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The 'climatism' cartel: why climate change deniers oppose market-based mitigation policy

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ABSTRACT

Mainstream policy responses seek to utilize market mechanisms in an effort to minimize costs for major emitters of greenhouse gases. Presumably, this should win over some climate change deniers who align themselves with think tanks promoting free markets and economic growth. Yet, climate change deniers and free-market activists are as staunchly opposed to market-based climate policy as they are to any other form of climate mitigation. In order to understand why climate change deniers reject market-based policy proposals, an archive of free-market environmental newsletters was analyzed for themes of economic opposition. This analysis revealed how climate change deniers rely upon the concept of a regulatory cartel to connect economic opposition to climate policy with attacks on scientific evidence. Because professional scientists do not operate under conventional private-market incentive structures, neoliberal climate change deniers frame scientific knowledge as an attack on economic freedom when utilized to guide policy governing environment–economy relationships.

KEYWORDS Climate change denial; think tanks; regulatory cartel; climatism

Introduction

Carbon markets have become popular policy tools to address climate change, allowing political leaders to claim action that simultaneously addresses environmental and economic concerns. Mitigating the drivers of climate change through carbon markets conforms to the trend in environmental policy described by Bernstein (2000, 2001) where leaders predicate environmental protection upon meeting the economic and political imperatives of liberalism. Despite critiques of the adequacy of carbon markets to address climate change (e.g., Lohmann 2008), such markets have so far emerged as the most politically practical strategy to address climate change. Alongside the mainstream political acknowledgment of the need for carbon mitigation, and debates within policy communities over questions of design, a concerted climate change denial effort has developed

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(most notably in the United States) that rejects any state mandate regarding climate action, often attacking the veracity of climate science while promoting the benefits of free markets (McCright and Dunlap 2000, 2003, 2010, Jacques *et al.* 2008, Oreskes and Conway 2010, Dunlap and McCright 2011, Dunlap and Jacques 2013, Brulle 2014).

Why do climate change deniers oppose market-based climate policies when they advocate market solutions for so many other social and economic problems? To answer this question, I examine an archive of climate change denial newsletters, particularly focusing on economic and political claims. Climate change deniers often rely on researchers who are relatively inactive in their field and focus on favorable reports isolated from larger bodies of research in order to justify their positions, clearly contradicting decades of consensus within the climate-science community regarding anthropogenic global warming (Anderegg *et al.* 2010, Washington and Cook 2011, Cook *et al.* 2013). While the claims made by deniers lack evidence considered acceptable by the standards of the international scientific community, they illuminate how climate change deniers frame their opponents and give insight into the political and rhetorical strategies of organized climate change denial.

Here, I explain how climate change deniers frame advocates of climate change mitigation as participating in a 'climatism cartel' that distorts free markets and funnels financial gains to entrenched interests across academic, government, economic, and civic organizations. The climate change denial countermovement is strongly organized in the US through think tanks committed to minimally regulated free markets, such as the American Enterprise Institute, Cato Institute, Competitive Enterprise Institute, Heartland Institute, and Heritage Foundation. Even liberal environmentalist proposals that seek to pair economic growth with mitigation in the form of carbon markets attract staunch opposition from climate change deniers.

I make two arguments. First, despite their overall commitment to free markets, climate change deniers oppose market-based carbon mitigation policy because such mechanisms do not meet the ideological vision of market institutions held by deniers. Specifically, climate change deniers implicitly categorize carbon markets as 'unnatural markets' (to paraphrase Dales 1968b, pp. 803–804) because the state imposes an artificial scarcity of goods (emissions rights) upon participants, restricting the ability of spontaneous and decentralized feedback from consumers to directly structure supply. In other words, because carbon markets exist because of state intervention, they are incapable of self-regulating and thus violate neoliberal ideological commitments. This ideological view generally insists that if a market cannot survive through 'self-regulation' directed by private actors, then its existence must ultimately leave consumers with higher-priced goods and services and may place economic growth at risk.[1]

Second, organized climate change denial reflects a tension over the appropriate role for scientific knowledge in guiding state policy. Because academic scientists operate professionally outside of private-market settings, deniers view their knowledge as suspect when applied to policy debates concerning economic regulation. Given the correlation between modern carbon emissions and GDP growth (Hall and Klitgaard 2012), climate change deniers depict mitigation policies as a new form of planned economics, framing political leaders as using climate science to justify collectivist policies. This concern over planned market activity has a long history; for several decades, think tanks have coordinated a neoliberal 'counter-revolution' against perceived collectivism that promotes achieved results over individual liberty, organized by intellectuals such as F.A. Hayek (see Cockett 1995 for a history of this topic).

Framing carbon markets as 'unnatural' allows think tanks to connect climate change denial to general grievances over state interventions into market activity. Social movement organizations mobilize support by aligning organizations and individuals through shared interpretative frames (Snow *et al.* 1986). Organizations can utilize frames in order to diagnose what the problem is and which actors share responsibility for its existence (Benford and Snow 2000). In the 'framing contest' over global warming (McCright and Dunlap 2000), climate change deniers align frames that transform scientific expertise into a coercive entity dictating entrepreneurial and consumer decisions, turning climate mitigation (market-based or otherwise) into a question of individual liberty.

Climate change denial organizations make this frame transformation coherent through the concept of the regulatory cartel. This refers to situations where regulation does not reflect public interests. Rather, it reflects the interests of powerful firms that exploit regulatory policy to restrict market entry from competitors and ensure profits (Stigler 1971, Posner 1975), thereby distorting ideal competition and creating monopoly rents that translate to social costs (e.g., in the form of unnecessarily high-priced consumer goods) that do not benefit society more generally. Regulatory standards enforced by the state may contribute to the creation of cartels by barring access to potential competitors unable to endure regulatory costs.

From this perspective, scientists, regulators, activists, and certain business entities share a mutual interest in creating a 'climatism cartel' that unnecessarily imposes social costs on all citizens by increasing energy prices and distorting energy-market competition. By regulating carbon emissions – regardless of whether regulations utilize market mechanisms – climate change deniers argue that 'climate change alarmists' use bad science to justify a regime of regulations that increases the costs associated with fossil fuels. The authority of climate science thus threatens to violate neoliberal ideology regarding the self-regulating ability of market actors to address the

negative externalities of anthropogenic greenhouse gases that cause climate change adequately. 'Internalizing' the negative externalities associated with generating wealth through fossil-fuel combustion creates a political space threatening to neoliberal ideology, privileging collective societal interests over the immediate interests of private actors.

The next section will review concepts and trends relevant to carbon regulation before reviewing prior research on climate change denial. I then describe data collected from an archive of climate change denial newsletters and the coding schemes that guided the content analysis used to identify key themes animating climate change deniers' opposition to market-based regulatory mechanisms. These themes include an articulation of the inherent qualities of free markets versus regulatory intervention, the flawed outcomes of climate policy, the ethics of subjugating markets to regulatory oversight, and the conspiracy between key actors to create cartels premised upon the perpetuation of climate change 'alarmism.'

Regulating the climate

Scholars studying regulation frequently note the political nature of regulatory standards that privilege some organizational or behavioral types over others. For example, Braithwaite (1994) demonstrates how large, impersonal nursing homes thrive in the US because only those types of firms have sufficient resources to comply with the variety of existing regulatory standards, excluding smaller care providers from market access. Busch (2000) argues that standards are not simply mechanisms that help coordinate action in market settings, but normative reflections of how humans and objects should interact in the modern world. When experts define standards of behavioral interaction between humans and objects, they create a moral economy signifying what is good and what is bad. Understanding the disciplinary nature of regulatory standards is crucial for understanding the intensity of climate change denier opposition to what may seem to casual observers like modest (and perhaps insufficient) proposals to regulate the drivers of anthropogenic climate change.

The broad transition from centralized forms of regulatory oversight to decentralized forms of regulation relying on market mechanisms characterizes a prominent trend within US environmental policy. Market mechanisms that attach price signals to emissions were first proposed by economists in the 1960s (Crocker 1966, Dales 1968a, 1968b). Perhaps the most successful implementation of emissions trading was through policies addressing SO_2 and NO_x emissions in the face of acid rain and ozone problems (Burtraw *et al.* 2005). Interestingly, both Crocker and Dales – intellectual forerunners advocating emissions trading – recommend against market mechanisms for carbon emissions (Hilsenrath 2009).

Despite such objections, trading carbon emissions has gained wide adoption both internationally and in the US. Replacing centralized 'command and control' approaches to environmental regulation that universally apply standards of practice across all firms within an industry, emissions trading instead focuses on defining an industry-wide pollution target and allows for differential contributions across firms. Regulators distribute pollution emissions allowances (either granted for free based on historical emissions records or auctioned to bidders), allowing firms to trade among each other so that mitigation takes places at the site of least cost. So, if Company A can double its reductions at lesser cost than Company B can make any reductions, Company B can purchase the emissions allowances owned by Company A, incentivizing Company A to reduce its emissions beyond its initial reduction target.

Climate science and politics

Anti-environmental countermovements have sought to delegitimize the status of scientific knowledge for decades (Austin 2002, Jacques *et al.* 2008, Hoggan and Littlemore 2009, McCright and Dunlap 2010, Oreskes and Conway 2010, Washington and Cook 2011). Early research on climate change denial as a countermovement identified its connection with conservative ideological agendas (McCright and Dunlap 2000), verified by subsequent research (McCright and Dunlap 2003, 2010, Jacques *et al.* 2008, Oreskes and Conway 2010, Dunlap and McCright 2011, Dunlap and Jacques 2013, Elsasser and Dunlap 2013, Brulle 2014).

Neoliberal think tanks promoting free-market solutions to social and economic problems originally organized the message of climate change denial with financial backing from the fossil-fuel industry and conservative foundations, details of which have grown increasingly difficult to trace over time (Brulle 2014). This alliance formed an 'echo chamber' made up of conservative media, politicians, and think tanks, strategizing to produce uncertainty and doubt in public discourse (Dunlap and McCright 2011, Jasny *et al.* 2015). Oreskes and Conway (2010) note that many prominent climate change deniers were also major figures disputing past environmental and health controversies, such as the link between tobacco smoking and cancer or sulfur dioxide emissions and acid rain. These counter-experts often overemphasize degrees of uncertainty to eschew the best scientific explanation for the case at hand (Oreskes 2007, Wynne 2010).

Looking at the modern development of climate change denial, McCright and Dunlap (2000) demonstrate that 1996–1997 were key turning points in the history of conservative opposition to action designed to mitigate climate change. More opposition think-tank publications were produced in 1996 alone than in 1990–1995 taken together, and the output in 1997 was more

than five times that of 1996. Within the lexicon of counterclaims, they identify three dominant themes: challenges to the evidence of global warming, that global warming produces net benefits, and that mitigation policies create more harm than good. Subsequent analysis has paid attention to the impact of climate change denial on the composition of expert testimony to Congress (McCright and Dunlap 2003), as well as the 'anti-reflexive' character of denier attacks on the gains of the environmental movement and knowledge documenting the environmental impact of modern economic development (McCright and Dunlap 2010). Tactically, climate change deniers rely upon a misrepresentation of scientific evidence, the intimidation of individual scientists, procedural tricks within political systems, and exploiting 'balancing norms' within media (Boykoff and Boykoff 2007, McCright and Dunlap 2010).

Given the politicized nature of representing climate change and challenging regulatory solutions, Jasanoff's (2004) co-production perspective can contextualize climate change deniers' opposition to regulating carbon emissions through market mechanisms. This perspective argues that scientific practice is inseparable from political norms. The idiom of co-production refers to how 'we gain explanatory power by thinking of natural and social orders as being produced together,' such that the way we 'represent the world (both nature and society) are inseparable from the ways in which we choose to live in it' (Jasanoff 2004, p. 2). Even if carbon trading is a far more 'market-friendly' regulatory approach than command and control, accepting the knowledge produced by climate scientists forces a reflexive examination of how we collectively satisfy needs and desires in a globalizing world with finite resources and carrying capacity. In order to understand climate change deniers, we must illustrate how they direct attention to ideological values by attaching social meaning to scientific facts (Jasanoff 2010).

Data and coding methods

My analysis relies upon an archive of *Environment and Climate News* (*ECN*), a newsletter 'devoted to sound science and free-market environmentalism' published 10 times per year by The Heartland Institute, a think tank that advocates free-market solutions to an array of problems. According to internal estimates, copies of *ECN* are distributed to all elected officials at the US national and state levels, most locally elected officials, and to approximately 20,000 lay readers.

I collected an archive of *ECN* issues from 2002 to 2012. The *ECN* archive provides an attractive collection to analyze because voices from nearly all of the major climate change denier organizations are represented within its pages. Each issue contained approximately 20 articles, and a total of 2045

unique articles were reviewed. Each of these 2045 articles was initially filtered according to whether they specifically dealt with the issue of climate change. This process yielded 590 articles discussing climate change (either its scientific basis, climate policy, or social and economic action intending to affect climate change). A modified coding scheme based on previous content analysis of climate change denial materials (McCright and Dunlap 2000) guided the next stage of coding, allowing me to assess *ECN* climate change themes in relation to research on the broader climate change denier epistemic community.

A total of 198 articles concerned the economic consequence of climate change policies. I then conducted a second round of coding for these 198 articles in order to assess important subthemes animating the economic opposition to climate change. Following a strategy of inductive analysis used in prior research (McCright and Dunlap 2000, Babbie 2013), an initial coding scheme was derived during this phase based upon 40 randomly selected articles (20% of the climate–economic articles). Consistent themes emerged around the self-regulating nature of markets, adverse policy outcomes, ethical concerns over climate mitigation, and the network of actors involved in implementing action on climate mitigation. This coding scheme did not require modification when applied to the full sample. Each article was coded according to whether it discussed one of these four themes, providing a proportional sense of how climate change deniers paid attention to each of these themes while discussing the economics of climate change policy and action. Articles that spoke directly to more than one theme were coded in multiple categories. Outlining the specific counterclaims that deniers make against climate change policy can help researchers understand how deniers frame their opponents and mobilize support through ideological claims.

Results

Figure 1 shows the yearly frequency of articles concerning climate change contained in the *ECN* archive. Two trends stand out. First, environmental deniers were paying a relatively constant amount of attention to climate change from 2002 to 2006 with about 40–50 articles per year dedicated to the topic. However, in 2007, the number of articles devoted to climate change doubled. That year, the Intergovernmental Panel on Climate Change (IPCC) released its Fourth Assessment Report, unequivocally declaring the anthropogenic sources of climate change. Al Gore's movie *An Inconvenient Truth* was released the previous year and created a popular conversation around the topic of climate change, while the Stern Review, presented to the UK government, concluded that an immediate implementation of climate-mitigation policy would save money versus the cost of

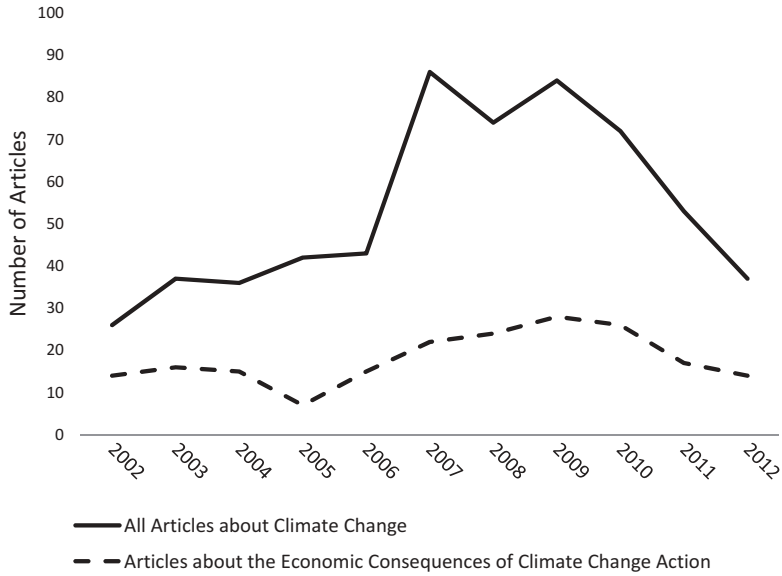

Figure 1. Frequency of articles in *Environment and Climate News* about climate change by year.

inaction on climate change over the long term. Therefore, it is no surprise that it was during this intersection of academic, popular, and policy attention to the mitigation of anthropogenic climate change that market fundamentalists increased their attention to climate change denial relative to other environmental issues.

The broad themes characterizing the climate change denier articles are presented in Table 1. Comparing these results with their research on the themes contained in the literature produced by climate change deniers in the 1990s, the *ECN* archive produced a relatively comparable representation of themes in their discussion of climate change. About three-fourths of articles challenged the evidentiary basis of climate change, clearly showing the importance of attacking scientific knowledge in mobilizing opposition to climate change policy. About 40% of articles challenged climate change policy directly, with a third focusing on economic consequences. This is a smaller proportion of economic and policy themes than observed in the majority of materials analyzed by McCright and Dunlap, but still constitutes a significant amount of dedicated attention. The articles containing themes regarding the economic consequence of climate change policy provide the focus of this analysis. An analysis of the themes present in the 198 articles concerning the economic consequences of climate change policy is displayed in Table 2. Exploring the content of each of these themes

Table 1. Modified coding scheme based on McCright and Dunlap's (2000) analysis of climate change denier counter-claims.

	N	%
Evidentiary basis of climate change is weak or wrong	**441**	**74.7**
1 – Scientific evidence of climate change is uncertain	305	51.7
2 – Mainstream climate research is 'junk' science	67	11.4
3 – The IPCC intentionally altered its reports to create a 'scientific consensus' on global warming	12	2.0
4 – Climate change is a scare tactic produced by environmentalists and bureaucrats	51	8.6
5 – Climate change is merely a political tool of politicians	11	1.9
Climate change would be beneficial if it were to occur	**35**	**5.9**
1 – Climate change would improve quality of life	5	0.8
2 – Climate change would improve human health	7	1.2
3 – Climate change would improve agriculture	17	2.9
4 – Climate change is good for the natural environment	12	2.0
Climate change policies would do more harm than good	**231**	**39.2**
1 – Proposed action would harm the economy	198	33.6
2 – Proposed action would weaken national security	6	1.0
3 – Proposed action would threaten national sovereignty	21	3.6
4 – Proposed action would harm the environment	22	3.7

Table 2. Subthemes contained in climate change denier articles about the economic consequences of regulatory policy.

Theme	Description	*N* (%)
Self-regulation	Markets characterized as inherently efficient, self-regulating, and generative of wealth	101 (51.0%)
Policy outcomes	Discusses the consequence of environmental regulatory policy, including market mechanisms such as carbon trading; also includes discussion of predicted costs of environmental regulatory policy	80 (40.4%)
Market ethos and morality of regulation	Emphasizes individual freedom, consumer choice, and the socially regressive nature of regulation	68 (34.4%)
Regulatory cartel	Environmental regulation achieved through coordinated activity by cartels composed of scientists, bureaucrats, activists, and select corporate interests	45 (22.7%)

illustrates the economic norms and fears that shape the climate change denier discourse around mitigation policy.

Self-regulation

The 'self-regulation' theme was assigned to articles that discussed markets as inherently efficient and self-regulating. Climate change deniers conceptualize 'spontaneous' markets as efficiently managing economic transactions because a decentralized set of rational actors voluntarily selects options that provide them with the greatest utility beyond cost. They view minimally regulated markets structured by feedback from aggregated 'partial knowledge' (in the form of consumer decisions) as more efficient and preferable

than markets structured by regulatory intervention and expert knowledge, a perspective laid out by Hayek (1945, p. 530).

In these newsletters, deniers harness the image of efficient self-regulating markets to argue that regulatory policy itself is counterproductive to the goal of climate change mitigation. Rather than mandating compliance with environmental performance standards, deniers argue that voluntary action from the private sector will more efficiently produce pro-environmental outcomes. This argument is captured by John Castellani, president of the Business Roundtable, who insists that 'CEOs will apply their best management thinking to make American companies among the most greenhouse-gas efficient in the world,' proving that 'voluntary actions can deliver continued economic growth, minimize the risks of climate change, and foster innovation and investment in new technologies – without costly government mandates and rigid compliance timetables' (*ECN* 2003, Issue 4). This comment captures the vision of a 'natural' market operating through voluntary actions and efficiently producing solutions to problems identified by business leaders and consumer demand.

This type of thinking reflects a common normative theme running throughout the articles characterized by the quality of self-regulation – that minimally regulated markets provide the ideal institutional context for environmental stewardship. According to this neoliberal thinking, even if climate change were resulting from anthropogenic action, consumers, entrepreneurs, and corporate managers (*not* bureaucratic regulators) possess the best insight into meeting the challenge of confronting environmental problems while maintaining economic growth. Any other type of market involvement will not be legitimate. Jim Johnston of the Heartland Institute made clear the difference between environmental policy market mechanisms and true markets:

> Cap-and-trade sounds like a market institution where rights are exchanged. But the allowances and credits in all of the systems above are denied property-right status. The reason is that government does not want to comply with the Fifth Amendment of the Constitution, to compensate victims for taking their property. Cap-and-trade is not a market, therefore it is not 'efficient' in any meaningful economic way. (*ECN* 2010, Issue 9)

Neoliberal climate change deniers elevate unregulated markets to an almost mystical level impervious to long-term failure. By definition, they view markets as self-correcting. What others frame as failures of capitalism to deliver collective goods, deniers identify as regulatory distortion.

In environmental terms, perhaps the biggest market failure in recent American history was the BP-Deepwater Horizon oil spill in the Gulf of Mexico. The reaction of climate change deniers illustrates their view of markets as infallible. The sentiments of ExxonMobil and Chevron

executives were uncritically relayed within the pages of *ECN*, defending the capability of the energy industry to self-regulate because 'the Gulf of Mexico oil spill would not have happened if BP had followed established industry safety procedures,' and the incident represented 'a dramatic departure from the industry norm for deepwater drilling procedures' (*ECN* 2010, Issue 5). Weeks after the oil-rig explosion, several speakers at the 2010 International Conference on Climate Change organized by The Heartland Institute insisted that the BP oil spill did not constitute a market failure and that energy regulation would only serve to increase costs and fail to prevent future environmental problems. Instead, they advocated deregulated approaches to energy markets, allowing self-correction through consumer boycotts.

Policy outcomes

Articles coded with the policy outcomes theme address specific consequences or estimated calculations of climate-policy results in terms of job losses and costs imposed on families and consumers. Deniers pay attention to estimated costs of various climate-mitigation policies as a means of expressing opposition. In 2002, *ECN* writers reported that participation in the Kyoto Protocol would have cost the American economy between $125 and $300 billion annually (Issue 3). Many of these articles translate climate-policy cost in terms of consumer expenditures. For example, a 2004 estimate of the Climate Stewardship Act proposed by Senators McCain and Lieberman framed it as more expensive than the Iraq War and would cause gasoline prices to rise between 9% and 19% by 2010 to 2025 (*ECN* 2004, Issue 6). A Heartland Institute study concluded that the Regional Greenhouse Gas Initiative (a carbon cap-and-trade regulatory regime covering states in the American northeast) would cost households between $4500 and $6300 annually (*ECN* 2006, Issue 2). Senator James Inhofe opposed the Sanders–Boxer and McCain–Lieberman climate-mitigation bills on the basis that they would create equivalent tax burdens of $4500 and $3500 on families of four, respectively (*ECN* 2007, Issue 6).

Climate change deniers consistently argue that pursuing climate change mitigation would lead to economic insecurity for many Americans. In a separate *ECN* issue, the same McCain–Lieberman Climate Stewardship Act was estimated to result in 39,000 job losses by 2010 and 190,000 job losses by 2020 (*ECN* 2004, Issue 7), while Kenneth Green of the American Enterprise Institute warned that President Obama's cap-and-trade regulatory scheme would eliminate '83,000 mining related jobs, 60,000 coal-energy power plant jobs, 31,000 coal transportation jobs,' and tens of thousands of other jobs related to coal (*ECN* 2009, Issue 1). Margo Thorning of the American Council for Capital Formation warned that

carbon-emission caps in California would result in 'higher energy costs, millions of dollars in lost business production, and widespread job losses' (*ECN* 2006, Issue 7). These types of viewpoints in the ECN archive consistently frame environmental regulation as presenting an either/or decision regarding economic growth and security, where environmental mandates can only be met at the cost of economic benefits. This framing implicitly rejects the prospect of liberal environmentalism if regulatory mandates intervene in market activity.

Market ethos and morality of regulation

Definitions of ethical conduct, as understood by neoliberals within the context of deregulated markets, explain an additional layer of opposition to state action on climate mitigation. Neoliberal deniers articulate an ethical order that benefits both environmental and human welfare through 'more markets' and 'less regulation.'

Committing to deregulated markets to address environmental problems requires the belief that aggregate consumer and entrepreneurial decisions provide better outcomes than policies based upon expert opinion. This belief means that only solutions to problems identifiable through knowledge of immediate interests are worth pursuing. As one example, Joel Schwartz of the American Enterprise Institute decried the conclusion of California Governor Arnold Schwarzenegger's Climate Action Team that American entrepreneurs and venture capitalists are missing an opportunity to earn money in emerging alternative energy markets, framing climate activists as

> claiming to know better than businesses and investors how they should spend their money. The activists even have university scientists with sophisticated computer models of California's economy to 'prove' it. And they're going to get the government to make sure the rest of us start acting in our own self-interest, whether we like it or not. (*ECN* 2006, Issue 8)

Reacting to government subsidies for alternative energy industries, Jerry Taylor of the Cato Institute argued that

> the federal government is in no position to intelligently *dictate capital flows* in energy markets. This exercise of 'picking winners' has never before yielded anything positive and probably never will … If [alternative energy companies] are not economically viable on their own merits, then no amount of subsidy or mandate will make the investment worthwhile from an economic perspective. (*ECN* 2009, Issue 4; emphasis added)

Thus, deniers frame markets as filtering mechanisms that provide ethical guidance for identifying the actors most capable of assessing the appropriate balance between economic want and environmental concern.

Elsewhere, climate change deniers warned that climate change mitigation could lead to carbon-rationing coupons or personal carbon allowances similar to WWII rationing coupons for food and fuel (*ECN* 2007, Issue 4, and *ECN* 2008, Issue 6). Given their attacks on the veracity of climate science, invoking carbon-rationing coupons or personal carbon allowances allows deniers to argue that regulatory solutions will only impose unnecessary sacrifice and duress. They even go so far as to view their fight against climate mitigation as a pursuit of social justice, arguing that the burdens of 'carbon sacrifice' will be unevenly distributed. For example, they claimed that the costs of meeting a cap on CO_2 emissions will be 'regressive in that poorer households would bear a larger burden relative to their income than wealthier households would' (*ECN* 2007, Issue 6). Todd Wynn of the American Legislative Exchange Council reiterated this point when he noted that American households that earn less than $50,000 spend much larger portions of their budget on food, healthcare, and energy, and that imposing additional costs through carbon regulation would particularly harm their well-being (*ECN* 2012, Issue 8). Likewise, Deneen Borelli of the National Center for Public Policy Research argued that 'since minorities are disproportionately represented among the poor households, these global warming regulations are racist because they will harm poor blacks, Hispanics, and other minorities the most' (*ECN* 2008, Issue 6). Although mitigation policies often have features designed to provide benefits to low-income households, this type of framing provides deniers with powerful rhetoric to oppose mitigation on ethical and moral grounds.

Regulatory cartels

Deniers tie all of their opposition to carbon regulation together through a common understanding that regulators use climate-science knowledge to justify standards that will benefit energy giants and harm consumers. Responding to the failure of the EU emissions trading scheme to yield substantial reductions in carbon emissions, Iain Murray of the Competitive Enterprise Institute argued that European policy makers essentially 'legalized a cartel' that gave windfall profits to the utilities industry (*ECN* 2007, Issue 5). Writers in *ECN* frequently frame problems that some may characterize as market failures as a problem of regulatory cartels. For deniers, market failures do not result from lack of regulatory oversight but from alliances between regulators and dominant firms. Framed this way, 'market failures' become 'government failures' as firms exploit state authority to gain uncompetitive advantages. For example, both Enron and BP were identified as complicit with 'climatism' because their executives knew they could exploit regulatory

standards to increase market share over companies ill prepared to take advantage of alternative energy markets immediately. Deniers accuse several other major companies of colluding with climate scientists and activists as a means of furthering their interests, including Ford Motor Company, Toyota, Duke Energy, Alcoa, General Electric, DuPont, Goldman Sachs, JP Morgan, Deutsche Bank, and many others.

Although the theme of regulatory cartels does not always receive much direct attention, it is consistently present in the literature produced by climate change deniers. Perhaps more than any other theme, concern over regulatory cartels represents the climate change deniers' concern over the co-production of climate science and climate policy. In order to understand how this all fits together, deniers refer to insidious interests of actors involved in 'climatism' or 'climate alarmism' (see Table 3). These terms refer to the perception found in the climate change denial literature of the constellation of actors promoting the veracity of climate-science knowledge in order to secure selfish interests.

What makes the 'climatism cartel' unique as a regulatory cartel is the perceived variety of actors involved. Usually, critiques of regulatory cartels focus on powerful firms within an industry. Climate change deniers argue that the climate cartel goes beyond big business, extending to scientists, activists, and bureaucrats as well. An outline of the actors and interests constituting climate alarmism as perceived by climate change deniers is presented in Table 3. The perceptions outlined in

Table 3. The climate change denier perception of actors and motives involved in the 'climatism' cartel.

Actors	Needs	Problem	Solution
Impact scientists	Funding for research and equipment (such as supercomputers); job security	Work does not satisfy practical needs of the consumer economy	Create a problem (climate change) in need of scientific expertise; conform to disciplinary norms in order to secure tenure
Energy and financial corporations	Market advantage	Investments in low-carbon energy projects not profitable unless scarcity imposed via regulation	Support regulation that gives them competitive advantage over companies not investing in low-carbon energy
State bureaucrats	Budget expansion; justification for existence	State agencies (such as EPA) need to expand budgets during fiscal contraction	Design regulatory schemes that need state oversight
Environmental activists	Self-preservation of organizations; funding; membership	Public may lose interest in environmental issues	Promote culture of fear through 'environmental alarmism' as means of encouraging funding and action

this table underline the importance for deniers to attack the evidentiary basis of climate change. The knowledge produced by climate change experts justifies action taken by other parties that threatens the operation of free markets. Thus, select energy and financial firms are seen as exploiting concern over climate change in order to secure their investments in alternative energy. Likewise, unproductive bureaucrats must identify problems in need of regulatory oversight in order to justify their organizational existence and expansion, while professional activists justify the purpose of their organization and drive membership through fear of climate change consequences.

Of course, in this view, climate scientists themselves have material interests in creating a body of knowledge articulating the impact of human action on the global environment. The fact that many scientists rely upon public funding to carry out research makes their knowledge suspect in the eyes of neoliberal climate change deniers. They frame climate scientists as deviant precisely because they do not operate under private-market incentive structures. For example, Patrick Michaels of the Cato Institute complained that 'so long as governments hand out billions of dollars each year for climate research, there is no incentive to report the truth' (*ECN* 2005, Issue 4). This allows climate change deniers to distrust scientific consensus on the grounds that it operates within a culture of 'publication bias' caused by 'heavy government funding of the search for one result, but little or no funding for other results' (*ECN* 2012, Issue 6).

Climatism ultimately refers to a network of actors, each of whom has a structural interest in perpetuating perceived realities of climate change in order to secure material benefits. It all starts with framing climate science as an intellectual practice that has little to no value in private-market transactions, imposing unnecessary social costs on economic activity through regulatory standards that result in less efficiency and other undesirable outcomes. In short, deniers accuse climate scientists of creating a problem where one does not exist. Under this narrative, deniers depict powerful members of the mainstream academic community as coercing all other scientists to confirm results that derive not from an unbiased search for truth, but a commitment to controlling human–environment interactions and free-market institutions. The supposedly alarmist character of this knowledge then allows other actors – bureaucrats looking to expand their budgets and power, activists seeking larger organizations, and big business hoping to monopolize new markets[2] – to coordinate action toward mutually beneficial ends. This type of representation lends insight into the framing of climate change within a conservative media 'echo chamber' dedicated to delaying action on climate mitigation.

Conclusion

Climate change deniers are not necessarily poorly educated or scientifically illiterate. Instead, they possess neoliberal commitments to free markets that lead them to view professional climate science as operating under perverse incentive structures, calling into question the legitimacy of scientific authority in guiding policy. For neoliberal climate change deniers, accepting the reality of climate change validates the insertion of collective concerns into rational decision-making processes, prompting consumers to act on the basis of something other than self-interest, and businesses to serve something other than the interests of their clients, communities, or stockholders.

In the context of climate change mitigation policy, deniers argue that allowing voluntary consumer decisions to dictate how a society addresses collective problems will provide more efficient solutions than action mandated by the state. Regardless of whether policy makers utilize market mechanisms, deniers argue that regulating carbon emissions creates economic damage precisely because it allows expert opinion to structure market transactions, violating the perceived efficiency of unregulated markets. Deniers frame climate scientists and policy makers as perverting 'natural' markets through their insistence upon the attachment of price signals to carbon emissions.

Focusing additional attention on the economic–ideological opposition to climate change provides further understanding of what animates climate change denial. Here, we can see how deniers challenge policy through an ideological commitment to infallible, 'pure' markets. In framing their opposition to climate policy, deniers tap into a vision of society where businesses are restrained only by the court of consumer decisions and where environmental performance is defined as a product of consumer desire. For them, markets free from the shackles of regulatory oversight and protected from government failures provide a social order where private actors prioritize economic and environmental concerns while maintaining individual liberty.

Climate change denial is not restricted to specific claims regarding the veracity of scientific evidence in support of anthropogenic climate change, but also reflects concern over expertise not beholden to market incentive structures that influences environmental and economic policy. Neoliberal climate change deniers view private actors as more trustworthy precisely because they think self-regulating markets will hold them accountable. From this perspective, attempts by the climate change denial countermovement to delegitimize the role of academic scientists in advising regulatory policy reflects a broader attack made by neoliberals on the public sphere in favor of privatization. Recognizing the perception held by neoliberal deniers that political opponents will use climate science to infringe upon 'true' market activity provides one key to understanding the modus operandi of the climate change denial countermovement.

Notes

1. We should note that empirical studies demonstrate the presence of a strong state in many types of legal markets, even many that may be characterized as 'deregulated' in an era of neoliberalism. See Vogel (1996) or Braithwaite (2008) for examples of this perspective.
2. Rhetorical attacks on 'big business' by neoliberal climate change deniers may be contrary to expectations. To be clear, such attacks do not target whole industries but rather firms that are specifically perceived to be working with state authorities to create favorable environmental regulation.

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