

THEGREENGROK

Climate Conundrum: Invoking a Pause

by Bill Chameides | September 25th, 2012

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[A group of Duke faculty, undergraduates, and grad students as well as some non-Dukies met in the Blue Ridge Mountains to discuss climate change messaging to help create a better informed public.](#)

What can neuroscientists and artists bring to the table in a climate science discussion? A lot.

Climate scientists are increasingly frustrated. We continue to make progress on the science front — for example, starting to unravel the relationship between climate change and extreme weather (see [here](#) and [here](#)); but the American

public seems at best concerned but unwilling to do much about it, and at worst dismissive.

Many Americans remain [unconvinced that global warming is occurring](#) and a [larger percentage is unconvinced that humans are the cause](#) of any warming. But if anything, the science just seems to get stronger, as evidenced by the recent independent study of a [former outspoken skeptical scientist who arrived at the same conclusion reached by climate scientists](#) and sundry scientific associations — the globe is warming and humans are almost certainly a major driving force.

Also frustrating is the fact that anything we might do on the [issue of climate science and any steps we should consider to mitigate or adapt to climate change](#) have pretty much disappeared from the national dialogue.

While many climate scientists fear that climate change is a, if not *the*, defining issue of our time, I'm willing to bet that a [scant few Americans](#) will go into the voting booth on November 6 with climate change high on their list of vote-determining issues.

Left Brains and Right Brains

So what in the world is going on? I'd say we have a brain-communication disconnect. Climate scientists are doing what they do best: providing folks with facts and figures and logical arguments, stuff that taps into the analytic parts of our brains. But it seems that for lots of people this analytical message is simply not sufficiently sustaining and visceral enough to lead to action on climate change, commitment to real change — change in the products we produce and purchase, change in the marketplace, meaningful behavioral changes.

What to do? Maybe we need to change the messages on climate change. Maybe just giving folks the facts and figures is not enough. Maybe it's time to experiment more with different modes of communication that affect both the non-analytical and analytical parts of our brains. But how?

The Plan

To help answer that question, a small group of Duke faculty, staff and students and a few non-Dukies met for a two-day retreat north of Asheville, North Carolina. (See end of post for meeting participants.) Our gathering was funded by a group called "[Invoking the Pause](#)," a small nonprofit that provides small grants to "foster creativity and 'out-of-the-box' thinking ... for innovative and potentially scalable ideas to," among other things, advance public understanding of climate change.

In planning the meeting we asked ourselves: If you want to experiment with different modes of communication that affect non-analytical as well as analytical parts of the brain, whom do you need to bring together? The analytical part is easy — climate scientists. But what about the non-analytical part? We chose two groups not traditionally associated with climate science: artists and cognitive/brain scientists. I suppose having artists at the meeting is not all that surprising. After all, artists are in the business of reaching people on emotional and visceral levels, and so can offer a unique perspective and skill set for eliciting such responses in the case of climate change.

But Why Brainy Cognitive Scientists?

In recent years cognitive scientists have been making, if you will, mind-blowing discoveries of how our brains work and how we process information and make decisions. They have developed a new and powerful array of analytical tools capable of monitoring an individual's brain activity during an event and thereby gauging his/her reaction to and retention of a given message over time. A central organizing theme for our discussions was how those new insights can be used to deepen our understanding and explore the effectiveness of various approaches to climate change messaging. (See [here](#) and [here](#).)

And so we had our plan: assemble climate scientists, artists and cognitive scientists at a mountain retreat where there is no escape (and only fleeting Internet access) for two days, and see what happens.

Pausing for a Creative Collision

We arrived on a Thursday night, convening in the cafeteria for some sort of noodle dish dinner — overall, the Wildacres Retreat was a wonderful location, wonderful facilities, wonderful people, but the food ... not so much. After dinner we repaired to our meeting room.

Most of the attendees had come bearing gifts that were broken out as we assembled that first evening.

[Julie Stuart](#), our facilitator and graphic artist cum environmentalist cum strategic communicator, was armed with dry markers of every possible color and reams of poster paper, on which we all got to draw and with which Julie created a graphical record of our discussions.

The artists had brought work samples (for example see [Pinar Yoldas's portfolio](#)). And Nicole Heller (formerly of Climate Central and now a Visiting Assistant Professor at the Nicholas School) and Eileen Thorsos helped set the context with

a 12-foot long timeline on climate science and public perception going back to the 1800s.

Along with cheese and crackers for sustenance, it was all good stuff, but the real prize came from the cognitive scientists — those guys, ever cognizant of what a brain needs to engage in a spirited discussion, came bearing cases of wine. And so we gathered in a circle, Julie with dry marker in hand, us holding wine goblets, and began. First introductions, then a discussion of purposes and goals, and before we knew it the magic that any retreat organizer prays for happened: a creative collision — conversation and debate and consensus and then more debate. Before we knew it, it was a day and a half later, Saturday noon. We broke ranks and headed back down the mountain. I can't speak for everyone, but I can say I drove home with my head spinning — so much new information, intriguing ideas. I highlight a few here.

The Cognitive Challenge

The cognitive scientists had some amazing insights. Here are a few:

- People rarely make decisions based on information. Despite what most of us think, many a human decision is processed in the unconscious rather than the conscious.
- Subliminal messaging is very powerful. How powerful? Check out this video (and [paper](#)) on how millisecond-long exposures to an Apple or IBM logo affected the level of creativity in test subjects. (And if you want to test how easily you can miss a "hidden" message, [check this one out](#).)
- People can receive messages in a defensive posture. For example, if someone has negative associations with environmentalists, a message containing the word "environment," regardless of its content, can simply reinforce those negative associations, thus having the very opposite of the outcome intended. (That got me thinking about the term "clean coal." Could it be a lose-lose phrase having the unintended effect of turning off both those with negative associations of dirty fossil fuels and those with negative associations of clean and green energy?)
- When given a non-specific, long-term goal, people tend to lose focus on it even as they make progress toward it — kind of a "I've done enough, time to move on" mindset. When given short-term, specific goals, on the other hand, people tend to accelerate toward them as they approach them — a "we're almost there" attitude.

At the end of the cognitive scientists' presentations, it was pretty clear why messaging on climate science has been and will continue to be its own challenge, a challenge that is strangely a part of and an addition to the challenge of addressing the actual problem of a warming world. Many people already have negative associations with climate science — not all that surprising given the well-financed campaign to discredit the science. (See [here](#), [here](#) and [here](#).) And

so almost any message about climate science is likely to reinforce that negativity. The same can probably be said for the word “environment.” And the goals of addressing climate change are so diffuse and long-term. They’re just not well-suited to the way our brains are wired.

Some Ideas

The general consensus was sober — we’ve got a huge task. Ultimately, to make progress, we may have to rebrand “the environment” and “climate science.” The catchphrase of “depoliticizing the environment” was frequently evoked. And it could be that we need new words. Should we use “nature” instead of “environment”? Could “it’s our home” play better in middle America than “save the planet”? And if people have negative associations with environmental themes, would artistic statements that are not overtly “environmental” be more effective than ones that put environmental themes front and center?

The experiment with the Apple and IBM logos illustrates how important a symbol or a subliminal message can be. One symbol for climate change that’s emerged over the past decade is the polar bear. Perhaps there’s a better one? And if there is, could it be used to subliminally change people’s attitudes about the environment?

Our discussion about subliminal messaging as well as the whole notion that we might use our understanding of human cognition to shape messages about climate science brought up ethical issues. Is the use of subliminal messages “brainwashing” or simply making people better able to absorb factual information? Is it appropriate for scientists to work with cognitive scientists to craft messages designed to work on the unconscious? These were questions we debated but were unable to resolve.

In the coming months our team will follow up on some of those ideas. The cognitive scientists will be working with artists to design and test new symbols for climate change and the environment. In addition we’ll be launching some experiments at Duke. Using a new initiative called Duke IDEAS, we will form interdisciplinary teams of undergraduates, graduate students, and faculty to test messaging around campus sustainability issues. For example, we hope to explore how different signs posted in dormitory bathrooms affect water usage. Could a picture of a mountain stream without words be more effective than a sign that states how much water Americans use daily and urges conservation?

Stay tuned...

Retreat Participants

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[Nick DeWind](#), Graduate student in neuroscience, Duke University

[Gavan J. Fitzsimons](#), Professor, Fuqua School of Business, Duke University

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[Eve Morgenstern](#), Photographer & Filmmaker

[Michael Platt](#), Director, [Duke Institute for Brain Sciences](#) and the [Center for Cognitive Neuroscience](#), Duke University

[Eileen Thorsos](#), Sustainability Education Program Coordinator, Duke Environmental Leadership Program & Duke University Superfund Research Center

[Pinar Yoldas](#), Artist, Graduate student, Duke University

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