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Climate Change Denial Books and Conservative Think Tanks: Exploring the Connection

Riley E. Dunlap[1] and Peter J. Jacques[2]

Abstract

The conservative movement and especially its think tanks play a critical role in denying the reality and significance of anthropogenic global warming (AGW), especially by manufacturing uncertainty over climate science. Books denying AGW are a crucial means of attacking climate science and scientists, and we examine the links between conservative think tanks (CTTs) and 108 climate change denial books published through 2010. We find a strong link, albeit noticeably weaker for the growing number of self-published denial books. We also examine the national origins of the books and the academic backgrounds of their authors or editors, finding that with the help of American CTTs climate change denial has spread to several other nations and that an increasing portion of denial books are produced by individuals with no scientific training. It appears that at least 90% of denial books do not undergo peer review, allowing authors or editors to recycle scientifically unfounded claims that are then amplified by the conservative movement, media, and political elites.

Keywords

climate change denial, conservative movement, conservative think tanks, denial books

No sooner had anthropogenic global warming (AGW) been placed on the public agenda, perhaps most effectively by James Hansen's 1988 congressional testimony, than an organized campaign to deny its reality and significance was launched. The

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early campaign was centered in corporate America, reflected by the Global Climate Coalition, but from the outset the conservative movement was heavily involved (McCright & Dunlap, 2000). The formation of the Intergovernmental Panel on Climate Change (IPCC) in 1988 and the emergence of the United Nations Framework Convention on Climate Change from the UN's 1992 "Earth Summit" in Rio generated fears of international action to reduce carbon emissions from fossil fuels use, fears crystallized by the 1997 Kyoto Protocol. Consequently, corporate America (especially fossil fuels corporations worried about restrictions on their products) and the U.S. conservative movement (for which opposition to governmental regulations is foundational) joined forces in attacking the scientific evidence for AGW and thus the necessity of reducing carbon emissions—the goal of the Kyoto Protocol.

Both industry and the conservative movement learned during the Reagan administration that frontal attacks on environmental regulations could create a backlash among the public (Dunlap, 1987). Consequently, they gradually shifted to another strategy, promoting "environmental skepticism." This strategy challenges the scientific evidence for environmental problems and therefore the need for regulations to protect environmental quality (Jacques, 2006; Jacques, Dunlap, & Freeman, 2008). Their major tactic was and continues to be manufacturing uncertainty (Michaels, 2008; Oreskes & Conway, 2010), constantly asserting that the evidence is not sufficient to warrant regulatory action. Historically these efforts focused on specific problems such as secondhand smoke, acid rain, and ozone depletion, but in the case of AGW they have ballooned into a full-scale assault on the multifaceted field of climate science, the IPCC, scientific organizations endorsing AGW, and even individual scientists (Powell, 2011; Weart, 2011).

With scientific evidence for AGW growing stronger and public awareness of global warming mounting (Nisbet & Meyers, 2007), in the late 1990s portions of corporate America—including some fossil fuels corporations—expressed acceptance both of the reality of AGW and necessity of reducing carbon emissions. Several corporations withdrew from the Global Climate Coalition (GCC), gradually leading to its demise in 2002, and it appeared that industry-funded attacks on the scientific evidence supporting AGW were subsiding (Dunlap & McCright, 2011). However, the conservative movement seemed dismayed by the corporate "sellout" and stepped up its already substantial efforts to deny the reality of climate change by attacking climate science and scientists (McCright & Dunlap, 2000, 2003). This transition is symbolized by the Cooler Heads Coalition, a coalition largely of conservative think tanks (CTTs) centered in the Competitive Enterprise Institute (CEI), emerging to fill the void created by the GCC. Similarly, the Heartland Institute, a small regional think tank in the 1990s, emerged as a leading force in climate change denial in the past decade (Pooley, 2010).

It now appears that CTTs such as CEI, the Heartland Institute, the CATO Institute, and the Marshall Institute are playing an ever more important role in efforts to deny AGW by attacking climate science. However, it must be noted that besides helping fund these think tanks, many corporations maintain ambivalent positions concerning

the necessity of reducing carbon emissions (Union of Concerned Scientists, 2012). Furthermore, major corporate associations such as the U.S. Chamber of Commerce and the American Petroleum Institute continue to strongly oppose policies to reduce carbon emissions (Pooley, 2010). Still, although corporations can bring their enormous resources to bear in lobbying against legislation, the conservative movement (especially its think tanks) often takes the lead in manufacturing uncertainty over climate science. Indeed, CTTs offer the ideal vehicle for undermining the credibility of climate science and attacking climate scientists.

CTTs have long been recognized as the crucial organizational base of the conservative movement, functioning as core "social movement organizations" (Jacques et al., 2008). Typically treated by media as credible sources of objective information, CTTs have achieved the status of an "alternate academia," and it is common to see their representatives interviewed along with or in lieu of leading academics and treated as independent experts on policy-relevant issues. They employ both in-house and commissioned personnel to produce a vast array of print material (from op-eds to policy briefs to magazine articles to books) as well as make media appearances, provide congressional testimony, give speeches, and so on to promote conservative positions on a wide range of policy issues including environmental protection (McCright & Dunlap, 2000, 2003). CTTs have been credited with having a major impact on U.S. politics and policy making (e.g., Stefanic & Delgado, 1996), influencing such aspects of American life as the conservative tilt of our judicial system (Teles, 2007), tax policies resulting in escalating inequality (Hacker & Pierson, 2007), and the fundamental framing of political debate (Smith, 2007).

It is little wonder then that CTTs have become central actors in climate change policy debates, especially by promoting denial of the reality and significance of AGW and thus the necessity of carbon emission reductions (Dunlap & McCright, 2011; Hoggan, 2009; Lahsen, 2008; McCright & Dunlap, 2000, 2003; Oreskes & Conway, 2010; Powell, 2011). The purpose of this article is to examine in detail one key tool CTTs use to sow skepticism toward AGW throughout the larger society: sponsoring books espousing climate change denial, including those by the small number of contrarian scientists who challenge mainstream climate science.

Books Challenging Climate Science

Although just one of many forms of media employed by CTTs, books are especially important for reaching the conservative movement's core constituency, wider segments of the public, and critical sectors of society such as corporate, political, and media leaders. Books confer a sense of legitimacy on their authors and provide them an effective tool for combating the findings of climate scientists that are published primarily in scholarly, peer-reviewed journals—at least within the public and policy (as opposed to scientific) arenas. Authors of successful books critiquing climate science often come to be viewed as "climate experts," regardless of their academic backgrounds or scientific credentials, and despite the fact that their books are seldom peer

reviewed. They are interviewed on TV and radio, quoted by newspaper columnists, and cited by sympathetic politicians and corporate figures. Their books are frequently carried by major bookstore chains, where they are seen (even if not purchased) by a wide segment of the public, many receive enormous publicity on CTT websites and from conservative and skeptical bloggers, and some are carried by the Conservative Book Club. In short, books are a potent means for diffusing skepticism concerning AGW and the need to reduce carbon emissions. Given the critical role of CTTs in challenging climate science and policy making, and their proclivity for using books to promote their causes, we expect to find a strong link between CTTs and books espousing climate change denial.

In part this expectation is based on prior experience. In an earlier study of environmental skepticism writ large (Jacques et al., 2008), we examined 141 books espousing skepticism toward the scientific evidence for environmental problems of all types (including global warming) published through 2005, looking for evidence of linkages to CTTs. We found that 130, or 92%, of the books were linked to a CTT, either via publication by a CTT press or a verifiable connection between the author or editor and a CTT, or both. These links to highly influential and generally well-heeled CTTs challenge a common theme of the books—namely, that the authors or editors are little Davids battling the Goliath of environmental science.

The present study extends our earlier work by examining books espousing climate change denial per se published through 2010, including some examined in the prior study since they represent examples of environmental skepticism. Besides focusing on book connections to CTTs, we also examine the educational credentials and national backgrounds of their authors or editors. Given that climate change denial has become widespread within the United States and to some degree internationally, we pay particular attention to the role of CTTs in diffusing a skeptical view of climate change and climate science to a wider audience both within the United States and internationally.

The Study

Our data set consists of the population of English-language books assigned an International Standard Book Number (ISBN) that espouse various forms of climate change denial.[1] These books reject evidence that global warming is occurring, that human actions are the predominant cause of global warming, and/or that global warming will have negative impacts on human and natural systems. These arguments have been labeled trend, attribution, and impact denial (Rahmstorf, 2004). Books were included only if they take one or more of these positions challenging climate science, all of which are used to reject the necessity of carbon emission reductions. We located 108 books espousing one or more of these versions of climate change denial published through 2010, employing searches via online book stores, bibliographies in denial books, references in articles written by climate change skeptics, and several skeptic

blogs that promote denial literature. Climate change denial books, especially those that were published by obscure presses or were self-published, can be difficult to locate, and we have possibly missed a few. However, we are confident that the 108 we analyze represent virtually all denial books in English, allowing us to generalize our findings with confidence.

We limit our analysis to first-edition books, ignoring the small number of second-edition volumes that came out in only slightly revised form.[2] The books are listed in the appendix (along with selected information we will shortly describe), grouped by their country of origin as determined via the lead author's or editor's apparent place of residence, and then arranged alphabetically by lead author or editor.

In addition to examining book links with CTTs—as done in our prior study—and location of lead author, we coded date of publication, the type of publisher employed, and information on the academic credentials (degrees and fields of study) of authors or editors. Our overall goal is to provide a good sense of the sources of these volumes—who is writing them and who is publishing them—paying special attention to the role of CTTs in the process. In the following sections we describe our coding decisions and thereby clarify information presented for each book in the appendix.

Results

We begin by charting the publication of these books over time, documenting the recent rapid increase in their numbers, and then highlight a significant new development—the growth of self-published books, often by laypersons denying AGW. We then examine the connections between CTTs and the books, noting how this connection differs for books issued by publishing houses and those that are self-published. We next examine the national origins of the books, showing how production of climate change denial volumes has spread from the United States to several other nations as denial has diffused internationally, noting the role of CTTs in this process. Then we turn to the academic and scientific credentials of the authors or editors of the books, highlighting trends over time and variation across nations. We end by commenting on how the publishing sources used by the denial authors enables most of them to avoid peer review.

Trends Over Time

As apparent in Figure 1, the first denial volume, Sherwood Idso's *Carbon Dioxide: Friend or Foe*,[3] appeared in 1982, well before AGW had achieved a prominent place on the nation's agenda. Highlighting the benefits of carbon dioxide, Idso took issue with early climate science that suggested increasing levels of carbon dioxide could produce deleterious effects. The remaining 107 books began appearing in 1989, the year after AGW became a highly visible issue in the United States and the IPCC was established, with 4 coming out that year. They were followed by 19 denial books

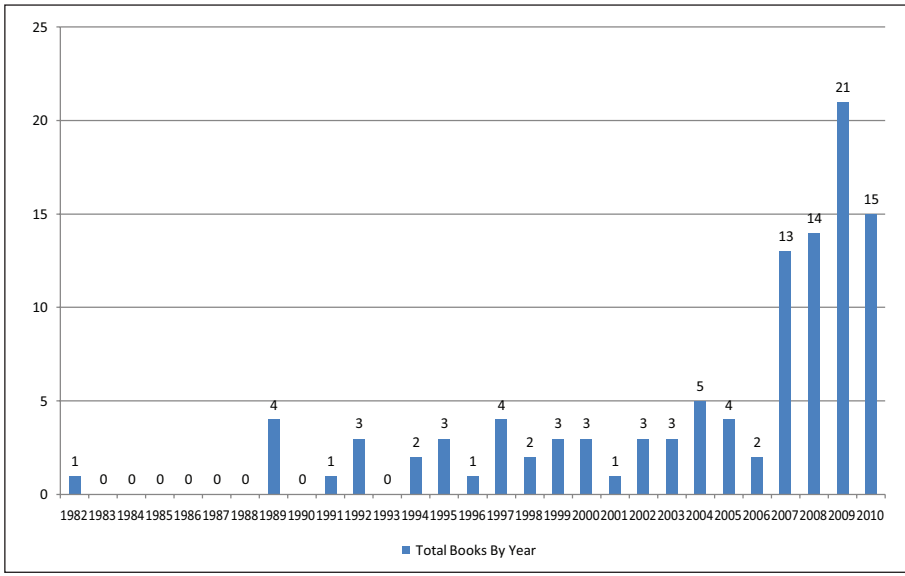

Figure 1. Climate change denial books by year.

published in the 1990s, 13 of them in the last half of that decade, reflecting a relatively slow but steady growth in their rate of publication. Another 15 appeared during the first half of the next decade, followed by a veritable explosion of 54 in the second half (especially 2007 to 2009), making a total of 69 from 2000 to 2009. Another 15 came out in 2010, yielding the total of 108 we are examining.

Many factors influence the writing and timing of books, and we can only speculate on the trend we have just described. There is a slow growth in the number of books appearing before the December 1997 meeting on the Kyoto Protocol,[4] then a relatively stable period of modest production (from one to five books a year) for the following decade, followed by the very rapid increase in the number of denial books per year beginning in 2007. There are several factors that likely stimulated the accelerated production of denial books starting in 2007: The release of Al Gore's (2006) *An Inconvenient Truth* in both video and book form the prior year and the enormous publicity it received, culminating in the video receiving the 2007 Academy Award for best documentary; Gore and the IPCC receiving the 2007 Nobel Peace Prize; publication of the IPCC's fourth Assessment Report claiming "unequivocal" evidence of global warming, and attributing it primarily to increasing anthropogenic greenhouse gas concentrations; consideration of climate change legislation in Congress, particularly the Warner-Lieberman Bill in the Senate and then the Waxman-Markey Bill in the House; and a notable rise in public concern about global warming (Brulle, Carmichael, & Jenkins, 2012).

The rising salience of global warming in the eyes of the public and the growing pressure for ameliorative policy action stimulated those skeptical of AGW and opposed to carbon emission reduction policies to step up their efforts to deny the reality and seriousness of AGW. One manifestation of this increased sense of urgency is the accelerating appearance of books critiquing climate science, attacking Gore and climate scientists, and arguing against the need for carbon emission reductions. Other manifestations include conservative elites and media becoming major vehicles for climate change denial, making it a virtual litmus test for Republican political candidates and adding it to the "culture wars" (joining God, gays, guns, and abortion) in the eyes of conservative laypeople—particularly those attracted to the Tea Party (Hoffman, 2012; Leiserowitz, Maibach, Roser-Renouf, & Hmielowski, 2011; McCright & Dunlap, 2011).

Such diffusion of climate change denial from the core sectors of the conservative movement, especially think tanks, is reflected in an interesting development concerning the denial books: a rapid growth in self-published volumes.[5] Specifically, 33 of the books under examination were published by individuals on their own or via a "vanity press," but 30 of them have appeared since 2000—with 26 coming out between 2007 and 2010! This development has influenced the relationship between denial books and CTTs, as we see next.

Book Ties With Conservative Think Tanks

Our examination of the links between the denial books and CTTs follows the procedure we used in our prior study of environmental skepticism (Jacques et al., 2008). Specifically, links were established in one of two ways: The author or editor was affiliated with a CTT or the book was published (or copublished) by a CTT press (often both). Author or editor affiliations with CTTs had to be empirically verifiable (typically from the CTT websites, where they were listed as board members, advisors, experts, etc.) and were not inferred. In choosing to err on the side of caution, we have possibly missed a few affiliations.

Table 1 shows the number of denial books linked to CTTs by decade (2000–2010 covers 11 years), as well by whether or not they were issued by a publisher or were self-published. To begin with, in the bottom of the third column we see that across all years 78 of the total 108 volumes, or 72%, have a verifiable link with a CTT. Although reflecting a strong link between CTTs and the denial volumes, this is noticeably lower than the 92% of books espousing environmental skepticism (which, again, includes some of the same books) published through 2005 found to have such a link in our prior study. However, the primary reasons for the lower percentage of climate change denial books being linked to CTTs are suggested by the trends over time as well as a comparison of the links for self-published books versus those issued by publishing houses. First, in the third column we can see that 100% of the denial books published in the 1980s and 95% published in the 1990s are linked to

Table 1. Conservative Think Tank Connections of Climate Change Denial Books—With Publishers, Self-Published, and Total—by Decade.

	Publisher		Self-published		Total books	
	%	*n*	%	*n*	%	*n*
1980–1989						
Yes	100	3	100	2	100	5
No	—	0	—	0	—	0
Total	100	3	100	2	100	5
1990–1999						
Yes	94	17	100	1	95	18
No	6	1	—	0	5	1
Total	100	18	100	1	100	19
2000–2010						
Yes	83	45	33	10	65	55
No	17	9	67	20	35	29
Total	100	54	100	30	100	84
All books						
Yes	87	65	39	13	72	78
No	13	10	61	20	28	30
Total	100	75	100	33	100	108

CTTs, whereas this is true of "only" 65% of those published since 2000. Second, the large decline in the percentage of CTT links since 2000 is primarily the result of the preponderance of self-published books appearing over the 11 years, as only one third of the 30 self-published books coming out since 2000 are linked to a CTT. In contrast, 83% of the books from publishing houses since 2000 have links to CTTs. More generally, in the bottom row we see that of the 75 denial books issued by a publishing house, 87% are linked to a CTT, whereas of the 33 self-published denial books, only 39% have such a link.

In recent years production of climate change denial books has "diffused" from CTTs to a broader segment of the conservative movement, just as endorsement of climate change denial has spread throughout most of the conservative sector of the public (McCright & Dunlap, 2011). Although the link between denial books issued by publishing houses and CTT presses (87%) is nearly as strong as the overall link found in our prior study of books espousing environmental skepticism, the link is much weaker for self-published denial books. This reflects the fact that many of the self-published books are written by laypeople, often without any scientific background whatsoever, who are clearly quite conservative and have presumably adopted climate change denial because it has become a core tenet of conservatism and is promoted by conservative media and elites.

Furthermore, it should be noted that nearly all of the authors or editors of the 108 books endorse a conservative ideology, confirming the strong link between conservatism and promotion of climate change denial emphasized by analysts of the denial campaign (Dunlap & McCright, 2011; Oreskes & Conway, 2010). Also, 17 of the 75 books issued by a publishing house, including the numerous CTT presses, are published by overtly conservative presses or conservative religious presses (as noted in the appendix), additional evidence of the strong link between conservatism and climate change denial.

Social movement organizations attempt to diffuse their views, both within the movement as well as throughout the larger society (Strang & Soule, 1998). As the core organizations of the conservative movement, CTTs have obviously been effective in spreading climate change denial throughout the movement, helped of course by conservative media and politicians, various Astroturf campaigns (that they helped establish), the Tea Party, and other elements of what has been termed the climate change "denial machine" (Dunlap & McCright, 2011). As noted above, one manifestation is the increasing number of self-published books by conservative individuals not directly linked to a CTT. The fact that these authors typically cite (and often rely heavily on) prior books with links to CTTs illustrates this successful diffusion.

There should be no doubt as to which set of books is most influential. At major bookstores you are likely to find titles like *Red Hot Lies* by Christopher Horner of the CEI, *Shattered Consensus* by Patrick Michaels of the CATO Institute, or *Unstoppable Global Warming* by Fred Singer of the Science and Environmental Policy Project and Dennis Avery of the Hudson Institute, titles also likely to be carried by the Conservative Book Club. On average, the books affiliated with CTTs receive far more publicity (including media appearances for their authors), sell much better, and thus reach larger audiences than do those that are self-published. In addition, individuals affiliated with CTTs are especially likely to produce multiple denial volumes—most notably Fred Singer with six and Patrick Michaels with five. In fact, of the 15 individuals who have published two or more books, 14 are affiliated with CTTs.

It is therefore clear that CTTs have played a central role in the explosion of books promoting climate change denial. Indeed, the CTTs that have played particularly prominent roles in attacking climate science in various ways are especially likely to publish (or copublish) the denial books, with the Cato Institute publishing five, the Heartland Institute publishing four, and the CEI, the Marshall Institute, the Hoover Institution, and the U.K. Institute for Economic Affairs each publishing three. These same CTTs are of course linked to far more of the titles via author or editor affiliations.

National Origins of Books

The denial of climate change has also diffused geographically, as in the past several years vigorous denial campaigns have developed in the United Kingdom, Canada, and Australia (Hamilton, 2007; Hoggan, 2009; Monbiot, 2007), and—to a lesser degree—

Table 2. Climate Change Denial Books by Nation by Decade and for All Years.

	United States		United Kingdom		Other		Total	
	%	*n*	%	*n*	%	*n*	%	*n*
1980s	80	4	20	1	—	0	100	5
1990s	63	12	21	4	16	3	100	19
2000+	60	50	17	14	24	20	101[a]	84
All years	61	66	18	19	21	23	100	108

a. Rounding error.

in a number of other nations (Dunlap & McCright, 2011). This diffusion has been stimulated in part by the direct efforts of U.S.-based CTTs, which have sent representatives including contrarian scientists Fred Singer and Patrick Michaels to other nations to promote climate change denial and to network with other members of the denial community.[6] These efforts have succeeded particularly well in nations that have a recent history of staunch conservative governments, influential CTTs, and a strong fossil fuels sector—as do Canada, Australia, and the United Kingdom, along with the United States.

The results of the successful geographical diffusion of climate change denial are apparent in Table 2 and the appendix. The latter shows that 19 of the denial books have been authored (or in one case edited) by individuals residing in the United Kingdom, followed by 7 from Canada and 6 from Australia. Other nations from which these English-only books have sprung include Denmark, France, and Sweden, with two each, and the Czech Republic, Germany, New Zealand, and the Netherlands, with one each.[7] The results in Table 2 portray the pattern of diffusion by decade. In the 1980s, 80% of the denial books originated in the United States, and the United Kingdom was the only other nation with a single volume (contributing 20% of the small total of five). In the 1990s, the United States contributed 63% of the denial books, followed by the United Kingdom with 21%, whereas the other nine nations contributed 16%. Since 2000, 60% of the denial books have come from the United States, 17% from the United Kingdom, and 24% from the remaining nine nations. That 4 of every 10 denial books since 2000 have been produced by authors or editors outside of the United States is evidence of the success of the U.S. conservative movement in helping diffuse denial internationally.

The role of CTTs in diffusing climate change denial internationally is shown in Table 3. Here we see that (because of the recent growth of self-published denial books in the United States) 65% of all denial books in the United States have a link with a CTT, but the figure is much higher in the other nations. In fact, 79% of the books from the United Kingdom are connected to CTTs, and 87% of the books from the various other nations are connected to CTTs. Thus, the pattern of strong connections between climate change denial books coming out of other nations (the large

Table 3. Conservative Think Tank Connections of Climate Change Denial Books by Nation and for All Books.

	United States		United Kingdom		Other		All books	
	%	*n*	%	*n*	%	*n*	%	*n*
Yes	65	43	79	15	87	20	72	78
No	35	23	21	4	13	3	28	30
Total Books	100	66	100	19	100	23	100	108

majority of which were published since 2000) comes close to the earlier situation in the United States where all 4 of the denial books published in the 1980s are linked to CTTs, and 11 of 12 published in the 1990s have such a link, making 94% of the early (prior to 2000) U.S. books having a CTT connection. It is not surprising that *all eight* of the denial books with non-U.S. authors or editors published prior to 2000 are connected to a CTT.

Although there is considerable variation in the strength of the conservative movement across the nations being examined, especially in terms of support among the general public, as well as in the popularity and ease of putting out self-published books, it will nonetheless be interesting to see if the production of climate change denial books diffuses beyond CTTs in other nations to the degree that it has in the United States in the past decade.

Academic Credentials of Authors and Editors

Interests promoting environmental skepticism have long employed individuals with academic degrees in science—likely to be accepted as "experts" by the public, media, and policy makers—to attack scientific evidence suggesting the need for environmental regulations (Jacques et al., 2008; Michaels, 2008; Oreskes & Conway, 2010). In their efforts to manufacture uncertainty over climate science, both the fossil fuels industry (especially early on) and CTTs have enlisted the support of a small number of contrarian scientists to critique and attack both climate science and climate scientists. Although the contrarians portray themselves as a minority of truth seekers battling the large "climate establishment," some of them have worked directly for the incredibly wealthy fossil fuels industry (including "front groups" it has set up, like the GCC) or well-funded CTTs. Patrick Michaels and Fred Singer are particularly notable in this regard (Hoggan, 2009; Powell, 2011).

One of the key features of the debate over climate change and especially the credibility of climate science is the asymmetry between the scientific credentials of mainstream climate scientists and their critics in the denial community, including the small

Table 4. Climate Change Denial Books by Academic Degrees of Authors or Editors by Decade and for All Years.

	Natural science PhD		Other PhD		No PhD		Total books	
	%	*n*	%	*n*	%	*n*	%	*n*
1980s	80	4	—	0	20	1	100	5
1990s	53	10	37	7	11	2	101[a]	19
2000+	33	28	17	14	50	42	100	84
All years	39	42	19	21	42	45	100	108

a. Rounding error.

number of contrarian scientists who critique and often attack mainstream climate science and scientists (Anderegg, Prall, Harold, & Schneider, 2010). A handful of contrarians have degrees in disciplines relevant to climate science, but others have PhDs in less germane natural science fields (e.g., soil science) that nonetheless—at least in the eyes of nonscientists—provide them with scientific credentials (Hoggan, 2009; Powell, 2011).

Because the use of apparent scientific expertise by those promoting climate change denial has played a vital role in the attacks on climate science (McCright & Dunlap, 2000, 2003; Powell, 2011), we examined the academic credentials of the authors or editors of the 108 denial books. Our aim is to provide a good sense of the contribution of contrarian scientists (who produce a wide range of material, from op-eds to policy briefs to an occasional journal article) to the denial volumes, as well as the backgrounds of the nonscientists who are also producing them. We coded each author or editor in terms of his or her highest academic degree and the field in which it was obtained. For present purposes we have separated the authors or editors into three categories: (a) those with PhDs in natural science (regardless of the field, thus including chemistry, geology, soil science, etc., as well as those more directly related to climate science), (b) those with other PhDs or equivalent degrees,[8] often in social science, and (c) those with less than a doctorate. Of the of 106 individuals who have authored or coauthored or edited or coedited one or more of the 108 denial books, 32 have a natural science PhD, 24 have a PhD in other fields, and 50 do not have doctorates.

We next assigned a code to each volume based on the highest or most relevant degree of *any* coauthor or coeditor. Thus, for example, *Man-Made Global Warming* by Hans Labohm, Simon Rozendaal, and Dick Thoenes (of the Netherlands) is coded as a 1 because Thoenes has a doctorate in chemical engineering. The results reported in Table 4 reveal that even with our "relaxed" coding scheme, whereby *any* natural science PhD degree held by *any* coauthor or coeditor is treated as indicating (at least potentially) relevant scientific expertise, only 39% of the total 108 denial volumes are authored or edited by individuals with scientific credentials as normally defined in

Table 5. Climate Change Denial Books by Author or Editor Degrees by Nation and for All Books.

	Natural science PhD		Other PhD		No PhD		Total books	
	%	*n*	%	*n*	%	*n*	%	*n*
United States	48	32	18	12	33	22	99[a]	66
United Kingdom	11	2	32	6	58	11	101[a]	19
Other	35	8	13	3	52	12	100	23
All books	39	42	19	21	42	45	100	108

a. Rounding error.

academic circles.[9] Another 19% of the books are produced by individuals with other doctorates, primarily in economics, politics, and law, and the remaining 42% by individuals without a doctorate.

When it comes to putting out books, the denial community clearly relies on a wide range of contributors well beyond the small number of contrarian (natural) scientists in its ranks. Again, however, we can observe some degree of diffusion over time, as individuals with natural science doctorates were involved in producing 80% of the small number of books coming out in the 1980s (4 of 5) and 53% (10 of 19) in the 1990s, but only 33% (28 of 84) since 2000. Thus, the campaign to deny the significance of AGW relied heavily on contrarian scientists early on, to give it scientific credibility, but over time climate change denial has spread sufficiently throughout the conservative community that individuals without any scientific expertise now produce denial volumes.

Finally, just as we earlier noted variation in the degree to which denial books are linked to CTTs across nations, we also find national variation in the reliance on contrarian scientists. Table 5 shows that natural scientists are involved with nearly half (48%) of the denial volumes coming from the United States. In stark contrast, only 2 of the 19 denial books or just 11% coming out of the United Kingdom have natural scientists as authors or editors, whereas 35% of the denial books from the remaining nine countries are produced (or coproduced) by natural scientists. These patterns partially reflect temporal trends, since the natural scientists are most heavily involved in the denial books published before 2000, and the preponderance of non-U.S. books have come out since then.

What these patterns suggest is that early on a small number of contrarian scientists, primarily located in the United States, played a critical role in planting and legitimating climate change denial within conservative circles. Highly influential scientists such as physicists Frederick Seitz, Robert Jastrow, and Robert Nierenberg of the Marshall Institute (Lahsen, 2008; Oreskes & Conway, 2010) and omnipresent Fred Singer and Patrick Michaels (Hoggan, 2009; Powell, 2011) worked diligently to criticize climate science and scientists and received a good deal of visibility (McCright &

Dunlap, 2003). As denial evolved over time and spread throughout a larger segment of American society (particularly among conservatives) as well as to other nations, the seeds sown by the contrarians have germinated and a wide range of individuals without backgrounds in natural science and thus relevant credentials for evaluating climate science feel free to write books denying AGW—and often publish them on their own! Of course, the diffusion has been facilitated by powerful actors, first by the fossil fuels industry and then by the conservative movement, primarily via the latter's influential think tanks.

The strong connection between contrarian scientists and CTTs is reflected in one additional finding. Of the 32 individuals with natural science PhDs in our study, 25 or 78% are connected to at least one CTT. In contrast, of the 50 individuals without a PhD, only 25 or 50% have a CTT connection, reflecting the fact that these people are often laypersons who are likely to self-publish their books. The strongest connection exists for the 24 individuals with nonscience PhDs, as 21 or 88% of them have links to one or more CTTs, where degrees in economics (8 individuals), politics (4 individuals), and law (3 individuals) confer plausible policy expertise.

Freedom From Peer Review and Its Implications

It is often noted that individuals promoting climate change denial, including the small number of contrarian scientists, mainly criticize or "audit" the work of climate scientists (especially as summarized by the IPCC), and only infrequently contribute to climate science themselves (e.g., Powell, 2011, chap. 3). Unlike mainstream climate scientists, who publish primarily in peer-reviewed journals, these critics typically employ a range of non-peer-reviewed outlets, ranging from blogs to the books we are examining. A large majority—97 of the 108 books—are self-published (33), published by a CTT press (35), published by a conservative (or conservative religious) press (17), or published by a popular press (12), and are thus unlikely to have undergone peer review—particularly by individuals with expertise in climate science. The remaining 11 books are issued by publishing houses that specialize in natural science and may have been subject to peer review, but this is often not clear from the publishers' websites. Of interest, four volumes are issued by Multi-Science Publishing in the United Kingdom, which also publishes *Energy & Environment*, a minor journal known primarily for providing a forum for climate skeptics and criticized for lack of adequate peer review (see, e.g., Barley, 2011). Notably, not a single denial book is published by a university press.[10]

The general lack of peer review allows authors or editors of denial books to make inaccurate assertions that misrepresent the current state of climate science. Like the vast range of other non-peer-reviewed material produced by the denial community, book authors can make whatever claims they wish, no matter how scientifically unfounded.[11] In fact, the lack of peer review in the "denialosphere" (Pooley, 2010) means that denial claims are continually recycled, no matter how many times they are refuted by empirical test or shown to be logically untenable (Powell, 2011; Washington

& Cook, 2011). Weart (2011, p. 48) terms them "zombie arguments" because they repeatedly rise from the grave.

Whereas scientific knowledge slowly but surely accumulates through testing, and then rejecting, modifying, and/or verifying hypotheses and theories,[12] the denial literature is cumulative in the literal sense. Regardless of how thoroughly discredited in the scientific literature, denialist claims (the recent warming trend reflects a natural cycle, is the result of solar activity, won't produce harmful impacts, etc.) are retained and reused whenever convenient. Non-peer-reviewed books espousing climate change denial offer an ideal means of presenting these claims, accounting for the growing popularity of such books. Strikingly, many of these books not only provide fallacious critiques of climate science but also present an alternate reality in which global warming is a hoax created by a conspiracy of supposedly greedy scientists, liberal politicians, and environmentalists (McKewon, 2012).

The general lack of peer review for the denial books is a common feature of the vast body of literature produced by the climate change denial community, ranging from blogs to newspaper op-eds to policy briefs from CTTs. Not being subject to peer review allows authors or editors of denial books to make scientifically inaccurate and discredited claims that are often amplified in conservative media and the blogosphere, potentially reaching significant segments of the general public. Their false claims are also used by conservative politicians, who sometimes invite the authors to testify at congressional hearings (McCright & Dunlap, 2003) and thereby provide them a direct voice in the policy-making arena. Although mainstream scientists occasionally take the time to debunk some of the more visible denial volumes, the proliferation of such books makes it impossible for busy scientists to critically review most of them. Thus, denial books are likely to continue to multiply, and many will receive considerable attention from sympathetic and scientifically unsophisticated audiences (McKewon, 2012). They are clearly a vital weapon in the conservative movement's war on climate science, and one of the key means by which it diffuses climate change denial throughout American society and into other nations.

Appendix

First-Edition English-Language Books Espousing Climate Change Denial and Their Links to Conservative Think Tanks (CTTs)

- Titles in bold do NOT have an apparent link with a CTT
- CTTs are italicized
- Italicized authors or editors hold a natural science doctorate
- *Self-published title
- **Overtly conservative publisher
- ***Conservative religious publisher

Lead Author Location
A. United States (n = 66)

Author or editor	Title	Publisher	Author or editor affiliations with CTTs	Date first published
Adler, Jonathan H. (ed.)	The Costs of Kyoto: Climate Change Policy and Its Implications	*Competitive Enterprise Institute*	*Competitive Enterprise Institute; Political Economy Research Center*	1997
Alexander, Ralph B.	**Global Warming False Alarm: The Bad Science Behind the United Nations' Assertion that Man-Made CO2 Causes Global Warming**	Canterbury Publishing*	None apparent	2009
Arrak, Arno	**What Warming? Satellite View of Global Temperature Change**	Booksurge.com Publishing*	None apparent	2009
Auxt, Jay A. and William Curtis III	**Global Warming and the Creator's Plan**	New Leaf Publishing Group/Master Books***	None apparent	2009
Bailey, Ronald (Ed.)	Global Warming and Other Eco Myths: How the Environmental Movement Uses False Science to Scare Us to Death	Prima Publishing/ Forum/*Competitive Enterprise Institute*	*Competitive Enterprise Institute; Cato Institute*	2002
Balling, Robert C., Jr.	The Heated Debate: Greenhouse Predictions Versus Climate Reality	*Pacific Research Institute for Public Policy*	*Committee for a Constructive Tomorrow; George C. Marshall Institute;* TechcentralStation.com/TCSDaily.com;[a] *Competitive Enterprise Institute;* ICECAP[b]	1992
Barrante, James	**Global Warming for Dim Wits: A Scientist's Perspective of Climate Change**	Universal Publishers	None apparent	2010

(continued)

Appendix (continued)

Author or editor	Title	Publisher	Author or editor affiliations with CTTs	Date first published
Battros, Mitch	**Global Warming: A Convenient Disguise**	Earth Changes Media*	None apparent	2007
Bradley, Robert L., Jr.	Climate Alarmism Reconsidered	*Institute of Economic Affairs*	*Competitive Enterprise Institute; Cato Institute; Institute for Energy Research*	2003
Cotton, William R. and Roger A. Pielke Sr.	Human Impacts on Weather and Climate	ASTeR Press*	Cotton: *The Heartland Institute*, ICECAP; Pielke, Sr.: *Science and Environmental Policy Project; Science and Public Policy Institute*	1992
Dana, D. J.	**A Convenient Lie: Common Sense Talk About Climate Change**	CreateSpace.com.com*	None apparent	2010
Dears, Donn	Carbon Folly: CO2 Emission Sources and Options	TSAugust*	*George C. Marshall Institute; The Heartland Institute*	2008
Fong, Peter	**Greenhouse Warming and Nuclear Hazards**	World Scientific	None apparent	2005
Goreham, Steve	Climatism! Science, Common Sense, and the 21st Century's Hottest Topic	New Lenox Books*	*Heartland Institute*	2010
Hayden, Howard C. (Ed.)	A Primer on CO2 and Climate	Vales Lake Publishing, LLC*	*The Heartland Institute; Competitive Enterprise Institute/Cooler Heads Coalition*	2007
Hoffman, Doug and Allen Simmons	**The Resilient Earth: Science, Global Warming and the Future of Humanity**	Booksurge.com*	None apparent	2009

(continued)

Appendix (continued)

Author or editor	Title	Publisher	Author or editor affiliations with CTTs	Date first published
Horner, Christopher C.	The Politically Incorrect Guide to Global Warming (and Environmentalism)	Regnery Publishing**	*The Competitive Enterprise Institute/Cooler Heads Coalition*	2007
Horner, Christopher C.	Red Hot Lies: How Global Warming Alarmists Use Threats, Fraud, and Deception to Keep You Misinformed	Regnery Publishing**	See above	2008
Hunt, William	**Global Warming Challenged: True Climate Crisis or Media Hype?**	CreateSpace.com*	None apparent	2009
Hunt, William	**Global Warming Challenged: Cost Optimized Edition**	CreateSpace.com*	None apparent	2010
Huseman, Richard	**Man-Made Global Warming Hoax**	Equity Press*	None apparent	2010
Husher, John Durbin	**Beyond Global Warming: The Bigger Problem and Real Crisis**	iUniverse, Inc.*	None apparent	2007
Idso, Craig D.	CO2, Global Warming and Coral Reefs: Prospects for The Future	Vales Lake Publishing, LLC with *Science and Public Policy Institute*	*George C. Marshall Institute; Center for the Study of C02;* ICECAP	2009
Idso, Craig D. and Sherwood B. Idso	CO2, Global Warming and Species Extinctions: Prospects for the Future	Vales Lake Publishing, LLC with Center for the Study of Carbon Dioxide and Global Change and *Science and Public Policy Institute*	Craig: see above; Sherwood: *George C. Marshall Institute; Center for the Study of C02*; ICECAP	

(continued)

Appendix (continued)

Author or editor	Title	Publisher	Author or editor affiliations with CTTs	Date first published
Idso, Craig D. and S. Fred Singer	Climate Change Reconsidered: The 2009 Report of the Non-Governmental Panel on Climate Change (NIPCC)	*Heartland Institute*	Idso: see above; Singer: *Science and Environmental Policy Project; Independent Institute; American Council on Science and Health; Cato Institute; National Center for Policy Analysis; Natural Resource Stewardship Project; The Hoover Institution on War, Revolution and Peace; Heritage Foundation;* ICECAP	2009
Idso, Sherwood B.	Carbon Dioxide: Friend or Foe	Institute for Biospheric Research*	See above	1982
Idso, Sherwood B.	Carbon Dioxide and Global Change: Earth in Transition	Institute for Biospheric Research*	See above	1989
Innes, William B.	**CLIMATE CON? History and Science of the Global Warming Scare**	Authorhouse*	None apparent	2007
Innis, Roy	Energy Keepers, Energy Killers	*Merril Press* (Branch of *The Center for the Defense of Free Enterprise*)	*The Congress of Racial Equality; The Hudson Institute*	2008
Jastrow, Robert, William Nierenberg, and Frederick Seitz	Scientific Perspectives on the Greenhouse Problem	Jameson Books/*The Marshall Press (George C. Marshall Institute)*	Jastrow: *George C. Marshall Institute*; Nierenberg: *George C. Marshall Institute; Science and Environmental Policy Project*; Seitz: see above	1989 via *George C. Marshall Institute*/1990 via Jameson and *The Marshall Press*
Johnson, Leo	**The Layman's Guide to Understanding the Global Warming Hoax**	Red Anvil Press*	None apparent	2008

(continued)

Appendix (continued)

Author or editor	Title	Publisher	Author or editor affiliations with CTTs	Date first published
Mendelsohn, Robert O.	The Greening of Global Warming (AEI Studies on Global Environmental Policy)	*American Enterprise Institute for Public Policy Research*	Global Warming Policy Foundation	1999
Michaels, Patrick J.	Sound and Fury: The Science and Politics of Global Warming	*Cato Institute*	*Cato Institute; Consumer Alert; George C. Marshall Institute; The Heritage Foundation; American Legislative Exchange Council; ICECAP*	1992
Michaels, Patrick J.	Meltdown: The Predictable Distortion of Global Warming by Scientists, Politicians, and the Media	*Cato Institute*	See above	2004
Michaels, Patrick J. (Ed.)	Shattered Consensus: The True State of Global Warming	Rowman & Littlefield/ *George C. Marshall Institute*	See above	2005
Michaels, Patrick J. and Robert C. Balling, Jr.	The Satanic Gases: Clearing the Air About Global Warming	*Cato Institute*	Michaels: see above; Balling: see above	2000
Michaels, Patrick J. and Robert C. Balling, Jr.	Climate of Extremes: Global Warming Science They Don't Want You to Know	*Cato Institute*	Michaels: see above; Balling: see above	2009
Moore, Thomas Gale	Global Warming: A Boon to Humans and Other Animals	*The Hoover Institution on War, Revolution and Peace*	*Competitive Enterprise Institute; The Independent Institute; The Hoover Institution on War, Revolution and Peace; Cato Institute*	1995

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Appendix (continued)

Author or editor	Title	Publisher	Author or editor affiliations with CTTs	Date first published
Moore, Thomas Gale	Climate of Fear: Why We Shouldn't Worry About Global Warming	*Cato Institute*	See above	1998
Moore, Thomas Gale	In Sickness or in Health: The Kyoto Protocol Versus Global Warming	*The Hoover Institution on War, Revolution and Peace*	See above	2000
Mosher, Steven M. and Thomas W. Fuller	**Climategate: The CRUtape Letters**	CreateSpace.com*	None apparent	2010
Okonski, Kendra (Ed.)	Adapt or Die: The Science, Politics and Economics of Climate Change	Profile Business Publishers/*International Policy Network*	*Competitive Enterprise Institute* and *International Policy Network*	2003
Opalek, Charles	**A Convenient Fabrication: The Non-crisis of Manmade Global Warming and Why We Are Powerless to Change the Climate.**	Lulu.com*	None apparent	2007
Parsons, Michael	**Global Warming: The Truth Behind the Myth**	Insight Books/Plenum Press	None apparent	1995
Robinson, David E.	**Climategate Debunked: Big Brother, Mainstream Media, Cover-ups**	CreateSpace.com*	None apparent	2010
Seitz, Frederick	Global Warming and Ozone Hole Controversies: A Challenge to Scientific Judgment	*George C. Marshall Institute*	See above	1994

(continued)

Appendix (continued)

Author or editor	Title	Publisher	Author or editor affiliations with CTTs	Date first published
Singer, S. Fred (Ed.)	Global Climate Change: Human and Natural Influences	Paragon House/ International Conference on the Unity of the Sciences**	See above	1989
Singer, S. Fred	Hot Talk Cold Science: Global Warming's Unfinished Debate	*The Independent Institute*	See above	1997
Singer, S. Fred	Climate Policy—From Rio to Kyoto: A Political Issue for 2000—And Beyond	*The Hoover Institution on War, Revolution and Peace*	See above	2000
Singer, S. Fred	Nature, Not Human Activity, Rules the Climate	*The Heartland Institute*	See above	2008
Singer, S. Fred and Dennis T. Avery	Unstoppable Global Warming: Every 1,500 Years (Paperback)	Rowman & Littlefield	Singer: see above; Avery: *The Hudson Institute; The Heartland Institute*	2007
Soon, Willie Wei-Hock and Steven H. Yaskell	The Maunder Minimum and the Variable Sun-Earth Connection	World Scientific Publishing Co.	Soon: *George C. Marshall Institute; The Greening Earth Society*; (ICECAP); TechcentralStation.com/TCSDaily.org; Yaskell: *Fundacion Argentina de Ecologia Cientifica*	2003
Soon, Willie Wei-Hock, Sallie Baliunas, Arthur B. Robinson, and Zachary W. Robinson	Global Warming: A Guide to the Science (Risk Controversy Series)	*The Fraser Institute*	Soon: see above; Baliunas: *George C. Marshall Institute; The Greening Earth Society*; TechcentralStation.com/TCSDaily; *Committee for a Constructive Tomorrow;* (ICECAP); A. B. Robinson: *Oregon Institute of Science and Medicine;* Z. W. Robinson: *Oregon Institute of Science and Medicine*	2001

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Appendix (continued)

Author or editor	Title	Publisher	Author or editor affiliations with CTTs	Date first published
Spencer, Roy	Climate Confusion: How Global Warming Leads to Bad Science, Pandering Politicians and Misguided Policies That Hurt the Poor	Encounter Books**	*George C. Marshall Institute*; (ICECAP); *Heartland Institute*; TechcentralStation.com/TCSDaily.com	2008
Spencer, Roy W.	The Great Global Warming Blunder: How Mother Nature Fooled the World's Top Climate Scientists	Encounter Books**	See above	2010
Spencer, Roy W.	The Bad Science and Bad Policy of Obama's Global Warming Agenda	Encounter Books**	See above	2010
Spite, Paul F.	**A Climate Crisis a la Gore: The Real Profit Pushing the Perception of Man Made Global Warming**	Booksurge.com*	None apparent	2008
Steward, H. Leighton	Fire, Ice and Paradise	Authorhouse*	American Petroleum Institute; PlantsNeed CO2 and CO2 Is Green;[c] *The Heartland Institute*	2008
Sussman, Brian	**Climategate: A Veteran Meteorologist Exposes the Global Warming Scam**	WND Books**	None apparent	2010
Taylor, Paul	**Climate of Ecopolitics: A Citizens Guide**	iUniverse, Inc.*	None apparent	2008

(continued)

Appendix (continued)

Author or editor	Title	Publisher	Author or editor affiliations with CTTs	Date first published
Vogt, Douglas	**God's Day of Judgment: The Real Cause of Global Warming**	Vector Associates*	None apparent	2007
Walker, Charls E., Mark A. Bloomfield, and Margo Thorning (Eds.)	Climate Change Policy: Practical Strategies to Promote Economic Growth and Environmental Quality	*American Council for Capital Formation, Center for Policy Research*	All: *American Council for Capital Formation*	1999
Watts, Anthony	Is the U.S. Surface Temperature Record Reliable?	*The Heartland Institute*	*The Heartland Institute*	2009
Wittwer, Sylvan H.	Food, Climate and Carbon Dioxide: The Global Environment and World Food Production	CRC Press	*Greening Earth Society; Center for the Study of Carbon Dioxide and Global Change*	1995
Wood, William W.	Global Warming: A Natural Phenomenon	Trafford Publishing*	*Center for the Study of Carbon Dioxide and Global Change*	2005
Zyrkowski, John	**It's the Sun, Not Your SUV: C02 Won't Destroy the Earth**	St. Augustine Press**	None apparent	2008

B. United Kingdom (n = 19)

Bate, Roger (Ed.)	Global Warming: The Continuing Debate	*European Science & Environment Forum*	*Institute for Economic Affairs; Competitive Enterprise Institute; American Enterprise Institute for Public Policy Research; Committee for a Constructive Tomorrow; European Science and Environmental Forum; Africa Fighting Malaria*	1998
Bate, Roger, and Julian Morris	Global Warming: Apocalypse or Hot Air? (IEA Studies on the Environment)	*Institute of Economic Affairs Environment Unit*/ Coronet Books**	Bate: see above; Morris: *Institute for Economic Affairs: International Policy Network*	1994
Boehmer-Christiansen, Sonja, and Aynsley J. Kellow	International Environmental Policy: Interests and the Failure of the Kyoto Process	Edward Elgar Publishing	Boehmer-Christiansen: *Heartland Institute*; Kellow: *The Institute for Public Affairs*	2002
Booker, Christopher	The Real Global Warming Disaster	Continuum	*Independent Women's Forum; Bruges Group*	2009
Booker, Christopher and Richard North	Scared to Death: From BSE to Global Warming: Why Scares Are Costing Us the Earth	Continuum (hardback); Gerald Duckworth & Co. (paperback)	Booker: see above; North: *Independent Women's Forum; Bruges Group*	2007
Daly, John L.	The Greenhouse Trap: Why the Greenhouse Effect Will Not End Life on Earth	Bantam Books	*The Greening Earth Society*	1989
Emsley, John (Ed.)	The Global Warming Debate: The Report of the European Science and Environment Forum	*European Science & Environment Forum*	*European Science & Environment Forum*	1996
Feldman, Stanley, and Vincent Marks	Global Warming and Other Bollocks: The Truth About All Those Science Scare Stories	Metro Publishing/John Blake Publishing	Feldman: *Institute for Ideas*; Marks: *Institute for Economic Affairs*	2009

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Appendix (continued)

Foster, Keith	**Catastrophe? A New Theory as to the Cause of Global Warming**	Sagax Publishing*	None apparent	2006
Foster, Philip	**While the Earth Endures: Creation, Cosmology, and Climate Change**	St. Matthew Publishing***	None apparent	2009
Glover, Peter C. and Michael J. Economides	Energy and Climate Wars: How Naïve Politicians, Green Ideologues, and Media Elites are Undermining the Truth About Energy and Climate	Continuum	Glover: none apparent; Economides: *Heartland Institute*	2010
Gray, Vincent	The Greenhouse Delusion: A Critique of "Climate Change 2001"	Multi-Science Publishing	*Natural Resource Stewardship Council*	2004
Helmer, Roger	Cool Thinking on Climate Change: Why the EU's Climate Alarmism is Both Mistaken and Dangerous	*Bruges Group*	*American Legislative Exchange Council; Bruges Group*	2009
Lawson, Nigel	An Appeal to Reason: A Cool Look at Global Warming	Overlook Duckworth, Peter Mayer Publishers	*Center for Policy Studies*; Global Warming Policy Foundation[d]	2008
Montford, A. W.	**The Hockeystick Illusion: Climategate and the Corruption of Science**	Stacey International**	None apparent	2010
Morris, Julian (Ed.)	Climate Change: Challenging the Conventional Wisdom (IEA Studies on the Environment)	*Institute of Economic Affairs Environment Unit*/Coronet Books**	See above	1997
Murray, Iain	The Really Inconvenient Truths: Seven Environmental Catastrophes Liberals Don't Want You to Know About—Because They Helped Cause Them	Regnery Publishing**	*Competitive Enterprise Institute*	2008
Robinson, Colin	Climate Change Policy: Challenging the Activists	*Institute for Economic Affairs*	*Institute of Economic Affairs*	2008
Taylor, Peter	**Chill: A Reassessment of Global Warming Theory**	*Clairview Books*	*None apparent*	2009

C. Australia (n = 6)

Carter, Robert	Climate: The Counter-Consensus—A Paleoclimatologist Speaks	Stacey International**	*Institute for Public Affairs*; Global Warming Policy Foundation	2010
Kininmonth, William	Climate Change: A Natural Hazard	Multi-Science Publishing	*The Lavoisier Group, Inc.*	2004
Nova, Joanne	The Skeptic's Handbook	*The Heartland Institute*	*Competitive Enterprise Institute/ Cooler Heads Coalition; Heartland; Science and Public Policy Institute*	2009
Nova, Joanne	The Skeptic's Handbook II: Global Bullies Want Your Money	http://joannenova.com.au*	See above	2009
Paltridge, Garth	The Climate Caper	Connor Court Publishing**	*Institute of Public Affairs; Natural Resource Stewardship Project*	2009
Plimer, Ian	Heaven and Earth: Global Warming, the Missing Science	Connor Court Publishing**; Taylor Trade Publishing (United States)	*Institute of Public Affairs*; Global Warming Policy Foundation	2009

D. Canada (n = 7)

Essex, Christopher and Ross McKitrick	Taken By Storm: The Troubled Science, Policy and Politics of Global Warming	Key Porter Books	McKitrick: *The Fraser Institute; Competitive Enterprise Institute/ Cooler Heads Coalition*; Essex: *Competitive Enterprise Institute/ Cooler Heads Coalition*	2002
Ismail, Nae	**A Hot Tea by the Giza: The Real Global Warming, Not CO2 Hoax**	iUniverse, Inc.*	None apparent	2010
Jones, Laura (Ed.)	Global Warming: The Science and the Politics	*The Fraser Institute*	*The Fraser Institute*	1997
Solomon, Lawrence	The Deniers: The World Renowned Scientists Who Stood Up Against Global Warming Hysteria, Political Persecution, and Fraud, and Those Who Are Too Fearful to Do So	Richard Vigilante Books**	*Energy Probe*	2008
Speers, J. Alvin	**Kyoto Fallacy-Hoax of the Millennium, A Chronology**	Aardvark Enterprises*	*None apparent*	2007
Wiskel, Bruno	The Emperor's New Climate: Debunking the Myths of Global Warming	Evergreen Environmental Company*	*Frontier Centre for Public Policy*	2006
Wiskel, Bruno	The Sky Is Not Falling: Putting Climate Change on Trial	Evergreen Environmental Company*	See above	2009

E. Czech Republic (*n* = 1)

Klaus, Vaclav	Blue Planet in Green Shackles: What Is Endangered, Climate or Freedom?	*Competitive Enterprise Institute*	*Competitive Enterprise Institute*	2007

F. Denmark (*n* = 2)

Lomborg, Bjorn	Cool It: The Skeptical Environmentalist's Guide to Global Warming	Knopf	*Competitive Enterprise Institute*	2007
Svensmark, Henrik and Nigel Calder	**The Chilling Stars: The New Theory of Climate Change**	Totem Books/Icon	Both: None apparent	2007

G. France (*n* = 2)

Gerondeau, Christian	Climate: The Great Delusion: A Study of the Climatic, Economic and Political Unrealities	Stacey International**	*Ecole Nationale des Ponts et Chaussees*; Global Warming Policy Foundation	2010
Leroux, Marcel	Global Warming—Myth or Reality? The Erring Ways of Climatology (Springer Praxis Books/Environmental Sciences)	Springer	*21st Century Associates*	2005

H. Germany (*n* = 1)

Weber, Gerd R.	Global Warming: The Rest of the Story	Paul & Co. Pub. Consortium/Bottiger Verlags-GmbH	*Committee for a Constructive Tomorrow*	1991

I. New Zealand (n = 1)

Wishart, Ian	Air Con: The Seriously Inconvenient Truth About Global Warming	Howling at the Moon Publishers*	*Science and Public Policy Institute*	2009

J. Sweden (n = 2)

Gerholm, Tor Ragnar (Ed.)	Climate Policy After Kyoto	Multi-Science Publishing	*Science and Environment Policy Project*	1999
Mathiesen, Mihkel M.	Global Warming in a Politically Correct Climate: How Truth Became Controversial	iUniverse, Inc.*	*Center for the Study of C02 and Global Change*	2004

K. The Netherlands (n = 1)

Labohm, Hans, Simon Rozendaal, and *Dick Thoenes*	Man-Made Global Warming: Unravelling a Dogma	Multi-Science Publishing	Labohm: *Natural Resource Stewardship Council*; Rozendaal: none apparent; Thoenes: *Science and Public Policy Institute*	2004

a. TechcentralStation.com/TCSDaily.com has gone through various modifications, but it has maintained a conservative position from the beginning. Currently it is part of the George W. Bush Institute.
b. ICECAP, or the International Climate and Environmental Change Assessment Project, at http://icecap.us, is a nonprofit organization dedicated to attribution skepticism, but it does not put free enterprise as an overt goal and therefore does not qualify as a conservative think tank.
c. H. Leighton Steward leads these groups, whose mission it is "to educate the public on the positive effects of additional atmospheric CO2 and help prevent the inadvertent negative impact to human, plant and animal life if we reduce CO2." They are not overtly conservative.
d. The Global Warming Policy Foundation is a think tank founded by Nigel Lawson and Benny Peiser, and it notes on its website, "We are an all-party and non-party think tank and a registered educational charity which, while open-minded on the contested science of global warming, is deeply concerned about the costs and other implications of many of the policies currently being advocated." The foundation works to question climate science, and its Academic Advisory Council contains many high-profile skeptics, but is does not fit as overtly conservative.

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Notes

1. ISBNs represent a useful operationalization of what constitutes a book, although a few of the volumes could be considered booklets or pamphlets.
2. We do this because we do not want to overrepresent authors in the various analyses reported below. The two books by William Hunt published in 2009 and 2010 were sufficiently different that we decided to include both of them.
3. Books referred to in text that are listed in the appendix are *not* listed in the references.
4. McCright and Dunlap (2000) found a surge in a wide range of material criticizing climate science, the Intergovernmental Panel on Climate Change, and the Kyoto Protocol posted on the websites of conservative think tanks leading up to the Kyoto Conference.
5. "Self-published" books are those where the author is the principal actor in printing the book. This includes authors paying vanity presses to print their books and those creating their own presses.
6. Singer is well-known for initiating "petitions" of scientists who criticize climate science, including the Heidelberg Appeal and the Leipzig Declaration (Hoggan, 2009, p. 92; Powell, 2011, pp. 55-56).
7. Limiting our analysis to books published in English leads us to ignore a small number of denial books in other languages.
8. These include three JDs (Jonathan Alder, Mark Bloomfield, and Christopher Horner), two MDs (Stanley Feldman and Vincent Marks), one ThD (William Curtis), and one DVM (Zachary Robinson)—all professional doctorates that are equated with PhDs.
9. We acknowledge that individuals without doctorates can develop considerable expertise with relevant work experience, and some would see, for example, Brian Sussman and Anthony Watts as having relevant expertise based on their experience as meteorologists and weather forecasters. However, meteorologists specialize in short-term *weather* and not long-term *climate* and lack training in climate science and often hold views of AGW at odds with those of mainstream climate scientists (e.g., Maibach, Wilson, & Witte, 2011).
10. The closest is Patrick Michaels's *Shattered Consensus*, which was copublished by the Marshall Institute and Rowman & Littlefield, the latter a respected academic press.
11. A good example is the highly debunked—but successful in terms of sales, publicity, and policy impact—book by Australian geologist and mining executive Ian Plimer, *Heaven and*

Earth: Global Warming, the Missing Science (see the critiques cited in McKewon, 2012, and Washington & Cook, 2011). For a good and continually updated overview of denial claims that have been debunked by mainstream scientists, see http://skepticalscience.com/.

12. See Weart (2008, 2011) on the operation of these processes in the evolution of climate science.

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