (2000a, 2000b) enlarged agenda for social movement research.

Immediately after the 104th Congress began, the House Committee on Science played a heightened role in attacking existing environmental policies and programs while promoting anti-environmental policies (Kraft 2000). Under the leadership of a handful of powerful Republicans, the Committee on Science led an all-out assault on existing environmental regulatory research programs. For example, Rep. Tom Delay (R-Texas) and Rep. John Doolittle (R-California) each introduced bills to repeal the ongoing accelerated phaseout of chlorofluorocarbons (CFCs). Also, Rep. Dana Rohrabacher (R-California) and Rep. Robert Walker (R-Pennsylvania) introduced bills that proposed sizable cuts in environmental research, particularly in climate change and energy research. The House of Representatives later passed these cuts.[13]

The series of events that best demonstrate the nature of this shift in the POS was initiated in February 1995 when Rep. Rohrabacher, chairman of the Subcommittee on Energy and the Environment, announced the creation of three hearings to look into allegations that political pressure was put on scientists to make unethical decisions. Alleged scientific improprieties in three major

areas of environmental science were investigated: ozone depletion (U.S. House of Representatives 1995a), global warming (1995b), and chemical dioxins (1995c). The Republican majority, which now had institutional control of Congress and the right to call hearings and compose witness lists, expected to demonstrate that the science underlying these three issues was distorted to serve the political purposes of liberals, thereby justifying both the repeal of environmental regulatory policies created on the basis of this science and the reduction of research funding for these areas of science.

The hearings were strongly criticized by Representative George E. Brown, Jr. (D-California) (1997: 14) as a McCarthy-esque witch-hunt for scientific misconduct in which the subcommittee "achieved actually what it purported to condemn—the politicalization of science." While witnesses and subcommittee members accused NASA, the EPA, and several scientists of deliberately doctoring scientific evidence and systematically excluding the participation of climate change skeptics from international scientific assessments of ozone depletion and global warming, these allegations failed to result in any formal action against any organization or individual scientist. Indeed, Brown, Jr. (1997: 14) claims, "the hearings produced no credible substantiation of any of the claims of scientific misconduct." However, the mere convening of the hearings signaled a shift in the policy arena for the standing of environmental science (Kraft 2000). Henceforth, the work of "mainstream" peer-reviewed scientists was unduly criticized, while the non-peer-reviewed work of skeptics associated with conservative think tanks and industry organizations was inevitably privileged above others. Brown, Jr. (1997: 15) argues:

> *Witnesses and subcommittee members at all three hearings appeared to give the non-peer reviewed views of individual scientists greater scientific credibility than peer-reviewed scientific assessments. Skeptic scientists seemed to be perceived as more credible precisely because their views conflicted with the consensus of peer-reviewed science.*

One can quickly grasp the spirit of the hearings by reading the following exchange between Rep. John Doolittle (R-California) and Rep. Lynn Rivers (D-Michigan) regarding the reality of ozone depletion[14] at the onset of the first of these three hearings (U. S. House of Representatives 1995a: 19):

> ***Mr. Doolittle**: I have found that there is no established consensus as to what actually the problem is. I have found extremely misleading representations by the government and government officials that are not founded on sound science.*
>
> ***Ms. Rivers**: That's what I was asking about, is not government scientists, necessarily, but peer-reviewed articles, where scientists who are out in academia who are doing this on a regular basis. Could you give me an example of some of the peer-reviewed publications that you consulted in formulating your opinion that there's no science?*
>
> ***Mr. Doolittle**: Well, you're going to hear from one of the scientists today, Dr. Singer.*

***Ms. Rivers**: Dr. Singer doesn't publish in peer-reviewed documents.*

***Mr. Doolittle**: You know, I'm not going to get involved in a mumbo-jumbo of peer-reviewed documents. There's politics within the scientific community, where they're all intimidated to speak out once someone has staked a position.*

***Ms. Rivers**: Right.*

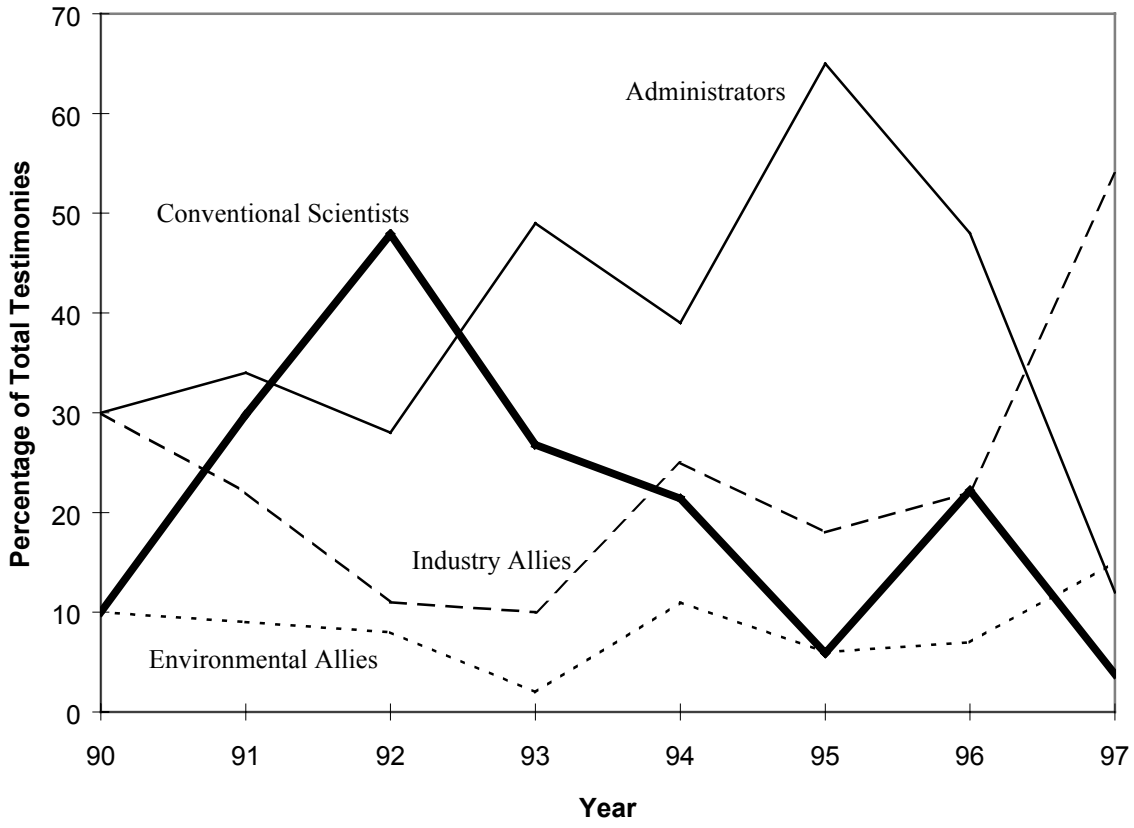
***Mr. Doolittle**: And thankfully, under this Congress, we're going to get to the truth and not just the academic politics.*

In essence, it appears as though the Republican contingent on the Committee on Science was dedicated to promoting its own ideological position and enhancing the visibility of climate change skeptics at the expense of peer-reviewed science and its usefulness in policy-making. In the following sections, we systematically assess the significance of this shift in the POS via the visibility of climate change skeptics between 1990 and 1997 in (1) all major Congressional hearings on global warming and (2) all global warming news articles in major newspapers.

Congressional Hearings and the Climate Change Skeptics

We used the *CIS Annual Abstracts* to identify the affiliation of all witnesses providing testimony in each of the thirty-seven major Congressional hearings on global warming between 1990 and 1997.[15] Figure 1 displays the specific patterns obtained when all of the 287 witness testimonies were categorized according to the particular interests represented by each of them. The testimony of administrators of government agencies, departments, and research programs made up the largest category with 36.2% of the total number of testimonies in this study (104 of 287). The percentage of testimonies given by administrators each year more than doubled between 1990 and 1995 when these actors presented 64.7% of the testimonies. After 1995, however, their percentage of testimonies sharply decreased. The testimony of "conventional" natural scientists (those not classified as administrators, leading skeptics, or as affiliated with industry or environmental organizations) made up the next largest category, comprising 27.9% of all the testimonies (80 of 287). The percentage of conventional natural scientist testimony rose steadily at the beginning of the time period and peaked in 1992—the year of the Rio Earth Summit. That year 47.9% of all testimonies (34 of 71) were presented by conventional natural scientists. After 1992, the percentage of testimonies by such scientists decreased considerably with the exception of a small rebound in 1996. In 1997, conventional natural scientists made up only 3.8% of the testimonies (1 of 26).

Figure 1: Percentage of Testimonies Presented Each Year by Four Categories of Actors



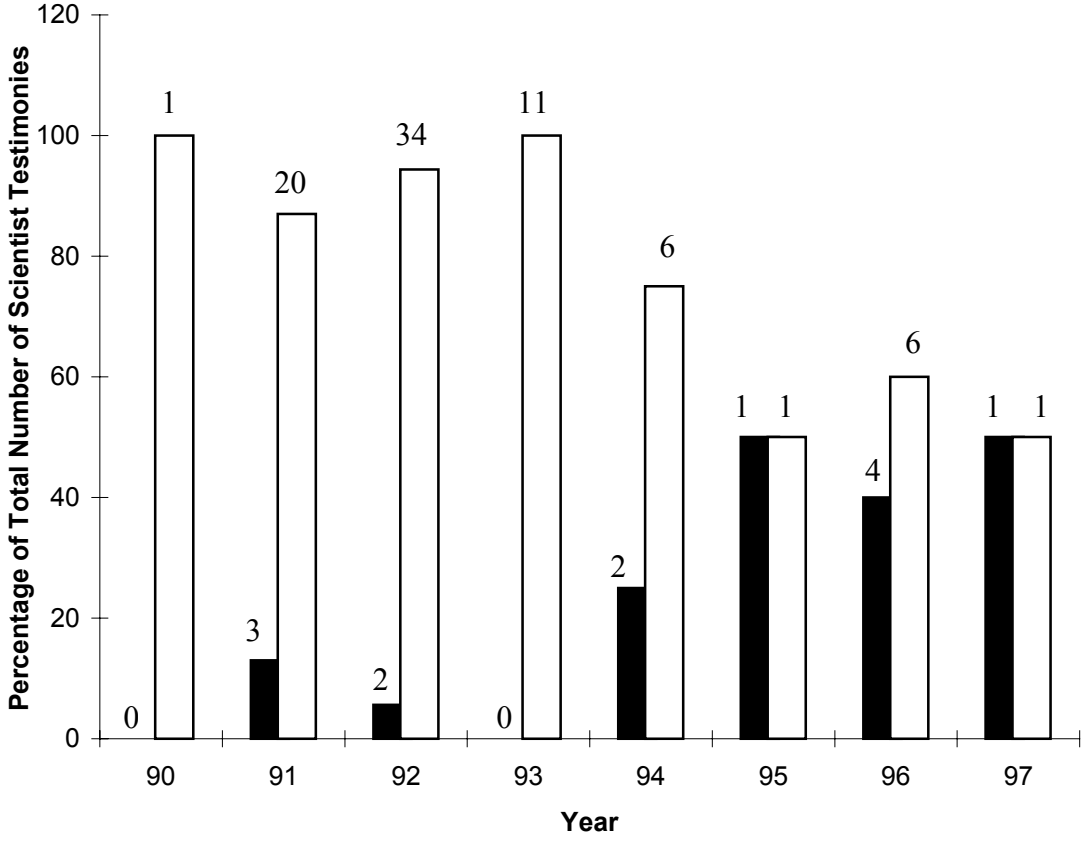
The third category consisted of those testimonies presented by individuals with strong ties to corporate America, representing approximately 20.9% of all testimonies (60 of 287) over the time period. This category consisted of all the testimonies from industry representatives, climate change skeptics, and other conservative think tank fellows. While the testimony of industrial allies made up 30% of the total in 1990, its percentage decreased steadily until it bottomed out in 1993 comprising less than 10% of the testimonies that year. After 1993, the percentage of testimonies by industry allies witnessed a sharp increase to the point that this category represented 53.8% of all testimonies presented in 1997.[16]

The final category was made up of presentations from representatives of environmental organizations. This category was the smallest, comprising only 8.4% of all the testimonies (24 of 287). The percentage of testimonies each year by witnesses in this category varied considerably

throughout the time period, ranging from a low of 2.4% in 1993 to a high of 15.4% in 1997, when it was the second most visible category. The Republican takeover of Congress did not bring about the total exclusion of the environmental community in global warming hearings. Instead, consistent with Brown, Jr. (1997), from 1994 onward we see the politicalization of climate science as vested interests—including environmental organizations—gained more visibility. Despite the sizable amount of variation over time, this category still contained the fewest number of testimonies throughout each of the first seven years covered by this study.

It is interesting to note that on the verge of the 1992 Rio Earth Summit, the testimonies of conventional natural scientists and administrators of various government agencies and programs dominated the hearings on global warming. Five years later, on the verge of the Kyoto Conference, discernible interest groups (especially industry allies) dominated the hearings, while government administrators and research scientists received limited attention. Also, beginning in 1994, industry representatives began to receive more attention in Congressional hearings on global warming to the point that these interests presented over half of the testimonies in the year of the Kyoto Conference. This increased visibility of industrial interests supports our expectation that the 1994 Republican takeover of Congress had a positive effect for industry and conservative interests, as opportunities for such groups to promote their counter-claims in Congressional hearings grew substantially.

Figure 2: Percentage of Natural Scientists' Testimonies Delivered Each Year by Climate Change Skeptics and Conventional Scientists in Congressional Hearings About Global Warming



Note: The number of testimonies by each group is listed at the top of each column.

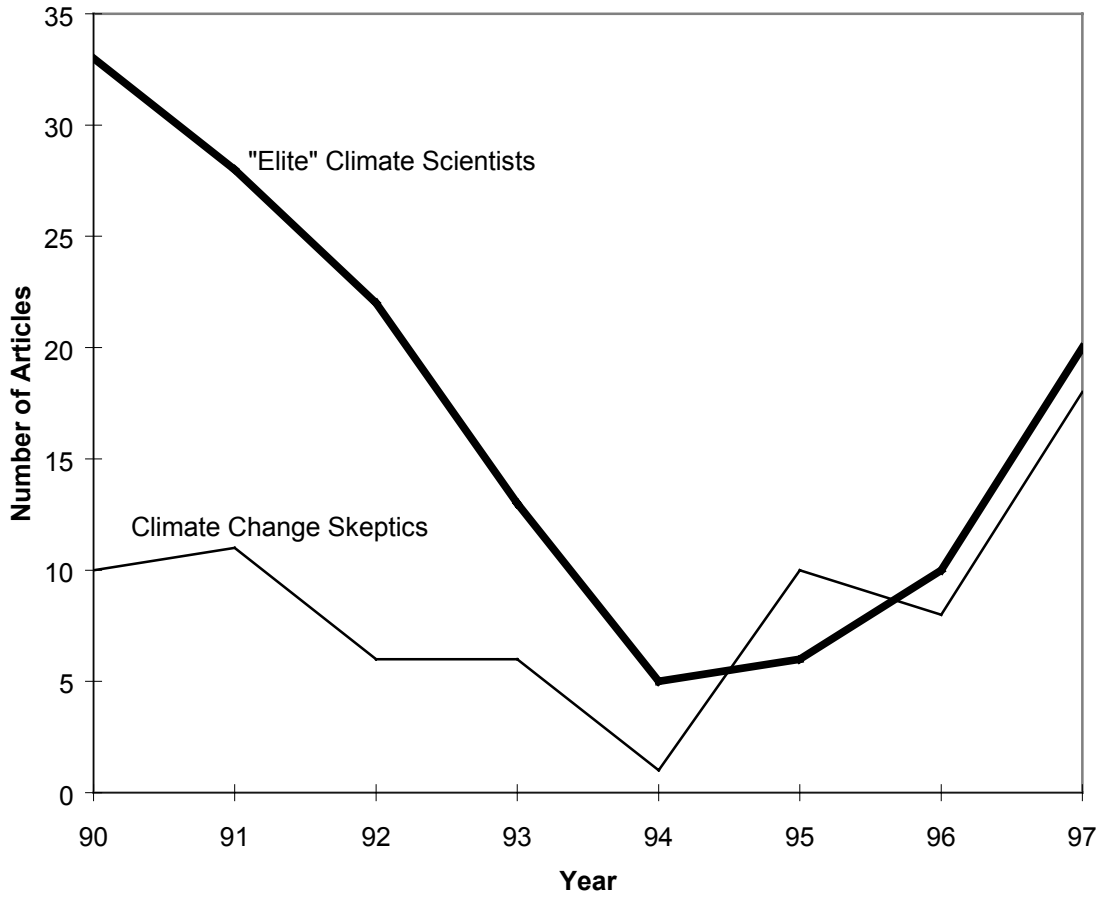
To assess more carefully the impact of the climate change skeptics in these Congressional hearings, we examine the proportion of natural scientist testimonies each year presented by the skeptics. The total number of all natural scientist testimonies equals the sum of the number of skeptic

testimonies and the number of all conventional scientist testimonies each year. Figure 2 displays the relative percentages of all natural scientist testimonies each year given by climate change skeptics and conventional scientists respectively. As anticipated, the skeptics were greatly overshadowed by all other natural scientists until 1994, when the skeptics presented 25% of all testimonies given by natural scientists. Since 1995, the percentage of testimonies by the five skeptics and all other natural scientists not in administrative positions and not representing environmental organizations remained approximately equal. After 1994, a modest rise in the number of skeptic testimonies and a sizable decrease in the number of conventional scientist testimonies combined to produce a conspicuous increase in skeptic visibility in Congress. This phenomenon—an increase in visibility for those skeptics with strong ties to industry (Ozone Action 1996a, 1996b; Gelbspan 1997) and conservative think tanks—clearly supports the expectation that the 1994 Republican takeover of Congress opened a window of opportunity that the conservative movement and its allies successfully exploited.

News Media and the Climate Change Skeptics

To determine the potential impact of the climate change skeptics on the general public, we examined the visibility of these scientists in the print media compared with the visibility of a similar number of elite climate scientists. As noted earlier, the following five scientists make up the group of elite climate scientists used in this study: Stephen Schneider, F. Sherwood Rowland, Bert Bolin, James E. Hansen, and Benjamin Santer. Examining the seven most widely circulating U.S. newspapers, the NEXIS search procedures described earlier resulted in a total of 194 global warming articles. The remainder of this inquiry deals only with articles citing at least one of the five climate change skeptics or one of the five elite climate scientists.

Figure 3: Number of Global Warming-Related Articles Citing an "Elite" Climate Scientist and/or a Climate Change Skeptic as an Information Source



Examining which scientists get cited as expert sources in these articles between 1990 and 1997 reveals two interesting patterns. Figure 3 displays the general patterns that emerge from this analysis. First, the number of articles citing at least one of the elite climate scientists decreased sharply between 1990 and 1994. Elite climate scientists were cited in 33 articles in 1990, but that number dropped to five in 1994. After 1994, the citation of elite climate scientists increased gradually to the point where they were cited as information sources in twenty articles in 1997. Second, the number of articles that cited at least one of the climate change skeptics also decreased between 1990 and 1994. Skeptics were cited in ten articles in 1990 but only one in 1994. After 1994, the citation of skeptics increased at a slightly greater rate (5.7 additional articles a year) than that of the elite climate scientists (5 additional articles a year). In fact, skeptics were actually cited as sources in more articles than the elite climate scientists in 1995, and in 1996 and 1997 the number of citations for both groups was approximately equal.

The results for the first few years of this study are consistent with the findings of earlier media analyses that document the initial appearance of skeptics in news stories on global warming in the early 1990s (McComas and Shanahan 1999) and the overall decline in the number of news stories on global warming after the 1992 Rio Conference when the issue was no longer commanding significant attention (Williams and Frey 1997). Unfortunately, since these earlier studies fail to gather data past the early 1990s, they are unable to detect the full effects of the conservative movement and its sympathetic scientists in the media. That is, with the 1994 Republican takeover of Congress and the rightward shift in the political culture in general, the skeptics achieved approximate parity with some of the most renowned experts in the field. We doubt that scholars in the early 1990s would have predicted this. As such, it is a telling story of how powerful groups are able to take advantage of the media's "balancing norm"[17]—or the equation of "objectivity" with presenting "both sides of the story"—to protect their interests.

According to Gitlin (1980), the media's balancing norm facilitates the perpetuation of dominant ideologies and the status quo. News stories on controversial topics follow a "pro and con" model where extreme views are contrasted and the reporter concludes by claiming the issue is unresolved—allowing the dramatic narrative to continue but also instilling confusion and passivity in the general public (Epstein 1973). Furthermore, Gitlin (1980) argues that powerful interests in technological controversies utilize the media's balancing norm to gain support for their positions that would not otherwise gain credence in the scientific community—where empirical verification, and not "fairness," "balance," or "equal time," is the standard.

Several scholars (e.g., Schneider 1993; Freudenburg and Buttel 1999) express concern about how the media's balancing norm in science reporting produces what has been called the "dueling scientists scenario," especially regarding global warming. Parallel to the "pro and con" model, reporters solicit statements from scientists holding the most extreme views regarding a scientific issue, regardless of the fact that the bulk of scientists hold positions between the extremes and may tend toward a consensus position. This false dichotomy breeds confusion within the general public regarding what is widely accepted knowledge and what is a highly speculative claim and between what are scientific and value judgments (Schneider 1993: 183). The resulting public confusion eventually translates into political inaction and policy gridlock—disproportionately favoring powerful interests attempting to construct the non-problematicity of environmental conditions.

The increased media visibility for those skeptics with strong ties to conservative think tanks is consistent with the assertion that the 1994 Republican takeover of Congress, along with the concomitant rightward shift in the national political culture, created increased opportunities for the conservative movement to oppose global warming policies via mainstream media. There is little

doubt that the entrepreneurial leaders of these conservative think tanks were cognizant of the media's balancing norm and aggressively manipulated the media's need to present "both sides of the story." Their efforts resulted in the dramatic rise in the skeptics' visibility during a time when an anti-regulatory message ("no action is needed") resonated closely with our national political culture.

SUMMARY AND CONCLUSION

We began with a significant puzzle. As scientific consensus on global warming crystallized, the environmental community successfully defined global warming as a legitimate problem, and the general public accepted global warming as a problem and supported substantial ameliorative policies. Despite this, claims about the reality of global warming and the necessity of binding climate policy became more contested in the U.S. policy arena in the late 1990s. As much of the world appeared to be coming together in common cause to solve the global warming problem, the U.S. Senate unanimously passed the Hagel-Byrd Resolution in July 1997 effectively neutralizing international negotiations months before the Kyoto Conference. The Clinton Administration was forced to abandon efforts to obtain Senate ratification of the Kyoto Protocol, and the Bush Administration announced that the U.S. has no intention of abiding by it. How can we explain this divergence?

We argue that our nation's failure to enact a significant climate policy is heavily influenced by the success of the conservative movement in challenging the legitimacy of global warming as a social problem. Through a multiplicity of activities, such as flooding the media with brief press releases, holding policy forums, and sponsoring press conferences for policy-makers, the entrepreneurial leadership of fourteen conservative think tanks challenged the environmental community's claims about global warming. In doing so, they primed the public arena for the activities of the climate change skeptics. Furthermore, these countermovement organizations provided the skeptics with substantial resources and significant venues for promoting their ideas. These conservative think tanks, with their neatly packaged counter-claims, professional SMO activities, and credentialed climate change skeptics, took advantage of the window of opportunity opened by the 1994 Republican takeover of Congress and concomitant rightward shift in the national political culture. As a result, since 1994 we saw a dramatic increase in the visibility of five American climate change skeptics in Congressional hearings on global warming and in news stories on global warming in the nation's largest circulating newspapers.

While we believe the evidence clearly suggests that the conservative movement, spearheaded by the think tanks allied with climate change skeptics, played a decisive role in defeating U.S. ratification of the Kyoto Protocol, we recognize that other factors also played a role. At a minimum,

the following factors—noted by other analysts—likely facilitated the success of the conservative movement in portraying global warming as non-problematic and thereby undermining support for the Kyoto Protocol.

First, climate change is a crescive—i.e., cumulative, incremental, long-term—problem with no definitive beginning and no specific, convenient location (Ungar 1998; also see Beamish 2002). The globally diffuse and slow-onset (rather than acute and immediate) characteristics of global warming hinder the portrayal of global warming as a problem deserving immediate action. Second, global warming is widely viewed as a future-oriented problem whose solution carries a potentially immense cost. Given that our policy arenas tend to discount the future, and the likelihood of policy action on an issue is inversely related to the apparent cost of such action, this perception decreases the "marketability" of global warming and increases the vulnerability of the environmental community's claims to attack or deconstruction (Ungar 1998).

Third, as we discussed above, the media's balancing norm and concomitant need for a dramatic narrative facilitates the mis-recognition of complex environmental problems. The public confusion and apathy resulting from such phenomena as the dueling scientists scenario creates conditions ripe for the re-definition of global as non-problematic. In addition, it seems reasonable to believe that a similar institutional norm operates within Congressional hearings where each party is expected to sponsor "its" experts to legitimate its policy prescriptions (see, e.g., Nichols 1991; Murphy and Maynard 2000).

Fourth, as others document, the fossil fuels industry, and its allies in the manufacturing sector and labor unions, mounted a dual campaign of public relations activities and Congressional lobbying against global warming amelioration during the 1990s (e.g., Gelbspan 1997; Ozone Action 1996a, 1996b; Levy and Egan 1998; Newell 2000; Carpenter 2001). In fact, the Global Climate Coalition, an organization of trade associations and corporations created in 1989 to promote business participation in the global warming policy debates, was quite active in the public global warming debate prior to the December 1997 Kyoto Conference. Indeed, the claims-making activities of the conservative movement and the fossil fuels industry, while not regularly coordinated, often reinforced one another.

Fifth, the 1990s witnessed, at most, only moderate levels of mobilization by the environmental community to maintain global warming on the national political agenda. Perhaps because of the realization of the potential costs associated with amelioration, global warming was seldom the highest priority of leading environmental SMOs. Also, even prior to the 1994 Federal elections, Congressional Democrats generated only modest support for potential climate-related legislation—e.g., the proposed 1992 carbon tax (Woodward 1994). Indeed, Lutzenhiser (2001) argues that the policy proposals of the Clinton Administration (e.g., greenhouse gas emissions

trading, utility deregulation, and increased energy technology research and development) were weak at best and most appropriately described by the term "non-policy."[18]

The continuing failure of the United States to participate in international efforts to ameliorate global warming therefore likely reflects a combination of the crescive nature of global warming; the public framing of global warming as a costly, future problem; the institutionalization of the dueling scientists scenario in the media and Congressional hearings; lobbying by the business community; the tepid involvement of the environmental movement and its allies; and the mobilization of the conservative movement to define global warming as "non-problematic" and therefore policies such as the Kyoto Protocol as unnecessary.

Our goal has been to highlight the previously discounted impact of conservative think tanks, especially those that mobilized explicitly against the Kyoto Protocol by—among other tactics—promoting the views of prominent climate change skeptics to discredit the claims of mainstream climate science. The theoretical significance of this case study is that it illustrates that problematicity is best conceptualized as an ongoing, contested process and not a definitive end-state once established. Thus, we demonstrate how a countermovement successfully challenged the established problematicity of global warming by reframing it as non-problematic, particularly via skillful deployment of sympathetic scientific expertise in public arenas (with their access facilitated by balancing norms). Future research should continue to identify those factors that facilitate the social construction of non-problematicity.

Specifically aided by the institutional power of ranking Republican politicians, the conservative movement successfully altered the nature of the global warming debate within Congress—away from the question of "*What do we need to do to address global warming?*" towards the more benign question of "*Is global warming really a problem?*" This highlights the utility of Zald's (2000a, 2000b) ISA concept since conservative movement leaders and ranking Republican politicians engaged in coordinated action toward a common goal—blocking ratification of the Kyoto Protocol. This is even more significant since there is every reason to believe that the heightened mobilization of leading conservative think tanks in the early 1990s contributed to the 1994 Republican takeover of Congress. On the other hand, the conservative movement did not significantly affect the general public's belief in the reality of global warming or support for the Kyoto Protocol (as evidenced by PIPA 1998). This raises obvious questions about the significance of public opinion, and thus we join other scholars in calling for more research on the role of public opinion vis-à-vis social movements (e.g., Giugni 1998) and policy-making (e.g., Burstein 1998).

Finally, the success of the conservative movement's opposition to a global warming treaty in the 1990s helps to explain the nature of the current isolationist stance of the United States government

in international climate negotiations. Indeed, we cautiously argue that recent policy debates in Washington D.C. seem to be more influenced by the enduring pre-Kyoto counter-claims of the conservative movement than the shifting position of the business community. While the stance of the conservative movement regarding global warming has changed little since 1997, the Kyoto Conference was a watershed for the business community by several accounts (Levy and Egan 1998; Newell 2000; Carpenter 2001).

Prior to the Kyoto Conference, the business community (and especially the fossil fuels industry) was nearly unanimous in its denial of global warming and its rejection of any binding climate treaty. However, since Kyoto more and more corporations have publicly acknowledged the reality of global warming[19] and have abandoned the anti-environmental Global Climate Coalition,[20] while joining groups—such as the Business Environmental Leadership Council—that acknowledge the necessity of decreasing greenhouse gas emissions. Membership in such associations often requires corporations to create their own programs for reducing carbon emissions. Finally, a substantial number of corporations are increasing their investments in renewable energy, fuel cells, and photovoltaics—although these totals still dwarf their budgets devoted toward maintaining fossil fuels operations (Levy and Egan 1998; Newell 2000; Carpenter 2001).

Thus, leading corporations are now positioning themselves to appear like pioneers leading us into a post-fossil fuels world. Regardless of motives (e.g., whether this is a blatant, short-term public relations move or a long-term, pragmatic move for competitive advantage in a post-fossil fuels market), much of the business community no longer sees challenging the reality of global warming to be a productive strategy. Indeed, this shift is consistent with the behavior of multinational corporations expected by ecological modernization theory (e.g., Mol and Spaargaren 2000). That is, multinational corporations are expected to adopt pro-environmental stances, practices, and products in order to maintain competitiveness and secure increased profits in important markets (e.g., Europe) where consumers demand such changes (Newell 2000).

While the multinational business community is pragmatically shifting to deal with the reality of global warming by working productively with governments around the world and collaborating proactively with the international environmental community, the more nationalistic American conservative movement is remarkably consistent in maintaining its pre-Kyoto position. This position appears to be having the most enduring impact in American policy circles, especially the current administration's stance on global warming. Since the conservative movement's position stems more from ideological grounds (whereas the business community's position is influenced by the economic bottom line), it becomes entrenched, arguably anti-reflexive, and unwilling to adapt to new evidence. Thus, while much of the business community has come to gradually acknowledge global warming

and even implement potential solutions, the conservative movement still basically challenges the reality of global warming and attempts to stifle any public discussion of climate policy by claiming it is infinitely costly and seemingly un-American.

Indeed, the Bush Administration appears to be significantly influenced by the conservative movement's enduring pre-Kyoto counter-claims. For instance, two recent White House documents sound like conservative think tank policy statements in their conspicuous and detailed emphases on the uncertainties of climate science (United States White House 2002a, 2002b). For example, *Climate Change Review* (2002a), which reports the initial findings of Bush's Cabinet-level climate change working group, ignores all the "core" knowledge claims about global warming, only discusses gaps and uncertainties in climate science, and even mischaracterizes the recent NAS report (National Research Council 2001) that endorses the IPCC conclusion that anthropogenic climate change is occurring and poses a potentially serious threat. In addition, a section of *Climate Change Review* (United States White House 2002a: 13-14) entitled "An Analysis of the Kyoto Protocol" reads like an outline of conservative movement counter-claims on global warming (McCright and Dunlap 2000).

In sum, the rhetoric as well as actions of the Bush Administration clearly suggests that the conservative movement's efforts in the 1990s to redefine global warming as non-problematic and thereby undermine the Kyoto Protocol are having an enduring influence. Once again, the conservative movement and especially conservative think tanks appear to have successfully affected our nation's policy-making, this time with international implications.

ENDNOTES

[1] We will use climate change and global warming interchangeably, although the former technically connotes all forms of climatic variability introduced by the general warming of the Earth's surface and oceans stemming from the increased accumulation of "greenhouse gases" (such as carbon dioxide) in the Earth's atmosphere. The increased concentration of such gases has strengthened the natural "greenhouse effect" whereby the atmosphere absorbs the sun's radiation rather than allowing it to escape into space (e.g., National Research Council 2001).

[2] As of January 2003, 84 nations have signed the Kyoto Protocol and 58 nations have ratified the treaty. Through signing and ratifying the Kyoto Protocol, developed nations agree to reduce their

future greenhouse gas emissions (predominately carbon dioxide) relative to their 1990 emissions levels. The Clinton Administration signed the Kyoto Protocol on November 12, 1998. Ratification of this treaty by the U.S. Senate would commit the United States to reduce emissions by seven percent during the period 2008 to 2012.

[3] Drawing upon Bachrach and Baratz (1970), Lukes (1974) argues that actors exercise the first dimension of power by protecting their subjective interests during direct conflicts over selected issues in public decision-making. Actors exercise the second dimension of power by confining the scope of decision-making to only those issues that do not seriously challenge their interests.

[4] Recently, social movement scholars (e.g., McAdam, McCarthy, and Zald 1996a; Tarrow 1998) point out that existing theories share a common interest in explaining the emergence, power, and success of social movements with three broad sets of factors: framing processes, mobilizing structures, and political opportunity structure. Prevailing wisdom holds that all three are important because the timing and form of social movements "bear the imprint of the specific opportunities that give them life" and "mobilizing structures and framing processes mediate the effects of political opportunities" (McAdam, McCarthy, and Zald 1996b: 11). In this paper, we utilize the dominant interpretations of these three factors to provide theoretical purchase in explaining the conservative movement's success in challenging the legitimacy of global warming as a social problem requiring sustained ameliorative action.

[5] One reviewer recommended we embed our case study within the more general literature on scientific controversies. While sympathetic to this suggestion, we believe it is more fruitful to build on the non-problematicity literature. Our case study reveals though that global warming does adhere to the general dynamics of such controversies, as identified by Mazur (1981) and Nelkin (1984).

[6] While there are various strands of contemporary conservatism (see, e.g., Lipset and Raab 1978), the term "conservative movement" is typically used by social scientists—and the actors being studied—to represent the elite-driven network of private foundations, policy-planning think tanks, and individual intellectuals and activists that directly or indirectly attempt to advance social traditionalism and economic libertarianism on a national level (Himmelstein 1990; Diamond 1995). Thus, we follow the precedent of scholars in this area (e.g., Saloma 1984; Allen 1992; Gottfried 1993) by treating this conglomeration of actors and organizations as a singular movement.

[7] See McCright and Dunlap (2000: 507) for the rationale for using the Internet.

[8] These scientists regularly call themselves "skeptic scientists." However, this is problematic since all scientists are (or at least should be) reflexive and skeptical. As such, we use the term "climate change skeptics" to convey the fact that what distinguishes these contrarian scientists from the vast

majority in the scientific community is their strong and vocal dissent from the growing consensus regarding the reality of anthropogenic climate change.

[9] Mazur (1981: 44-45) defines an occupational activist as someone who advocates for a position in a scientific controversy that is compatible with one's occupational role or organizational allegiance and is in the best interests of one's livelihood.

[10] All hearings on climate change or global warming were listed under this heading.

[11] A list of these hearings is available upon request.

[12] Yearley (1992) and Hannigan (1995) emphasize the environmental movement's heavy reliance on scientific experts. Yearley (1992) contends that while many social movements are based on moral and religious claims, the environmental movement's claims are heavily dependent upon scientific evidence and expertise. Furthermore, scientists also occupy a central location in the environmental movement and are instrumental in the organizational development of many environmental organizations (Mitchell, Mertig, and Dunlap 1992). Individual scientists and particular groups of scientists take highly visible leadership roles in the environmental movement, and these roles seem indispensable to the credibility and success of the movement.

[13] Indeed, the anti-environmental backlash promoted by these Republicans was so severe that it provoked public criticism by a sizable number of other Republicans. This led directly to the creation in 1995 of an organization named Republicans for Environmental Protection (REP America), which produces policy studies in many environmental areas that read like literature circulated by environmental SMOs—see, e.g., REP America's policy position on climate change (DiPeso 2000).

[14] In this 1995 hearing, the Republican contingent in the subcommittee tried to debunk the reality of ozone depletion—a scientific conclusion successfully established in the relevant scientific community years earlier. Indeed, with the support of President Reagan (1987), the U.S. Senate ratified the Montreal Protocol (to reduce the amount of ozone-depleting chlorofluorocarbons in the atmosphere) in March 1988 by a vote of 83-0.

[15] General analysis of this data shows that the number of Congressional hearings on global warming rose sharply in the first two years of the study and gradually declined after that. The number of Congressional hearings on global warming peaked in 1992—the year of the Rio Earth Summit. During that year there were nine major Congressional hearings that focused primarily on the problem of global warming. After 1992, the number of hearings decreased steadily to the point that between 1994 and 1997 there was an average of only three hearings per year devoted primarily to global warming. This may be a consequence of the 1994 Republican takeover of Congress, as a decrease in the number of Congressional hearings on global warming is consistent with the conservative

movement's goal of turning it into a non-issue in the national political arena. However, the evidence is insufficient to evaluate the validity of this assertion.

[16] Climate change skeptics presented 21.7% of all testimonies by industry allies (13 of 60) over the time period: 0 of 3 in 1990; 3 of 15 in 1991; 2 of 8 in 1992; 0 of 4 in 1993; 2 of 7 in 1994; 1 of 3 in 1995; 4 of 6 in 1996; and 1 of 14 in 1997.

[17] According to the 1949 Communications Act, all radio and television stations licensed by the Federal Communications Commission must present contrasting viewpoints on every controversial issue of public importance. This "Fairness Doctrine" affects not only radio and television news programming but also news reporting in the print media and the norms of journalism in general (Epstein 1973; Gans 1979; Gitlin 1980). The Fairness Doctrine forces a network to provide "balance" on an issue by presenting "both sides of the story"—even if one side is contrived, empirically false, and misleading (Epstein 1973). Indeed, this practice is often perceived as synonymous with "objective" journalism (Gans 1979). Furthermore, Gitlin (1980: 90) writes that "counterposed extremisms set up the sort of balances that journalists routinely equate with 'good stories'" not only because they satisfy this imposed balancing norm but also because they provide necessary dramatic conflict for the narrative structure of a news story.

[18] Arguably, President Clinton's boldest public statement regarding global warming occurred not while in office but quite recently during his September 11, 2002 guest appearance on the *Late Show with David Letterman* where he openly discussed the ramifications and solutions to global warming, apparently without fear of negative political consequences.

[19] This began with Dupont and British Petroleum/Amoco in 1997 and Royal Dutch/Shell, Texaco, General Motors, and Sun Oil in 1998.

[20] For instance, Dupont and British Petroleum/Amoco left in 1997, Royal Dutch/Shell in 1998, Ford in 1999, and Daimler Chrysler, General Motors, and Texaco in 2000.

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