The Unconvinced

Critics, skeptics, deniers, or contrarians

A lunchtime talk by
Jim Prall
Senior Systems Programmer
ECE Dept., University of Toronto
jim.prall@utoronto.ca

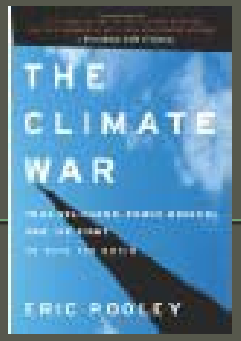
for
Climate Change Conference 2010
www.ccc-2010.ca
Toronto, Canada
August 14, 2010

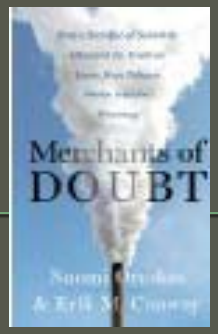
Online Resources

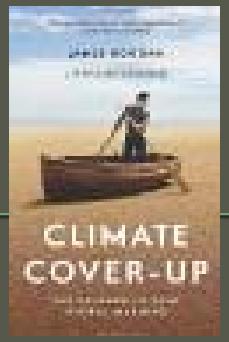
- Skepticalscience.org
  - Presents a wide range of skeptical claims, with a short, clear response to each; cites primary literature, with links.
  - Great free app for iPhone, Android, Nokia
    - Get This App! (or bookmark site)

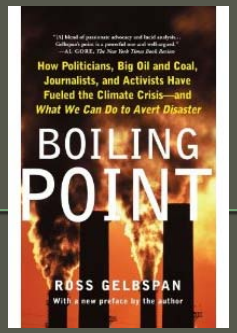
Online Resources

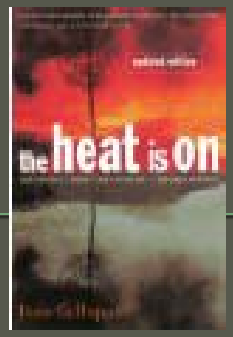
- Skepticalscience.org
  - “It’s the Sun!”
  - “Climate’s changed before!”
  - “There is no consensus!”
  - “It’s cooling!”
  - “Models are unreliable!”
  - “It hasn’t warmed since 1998!”
  - “Ice age predicted in the 70s!”
  - “The ‘hockey stick’ is broken!”











Books

- Eric Pooley, 2010. *The Climate War*
- Oreskes & Conway, 2010. *Merchants of Doubt*
- James Hoggan, 2010. *Climate Cover-up*
- Ross Gelbspan, 2005. *Boiling Point: How Politicians, Big Oil and Coal, Journalists, and Activists Have Fueled a Climate Crisis--And What We Can Do to Avert Disaster*
- Ross Gelbspan, 1998. *The Heat is On: The Climate Crisis, The Cover-up, The Prescription*

Addicts in denial

"America is addicted to oil"

--U.S. President George W. Bush
State of the Union, Jan. 31, 2006

"There are many reasons for denial in addiction. One reason is that people generally do not like to feel helpless and out-of-control and this is particularly true for the addict." drugalcohol-rehab.com

Global warming is widely recognized

- IPCC reports in 1990, 1995, 2001, 2007
- Over 30 National Academies of Science
- Scientific associations:
  - AAAS, ACS, AIP, APS, AuIP, EPS, ESU, FASTS, NAfSA; AGU, EFG, EGU, GSA, GSAu, IUGG, NAGT, AQA, IUQR
  - AMS, AuMOS, CFCAS, CMOS, RMS, WMO
  - AAWV, AIBS, ASMb, ACRS, IoB, SAF, WSI
  - AAP, ACPM, AMA, APHA, AuMA, WFPHA, WHO
    - Red = Canadian Yellow = says "consensus"

http://en.wikipedia.org/wiki/Scientific_opinion_on_climate_change

Yet some still debate or doubt

- Very few climate scientists (< 3%)
  - Doran & Zimmerman 2009
  - Anderegg, Prall et al 2010
- Some other scientists
- Many policymakers
- A lot of bloggers
- Many U.S., Canadian voters
  - Some openly reject science as "hoax", "fraud", "scam"
  - Many more *say* they accept it, but don't treat the issue as a priority – it is not "salient"

Reasons for Doubt

- Areas of scientific uncertainty
  - We'll never know everything
- Complexity of subject
  - Physics, biology, economics, politics
  - Reliance on computer modeling for projections
- (Perceived) need for certainty
  - Challenge of decisions in the face of uncertainty
- Sense of consequences of being wrong
  - Unwelcome implications (big gov't, carbon TAX)

Unconvinced Politicians

- Key skeptics /deniers in politics
  - Bush/Cheney administration
  - US Sen. James Inhofe
  - US Reps. Joe Barton, John Boehner
  - 2008 US VP candidate Sarah Palin
  - Stephen Harper?
    - Not an overt "denier" but certainly a "delayer"
    - Waiting to see what U.S. finally does…

Unconvinced Politicians

- Key skeptics /deniers in politics
  - Czech President Vaclav Klaus
  - Saudi Arabia – IPCC delegation
    - Schneider, *Science as a Contact Sport*, 2010
  - Russian P.M. Vladimir Putin
    - Yet he acceded to Kyoto Protocol to gain WTO
    - Also: turnaround this week by President Medvedyev

Climate Change Performance Index (CCPI)

www.germanwatch.org/klima/ccpi.htm

a worldwide national ranking of 57 top emitters' relative climate protection performance published by Germanwatch and Climate Action Network (CAN) Europe, Europe's leading network for climate and energy issues.

Unconvinced Politicians lead to policy failures

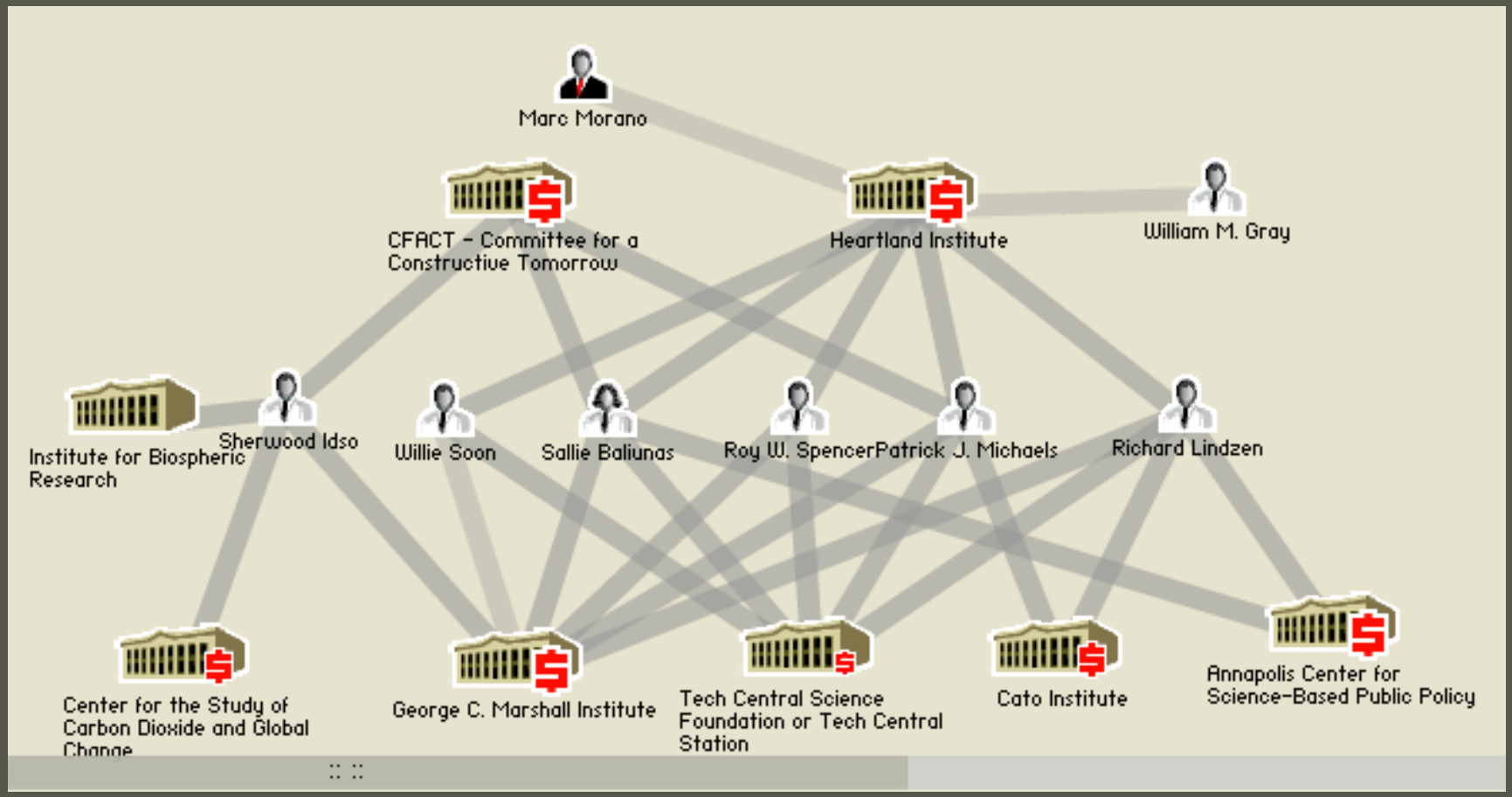
www.germanwatch.org/klima/ccpi.htm

"This year's bottom-of-the-barrel finishers were Canada and Saudi Arabia. Because Canada's government delayed the announcement of any major new climate policies, it remained in second-to-last place for the second year in a row."

Unconvinced Scientists

- A handful of climate scientists
  - Richard Lindzen, MIT – clouds
  - William Gray, CSU – hurricanes
    - Chris Mooney, 2007 *Storm World*
  - John Christy & Roy Spencer, UAH – satellite data
  - Pat Michaels, GMU, Cato – heat-related mortality
  - Sherwood Idso, CSU – hydrology, plants
- Best Responses on science:
  - Realclimate.org
  - Skepticalscience.com

Unconvinced Scientists & ties to Think Tanks



Source: exxonsecrets.org/index.php?mapid=1598

Magnifying Doubt

- Strategy of delay: play up reservations
- Find plausible reasons to keep waiting
- Cherry pick data – press releases
- Petitions
- Attack data, scientists who speak out
- Publicize talking points & repeat

- Resources:
  - Exxonsecrets.org
  - Oreskes; Hoggan (2010) *Climate Cover-Up*

Email blitz widespread

- **"US climate scientists receive hate mail barrage in wake of UEA scandal**
  - **Vitriolic campaign targets American scientists following leak of climate unit emails"**

-- Leo Hickman
guardian.co.uk, Monday 5 July 2010

Email blitz widespread

- "Leading US climate scientists are being subjected to a barrage of right-wing lunatic hate mail … We have an aggressive disinformation campaign aimed at intimidating the climate science community—in part by singling out for attack some of those who have made the effort to communicate essential climate science findings to policymakers and their fellow citizens "

  -- climatesciencewatch.org

Doran & Kendall-Zimmerman 2009

- Email survey of AGU members (n=3146)
- 1. When compared with pre-1800s levels, do you think that mean global temperatures have generally risen, fallen, or remained relatively constant?

- 2. Do you think human activity is a significant contributing factor in changing mean global temperatures?

Doran & Kendall-Zimmerman

presented here is to assess the scientific is given by *Kendall Zimmerman* [2008]):

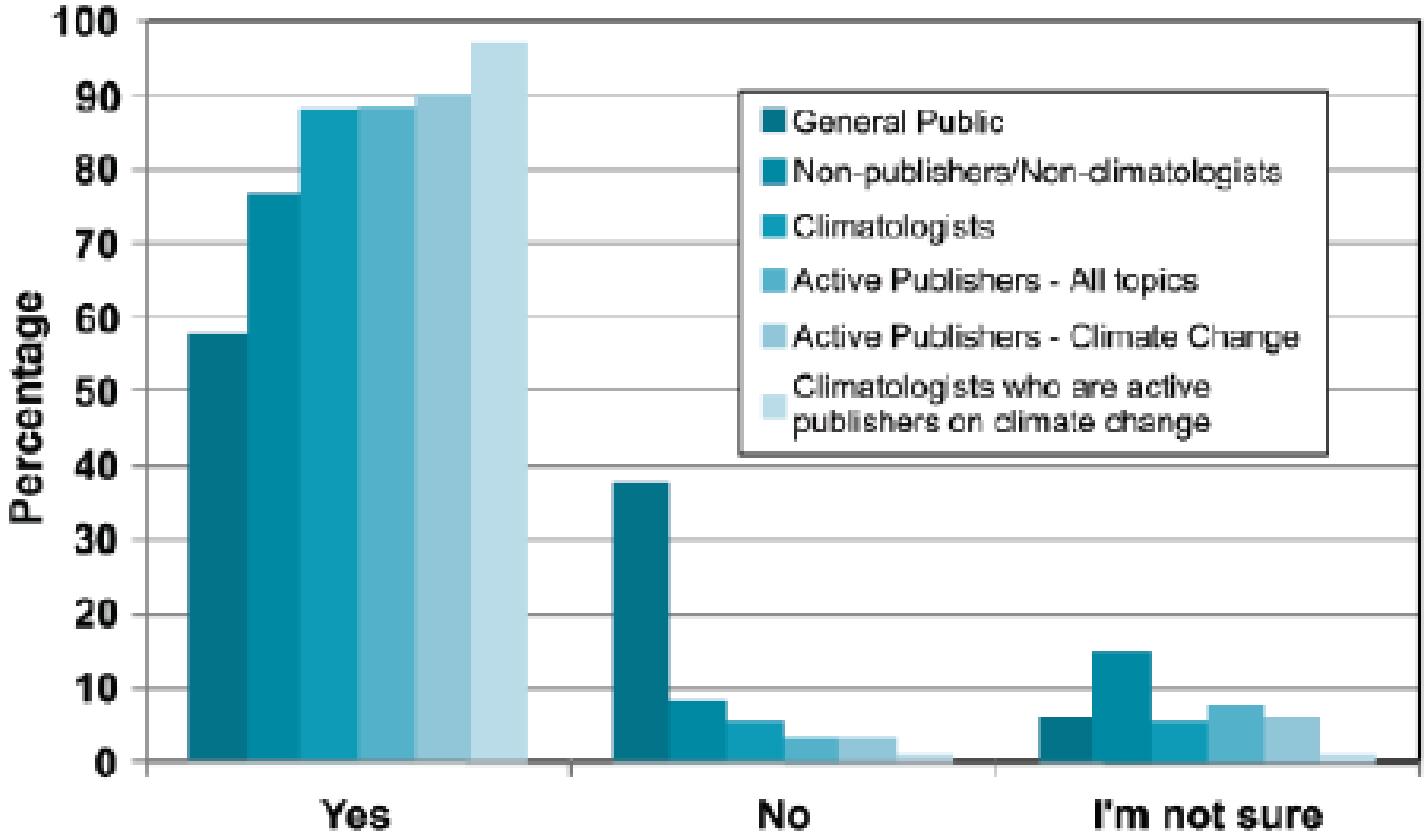


Fig. 1. Response distribution to our survey question 2. The general public data come from a 2008 Gallup poll (see http://www.gallup.com/poll/1615/Environment.aspx).

Doran & Kendall-Zimmermann

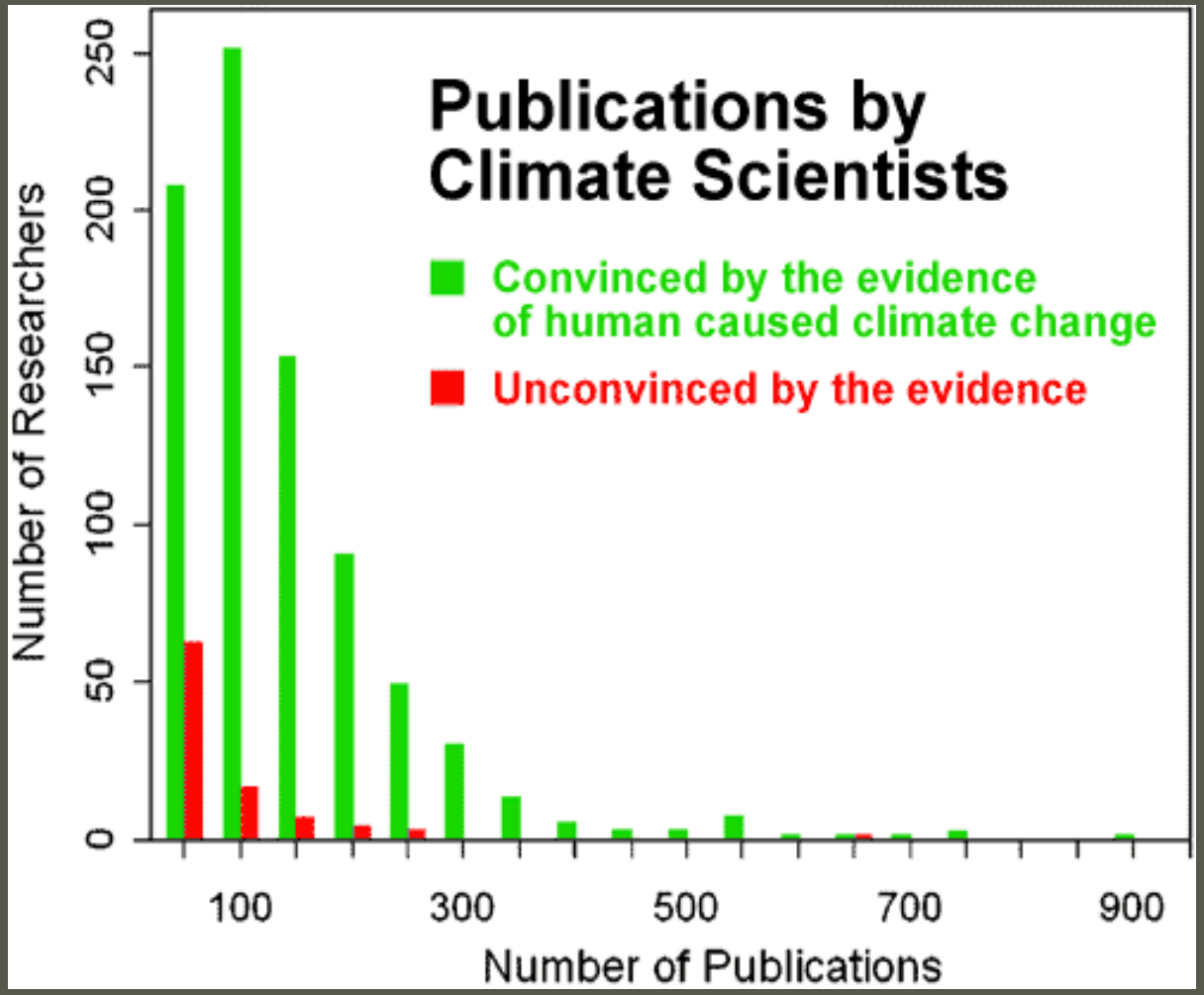
- "Of scientists who were non-climatologists and didn't publish research, 77% answered yes. In contrast, 97.5% of climatologists who actively publish research on climate change responded yes. As the level of active research and specialization in climate science increases, so does agreement that humans are significantly changing global temperatures." - skepticalscience

Expert Credibility in Climate Change

My paper with Prof. Stephen Schneider, PhD student Bill Anderegg, and Jacob Harold, PNAS, June 21, 2010
doi:10.1073/pnas.1003187107

Looked at publication and citation counts for all 619 contributing & lead authors to working group 1 of IPCC AR4, and signers of over a dozen statements

Our Results



- Of the top 200 by # of papers, under 3% signed a negative statement
- Fits with Doran & Zimmermann

The Aftermath

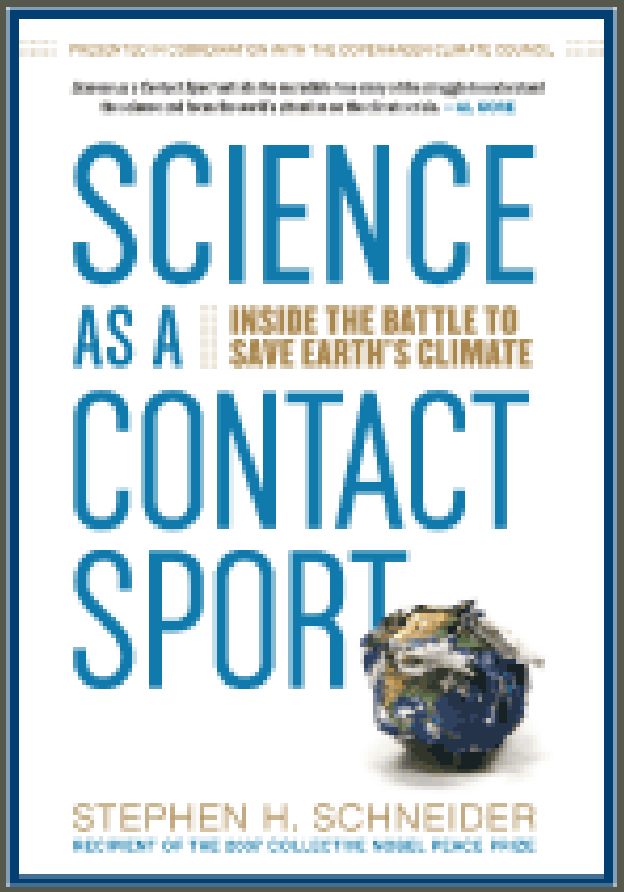
- Climate contrarian blogs jumped all over it
- Marc Morano published my email
- Around 50 emails (incl. blog replies)
  - Some coherent
  - Some dismissive
  - "Please add me to your blacklist"
  - Some quite cranky
    - "hypocrite" (??) "Grand Inquisitor" "bottom-feeder"
    - "Arrogance … YOU LIE FOR MONEY AND POWER"
    - "disgrace" "jerk" "a**hole" "loathsome … creep"
    - "u very dumb ass" -- from "peacemakerdoug"
    - "ad homonym attacks" (my favorite – self-ref!)

The Aftermath

- Dr. Stephen Schneider gave two interviews on our results before he died suddenly on July 19th.
- blogs.discovermagazine.com/intersection/tag/rick-piltz/
- http://stephenschneider.stanford.edu/

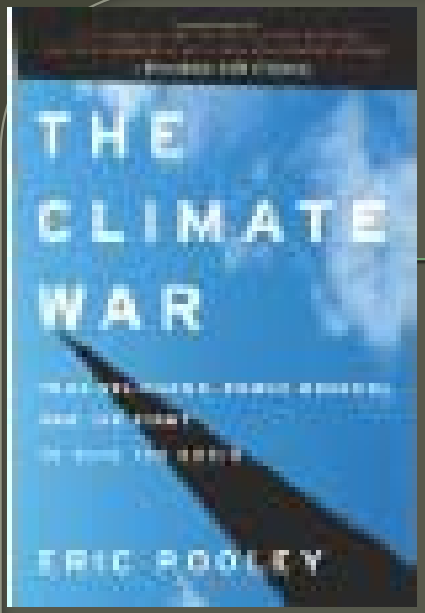
Stephen H. Schneider, 1945-2010

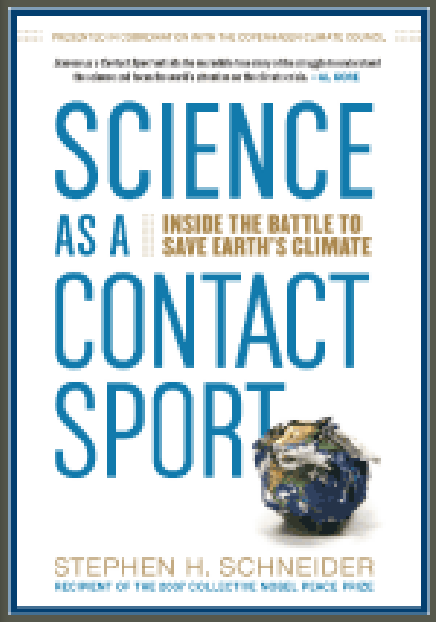
- http://stephenschneider.stanford.edu/

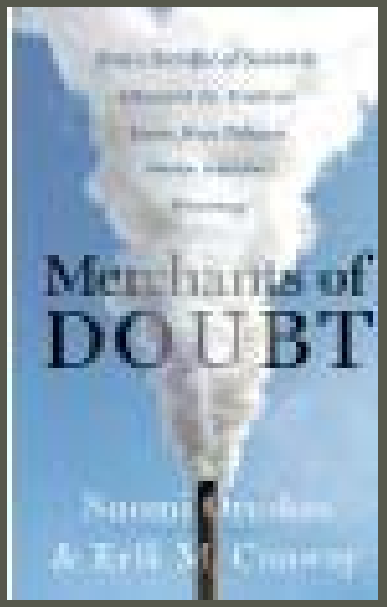


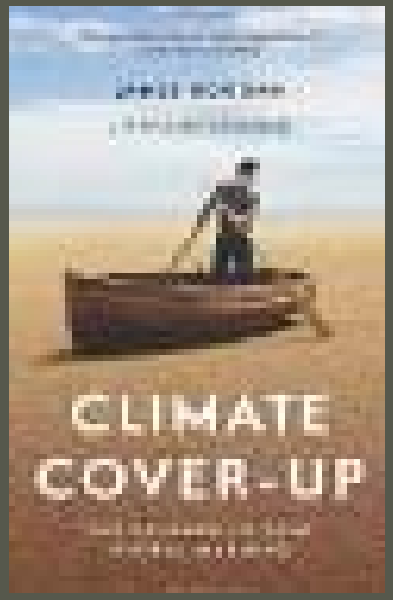
Thank You

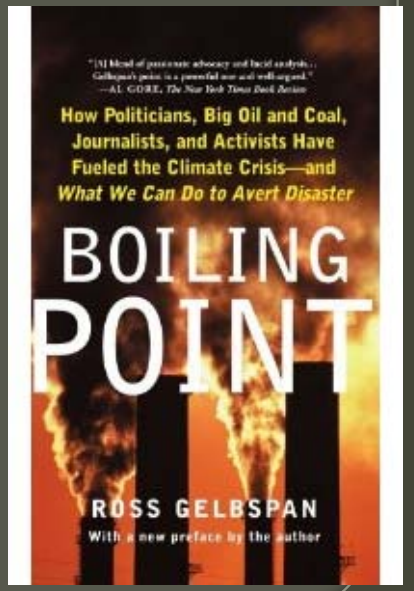
skepticalscience.com
climatesciencewatch.com
desmogblog.com











Related Reading

- Robert F. Kennedy, Jr. 2004. *Crimes Against Nature*
- Chris Mooney 2005. *The Republican War on Science*
- Al Gore 2007. *The Assault on Reason*
- David Michaels 2007. *Doubt Was Their Product*