

# Geoengineering Our Climate?

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## Strange Bedfellows: Climate Engineering Politics in the United States

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## Climate Engineering Subverts Traditional Left-Right Politics

In the United States, positions on climate change have become strong markers of political identity. There are, in fact, very few stronger indicators. Matthew Nisbet, a political communications scholar, places the current public conversation in the United States about climate change in the same rarefied category as debates about gun control and taxes, as one among a handful of issues that most clearly “show two Americas divided along ideological lines.”<sup>1</sup> Indeed, a straightforward way to predict whether a particular person in the United States supports action in response to climate change, or, for that matter, believes that climate change is a real thing, is to ask about their political affiliation.<sup>2</sup> Those who identify as Democrats or political liberals are supposed to, as a matter of political dogma, believe in climate change and the need for a response; Republicans or political conservatives are supposed to hold the opposite view.

When it comes to climate engineering, though, (and we use the term “climate engineering” in its broadest sense here, to refer to the full potential set of greenhouse gas removal and albedo modification technologies, since this wide usage best reflects the muddied state of the conversation in the United States), the picture is a good deal more complicated. The left-right divide matters, as we will discuss below, but is also subverted and transgressed in interesting and important ways. The growing chatter about development and potential deployment of climate engineering responses is producing curious,

and sometimes counter-intuitive, reaction from across the political spectrum.

A few cherry-picked examples give something of the flavor of the entanglements being produced. For instance, a broad coalition of voices across the left-right spectrum stands opposed to climate engineering, at least in public rhetoric. Al Gore, liberal champion of climate action, is on record as suggesting that climate engineering, and specifically stratospheric aerosol injection, is “insane, utterly mad and delusional in the extreme.”<sup>3</sup> Similarly, author and liberal climate activist Bill McKibben routinely describes any talk of climate engineering as the refuge of those unwilling to shake an addiction to fossil fuels.<sup>4</sup> This broad opposition to consideration of climate engineering is a stance shared with the preponderance of self-identified American conservatives surveyed in a study undertaken by Mercer et al., the findings of which suggest that conservatives, as a group, skew towards being “detractors” when asked about their views on solar radiation management.<sup>5</sup>

At the same time, a general support for consideration of climate engineering is apparent from interesting quarters. Democratic congressman Bart Gordon, when he was Chairman of the House Science and Technology Committee, called the only congressional hearings to date on climate engineering,<sup>6</sup> and is on record as being supportive of develop-

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<sup>3</sup> Quoted in Goldenberg 2014. Gore, who acts as a judge for the Virgin Earth Challenge, is said to support research and development of many proposed Carbon Dioxide Removal technologies, some of which traditionally fall under the climate engineering umbrella. He was specifically referring to stratospheric aerosol injection in his comment cited above.

<sup>4</sup> McKibben 2013

<sup>5</sup> Mercer et al. 2011

<sup>6</sup> Geoengineering: Parts I, II, and III 2010

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<sup>1</sup> Nisbet 2009

<sup>2</sup> See, for instance, McCright et al. 2014

ment of a research agenda on many climate engineering technologies.<sup>7</sup> This puts him in uneasy company with Republican political establishment figures like former Presidential candidate Newt Gingrich, who made what he called a conservative case for consideration of stratospheric aerosol injection, at the height of debate in the United States about a cap and trade bill, in a blog post with the evocative title, “Stop the Green Pig: Defeat the Boxer-Warner-Lieberman Green Pork Bill Capping American Jobs and Trading America’s Future.”<sup>8</sup>

What's going on? What's shaping these odd coalitions and political boundary crossings?

One possible answer has been advanced by Australian author Clive Hamilton. He has suggested that the divide emerging in the United States between those who claim support for a climate engineering response and those who stand most firmly opposed can best be explained by sharply divergent understandings concerning humanity’s use of technology. These understandings, says Hamilton, do not track with traditional left-right characterizations. Rather, they reflect worldviews that have their roots in deeper understandings of humanity’s relationships with the built and the natural worlds. Hamilton draws a distinction between so-called *Prometheans* (named for the figure in Greek mythology who wrested fire from the gods)

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<sup>7</sup> See, for instance, Gordon’s comments as part of a panel discussion on climate engineering organized by Resources for the Future and the Forum for Climate Engineering Assessment, available at <http://www.rff.org/Events/Pages/Whats-Next-for-Climate-Engineering.aspx>. Gordon argues that various climate engineering technologies may well, with United States government support, become “tools in the toolbox.”

<sup>8</sup> Gingrich 2008

and *Soterians* (named for the Greek goddess who represented, in Hamilton’s words, “safety, preservation and deliverance from harm.”)<sup>9</sup> The Prometheans hold “[a] technocratic rationalist worldview confident of humanity’s ability to control nature,” which stands in sharp contrast to the Soterian worldview, “a humble outlook suspicious of unnatural technological solutions and the hubris of mastery projects.”<sup>10</sup> So Democratic and Republican Prometheans may find common ground in support for climate engineering.

Another contrasting possibility is that climate engineering plays to facets of left-right ideology that stretch beyond traditional conceptions of climate change and what it suggests in terms of required response. Mercer et al., again, suggest, based on their survey work, that political liberals who stand opposed to climate engineering may do so out of a desire for the maintenance of naturalism when it comes to addressing climate change and other expressions of environmental harm,<sup>11</sup> while political conservatives opposed to climate engineering may be motivated by distrust of government and other powerful institutions that would have most control over a climate engineering response.<sup>12</sup> Or it could be that liberals who advocate for climate engineering research and potential deployment

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<sup>9</sup> Hamilton 2013, 18

<sup>10</sup> Hamilton 2013, 123-124. By Hamilton’s reckoning, the Promethean (or what Hamilton calls in Revkin 2014 the “eco-pragmatist”) camp is occupied, in the United States, by figures like Michael Schellenberger, Ted Nordhaus, Peter Kareiva, and Stewart Brand.

<sup>11</sup> Wapner 2013

<sup>12</sup> Mercer et al. 2011. See, though, Buck 2015, for an argument that this simplistic account of conservative motivations breaks down in the face of the fact that deployment of large-scale climate engineering technologies would require a strong overarching regulatory scheme.

may do so reluctantly out of a sense of desperation when it comes to climate change,<sup>13</sup> while conservatives may believe that climate engineering represents a form of response to climate change that aligns with deep beliefs in the power of free enterprise and market-driven innovation.<sup>14</sup>

In this way, the climate engineering conversation can be seen to be creating some strange bedfellows, with pockets on the left and right finding themselves arguing for similar positions, though often for quite different reasons. The result, as Jeff Goodell has put it, is that climate engineering “scrambles old political alliances and carves out new ideological fault lines.”<sup>15</sup> There is some intuitive resonance to the kinds of claims advanced by the figures referenced above. They suggest, when taken together, that climate engineering is a subject that cuts across the traditional left-right divide in important and profound ways.

### **But the Left-Right Political Divide Still Matters**

What might these emerging lines of alliance and contestation lead to? We move here from review of the existing landscape in the United States to speculation regarding what it might become.

One important thing to note is that the climate engineering conversation that is evolving rapidly in the United States is doing so in a context that, despite all that has been noted, is marked to its core by left-right ideological understandings. This means that while talk of

climate engineering may to some extent confound old categories, it will also be shaped by those categories in ways that must be analyzed and certainly cannot be ignored.

This leads to one possible future—a future in which climate engineering is used rhetorically within the United States to subvert climate action. There is a real danger, for instance, that the promise of some climate engineering *deus ex machina* will be dangled as a coming “solution” by conservative political and corporate elites intent on limiting other forms of response to climate change. This is something more than the “moral hazard” that is often discussed in climate engineering circles—that is, the idea that any talk of climate engineering may distract from mitigation and adaptation activities. And it is something more than conservatives embracing climate engineering as a “solution” to a problem that mainstream American political conservatism has long actively denied. Instead, we are suggesting here that it is possible to imagine some vague promise of a climate engineering fix being offered *knowingly* and *strategically* by powerful conservative actors with the sole intent of preserving business as usual. This may happen even as these same actors undercut the kinds of large-scale scientific, technologic, and social investments that would be required to take climate engineering ideas from the drawing board into the world, on the grounds that the public investment and control that, say, a sulfate aerosol injection strategy would require are anathema to conservative ideology.

At the same time, it is possible to imagine climate engineering emerging as a great new boogie man on the political left. If climate engineering comes to be widely seen or char-

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<sup>13</sup> See, for instance, profile of Ken Caldeira in Merchant 2014

<sup>14</sup> Lane 2014

<sup>15</sup> Goodell 2010, 15

acterized as a conservative plot to avoid taking real action on climate change, then important actors on the political left might rush, in a united fashion, to oppose any climate engineering development. At present, just a handful of environmental non-governmental organizations (ENGOS) are tracking the climate engineering conversation in any meaningful way.<sup>16</sup> If real-world events forced ENGOS based in the United States to adopt a position on climate engineering—if, say, a research team were to embark on medium or large-scale testing of stratospheric sulfate injection, or if a new Republican administration were to announce a desire for a climate engineering research agenda—the traditional left-right divide could well work to prompt fierce liberal opposition.

These are important considerations. The United States has emerged as a hub of climate engineering research, with a growing number of physical science research programs and an increasingly robust engagement by the scientific establishment. There is also emerging political interest, as evidenced by US government support of a pair of studies produced by the National Academy of Sciences<sup>17</sup> and reports on climate engineering research and governance by important establishment bodies like the Congressional Research Service.<sup>18</sup> The positions taken on climate engineering by publics and elites in the United States will, given the country's extraordinary clout when it comes to scientific and technological matters, have an indelible impact on the global climate engineering conversation.

At present, the discussion concerning climate engineering is dominated by scientific voices, speaking, for the most part, in rationalist ways about climate engineering as, at best, a bottom-of-the-barrel component of a strategic response to climate change. However, when climate engineering gains more political and public traction and salience in the United States, as it surely must, the terms of the conversation will change. Broader climate politics in the United States are anything but rational, and are instead driven all too much by political ideology and culture. So, too, will it be for the politics of climate engineering

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<sup>16</sup> Forum for Climate Engineering Assessment 2015

<sup>17</sup> National Research Council 2015a and 2015b

<sup>18</sup> Bracmort and Lattanzio 2013

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