

FYSM 1000-04: science & environmental communication



University of Colorado-Boulder

Fall 2017

Thursday, August 31st

today's class



- *co-facilitation sign-ups*
- *check-in & other logistics (e.g. release forms, confidential peer assessment forms)*
- *introduction of larger Inside the Greenhouse project*
- *a science and environmental communications backgrounder*
- *introduction of composition #1: visual storytelling, discussion of audience*
- *storyboarding discussions*

Reading:

Cox, R. and Pezzullo, P. (2016) *Environmental Communication and the Public Sphere* Sage Publications, Thousand Oaks California – 4th edition, introduction (pp. 1-10)

logistics



- *co-facilitation sign-ups*
- *check-in & other logistics (e.g. release forms, confidential peer assessment forms)*

The screenshot shows the website of the Center for Science & Technology Policy Research (CSTPR). The header includes the CSTPR logo, navigation links (Home, About Us, Research, Education, Outreach, Publications, News & Events), and a search bar. The main content area displays the 'Education' section, specifically the 'SCIENCE & ENVIRONMENTAL COMMUNICATION FYSM 1000-04' course. The course page lists 'Additional Materials' and a 'Course Schedule'.

CENTER FOR SCIENCE & TECHNOLOGY POLICY RESEARCH

CSTPR

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Home About Us Research **Education** Outreach Publications News & Events

Graduate Certificate in Science & Technology Policy

AAAS "CASE" Workshop Student Competition

Radford Byerly, Jr. Award in Science and Technology Policy

Forum on Science Ethics and Policy

Red Cross/Red Crescent Internship Program

S&T Education at CU

S&T Education Elsewhere

Student Resources

SCIENCE & ENVIRONMENTAL COMMUNICATION FYSM 1000-04

Additional Materials

- [Confidential Peer Assessment for Co-Facilitation](#)
- [Confidential Peer Assessment for Composition #2](#)
- [Personal Release Form](#)

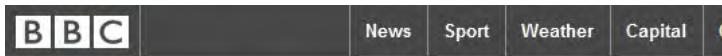
FYSM 1000-04

- [Course Basics](#)
- [Course Description](#)
- [Course Reading Materials](#)
- [Course Requirements](#)
- [Additional Materials](#)

Course Schedule

- [Week 1](#)
- [Week 2](#)
- [Week 3](#)
- [Week 4](#)
- [Week 5](#)
- [Week 6](#)
- [Week 7](#)
- [Week 8](#)
- [Week 9](#)
- [Week 10](#)

burgeoning projects communicating about science & environment



BBC
MEDIA ACTION
TRANSFORMING LIVES THROUGH MEDIA
AROUND THE WORLD

Home About What we do Where

THE STORY GROUP
multimedia journalism

BRACING FOR

Reported by FI



CT
TE

**CLIMATE
CHANGE
POLITICS**

videonline

YALE
**Climate
Connections**

Listen. V



LIFE+RESPIRA

Exploring a world of
our own making...

By Bruce Lieberman on Jun 10, 2015

MEDIATING
CLIMATE

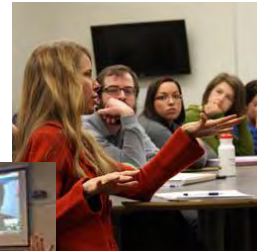


Inside the Greenhouse

INSIDE THE GREENHOUSE



a living laboratory situated in a University setting, an intentional space for development and experimentation with creative modes to communicate, evaluate and confront climate change through a range of mitigation and adaptation strategies



UPPER-DIVISION COURSES:

“Climate and Film – expressions through video production” (Professor Becca Safran)

“Creative Climate Communications” (Professor Max Boykoff/Professor Beth Osnes)

INTERNSHIPS e.g. Women’s Energy Party; Navajo Nation

RESEARCH PROJECTS e.g. efficacy of messaging

More Than Scientists & Inside the Greenhouse



 **MORE THAN SCIENTISTS**
The people behind climate science



 **MORE THAN SCIENTISTS**
The people behind climate science



Carol Wessman
CIRES Fellow
University of Colorado Boulder

 **MORE THAN SCIENTISTS**
The people behind climate science



Dr. James White
Professor of Geological Sciences
University of Colorado Boulder

 **MORE THAN SCIENTISTS**
The people behind climate science



Jen Kay
Assistant Professor
ATOC and CIRES

 **MORE THAN SCIENTISTS**
The people behind climate science



 **MORE THAN SCIENTISTS**
The people behind climate science



Dr. Lisa Dilling

 **MORE THAN SCIENTISTS**
The people behind climate science



Kevin Trenberth
Climate Scientist
National Center for Atmospheric Research

 **MORE THAN SCIENTISTS**
The people behind climate science



Geochemist
at INSTAAR
Professional
Aerial Dancer

 **MORE THAN SCIENTISTS**
The people behind climate science



Mark Serreze,
National Snow & Ice Data Center

Story-telling and Narrative



the many different forms of story!

spoken word
graphic novels
novels
magazines
newspapers
broadcast journalism
facebook statuses
tweets
jokes
film
ads



A good story is:

Authentic

Emotional

Relevant/relatable/familiar

Often focused on a character

Structured

“Stories must have a basic structure [beginning, middle and end] and answer the fundamental questions: who, what, when, where, why, how.” Bobette Buster

Recycled Runway



Cooperative Institute for Research in Environmental Sciences
UNIVERSITY OF COLORADO BOULDER and NOAA



historical/traditional conditions of engagement



“The deficit model is dead...long live the deficit model.” ~ Brian Wynne (2008)



“providing information and filling knowledge gaps is at best necessary but rarely sufficient to create active behavioral engagement.” ~ Susanne C. Moser (2009)

21st century communication & engagement



“the debate over [science/environment/climate change]...is not about carbon dioxide and greenhouse gas models; it is about opposing cultural values and worldviews through which that science is seen”

- Andrew Hoffman (2015)



culture, politics and global environmental change



our human-environment relationships



'our' values, ethical perspectives

communications are vehicles of power, and artifacts/manifestations of intersecting science-policy influences and competing perspectives, values, cultures, histories, priorities.

These flow into and emanate from insights gained from your research and experiences, subject to multiple interpretations of 'truth', priorities, and 'problems' themselves

supports & barriers

politics & policies

poverty,
(in)equality

The purpose of the book is threefold (p. 3):

- (1) to deepen your insight into how communication shapes our perceptions on environmental issues
- (2) To acquaint you with some of the media and public forums that are used for environmental communication, along with the communication of scientists, corporate lobbyists, ordinary citizens and others who seek to influence decisions about the environment
- (3) To enable you to join in conversations and debates that are already taking place locally and globally that may affect the environments where you yourself live, study, work, meditate, and recreate

coming to terms



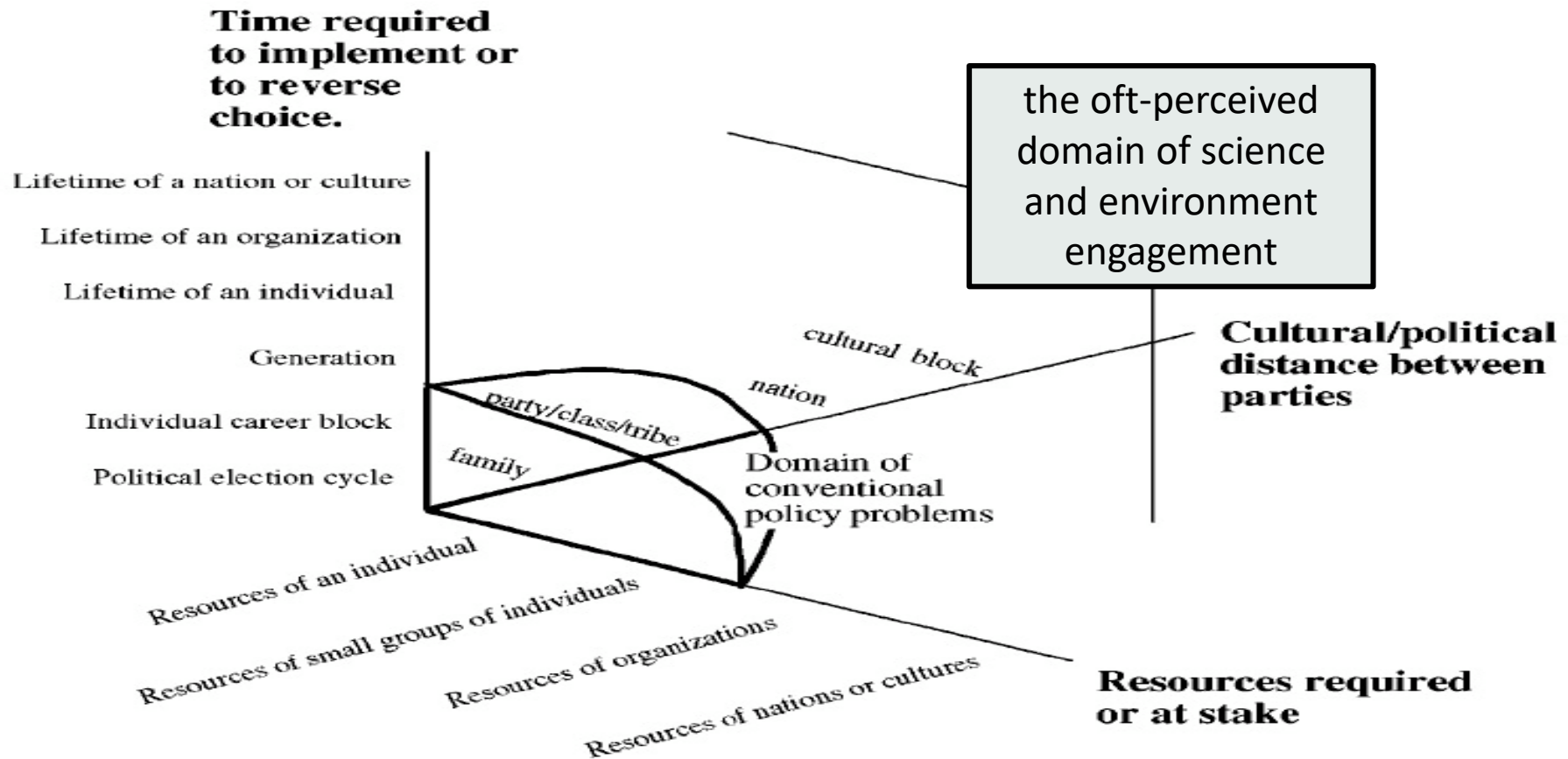
in *Environmental Communication in the Public Sphere*

communication: “a symbolic mode of interaction that we use in constructing environmental problems and in negotiating society’s different responses to them” (p. 5)

Multimodal communications:

a mode is “a system of choices used to communicate meaning. What might count as a mode is an open-ended set, ranging across a number of systems, including but not limited to language, image, color, typography, music, voice, quality, dress, gesture, special resources, perfume, and cuisine” (Page (2010) *New Perspectives on Narrative and Multimodality*, p. 6)

communicating (& confronting) science/environmental issues



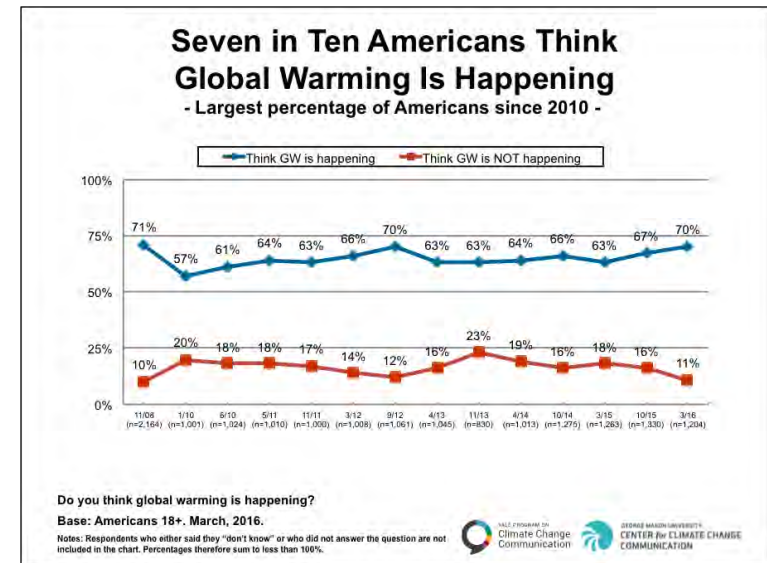
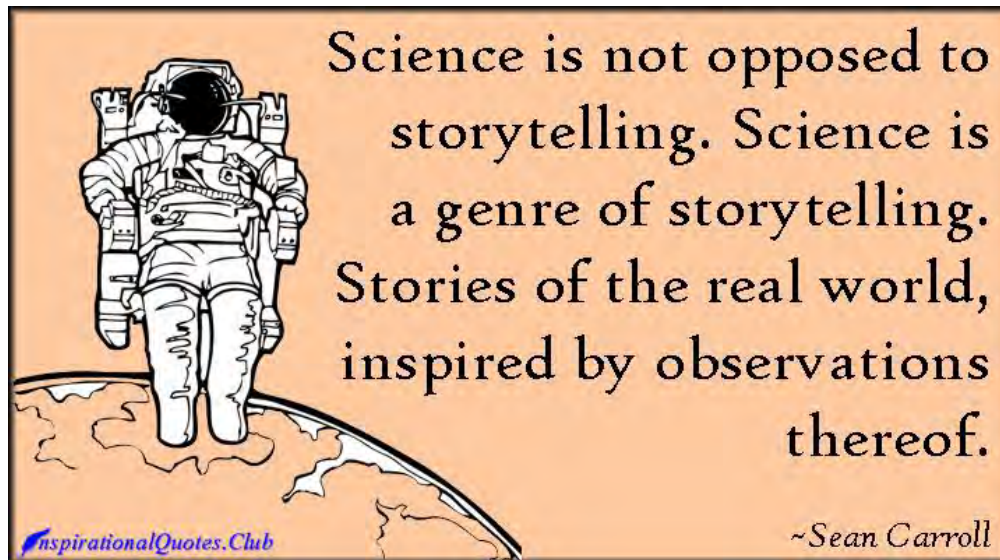
**‘finite pool of worry’ meets
varied risk management strategies**

Morgan et al (1999)

conditions of engagement



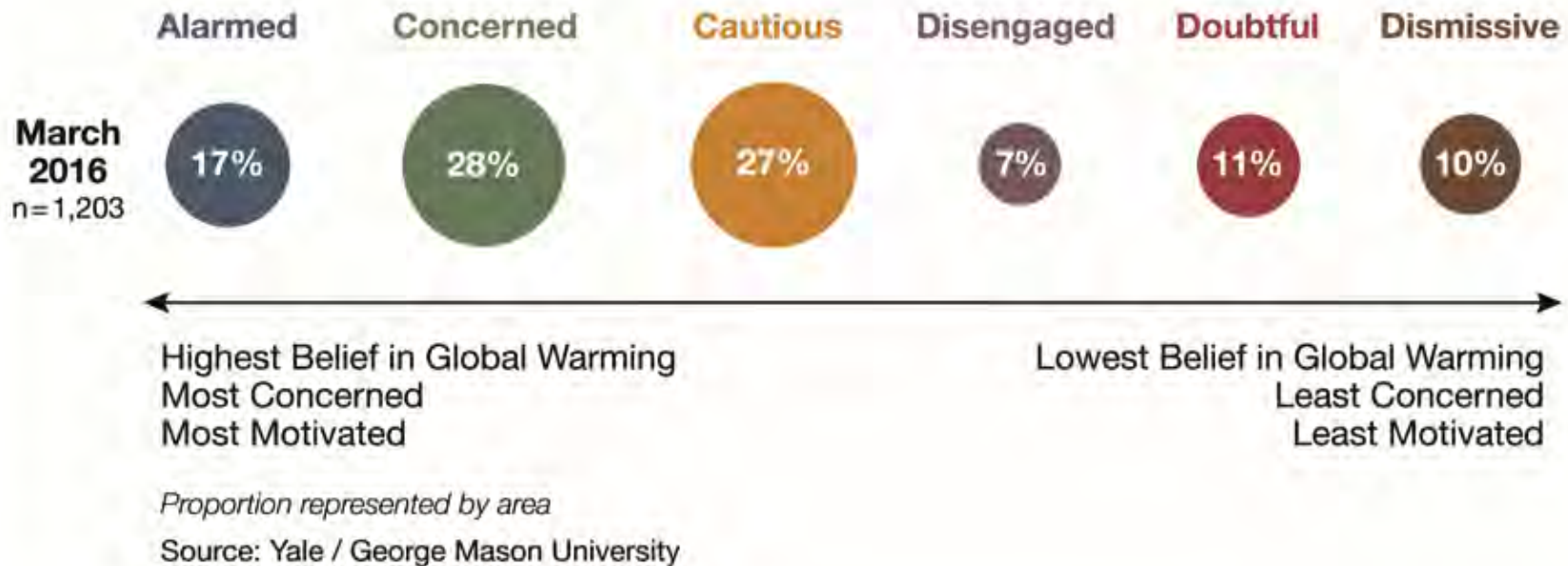
- carefully consider audience(s)
- bring science/environment 'home'
- tell meaningful stories



case study: Six Americas –



Take short survey at <http://uw.kqed.org/climatesurvey/index-kqed.php>

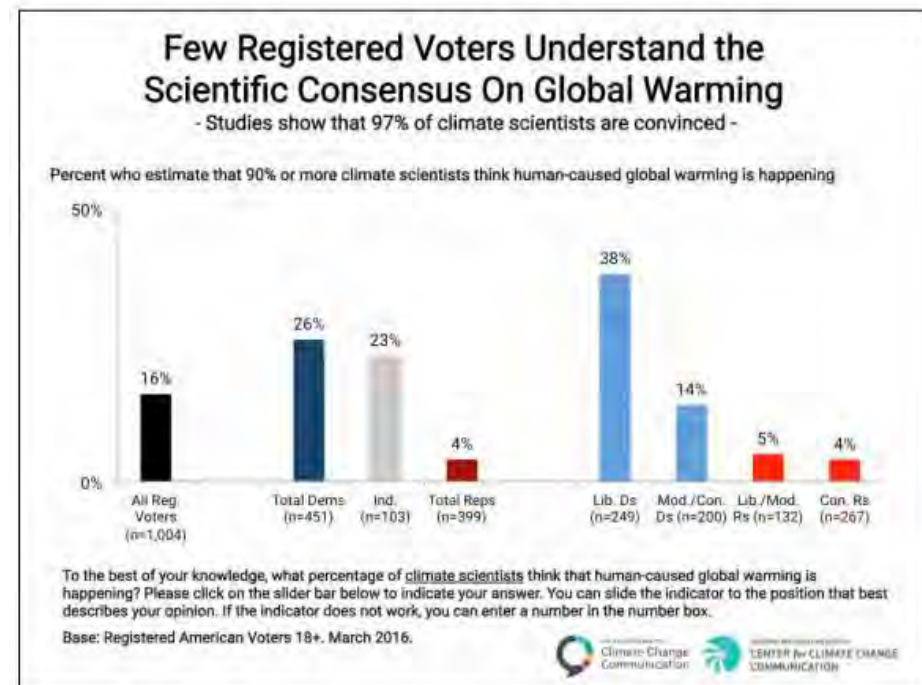
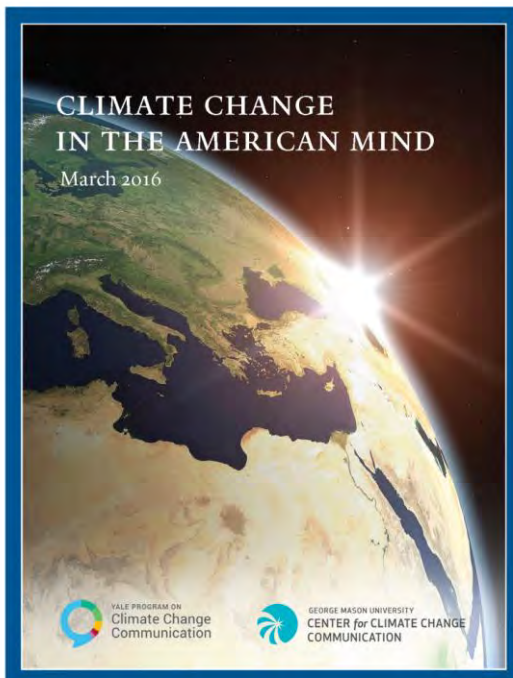


'know thy audience, know thy self, know thy stuff' ~ Stephen H. Schneider

United States Climate Views (March 2016)

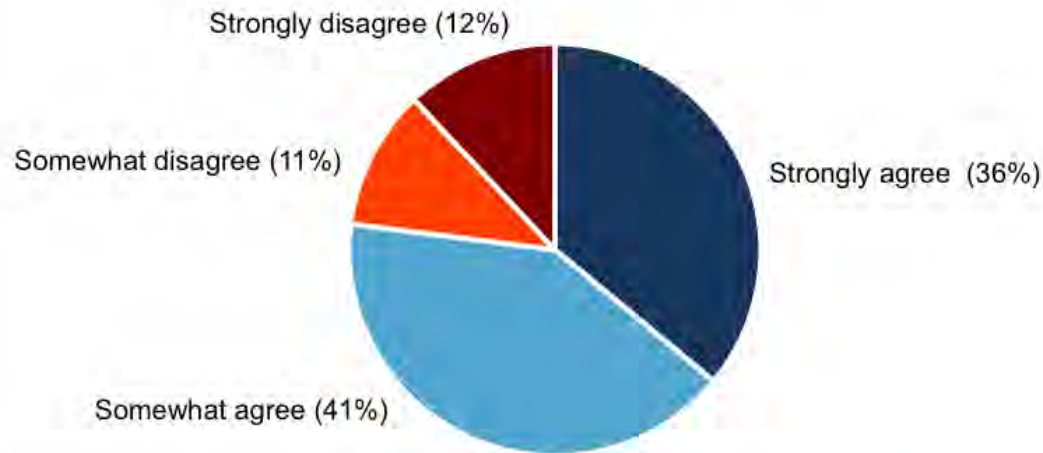


- “There is a clear difference between liberal/moderate Republicans and conservative Republicans. In many respects, liberal/moderate Republicans are similar to moderate/conservative Democrats on the issue of global warming, potentially forming a moderate, middle ground” (p. 4)
- “Although numerous studies find that 97% of climate scientists are convinced human-caused global warming is happening, few American voters are aware of this. Only about one in six (16%) voters understand that 90% or more of climate scientists are convinced” (p. 9)



a large majority of Americans (76%) support teaching children about global warming in school.

Americans Say Schools Should Teach Children About The Causes, Consequences, and Potential Solutions to Global Warming



How much do you agree or disagree with the following statements...?

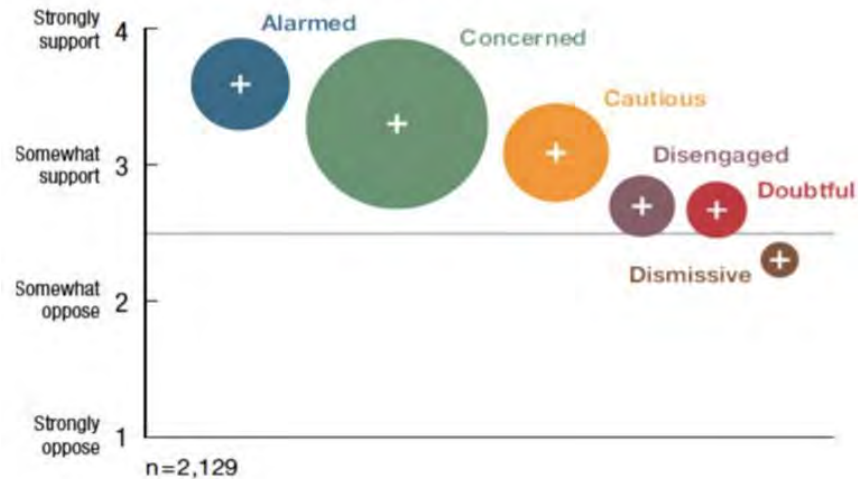
Schools should teach our children about the causes, consequences, and potential solutions to global warming.

Base: Registered American Voters 18+ (n=1,004). March 2016.

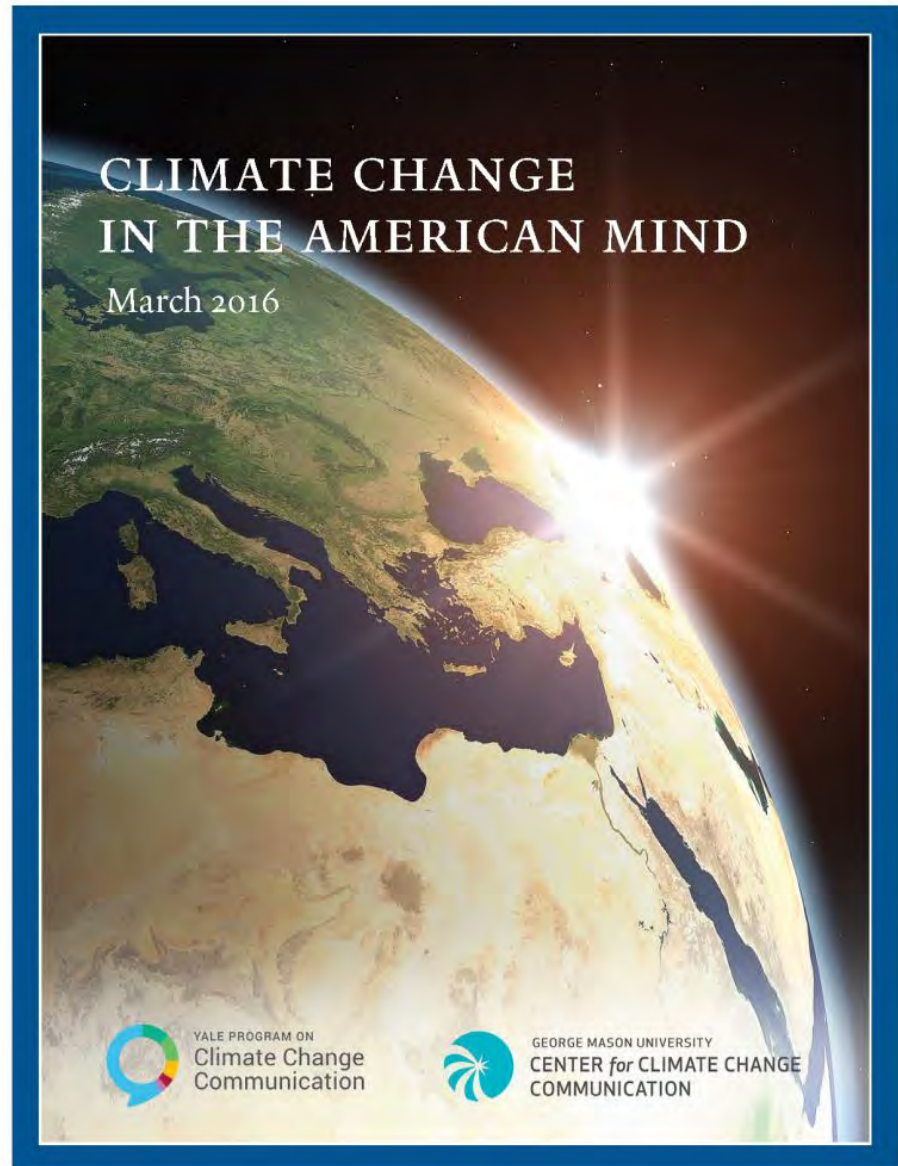
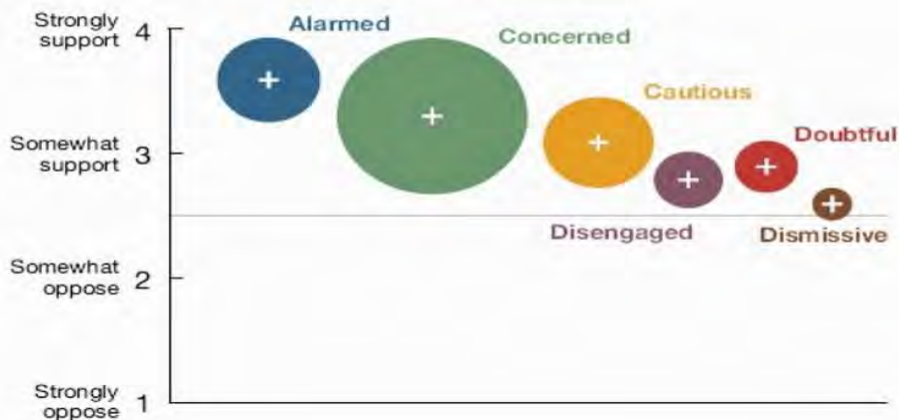
US Climate Views: common ground?



Support for requiring 45 mpg fuel efficiency across vehicle fleets, even at a \$1,000 price premium.



Support for providing rebates for purchases of solar panels and fuel-efficient vehicles



context & media attention



2004–2017 World Newspaper Coverage of Climate Change or Global Warming

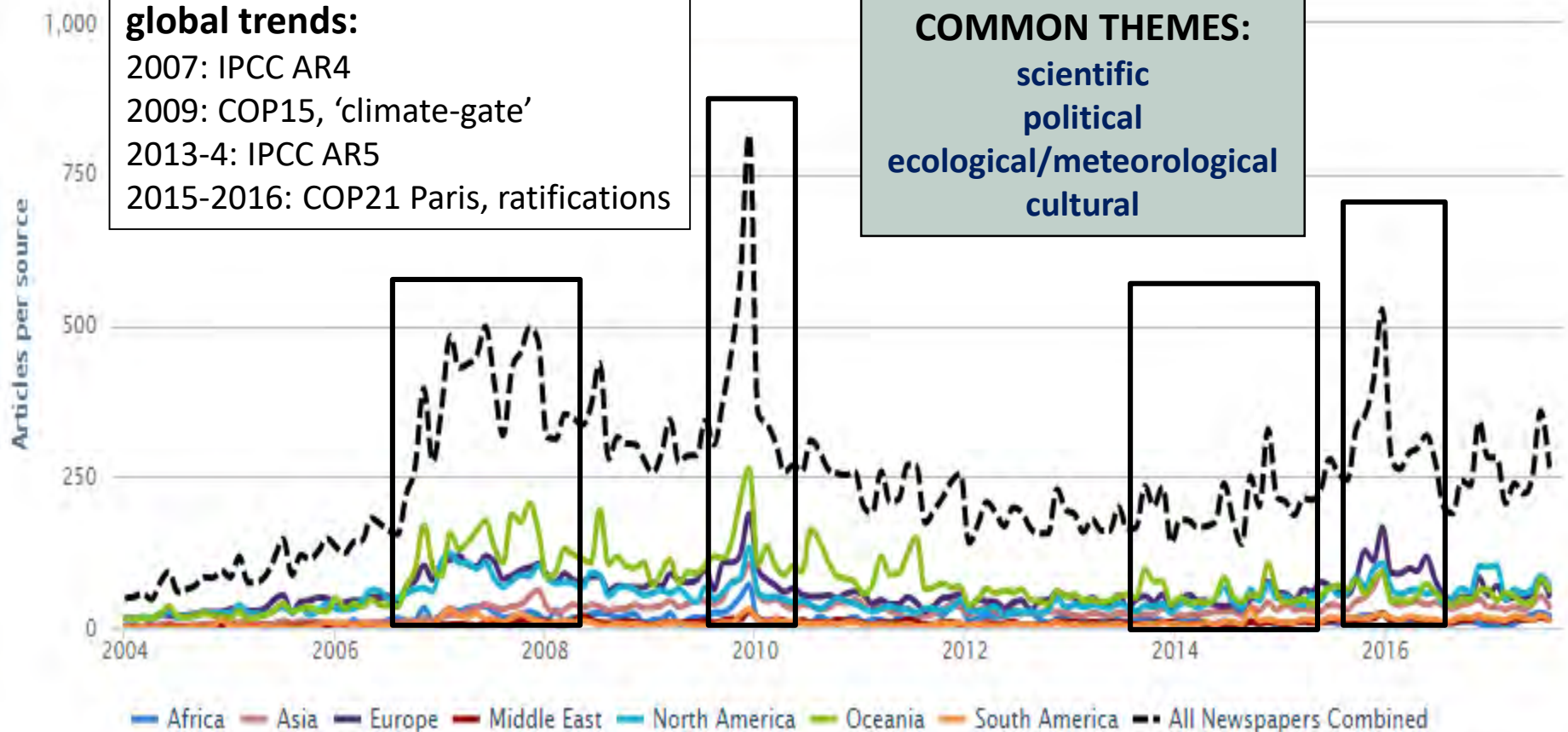


global trends:

2007: IPCC AR4
2009: COP15, 'climate-gate'
2013-4: IPCC AR5
2015-2016: COP21 Paris, ratifications

COMMON THEMES:

scientific
political
ecological/meteorological
cultural



CIRES Center for Science and Technology Policy Research, University of Colorado Boulder, http://sciencepolicy.colorado.edu/media_coverage

updated monthly at http://sciencepolicy.colorado.edu/media_coverage/

A CAUTION

MORE MEDIA ATTENTION \neq MORE PUBLIC UNDERSTANDING/CLARITY



2000-2017 United States Newspaper Coverage of Climate Change or Global Warming

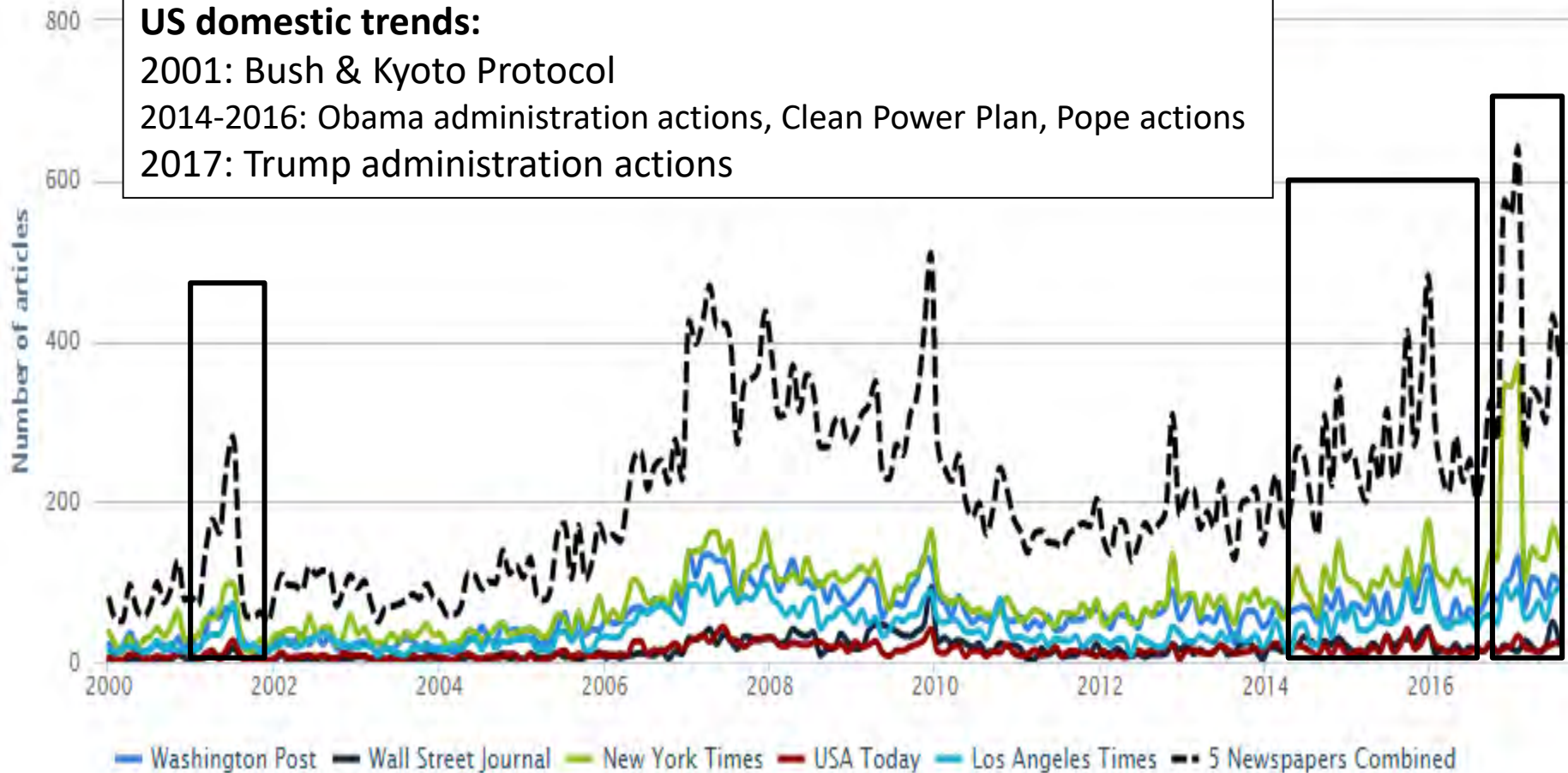


US domestic trends:

2001: Bush & Kyoto Protocol

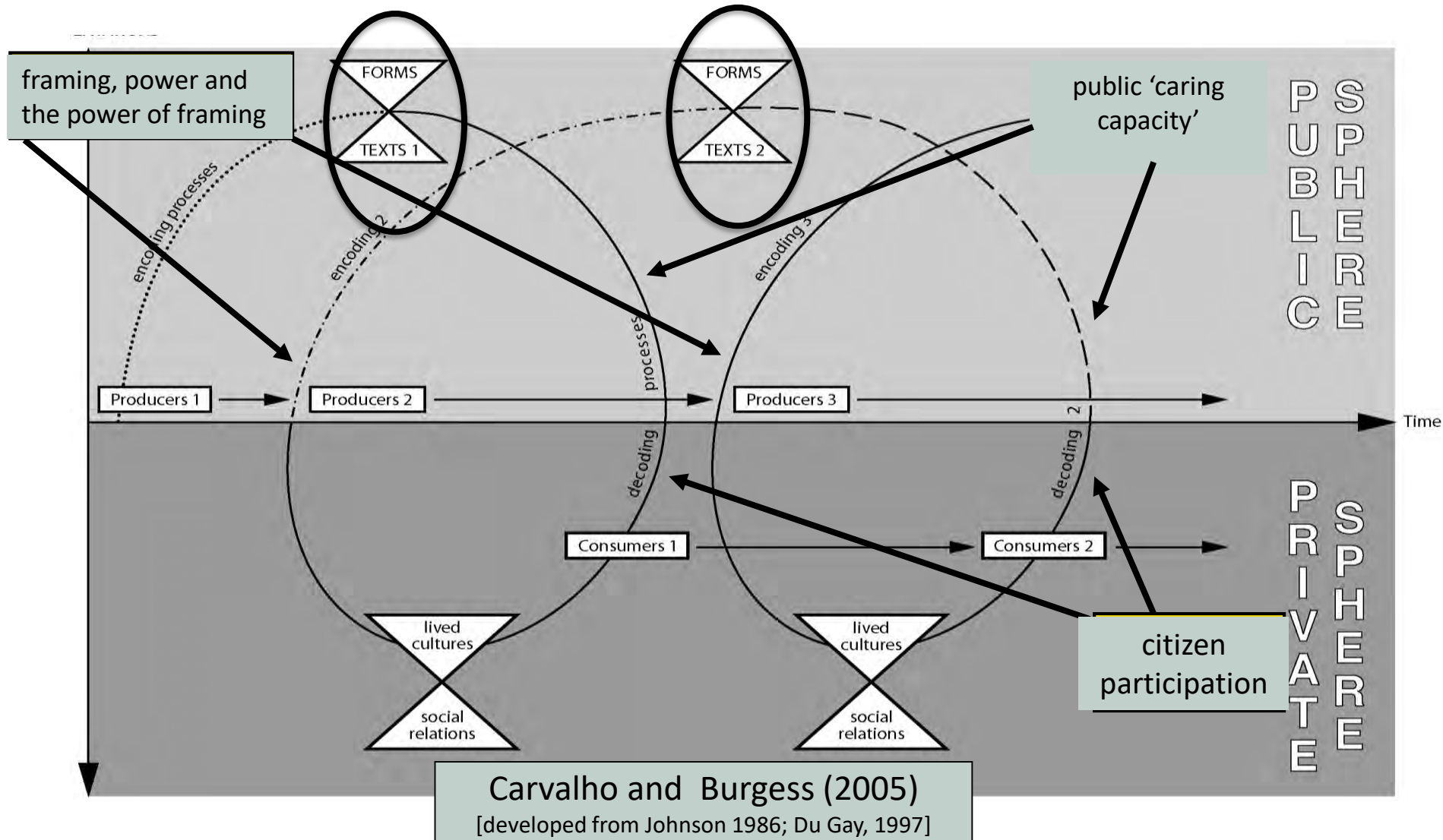
2014-2016: Obama administration actions, Clean Power Plan, Pope actions

2017: Trump administration actions



updated monthly at http://sciencepolicy.colorado.edu/media_coverage/

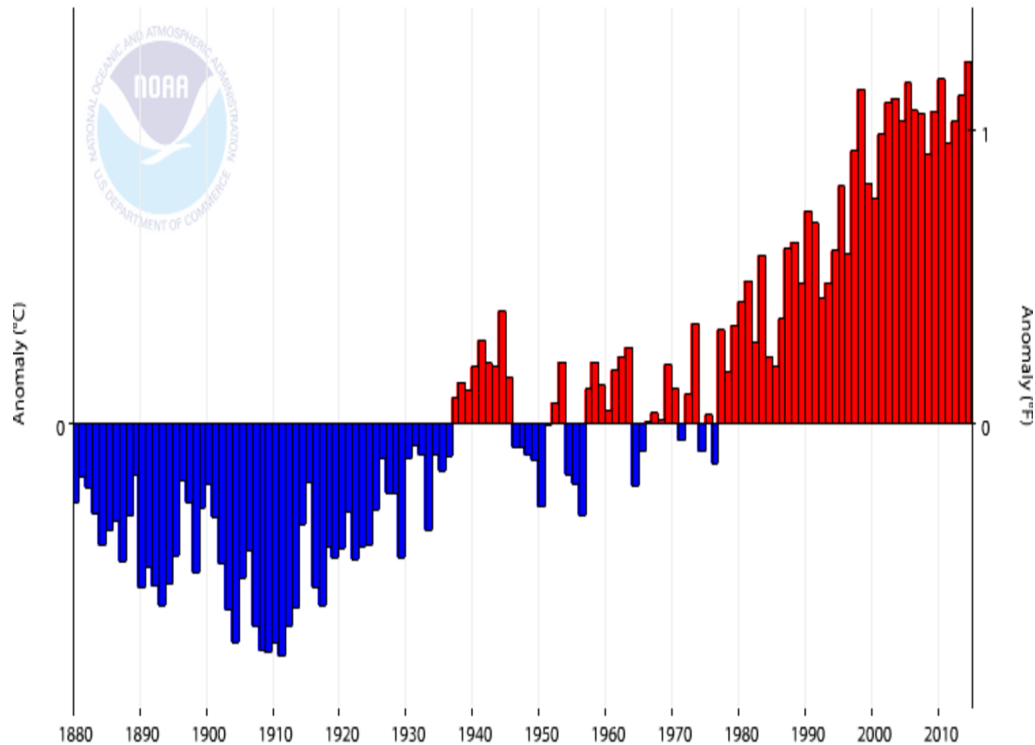
CULTURAL CIRCUITS OF COMMUNICATION: NEXUS BETWEEN KNOWLEDGE & ACTION



human-environment relationships



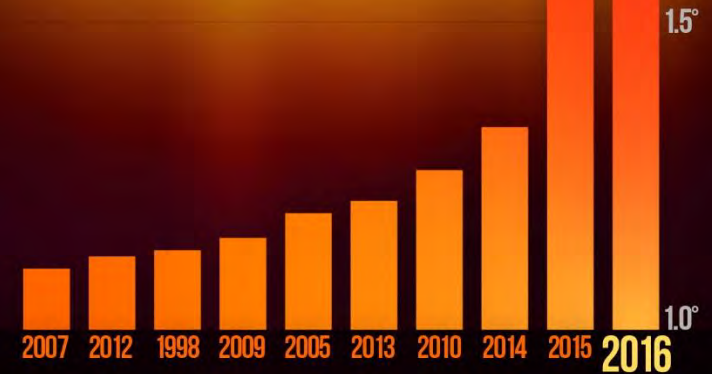
Global Land and Ocean Temperature Anomalies, January-December



things aren't what
they used to be

TEN HOTTEST YEARS

All Since 1998



2003 and 2006 (not shown) tied with 2007. Columns represent difference from 20th century average. Data as of January 15, 2017. Subject to change based on NCEP revisions. Source: NOAA/NCEP

CLIMATE CENTRAL

composition #1



Composition #1 – Visual representations of science &/or environment

In this first composition, you will work individually. The task with this composition is to visually tell a story about a selected science and/or environmental topic of your choice. You will use Instagram to tell your story.

To provide ideas/stimulus for your projects, you can take one of two options:

+ **First**, you can reach out to an environment- or science-related student group on campus and interview members of that group, take still photos and build a coherent narrative.

+ **Second**, you can participate in one of the CU Boulder Eco Engage fieldtrips offered in the Fall term before the assignment is due (October 3rd). More information is here www.CUEco-engage.com. Check the webpages for dates/times/topics for fieldtrips as these may change. These are free to CU Boulder students but **require you to sign up ahead of time**, as spaces on these fieldtrips fill quickly. These are events focused on introducing first and second year students to new ideas, career paths, and internship opportunities.

Two Fall 2017 Eco Engage fieldtrips before the deadline:

(1) Watershed to Waterspout

Friday, September 15, 12:30 - 5pm (deadline to register is Sept 13)

(2) Food Deserts to Food Justice

Friday, September 29, 10 am - 5 pm (deadline to register is Sept 20)

These are great opportunities to put together your visual storytelling project for composition #1 and also for you to plug in to CU Boulder activities. You can also choose something outside of these two events, just communicate early and often with your instructor and course assistant to be sure your choice is a good one for this project.

In class on **Tuesday, September 5**, you will begin work (if you haven't started earlier) to interpret and plan to communicate the aspect of science and/or environment through visual storytelling in up to 20 still shots and captions (of up to 100 words each) depicted through Instagram. You may choose to start a new Instagram account, or to use one you may already have = these will be shared with others in the class so we can all follow along.

Before class on **Tuesday, September 12**, you will post one representative picture on this account to indication how you will be charting your path forward with composition #1. In class, you will share the pic, along with a 'storyboard' of your ideas to 'pitch' to the class for constructive feedback. Based on feedback from the class, you will then move forward with your project over the next weeks.

In class on **Tuesday, October 3**, you will have four minutes total to present your *Completed Draft* composition #1 to the class. At this session you will each also turn in a hard copy of your *Composition Description* and any *Release Forms* needed.

visual
storytelling
(with some
supporting
text)

audience

storyboarding



Here's two examples of the same storyboard for a section of the 'How to Film' video



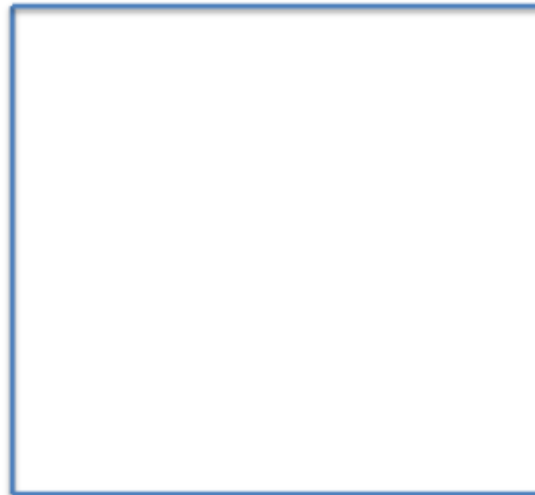
1. Wide shot of both Sarah and Callum illustrating where they are and what the film is about



2. Close-up of Sarah speaking directly to camera
React: Sarah



Project Title _____ Scene _____



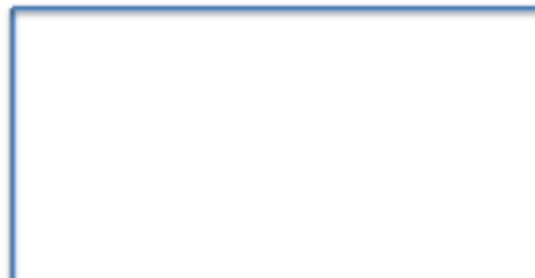
Action: _____

Narration: _____

Music: _____

SFX: _____

Duration: _____



Action: _____

Narration: _____

Music: _____

composition #1



for Tuesday:

- **set up an Instagram account and start to follow ‘everydayclimate’**
- **share your account with David Oonk in class**
- **read Bernard (2016) chapter 3**
- **brainstorm ideas for composition #1: pitch & feedback is one week from Tuesday (2 minute pitches, visit from George Lange**
<http://www.langestudio.com/>

the hatchet & the seed: engagements in the 21st century



“...if things are *made* rather than found, then the possibility exists for them to be *unmade*, or *made differently*”

~ Stephanie Rutherford

