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**Green**

**A Blog About Energy and the Environment**



February 1, 2011, 8:12 am

# Are We Hard-Wired to Doubt Science?

By [FELICITY BARRINGER](#)



Annie Tritt for The New York Times

Deborah Tavares, with a sign protesting smart-meter installations, in Sebastopol, Calif.



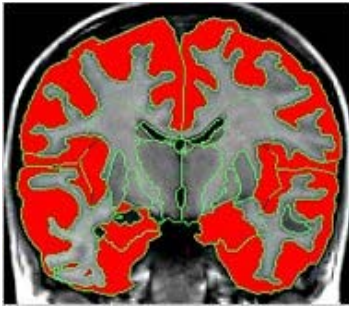
In researching Monday's [article](#) about opposition to smart meters, I found myself once again facing a dilemma built into environmental reporting: how to evaluate whether claims of health effects caused by some environmental contaminant — chemicals, noise, radiation, whatever — are potentially valid? I turned, as usual, to the peer-reviewed science.

But some very intelligent people I interviewed had little use for the existing (if sparse) science. How, in a rational society, does one understand those who reject science, a common touchstone of what is real and verifiable?

The absence of scientific evidence doesn't dissuade those who believe childhood vaccines are linked to autism, or those who believe their headaches, dizziness and other symptoms are caused by cellphones and smart meters. And the presence of large amounts of scientific evidence doesn't convince those who reject the idea that human activities are disrupting the climate.

What gives? A recovering journalist, David Ropeik, who is an instructor at the Harvard University extension school and the author of a book, "How Risky Is It Really?" offers one explanation.

He uses peer-reviewed science to explain the limits of peer-reviewed science as a persuasive tool.



Dr. Martha R. Herbert,

Massachusetts General Hospital  
The cerebral cortex and hippocampal amygdala (in red) in a normal brain.

Humans, he argues, are hard-wired to reject scientific conclusions that run counter to their instinctive belief that someone or something is out to get them.

Here, slightly edited and condensed, is Mr. Ropeik's explanation of the role of neuroscience, psychology and anthropology in creating this societal cognitive dissonance about peer-reviewed science. (Or, as my colleague [Andrew Revkin says](#), why we have "inconvenient minds.")

The assumption that there is a single truth to know that the scientific method can bring us — or a useful truth we will all ascribe to — overlooks large bodies of science that show that there is no such thing as a fact. We are subjective analyzers of data. You and I and everybody there in that story will look at "the facts" — no matter how peer-reviewed and scientifically robust they may be — through the lenses that evolution has given us for our survival.

First, the way information comes into and is processed by the brain is part of this. It's processed sooner by the amygdala, where fear starts, than the cortex, the seat of reason. We are hard-wired to respond to external or internal information with emotion and instinct first and cognition second. With emotion and instinct more and reason less.

In the case of radiation, it is invisible. It is a risk that we have no information to immediately use to protect ourselves. Look at the risks that are scary — chemicals, pesticides, radiation — we are uncertain and it scares us because we have less control over what we can't detect. Even if you have a Geiger counter, you would see this information and it would still be partial. Most of us would still be a couple of degrees short of knowing what it meant. Meanwhile, your amygdala is screaming: Alert! Alert!

Second, there is the time element when it comes to being averse to loss. If a risk is down the road, we see it with rose-colored glasses. "It won't happen to me." This means people like smokers, or cellphone-using drivers, or people in Manhattan about something like 9/11. But when something is more immediate, the risk side of the equation carries more weight.

Third — and this is the cutting edge field of research into risk perception — we tend to identify in four major groups over how we want society to be organized and to operate. You and I tend to conform our opinions about the validity of science to match what would be consistent with how our tribe operates.

Two of the groups involved, he said, are simply characterized: individualists (most people would call them libertarians, who want the government to butt out) and communitarians, the two poles on the political spectrum. The two other groups, he said, are called hierarchists and egalitarians. "Hierarchists like the status quo, class, old money," he said. "They like a nice predictable social ladder with rungs on the ladder. Egalitarians don't want any rungs."

Based on their remarks, he said, some of the smart-meter opponents are a blend of egalitarian and communitarian. "They don't like new technology," he explained, and they are bothered by an economic status quo that produces things like smart meters.

“They believe that society would be better if it stood up more to the hierarchist status quo,” he said. “When something that represents that status quo comes along, there is a cultural resistance to it. That is the underlying cultural reason they will cherry-pick their symptoms and the facts into their ostensibly rational argument against smart meters.”

The science on which Mr. Ropeik bases his conclusions includes the work of Joseph LeDoux, a neuroscientist at New York University and the author of [“The Emotional Brain: The Mysterious Underpinnings of Emotional Life.”](#) and of [Paul Whalen](#), an associate professor of psychology and brain science at Dartmouth who maintains a [Web site](#) called “The Whalen Lab, An Affective-Cognitive Neuroscience Laboratory.”

Those who developed the theory of cultural cognition, including scholars at Yale who are [writing](#) about the reception of the science of climate change, convene at this [Web site](#).

The literature on the psychology of risk perception is [cited](#) in a chapter of Mr. Ropeik’s book.

Now, why do I think that not everyone is going to agree with him... ?

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[1.](#)

[Robert](#)

Washington, DC

February 1st, 2011

7:54 am

Humans are always looking for short cuts. We believe what we want to believe, despite facts, figures and hard science! This human failing is the primary reason why anyone with any interest in any subject no matter how remote should never ever be allowed to participate in the decision making process!

A classic example is a judge! No matter how impartial we assume the judge to be the problem is that they are filled with a head full of biases and pre-conceived notions! Hence, hard science, facts and figures mean nothing unless they support their particular world views!

Same example applies across society!

Robert

Washington, DC

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[2.](#)

[Gatrell](#)

Kentucky

February 1st, 2011

7:54 am

I think the main problem with trust in science is modern media. Scientists disagree publicly. There is not "just one voice." And when they make mistakes, as with Vioxx and so many other drugs, products and treatments, we come to realize that so much of it is science, brought to us courtesy of corporations who are paying for the studies. Corporations are rushing products to market in order to pay for their research--without studying the

products long enough to know with any certainty that they are safe. And the USDA, FDA, EPA and other government officials and agencies are not requiring adequate proof of safety. They are rushing too because in many cases the Government has invested our tax dollars in these products, and wants to make a quick profit too.

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[3.](#)

[killingMother](#)

North Carolina

February 1st, 2011

7:54 am

Recent data also suggests that a large proportion of the population are genetically preprogrammed to favor anecdotal over empirical evidence. This makes sense. In the wild, if one sees a hyena tearing a human to shreds, he is well advised to avoid hyenas in the future. The anecdotal evidence model serves the species well in terms of survival. The unfortunate problem is that when the same person sees a chicken feasting on a corpse and assumes the chicken is a danger too. [www.killingmother.blogspot.com](http://www.killingmother.blogspot.com).

[Recommend](#) Recommended by 4 Readers

[4.](#)

DanW

Ohio

February 1st, 2011

7:55 am

The decline of our education system and the decline of our media are largely responsible for the decline in science. The scientific method has been lost in the media and indeed in aspects of science such as climate science. Recently both climate scientists and the media have resorted to falsificationism as a replacement to the scientific method.

Falsificationism is the assertion that a false idea is in fact true and that challengers to the idea must prove that it is not true. It is often followed in the media by the rejection of all skeptical data and theory that detract from the falsification. We are then left with the premise everything proves the false assumption. Warm weather and cold weather both 'confirm' global warming for example.

The scientific method in contrast is the presentation of a hypothesis supported by reproducible experimental evidence and the expectation that the observation will be challenged by skeptical scientists.

Climate science has been discredited by the many 'scientists' that support climate science because they have not been honest and open with either their data or their experimentation. Their data does not appear to be reproducible. Further there is no experimental evidence supporting their conclusion.

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[5.](#)

Joel Bergsman

St Leonard, MD

February 1st, 2011

7:55 am

The four-way grouping mentioned in the post is moderately (!) similar to one that's long been on the website of the Libertarian Party. The site offers a very simplified quiz that locates the taker on its two continua -- try it, it's fun and revealing. Imho both schema are not nuanced enough -- how could they be? -- but both furnish useful insight into our personal attitudes about what kind of government we like and what kind of society we would prefer to live in.

There is probably no axiom less valid than "de gustibus non est disputandum." Tastes are exactly what most of our fights are about.

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[6.](#)

Scott

Los Angeles

February 1st, 2011

7:55 am

Well there are lots of psychological explanations for why people reject science, facts, rational arguments:

- 1) Recognition that they know less than the scientists, so they must use general arguments (we can't know everything) to disagree, rather than facts (they don't know any facts, but instead question the validity of facts in general).
- 2) Contrarianism. Wanting to disagree with things in general, including science
- 3) Displaced angst at being included by others as being in a lower social or intellectual position; if you can't afford a hybrid car, get angry at hybrid cars or green power in general.
- 4) Distaste with the excessively rational and paternalistic/condescending tone of scientists, which can be directed toward science rather than at people, which is aggravated when scientists overstep the limits of their field and make blanket judgments about religion and assertions about the right way for people to think
- 5) The belief that rational arguments are being used for sinister ends. If people are using smart meters or your health information to charge you more money or deny you services, it makes sense to be against those technologies, either consciously or subconsciously. Since science has been used on the one hand to produce and push junk, and on the other hand to introduce statistical schemes that make you lose money for consuming that junk, intelligent people may be a bit paranoid of science and scientists at this point

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[7.](#)

HIGHLIGHT ([what's this?](#))

Tom

Rapid City

February 1st, 2011

8:14 am

As a scientist I'm well aware of the phenomenon. It goes farther than science though--we doubt reasoning of any sort. "Don't confuse me with the facts; I've already made up my mind." This phenomenon can turn any forum for making decisions--from the PTA to the US Senate--into the human equivalent of a group of screaming chimps. I believe we all know it too, and it makes us feel guilty. I used to tell my students that this is the basis for the Christian concept of original sin.

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[8.](#)

PAUL TAYLOR EXAMINER

LOS Angeles, CA

February 1st, 2011

8:15 am

ECOPOLITICS

After 40 years of EPA environmental controls and successes, America leads the world in environmental protection. So, we should concede that our environmental regulatory system is complete, and that most pollution problems are solved, or are under active management.

Recent climate frauds have revealed an environmental movement that is partisan, and corrupted by radical, anti-capitalist fear mongers. Militant eco-groups and green-obsessed bureaucrats have become an "axis of antagonism" that we can no longer afford.

As the U.S. struggles through a third year of historic economic hardship with record unemployment, we don't need any more costly environmental regulations. What we need is a complimentary U.S. energy policy.

[Recommend](#) Recommended by 4 Readers

[9.](#)

[Susannah](#)

France

February 1st, 2011

8:15 am

Ah! I see. So, folks that do not believe science is a sound basis from which to operate are less evolved.

[Recommend](#) Recommended by 3 Readers

[10.](#)

[Jim](#)

Baltimore, MD

February 1st, 2011

8:15 am

Actually, humans could just not trust either the group of scientists who make up studies or the group of journalists who report them, both with vested interests in winning short-term approval but not much direct involvement in the outcomes of a local community. This is why we favor anecdotal evidence, because others in our circumstances likely weight local conditions similarly.

Scientists vary enormously in the life experiences they bring to crafting experiments and interpreting data. Groups of scientists often are composed according to the quirks or pre-determined needs of an industry group or political committee. The many and various failings of blue-ribbon panels, scientific assemblies, and the politicians/journalists who use them have rightly made the average citizen wary of drive-by science and journalism. When scientists and journalists take more care with science and its real-life outcomes, we will let down our guard. This report, for example, seems more like a cheap shot to lower your reader's guard than a serious piece about how we perceive data in aggregation.

[Recommend](#) Recommended by 6 Readers

[11.](#)

[Mark](#)

Los Angeles, CA

February 1st, 2011

8:15 am

Perhaps some people remember the United States government spraying radioactive particles over American cities in the 1950s, and go from there. Or, maybe, people have been lied to and manipulated so much by corporations and politicians that the mask of science is inadequate to cover an permeating lack of credibility. Then there is the matter of the 'sparse' nature of the available information.

The big problem in trying to reach people with a rationale is the competition from other rationales in the marketplace of the public mind.

No 'hardwired' biological basis need be a determinant, though it is a nice way for science to project authority against those who doubt that scientists know everything and always agree amongst themselves.

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[12.](#)

[claire](#)

Brooklyn, NY

February 1st, 2011

8:41 am

I think this is correct, but also I think the situation has been made worse by political opportunists and those who support certain interests (such as corporations etc). The success of negative advertising in politics has not been lost on those who cynically want to advance their self-interest when scientific evidence is against them. Their version of negative advertising is campaigns to disparage all scientists and/or to make false equivalency between the majority of evidence and the "other side" who denies global warming etc; so that people will just throw up their hands and ignore all of it... and that leaves only the ad campaigns enticing people to buy bigger cars and eat crappy food to have their way.

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[13.](#)

[Bill de Tucson](#)

Arizona

February 1st, 2011



8:41 am

Although I don't like the computer analogy of "hard-wired," I find the cultural explanation interesting--that we tend to respond positively to that which confirms our ideological biases, for example. On the other hand, I would like to see some similar analysis of why some people accept scientific findings readily--even to the point of accepting what a scientist says regardless of the evidence to support his or her assertion. Worth reading Gottlieb's review of Ramachandran's book "The Tell Tale Brain," in which Gottlieb states, "Reads may sometimes lose track of what is firmly established, what is tentative and what is way out there. His fondness for evolutionary explanations can be particularly freewheeling." (Sunday NYT Book Review, Jan 30)

[www.ugotitwrong.wordpress.com](http://www.ugotitwrong.wordpress.com)

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[14.](#)

sas

new york

February 1st, 2011

8:41 am

#4 dan -- "Climate science has been discredited by the many 'scientists' that support climate science because they have not been honest and open with either their data or their experimentation. Their data does not appear to be reproducible. Further there is no experimental evidence supporting their conclusion."

i heartily agree.

the author seems to exclude the possibility that many intelligent and educated people otherwise respectful of science simply find more than adequate reason to suspect the failed 'science' of so-called climate 'science', which by this observer's analysis is based on fraudulent and cherry picked data and entirely fabricated to propel an international agenda of 'social justice.'

evolution? yes!

the laws of thermodynamics? yes!

is there a god? prove it!

co2 drives climate? prove it!

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[15.](#)

Craig Gorsuch

DFW, USA

February 1st, 2011

8:42 am

To use the example of the photo in the article (Smart electrical meters). My concern is not that I'll save money, nor that the electric company will "provide" this equipment for me... My concern is that the electrical company will have granular control over my energy consumption. It's not enough that I pay them for a service, buy they want to tell me that I'm using too much electricity at certain times of the day. This, theoretically, gives someone else the ability to "throttle" my electrical use without my permission. Would you like someone telling you how much of X you are allowed to use at a particular time? I didn't think so.

What if I work the night shift, and my wife works the day shift. Our electrical consumption will reflect that. What if I run a machine shop in my garage as my home-based business? According to the power company, I'll be using too much electricity during normal business hours "when everyone works downtown". Why should I have to defend my power consumption?

The Electrical Company is selling a bulk commodity, just like The Gas Station. We buy X amount at price based on our consumption of that commodity. If we use more, we pay more. Why should it matter how much we use at any given time? If I choose to reduce my gas consumption, I either have the money to buy a more fuel efficient car, or I don't. (Some things are beyond my power. I can't "visualize" a raise.) If I choose to reduce my electrical consumption, I either have the money to buy more energy efficient appliances or I don't.

But to allow some third party to control my electrical consumption... It's too much like depending on the Egyptian

internet right now. Someone else pulled the plug for \*political\* reasons. I don't want to give anyone that kind of control of my electrical power. (Not that they can't now, but smart meters add more control.)

When I have the money to do so, I want off the grid. Simple as that. Let anyone try to tell me how much electricity I can and can't use then.

[Recommend](#) Recommended by 4 Readers

[16.](#)

Peter

NY

February 1st, 2011

8:42 am

[people-press.org...](http://people-press.org...)

Look at those data. When half of Americans can't tell me that an electron is smaller than an atom or that antibiotics can't kill a virus, should I take their 'incredulousness' towards science seriously?

Of course not. Our population is 'skeptical' towards science because they cannot understand it. They cannot understand it because religious fundamentalists obfuscate the teaching of science and the educational system is failing due to a lack of funding.

They're not skeptical, they're ignorant and angry towards "elitist" concepts that tell us we cannot gorge energy and that we're not the carbon-copy of an omnipotent and anthropomorphic deity.

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[17.](#)

GDT

Buffalo

February 1st, 2011

8:42 am

But some very intelligent people I interviewed had little use for the existing (if sparse) science. How, in a rational society, does one understand those who reject science, a common touchstone of what is real and verifiable?

Intelligent people have "little use" for science? In favor of what belief system then? Why not call them what they are? Surely not intelligent.

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[18.](#)

ACW

New Jersey

February 1st, 2011

8:42 am

Ah, yes, there are two kinds of people: People who divide people into groups, and ...

I think Mr. Ropeik is partly right, but only part.

Admittedly fear is the strongest, most immediate, most visceral emotion we have. (Where would the nightly news be without the amygdala? "Danger in the Lingerie Drawer! Are socks killing your children? Report at 11!") And our openness to some arguments and not others is indeed influenced by our basic emotional character. "That's just how I am, I think what I think, don't try to confuse me with facts." I suspect everyone has at least one personal belief that other people would think qualifies the believer for membership in the tinfoil hat brigade. (Just not always the same belief.) Add in the gutting of science education and the rise of the religious right (the earth is 6,000 years old and God put the fossils in the rocks to test your faith), whose adherents could fit into any of those four categories.

BUT suspicion is also rational, learned from experience. I'm old enough to remember crawling under the desk to "duck and cover" on the assumption that this would save us from the Bomb. I also recall a prominent doctor's prediction that in a few years the field of epidemiology would die out because antibiotics would vanquish all

communicable diseases (this was only a few months before the NYT carried a small article about a mysterious cluster of rare cancers in gay men ... ). Is it any wonder that, given the number of reassurances from scientists that turned out less than reassuring, some people are not easily reassured?

Scientific disasters, like most disasters, often are rooted in incomplete knowledge. (As Donald Rumsfeld had it, the "unknown unknowns.") Case in point, thalidomide. They knew what it did (prevent morning sickness). They knew what it didn't do (cause birth defects in test rabbits). The unknown unknown: The difference between rabbits and humans.

Although I think the probability that vaccines "cause" autism is very slim, there are so many subtle environmental factors to consider, which may also act in combination; and I (apparently in the minority) think "autism" is probably a symptom, with several possible causes. That's assuming we can settle on a definition at all, which, considering that right now it's a "spectrum" ranging from Temple Grandin to Noah Greenfeld and beyond to complete basket cases. (And I question whether Asperger's is "autism" at all.) So no, I'm not willing to rule out entirely that some "autistic" people have had a reaction to an environmental factor, such as a component of a vaccine, which might be triggered only in combination with a genetic susceptibility and/or at a particular stage in development. Proposition: Kid A gets a vaccine but doesn't have the gene; Kid B has the gene but doesn't get the same formulation of the vaccine; Kid C has the gene, plus the vaccine, but is vaccinated at age 1 year; Kid D, gene + vaccine, at age 6 months. Only Kid D develops autism. Possible? I think so. How would you test for it, though? Pretty near impossible.

And finally, as any good scientist will tell you: Absence of evidence is not evidence of absence.

So I conclude that cognition does play an important role in the seemingly irrational scepticism of the four groups. The danger of Mr. Ropeik's hypothesis is that it encourages the scientists who plunge forward and dismiss any critics or sceptics as irrational, anti-science woo-woos. The most dangerous man on earth is the one who assumes he is always right.

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[19.](#)

[R Navas](#)

Bellingham, WA

February 1st, 2011

8:42 am

Science and Math education is a vital tool for the disission making required to operate a democracy. Without critical judgement we are at the command of those who would use fear and hate to control us.

No guns are required.

[Recommend](#) Recommended by 7 Readers

[20.](#)

[Zac](#)

Madison, WI

February 1st, 2011

8:43 am

Bloodletting medical practitioners of the seventeenth century would have considered their practice 'scientifically advanced' at the time. Keep in mind that it was not that long ago in human history that Pasteur proved the existence of the germ theory of disease, which up until that point had been nothing more than an intuition - quite similar to the intuitions of the anti-radiation crowd. This is not to say they're justified in their doubts, but that the science isn't perfect.

A little humility is perhaps in order. Science is a process, and cell phones haven't been around for very long. Like journalism, science is selective and incomplete; the people isolating the variables and testing the hypotheses are also the people selecting which questions to ask- and the questions determine the answer. Virilio says that the invention of the ship was also the invention of the shipwreck. Science proves a lot, but it's as infallible as the people who perform it, which is to say, not as infallible as we would like to think.

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[21.](#)

petmal12  
New York, NY  
February 1st, 2011  
8:43 am

We doubt science where the data used to produce a conclusion mysteriously disappears, as was the case with the "climategate" data. Calling those who produce data that debunks a previously held theory names is not exactly scientific. Further, claiming that extreme cold is the result of "climate change" does little to advance the cause of science, for this argument essentially rules out any scenario which can disprove the theory. Again, not exactly scientific.

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[22.](#)

a dude  
brooklyn  
February 1st, 2011  
8:43 am

I have a problem with the idea of "intelligent people" who reject the scientific method. This leads us to an arguably meaningless definition of intelligence. Who cares if someone's mind is theoretically capable of processing at a high level, if has some mechanism in place that always prevents it from doing so?

This sounds more like a description of (one of many) mechanisms of stupidity.

[Recommend](#) Recommended by 6 Readers

[23.](#)

Mike B  
New Jersey  
February 1st, 2011  
8:44 am

Humans are actually keenly aware of the numerous social and political aspects that go along with any decision. Even when the Science is cut and dry there are social and political motivations behind the decision and don't forget there is very little good science on what will actually make people happier and better off as those are subjective values that defy easy measurement.

Therefore people aren't so much rejecting science as they are defending their own interests. Unfortunately invoking purely self-serving motivations is no way to win an argument and sometimes people have little more than a gut feeling that something will be a bad idea. Mock as you will, "gut" feelings are a Human's years of experiences matching against a pattern in current circumstances. In the case of smart meters people know that if the power company is for something it must provide benefits to them and benefits flowing to the power company usually mean benefits flowing away from the consumers.

The point is that smart meters can be used to make the grid more efficient and lower costs, but it can also be used to raise revenue and raise profits. Differential pricing of power implies that at off peak times customers will pay the current rate and at peak times they pay more. Smart meters can be told to turn off a customer's power remotely instead of having to send someone out which introduces another risk if the customer misses or even disputes a payment. Sure a Scientist can say that the meters can increase efficiency and present no radiation risk, but they can't say that the power company won't use them to screw the customers.

Same with global warming. Yes Humans are warming the planet, but it is not clear cut that we should actually do something about it. The typical American will probably pay less to deal with the effects of global warming than they will have to pay to prevent global warming. Sure there are all sorts of ethical issues, but science can't answer those. The end result is that in both cases attacking the Science is an effective response to achieve what is in someone's self-interest because by invalidating the "facts" they don't have to risk losing the more squishy ethical arguments. Irrational means to achieve a perfectly rational end.

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[24.](#)

David F Collins

Chicago

February 1st, 2011

8:44 am

"Fact, fact, fact," said Mr Gradgrind (HARD TIMES, by Dickens). Phooey. Just reach for a Dr Popper and get used to the fact that there is no such thing as a fact, and that is a scientific fact.

[Recommend](#) Recommended by 2 Readers

[25](#).

Scott

NY

February 1st, 2011

8:44 am

Dan - way to exaggerate from an isolated incident to misrepresent climate 'scientists' (and I love the use of the quotes) while ignoring that many of the actual quoted skeptical scientists are on the payroll of industries with a vested interest in maintaining 'skepticism' (see how I used quotes there myself? It's fun!). Much of the data has in fact been reproduced. Very little of the climate skeptic side's hypotheses, when they bother to come up with one, can be verified. Blame it on the sun spots? No sun spots for some years while climate change continues but we'll switch to el nino. No el nino - it's normal climate change. The fact that so many skeptics are ideologically identical suggests that it is ideology and not evidence that is driving their attitudes.

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How are climate change, scarcer resources, population growth and other challenges reshaping society? From [science](#) to [business](#) to [politics](#) to [living](#), our reporters track the high-stakes pursuit of a greener globe in a dialogue with experts and readers.

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Chatting with scientists, policy experts and activists about environmental issues.

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#### Consumers

- [Climate Ark](#)
- [Green-e](#)
- [Greener Choices](#)
- [Grist](#)
- [Jamble Magazine](#)
- [MetroGreen+Business](#)
- [National Geographic Green Guide](#)
- [Solar Buzz](#)
- [The Daily Green](#)
- [Treehugger](#)

#### Institutions

- [DOE: Office of Energy Efficiency and Renewable Energy](#)
- [Energy Star](#)
- [European and Chicago Climate Exchanges](#)
- [European Commission Directorate General for Environment](#)
- [European Federation for Transport and Environment](#)
- [International Energy Agency](#)
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- [United Nations Environment Program](#)
- [United Nations Framework Convention on Climate Change](#)
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#### Jobs

- [Bright Green Talent](#)
- [Clean Edge Jobs](#)
- [CleanTechies](#)
- [CleanTechRecruits.com](#)
- [EcoEmploy](#)
- [Green Career Central](#)
- [Green Dream Jobs](#)
- [GreenCareers from Monster](#)
- [GreenJobs from Treehugger](#)
- [Grist Jobs](#)
- [Renewable Energy Jobs](#)

#### News Sources

- [Alternative Energy Investments](#)
- [Alternative Energy News](#)
- [BBC News: Global Climate Change](#)
- [Clean Edge, Inc.](#)
- [Climate Biz](#)

- [Climate Change News Digest](#)
- [CNet: Green Tech](#)
- [Consumer Reports: Greener Choices](#)
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- [Renewable Energy World](#)
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#### Organizations

- [American Society of Landscape Architects](#)
- [American Wind Energy Association](#)
- [Association for the Study of Peak Oil](#)
- [Carbon Disclosure Project](#)
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