

Climate Change Science & Public Policy

Douglas Yazell, Session Chair

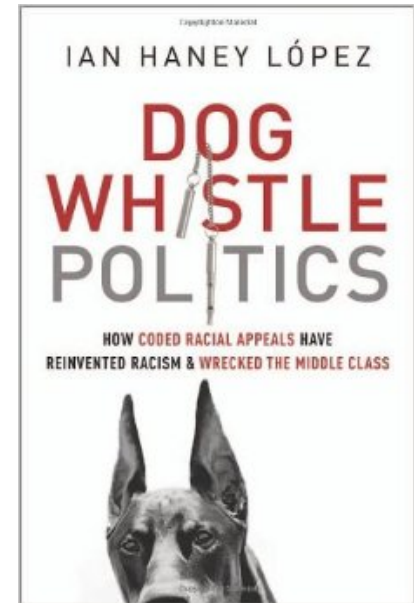
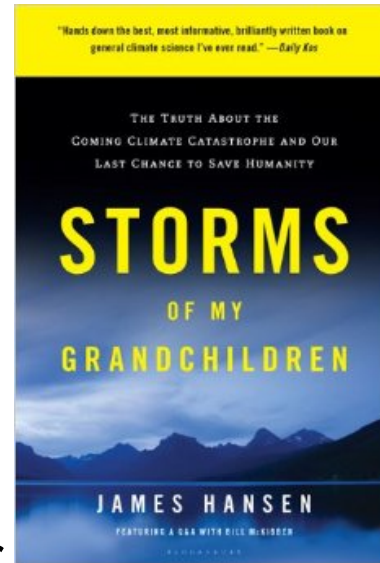
- AIAA Houston Section Editor
- Editorial board member of AIAA's magazine Aerospace America

AIAA Houston Section event

- Annual Technical Symposium (ATS 2014)
- Friday, May 9, 2014
- NASA/JSC Gilruth Center

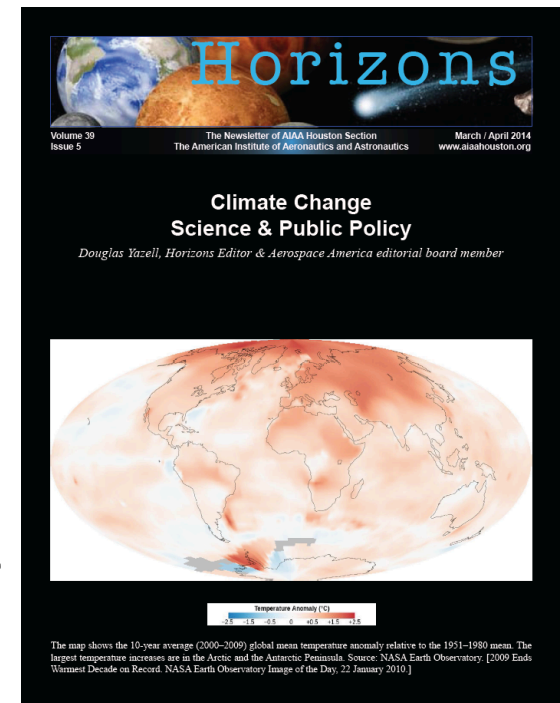
Featured Speakers

- Professor Daniel Cohan, Rice University
- Adrian Shelley, Executive Director, Air Alliance Houston



Climate Change Science

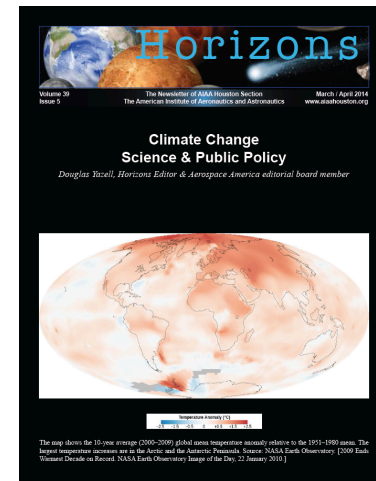
- “Nobody has a monopoly on what is a very hard problem, but I don’t have much patience for anyone who denies that this challenge is real.” President Obama, June 25, 2013
- UN IPCC reports since 1990 (urgency prior to their consensus among signatory countries)
- All science societies, even the AGU since 2003! (“urgent action”)
- Denialists, contrarians, unaware, not on their radar
 - Business: Lead wars (1953), tobacco wars (1964), climate change wars (1990, 2007, 2014), etc.
 - Conservatives [Brull 2013: Not Just the Koch Brothers]: often elected, think tanks, money, intelligence, organized, embracing the wrong conclusion, **anti-liberal**





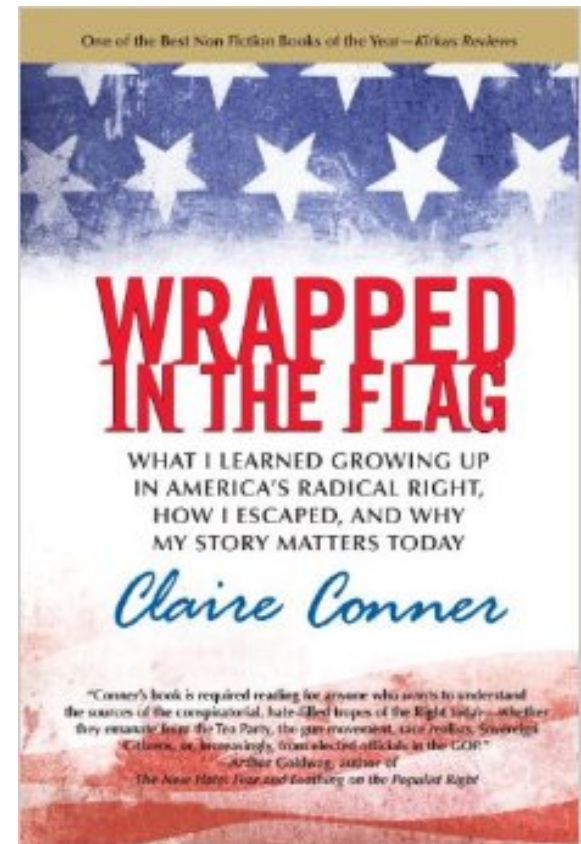
AIAA Public Policy

- Territory from Houston (NASA/JSC) to College Station (Texas A&M University)
 - Rice University
 - University of Houston
- NASA climate change website
 - Courage
 - Excellence
 - A model for AIAA and AIAA Houston Section
 - Two A's in NASA match the last two A's in AIAA
- My suggestions for AIAA public policy: climate change position statement, etc.
 - AIAA Houston Section (800 professional members)
 - AIAA (35,000 members, 100 corporate members)
 - One model: American Geophysical Union (AGU) position statement (“urgent action”)
 - Keep climate change in the news



Citizen-to-Citizen Public Policy

- “My theory of change was, *People will read what I wrote, and then they will **change!***”
- Bill McKibben learned what is required: *old-fashioned politics*



Houston Public Policy

- www.c40.org
- Since 2005
- Houston on the steering committee
- Large international cities
- More than 40 cities
- Mayors Bill White and Annise Parker



Mayoral Powers

	own and operate	set and enforce policies	budgetary and revenue control	set vision
Private Buildings	not available	not applicable	limited powers	partial powers
Public Buildings	strong powers	strong powers	strong powers	strong powers
Energy Supply	limited powers	strong powers	limited powers	partial powers
Finance & Economy	strong powers	strong powers	strong powers	strong powers
Public Transport	partial powers	strong powers	partial powers	partial powers
City Roads	strong powers	strong powers	strong powers	strong powers
Urban Land Use	partial powers	strong powers	limited powers	partial powers
Waste	partial powers	strong powers	strong powers	strong powers
Water	strong powers	strong powers	strong powers	strong powers

not available not applicable limited powers partial powers strong powers

CITY DATA

GOVERNANCE

Mayor Annise Parker
Elected 2010



POPULATION: MAYOR'S JURISDICTION
2.1 million people



POPULATION: METRO AREA
6.1 million people

National Public Policy

• President Obama's climate action plan

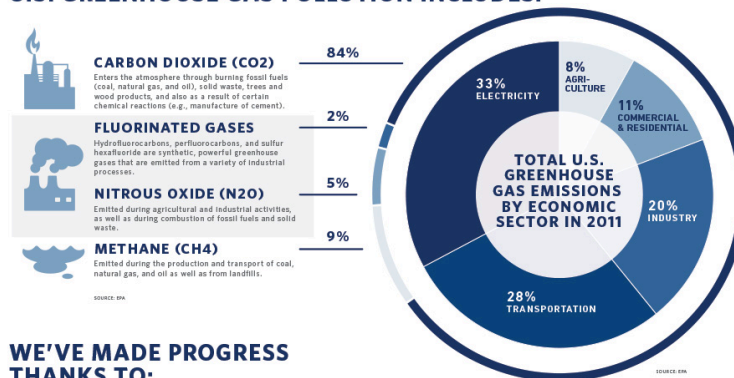
CLIMATE CHANGE AND PRESIDENT OBAMA'S ACTION PLAN

PRESIDENT OBAMA HAS ANNOUNCED A SERIES OF EXECUTIVE ACTIONS TO REDUCE CARBON POLLUTION, PREPARE THE U.S. FOR THE IMPACTS OF CLIMATE CHANGE, AND LEAD INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE.

WE'RE STILL CONTRIBUTING TO THE PROBLEM

CARBON POLLUTION IS THE BIGGEST DRIVER OF CLIMATE CHANGE

U.S. GREENHOUSE GAS POLLUTION INCLUDES:



WE'VE MADE PROGRESS THANKS TO:

STRONGER FUEL ECONOMY STANDARDS

We set the highest fuel economy standards in American history that will double the efficiency of our cars and trucks by 2025.

DOUBLED RENEWABLE ENERGY

We doubled renewable energy generation from wind and solar resources.

DECREASED CARBON POLLUTION

In 2012, U.S. Energy Sector carbon pollution fell to the lowest level in nearly 30 years.

BUT WE HAVE MORE WORK TO DO.

BECAUSE CLIMATE CHANGE SPANS INTERNATIONAL BORDERS, THE PRESIDENT'S PLAN WILL ALSO

LEAD INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE

America will continue to take on a leadership role in engaging the world's major economies to advance key climate priorities and in galvanizing global action through international climate negotiations. The plan will:

WORK WITH OTHER COUNTRIES TO TAKE ACTION TO ADDRESS CLIMATE CHANGE

ENHANCE MULTILATERAL
ENGAGEMENT WITH MAJOR
ECONOMIES

COMBAT SHORT-LIVED CLIMATE
POLLUTANTS

EXPAND CLEAN ENERGY USE AND CUT
ENERGY WASTE

PHASE OUT SUBSIDIES THAT
ENCOURAGE WASTEFUL
CONSUMPTION OF FOSSIL FUELS

STRENGTHEN GLOBAL RESILIENCE TO
CLIMATE CHANGE

EXPAND BILATERAL COOPERATION
WITH MAJOR EMERGING ECONOMIES

REDUCE EMISSIONS FROM
DEFORESTATION AND FOREST
DEGRADATION

NEGOTIATE GLOBAL FREE TRADE IN
ENVIRONMENTAL GOODS AND
SERVICES

LEAD GLOBAL PUBLIC SECTOR
FINANCING TOWARD CLEANER
ENERGY

MOBILIZE CLIMATE FINANCE

LEAD EFFORTS TO ADDRESS CLIMATE CHANGE THROUGH INTERNATIONAL NEGOTIATIONS



The United States has made historic progress in the international climate negotiations during the past four years.

PROGRESS:

In 2009, the U.S. and China launched the \$500 Million Clean Energy Research Center for joint research and development of clean energy technology needed equally by the U.S. and China.

PROGRESS:

Negotiations at the Copenhagen Accord helped to move the world toward a more sustainable emissions trajectory through 2020 by limiting greenhouse pollution.

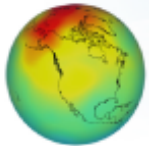
MOVING FORWARD

The U.S. has committed to expand major new and existing international initiatives, including bilateral initiatives with China, India, and other major emitting countries.

We will lead global public sector financing toward cleaner energy by ending U.S. government financial support for new coal-fired power plants overseas, with limited exceptions.

Climate Change National Forum

- New website
- Some creators & members are in AIAA Houston Section territory
- Scientists & Member-Scientists invited to join
 - AGU (American Geophysical Union)
 - AMS (American Meteorological Society)
 - AIP (American Institute of Physics)
- Three science societies, like all of science societies, in agreement with United Nations Intergovernmental Panel on Climate Change (IPCC)



CLIMATE CHANGE NATIONAL FORUM

A national platform founded by leading climate scientists to educate the American public about climate change.

TAMU



John Nielsen-Gammon

UH



Barry Lefer



Kerry Emanuel



Andrew Dessler

Columnists



Stephanie Thomas



Sean Robinson

Rice Univ.



Daniel Cohan



Judith Curry



Backup Charts

Session abstract with biography



Greetings Douglas Yazell,

This is a copy of the abstract you have submitted:

Presenter Name: Douglas Yazell

Presenter E-mail: douglas.yazell@me.com

Presenter Biography:

The author earned a Bachelor's Degree of Science from the University of South Florida in Tampa and a master's degree in engineering from the University of California, Irvine. The author's Honeywell aerospace engineering career includes 1981-2011 NASA-related assignments that took him from Clearwater, Florida (1981-1983), to the Los Angeles, California area (1983-1992), and then to the Houston, Texas NASA/JSC community. That included space shuttle entry flight control (1983-1988) Space Station Freedom guidance, navigation and control, and Orion entry mode team flight control (2006-2011). The author is an AIAA Associate Fellow since 2006. Since 2008, the author is a member of the AIAA Aerospace America national magazine editorial board. Since April of 2011, the author is the Editor of Horizons, the newsletter of AIAA Houston Section. He started his bimonthly, one-page climate change science & public policy column (Climate Change & Local Responses, focusing on AIAA Houston Section territory from Houston to College Station, Texas) in the January/February 2013 issue of Horizons.

Abstract Topic: Climate Change

Abstract Title: Climate Change Science & Public Policy

Abstract Text:

Climate change science appears in short summaries from three groups, the American Geophysical Union (AGU), the American Institute of Physics (AIP), and the American Meteorological Society (AMS). A new website, the Climate Change National Forum (CCNF) includes Texas A&M University professor and Texas State Climatologist John-Nielsen Gammon and University of Houston professor Barry Lefer (both in our AIAA Houston Section territory), and this website invites Scientists and Member-Scientists of those three groups to participate in their website. Short science summaries are available from the National Research Council (NRC), the American Association for the Advancement of Science (AAAS), and the National Academy of Science (NAS). These sources agree with reports from the United Nations Intergovernmental Panel on Climate Change (UN IPCC). The RapidScat climate change science instrument is scheduled to be installed on the International Space Station in 2014. The NASA website is a good science guide: Climate Change, Vital Signs of the Planet. Climate change public policy since 2005 includes the C40 Cities Climate Leadership Group (an international alliance of more than 40 large cities), with Houston now a member of its steering committee. President Obama is taking sensible action. Douglas Yazell's Climate Change Science & Public Policy cover story will be submitted for the March/April 2014 issue of Horizons, the newsletter of AIAA Houston Section, to be online by April 30, 2014. Two confirmed invited speakers for this session as of April 24, 2014, are Dr. Daniel Cohan of Rice University and Adrian Shelley, Executive Director, Air Alliance Houston.

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This abstract was sent from the form on the AIAA Houston Section 2014 ATS page:

<http://www.aiaahouston.org/2014-annual-technical-symposium/>

Biographies for 2 Invited Speakers



Daniel Cohan is an Associate Professor of Civil and Environmental Engineering at Rice University. His research specializes in the development of photochemical models and their application to air quality management and health studies; the integration of satellite data with atmospheric models; and the impacts of energy use on air quality and climate. He received a B.A. in Applied Mathematics from Harvard University, a Ph.D. in Atmospheric Chemistry from Georgia Tech, and served as a Fulbright Scholar to Australia. Dr. Cohan is a recipient of an NSF CAREER award and a member of the NASA Air Quality Applied Sciences Team.



Adrian Shelley is a native Texan from the City of Houston. He is the Executive Director of Air Alliance Houston, the Houston region's clean air and public health nonprofit. Adrian has a bachelor's degree from Trinity University in San Antonio and a Juris Doctorate from the University of Texas School of Law. Adrian served as the Environmental Director and Counsel for State Representative Jessica Farrar during the 82nd session of the Texas Legislature. He has worked in clean air law for a variety of nonprofit organizations. He first worked with Air Alliance Houston as a legal fellow in 2010.



News Releases

[Last Week](#)[Last Month](#)[Last Year](#)[Archive](#)[2014](#)[2013](#)[December](#)[Not Just the Koch Brothers: New Drexel Study Reveals Funders Behind the Climate Change Denial Effort](#)[November](#)[October](#)[September](#)[August](#)

NOT JUST THE KOCH BROTHERS: NEW DREXEL STUDY REVEALS FUNDERS BEHIND THE CLIMATE CHANGE DENIAL EFFORT

PHILADELPHIA, December 20, 2013

A new study conducted by Drexel University environmental sociologist **Robert J. Brulle, PhD**, exposes the organizational underpinnings and funding behind the powerful climate change countermovement. This study marks the first peer-reviewed, comprehensive analysis ever conducted of the sources of funding that maintain the denial effort.

Through an analysis of the financial structure of the organizations that constitute the core of the countermovement and their sources of monetary support, Brulle found that, while the largest and most consistent funders behind the countermovement are a number of well-known conservative foundations, the majority of donations are "dark money," or concealed funding.

The data also indicates that Koch Industries and ExxonMobil, two of the largest supporters of climate science denial, have recently pulled back from publicly funding countermovement organizations. Coinciding with the decline in traceable funding, the amount of funding given to countermovement organizations through third parties, through foundations like the Pew Charitable Trusts and



Robert Brulle, PhD, is a professor of sociology and environmental science at Drexel University

Figure 4, Brull 2013, Not Just the Koch Brothers (press release, Drexel University)

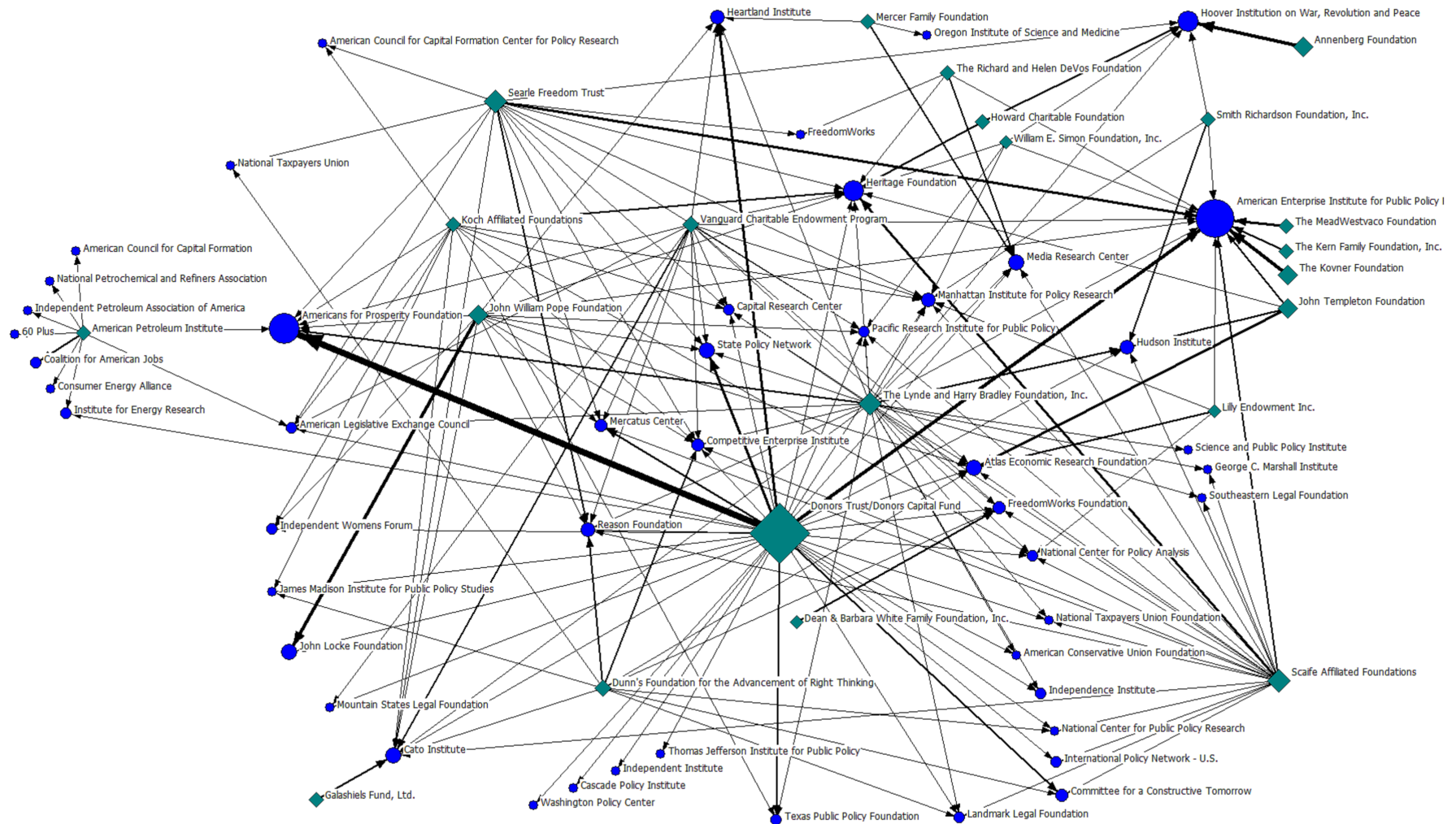


Figure 2, Brull 2013, Not Just the Koch Brothers (press release, Drexel University)

**Total Foundation Recipient Income Distribution - 2003 to 2010
U.S. Climate Change Countermovement Organizations**

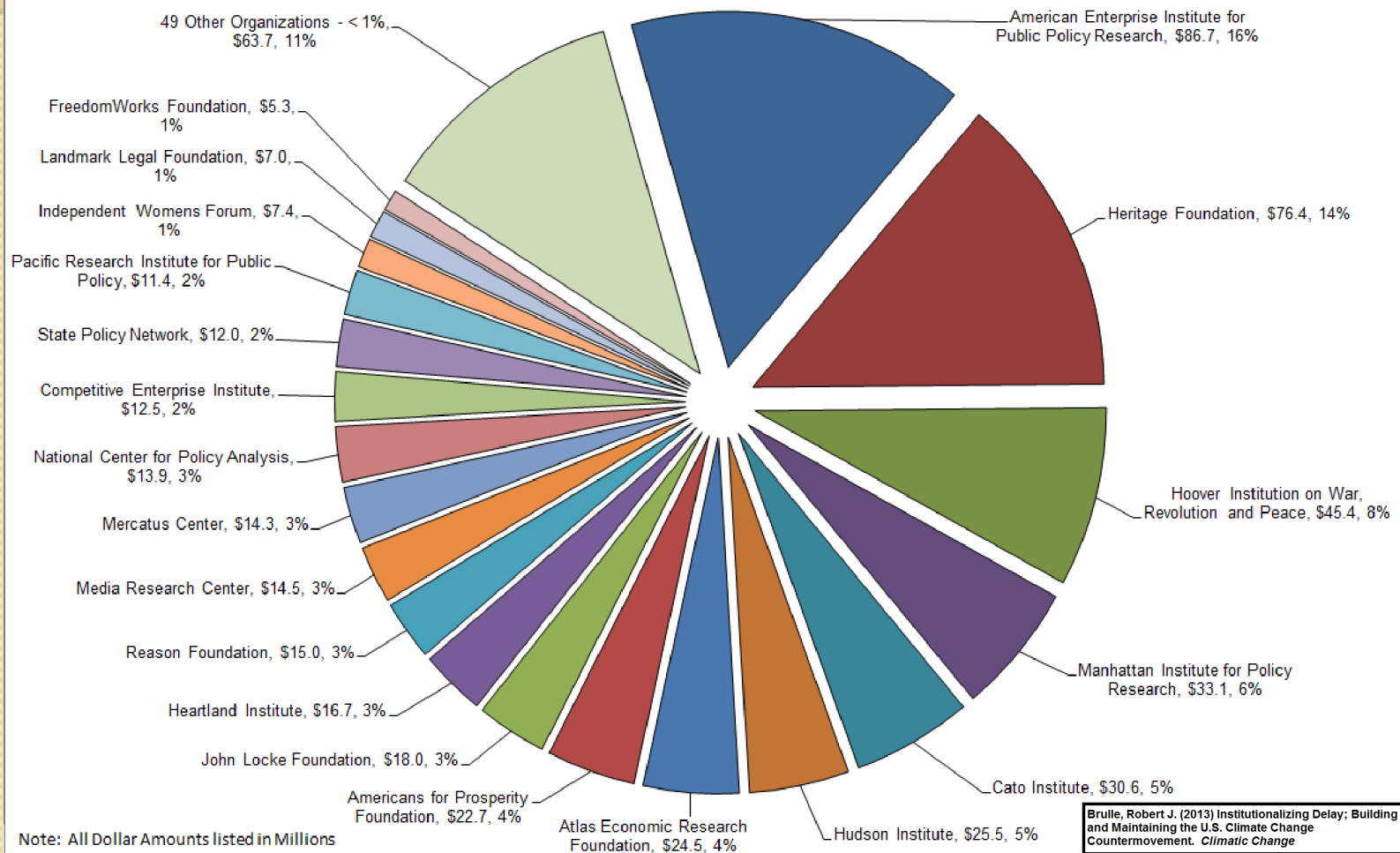


Figure 1, Brull 2013, Not Just the Koch Brothers (press release, Drexel University)

**Total Foundation Funding Distribution - 2003 to 2010
U.S. Climate Change Countermovement Organizations**

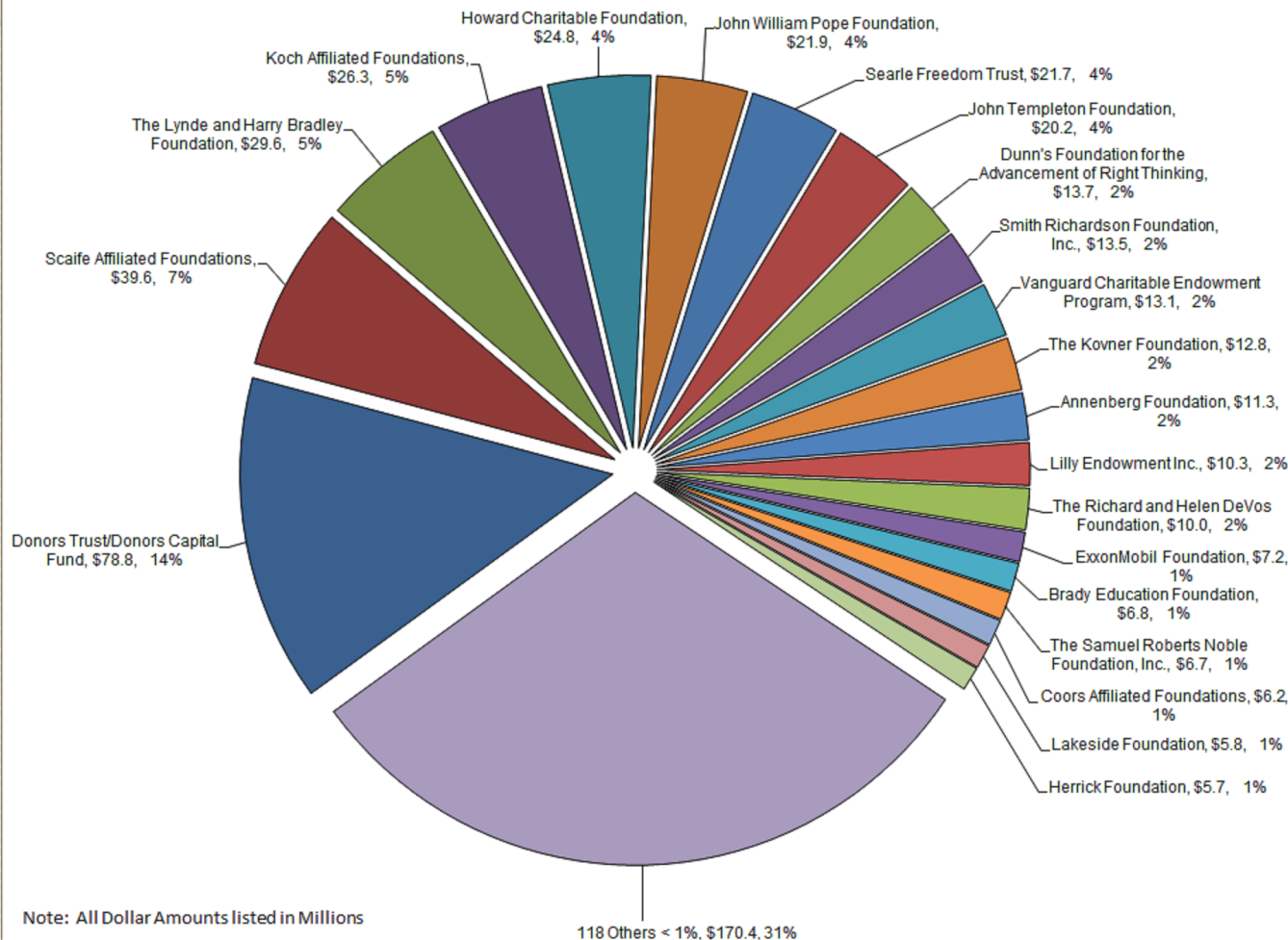
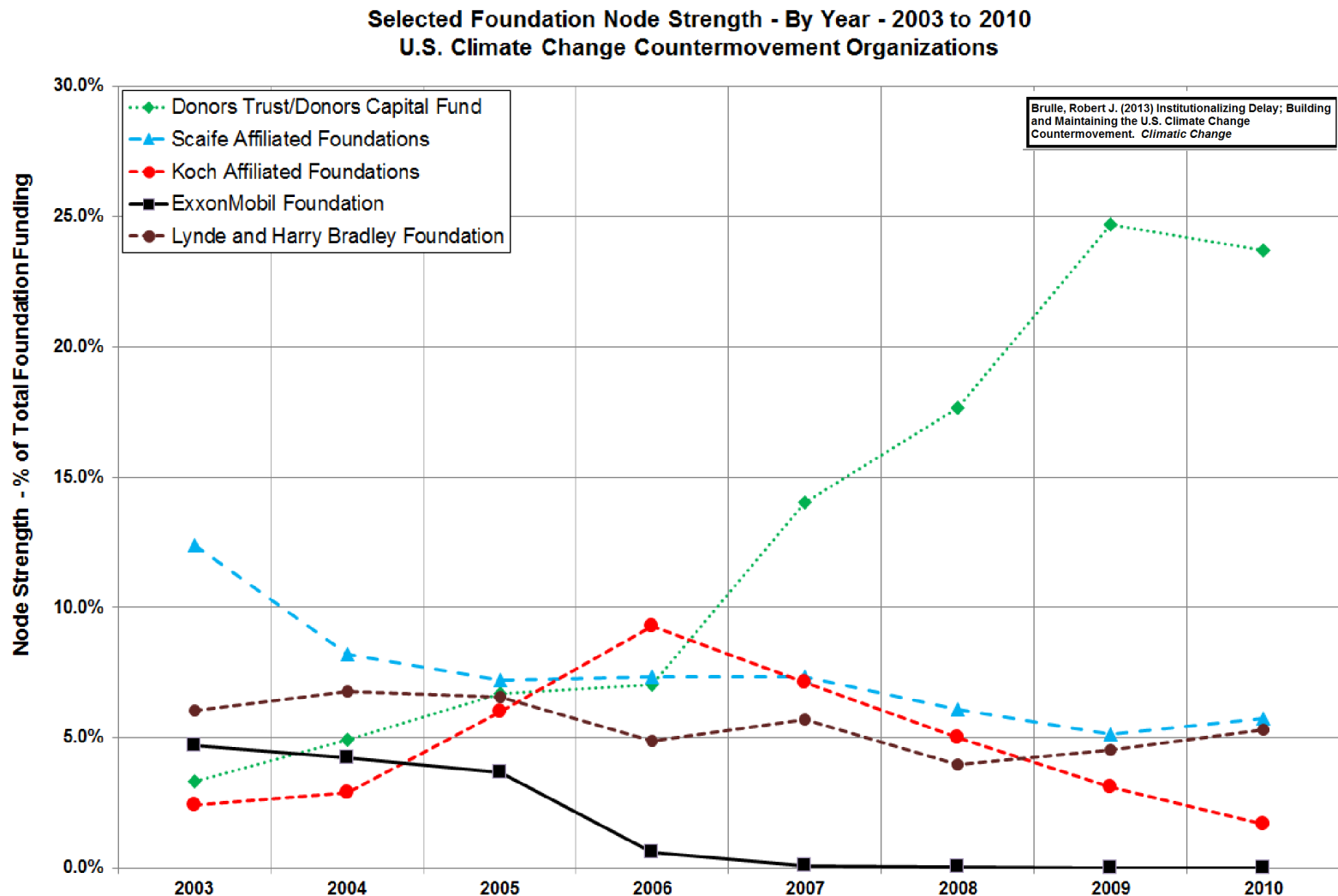
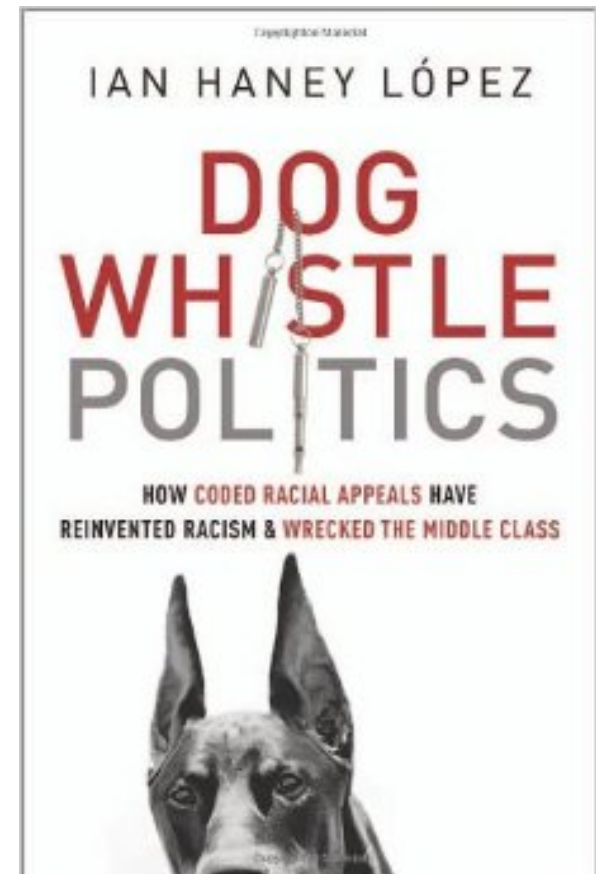


Figure 3, Brull 2013, Not Just the Koch Brothers (press release, Drexel University)

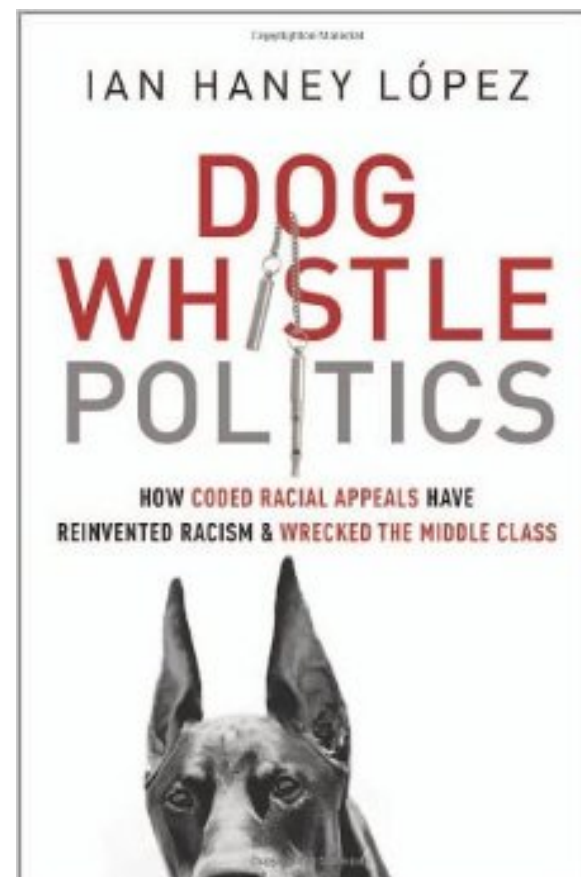


This is not to say that race is the only social division used to target liberalism. The broader history of culture war politics involves interwoven campaigns assailing gender, abortion rights, sexual orientation, same-sex marriage, religion, the environment, global warming, and guns, among other attacks. Defending liberalism will require more than thinking about how race has evolved over the last half-century. In addition, sustained attention must also be given to other targets of demagogic campaigns, and about how best to respond on those fronts as well.

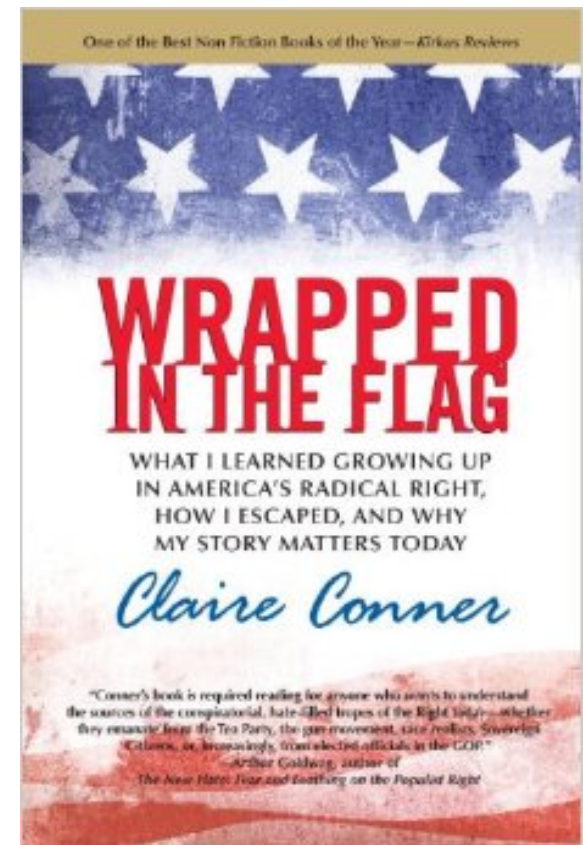


Beyond a seemingly intentional policy to agitate the public with racial propaganda, Fox News also demonstrates a strong propensity to propagate falsehoods about liberal policies. Perhaps the most striking example is the claim aired numerous times on Fox that the health care reform passed under Obama

would include “death panels,” medical tribunals that, according to Glenn Beck, would “tell Grandma and Grandpa ... how and when to die.” This macabre lie captured the imagination of many, with a September 2009 poll showing that 41 percent of respondents were convinced death panels were part of the health reform bill.⁴⁹ Research shows that Fox News viewers are systematically misinformed about key public policy issues, leading viewers to develop undue animosity towards liberal governance. After the 2010 elections, those “who watched Fox News almost daily” were much more likely than non-viewers to believe significant falsehoods about the stimulus plan, the state of the economy, the health care law, climate change, and taxes.⁵⁰



United Nations mentioned 25 times.



The Gablers identified specific errors in the books they attacked. Any criticism of our constitution or the Founding Fathers was unacceptable. Support for one-world government or the **United Nations** was unforgivable. Gun control was a major no-no, as was any suggestion of limits on ammunition. Our nation, they believed, was first and foremost Christian. Thus, any suggestion that the founders were deists was intolerable. There could be no discussion of other nations as equal to the United States. After all, our country was exceptional and a perfect embodiment of what government ought to be.