How Climate Change Became Controversial

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Introduction

• James Hansen’s June, 1988 Senate testimony that global warming was already occurring, given in the midst of a severe drought, put global warming onto the public agenda as a “social problem.”

• It received a great deal of media attention, and the following year a Gallup Poll found 63% of Americans saying they worry “a great deal” or a “fair amount” about global warming versus 30% worrying “only a little” or “not at all” about it.

• But in 2015, in response to the same Gallup Poll question, the comparable figures were 55% and 45%--a very noticeable rise in those “only a little” or “not at all” worried.

• Over this same time span, the scientific evidence supporting human-caused global warming has increased dramatically, even as many Americans now see it as less problematic and it has become the subject of great controversy.
General Research Question & “Hypothesis”

• Trying to explain this disjunction has been a broad research question or focus for my work for some time.
• Along with others, I “hypothesize” that a well-organized “climate-change counter-movement” or “denial movement” has been successful in challenging the problematic nature of global warming and thus the need to take action to ameliorate it.
• After a quick overview of the denial movement I will focus on a set of key actors that serve as the “glue” holding it together—the Conservative Movement and especially conservative think tanks. In the process I will report some of my work as well as that of other scholars.
Not Just Fossil Fuels Corporations

• When people think of climate change denial they often think of Exxon-Mobil and other fossil fuels companies, which have been central players, but over the past quarter century a complex climate change denial movement consisting of multiple components—all opposing efforts to deal with climate change—has evolved.

• Science journalist Sharon Begley termed it the “denial machine” in a 2007 Newsweek cover story, and the label is often used.
Key Components of the Climate Change Denial Machine

Fossil Fuels Industry
ExxonMobil, Peabody Coal, American Petroleum Institute, Western Fuels Association, Edison Electric Institute, et al.

Corporate America

Conservative Foundations

Conservative Think Tanks
American Enterprise Institute, Cato Institute, Committee for a Constructive Tomorrow, Competitive Enterprise Institute, Heritage Foundation, Heartland Institute, George C. Marshall Institute, et al.

Front Groups

Contrarian Scientists

Astroturf Organizations and Campaigns
Americans for Prosperity (“Regulation Reality” tours), Freedom Works (“Hot Air” rallies), Americans for Balanced Energy Choices (“citizens’ army” to lobby for coal and oppose climate legislation), American Coalition for Clean Coal Energy (media and lobbying campaigns, forged letters to Congress), Energy Citizens (rallies against climate legislation), et al.

Media

Echo Chamber

Politicians

Blogs

Conservative Movement

• Let’s turn to the central role of the Conservative Movement (especially conservative think tanks or CTTs) in leading denial campaigns.

• I will begin with a quick overview of the growth of anti-environmentalism within the U.S. Conservative Movement and the transition to climate change denial per se, and then examine the vital role CTTs (and their funders) have played in promoting CC denial in the U.S. and increasingly around the world.

• I’ll highlight the major strategies employed, especially manufacturing uncertainty and controversy.

• And conclude that the denial movement has succeeded in making climate change controversial and thereby blocking efforts to deal with it.
Historical Background

• In the 1970s wealthy conservatives such as Joseph Coors banded together to set up foundations and think tanks (e.g. Heritage Foundation) to counteract what they saw as the threats posed by the progressive social movements of the 1960s and initiatives launched by the federal government.

• CTTs like Heritage, CATO, AEI, CEI became key components of the conservative movement, functioning as social movement organizations.
Conservative Think Tanks

- CTTs pursue activist agendas, including:
  - Generating and promoting ideas and ideologies.
  - Providing resources and networking opportunities for conservative intellectuals and activists.
  - Publishing and diffusing information to policy-makers and the media.
  - Enabling the circulation of elites across administrations.
  - Constitute an “alternative academia” with enormous visibility and credibility.
  - Have had considerable influence on economic, social and foreign policies—e.g. “trickle down” economics.
The Conservative Focus on Environmentalism

- After the fall of the Soviet Union in 1991 and the emergence of *global* environmentalism with the 1992 Earth Summit, the U.S. Conservative Movement began to focus on the perceived threat posed by environmental regulations. Its fear was heightened by the Clinton-Gore Administration’s receptivity to environmental concerns. Basically it substituted a “Green Scare” for the declining “Red Scare.”
ENVIRONMENTALISM

GREEN ON THE OUTSIDE
RED ON THE INSIDE
Why Did Conservatives Launch an Anti-Environmental “Countermovement”?

• “We argue that three conditions promote the rise of countermovements: first, the movement shows signs of success; second, the interests of some population are threatened by movement goals; and third, political allies are available to aid oppositional mobilization.”

These conditions seem to have been met for the Environmental Movement by the 1990s:

First, environmentalism was evolving into a strong global movement in the 1990s, highlighted by the 1992 “Earth Summit” in Rio. Second, the spread of global capitalism via market economies, privatization of common property, and free trade were jeopardized. Third, the growing strength of the U.S. Conservative Movement and Republican takeover of Congress in 1995 provided important “allies” for anti-environmentalists.
Counter-Movement

• As a result, the Conservative Movement mounted a major “counter-movement” designed specifically to undermine environmentalism, which it saw as a threat to its politico-economic agenda (neo-liberal economies, privatization of resources, free trade, etc.) domestically \textit{and} internationally.

• It is funded by wealthy conservative donors and their foundations and many corporations and led by CTTs.
Change in Strategy

• Conservatives learned during the Reagan Administration that direct attacks on environmental regulations can produce a backlash, and it is more effective to question the seriousness of environmental problems.

• Those promoting the need for environmental regulations typically employ scientific evidence to make their case, so the Conservative Movement began to challenge such evidence as a key strategy. It did so by promoting “environmental skepticism.”
“Environmental Skepticism”

• The fundamental characteristic of “environmental skepticism” is that it challenges the authenticity of environmental problems and thus the necessity of environmental protection policies.

• The most effective way to promote environmental skepticism is “manufacturing uncertainty,” a technique long employed by corporations to fight government regulations on specific products and perfected by the tobacco industry. The Conservative Movement and its allies adopted this time-tested method in the battle against environmental regulations by attacking environmental science writ large.
DOUBT IS THEIR PRODUCT
How Industry's Assault on Science Threatens Your Health
David Michaels
Study of Books Espousing Environmental Skepticism

- To shed light on the increasing use of environmental skepticism and its link to CTTs colleagues and I examined the growing spate of books espousing such skepticism.

Methods and Results

• We compiled a list of 141 English-language books (as close to the entire population as we could achieve) espousing environmental skepticism that were published through 2005, and examined their links to conservative think tanks (CTTs) via (a) authors’ formal affiliations and/or (b) publication by a CTT Press.

• We found 130 or 92% of these books to be linked to one or more CTTs.

• Their numbers exploded in 1992, the year of the Rio Earth Summit and when the “Green Threat” began to be promoted.
Books Before and After the 1992 Rio Summit

Percentages:
\[
\frac{27}{141} = 19\% \\
\frac{114}{141} = 81\%
\]

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From Environmental Skepticism to Climate Change Denial

• Beginning with the 1992 Rio Earth Summit and escalating with the Kyoto Protocol in 1997 the Conservative Movement focused increasing attention on climate change, and it has become the primary focus of conservative opposition to environmental policy-making at the present time.
The Threat

- Efforts to deal with climate change are portrayed as threatening economic growth, free enterprise and the “American way of life,” as well as representing the threat of unprecedented governmental regulations both nationally and internationally. It has therefore become “the” environmental issue for conservatives in our age of neo-liberal (anti-regulatory) ideology.
Global Warming Is A Hoax.

The real goal is communism.
• Not surprisingly, manufacturing uncertainty has become the crucial strategy for challenging the evidence for climate change, and in fact early figures involved in climate change denial such as Frederick Seitz of the Marshall Institute and Fred Singer of the Science and Environmental Policy Project were previously heavily involved in challenging evidence concerning the harmful effects of tobacco smoke—as detailed by Oreskes and Conway in *Merchants of Doubt*. 
Contrarian Scientists

• A relatively small number of “contrarian” scientists have played a vital role in challenging mainstream climate science since the late 1980s. Their “scientific credentials” (PhDs) give them credibility in the eyes of the public, media and some policy-makers—who do not look at disciplinary relevance, publication records and other indicators of actual expertise pertinent to climate science.

• Nearly all leading contrarians have affiliations with one or more CTTs at this point.
Contrarian Scientists

Frederick Seitz

Richard Lindzen

Patrick Michaels

S. Fred Singer

John Christy

William Happer
Amplification of Contrarian Voices

• Their efforts are supported and publicized by key actors in the Conservative Movement (especially CTTs and conservative media like Fox News, talk radio, the WSJ editorial page and websites like Breitbart), serving to amplify the voices of the contrarians.

• CTTs give contrarian voices far more visibility in the media and policy circles than their expertise warrants, allowing them to create the appearance of “scientific controversy” over climate change within the public realm despite considerable consensus in the scientific realm.

• Manufacturing uncertainty over specific products has thus evolved into “manufacturing controversy” over an entire scientific field.
Manufacturing Controversy

• Once the appearance of “scientific controversy” is created in the public realm, scientific norms for evaluating evidence (e.g., peer-review) no longer apply, and contrarians and their supporters appeal to societal norms such as (a) freedom of speech, (b) hearing both sides of the issue, and (c) respecting minority viewpoints to garner more attention for their marginal views.
• The Denial Machine went into “overdrive” after Al Gore’s *Inconvenient Truth* put global warming back on the public agenda.

• And its efforts escalated even more with the election of the Obama Administration and a Democratic Congress in 2008, as enactment of both national and international policies to achieve reductions in greenhouse gas (GHG) emissions seemed imminent.
New Study

• To examine the growth and diffusion of climate change denial, and the role of the U.S. Conservative Movement and its CTTs in promoting it, Peter Jacques and I analyzed 108 books espousing climate change denial published through 2010 (some included in our prior study). Besides examining their links to CTTs, we also examined the location and academic backgrounds of their authors and editors.

Several of these books have been best sellers among “climate change” books on Amazon.com, and at one point 14 appeared among the top 100 sellers for “climatology.” It is common to find them in major bookstores. Not surprisingly some are carried by the Conservative Book Club. Thus, they reach a large audience.
Climate Change Denial Books By Year

Total Books By Year

[Bar chart showing the number of climate change denial books by year]
Climate Change Denial Books by Decade, Self-Published vs. Others

- **1982-89**: 3 All Others, 2 Self Published
- **1990-99**: 18 All Others, 1 Self Published
- **2000-10**: 55 All Others, 29 Self Published
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<td>100% (3/3)</td>
<td>100% (5/5)</td>
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<tr>
<td>1990’s</td>
<td>100% (1/1)</td>
<td>94% (17/18)</td>
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<td>33% (10/30)</td>
<td>83% (45/54)</td>
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<td>87% (65/75)</td>
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THE SATANIC GASES
Clearing the Air about Global Warming

by Patrick J. Michaels and Robert C. Balling, Jr.
CLIMATE CON?
History and Science of the Global Warming Scare

William B. Innes
Mainstream Climate Science

• The IPCC’s Assessment Reports conclude that:
  1. Global warming is occurring and will continue.
  2. Human activities producing GHG emissions are a significant cause of global warming.

• Many argue that these findings suggest the need for policies designed to reduce (GHG) emissions.
Major Denial Themes

- Climate change contrarians eager to undermine mainstream climate science have taken issue with each of these points, using four key themes:
  - *Trend* denial – the Earth is *not* getting warmer
  - *Attribution* denial – even if it is, humans are *not* the cause
  - *Impact* denial – should warming occur, the impacts will be inconsequential or *benign*
  - *Policy* denial – there is *no need* for carbon emissions reduction policies, *and* such policies will do far more harm than global warming
Changing Themes

• Over time the “counter-claims” to the IPCC issued by climate change skeptics, especially contrarian scientists, have evolved in response to growing evidence of global warming--from it’s not occurring, to it won’t be harmful, to it’s naturally caused and nowadays “there’s nothing we can do to stop it.” None of the counter-claims ever disappear, however, as trend denial is again popular with discussions about a purported “pause” in warming.

• However, the bottom line has not changed: NO REGULATIONS! This reflects the near universal conservative ideology (or “market fundamentalism”) behind all versions of climate change denial.
Freedom from Peer Review

- Individuals promoting climate change denial, including book authors, mainly criticize climate science, and very rarely contribute to the scientific literature. They avoid peer-review via blog posts, op-eds, CTT reports, speeches and books. A large majority (97 or 108) of the books we examined are self-published or published by a conservative or popular press. *Not a single one* is published by a university press.

- More generally, virtually none of the vast amount of denial literature produced by CTTs undergoes anything approximately peer review.
Cumulative Non-Science vs. Science

• The absence of peer review allows book authors and authors of other denial material to make whatever claims they wish, no matter how soundly the claims have been refuted in the scientific literature. Denial books and other writings are ideal for recycling debunked claims, or “zombie arguments” that continually arise from the grave. The result is that the denial literature in general is cumulative in the literal sense, as nothing is discarded.

• Claims are brought out of the denial closet whenever they might be useful, sometimes modified to counteract new climate science findings or policy proposals.
Scientific Realm: Considerable Consensus

13,950 Peer-Reviewed Climate Articles 1991-2012

24 Reject Global Warming

Source: Dr. James L. Powell
Counter-Claims and Framing Wars

• McCright and I documented the major themes in a study of 224 documents produced by 14 CTTs from 1990 to 1997 (year of the Kyoto Protocol), although attribution denial wasn’t fully developed (*Social Problems* 2000).

• A new study covering 1998 to 2013 finds that 19 CTTs produced 16,028 documents on climate change and uses large-scale computational text analysis to isolate 47 major themes (Bousallis and Coan, *Global Environmental Change*, 2015).

• This reveals the dramatic increase in denial efforts by CTTs, and the fact that they are engaged in “framing contests” with the climate change community. Nowadays nearly every new finding produced by climate science provokes a counter-claim challenging it.
Another new study, by Justin Farrell, goes further in compiling a set of 164 organizations (CTTs, foundations, trade associations, PR firms) involved in the denial movement, their network ties and the 40,785 documents they produced, using large-scale computational text analysis to isolate 26 key themes.

He shows that organizations producing denial literature are more centrally located in the denial network, and more likely to have obtained funding from ExxonMobil and/or Koch Family foundations.

He then shows that these themes are repeated in leading national newspapers’ coverage of climate change and Presidential speeches on the topic, suggesting the impact of denial organizations on national discourse.

Public Realm: Major “Scientific Controversy”

• By continually manufacturing uncertainty on nearly all aspects of climate science, the denial machine has succeeded in creating the impression that climate change is the subject of considerable scientific controversy.

• One result is that climate change has become one of the most politically polarized issues of our time. See, e.g., R. E. Dunlap, et al., “The Political Divide on Climate Change: Partisan Polarization Widens in the U.S.” Environment Vol. 58 (September/October, 2016):4-22.
Impacts of Climate Change Denial

Evidence that efforts to deny the seriousness of climate change have been successful include:

1. The U.S. media give far more attention to climate change denial and portray climate science as “uncertain” than is the case for media in other developed nations.

2. The American public consistently expresses less concern about climate change than do the publics of other developed nations.
3. The U.S. has yet to enact meaningful climate change policy and has been an impediment to international policy-making—e.g. the Obama Administration avoided proposing anything that would require Senate ratification at the recent Paris COP, thereby weakening the outcome.

4. Climate change denial has become a core element of contemporary conservatives’ “worldview” and personal “identity,” joining God, Gays, Guns and Abortion.

5. This is particularly apparent in politics, where the Republican Party is almost unified in opposition to climate change policy and overt denial commonplace.
GOP and Denial Machine

Indeed, the GOP has become a key cog in the “denial machine” as exemplified by, for example:

1. Trump’s anti-environmental cabinet appointments.
2. Scrubbing of climate change information from agency websites.
3. Congressional harassment of climate scientists.
4. Proposed budget cuts for climate science.
5. Undoing Obama’s climate change initiatives.
6. Withdrawing U.S. from the Paris Agreement?
Conclusion

• The foregoing results suggest that the Conservative Movement and its corporate allies have been successful in framing climate change as a “scientific controversy,” even a “hoax” and a “liberal plot” to promote governmental regulations that will harm economic growth and threaten individual freedom. Climate science is portrayed not only as “uncertain,” but as “junk science” pursued by self-serving researchers and liberal politicians eager to expand government control over the lives of Americans.

• Thus, there’s no need to take action on a phony issue—or “fake problem.”
GLOBAL WARMING is a HUGE FRAUD

Drill Here

Drill Now
Implications

• Can a society that denies scientific evidence of its negative impacts on the biophysical environment, impacts that threaten its well-being, remain resilient? Long-term sustainability requires responding to accurate feedback, and denying scientific evidence blinds us to reality and threatens resilience.
Even worse, early corporate efforts to deny evidence of harmful products and the Conservative Movement’s efforts to deny the seriousness of environmental problems and climate change have snowballed into denial of any “inconvenient” scientific OR other evidence.

Today we live in a “post-fact” and “post-truth” world in which “alternate realities” are constructed, accepted as real by many, and acted upon—even though they are “false.”
Here’s a good example
Thank you.