creative climate communications
an inflection point at the human-environment interface
Decarbonization

- decreasing the carbon-content of energy generating fuels
- levers: efficiency gains, mode-switching
- achieved thru political economic measures & cultural/societal demands
- associated with diminishing the environmental impact of energy generation
Special report on 1.5°C

- 45% cuts from 2010 levels by 2030
- ‘net zero emissions’ by 2050

The World Is Not on Track to Limit Temperature Rise to 1.5°C

Notes: *on average, no or low overshoot.
IPCC special report: keeping below 1.5°C

IPCC (2018)
Sea levels are expected to rise 16 to 24 in. by 2100. Atmospheric temperatures are expected to increase 2.7°F to 10°F by 2100, contingent primarily on emissions scenarios...
Earth’s carbon budget

IPCC 5th assessment report, WG I (2013)

500 gigatons can be emitted (IPCC) before crossing 2°C
(1 gigaton = 1 billion tons; global emissions approx. 10gt/yr)

How can we divide up the global emissions allotment?
‘one trillion tons’

the amount of carbon dioxide that could be released into the atmosphere while keeping global warming under 3.6°F (2°C)

→ since industrial revolution we have already emitted 500 billion tons of CO₂

→ "It took 250 years to burn the first 500 billion tons. On current trends we'll burn the next 500 billion in less than 40 years." ~ Myles Allen

Meinshausen et al (2009)
inherent climate change engagement challenges

DOMAIN OF MANY CLIMATE CHANGE PROBLEMS

Time required to implement or to reverse choice.

- Lifetime of a nation or culture
- Lifetime of an organization
- Lifetime of an individual
- Generation
- Individual career block
- Political election cycle
- Resources of an individual
- Resources of small groups of individuals
- Resources of organizations
- Resources of nations or cultures

Resources required or at stake

Cultural/political distance between parties

Morgan et al (1999)
intricacies and complexities of climate negotiations include:

(1) **centrality/ubiquity of carbon**—embedded in human activities of transportation, land use, industry, and household energy use

(2) **differences between contributors and those who bear the burden**—common but differentiated responsibilities (CDR)

(3) **institutional arrangements**—how to best configure organizations to optimally deal with mitigation and adaptation challenges

Okereke (2009)
“the debate over 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”

(1) we all use cognitive filters
(2) our cognitive filters reflect our cultural identity
(3) cultural identity can overpower scientific reasoning
(4) our political economy creates inertia for change
carbon, our lives & livelihoods

Tracking Carbon Emissions
A footprint comparison of total carbon dioxide emissions by nation and per capita shows there's plenty of room for smaller countries to reduce their carbon footprints.
By Stanford Kay

Global CO₂ emissions by world region, 1751 to 2015
Annual carbon dioxide emissions in billion tonnes (Gt).

Cumulative CO₂ Emissions 1850–2011 (% of World Total)

Mitigation ~ human intervention to reduce the emissions of GHGs

Adaptation ~ the alteration of an organism or the capacity to make changes to suit conditions different than those normally encountered

Education ~ informing one another through different ways of learning & knowing about climate change
Does the scale of response(s) match the scale of the challenges?

“radical changes...will be needed for a low carbon society” – Tina Fawcett (2010)
“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)
2004–2018 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

**Resonant Themes:**
- Ecological/meteorological events and issues
- Scientific events and issues
- Cultural events and issues
- Political events and issues

“Few things are as much a part of our lives ...an instant historical record of the pace, progress, problems, and hopes of society.” ~ W. Lance Bennett (2002)

Updated monthly at [http://sciencepolicy.colorado.edu/media_coverage/](http://sciencepolicy.colorado.edu/media_coverage/)
2000–2018 United States Newspaper Coverage of Climate Change or Global Warming

**US domestic trends:**
- 2001: Bush & Kyoto Protocol
- 2014-2016: ‘Clean Power Plan’, Paris Agreement
- 2017-2018: Trump administration actions

Updated monthly at [http://sciencepolicy.colorado.edu/media_coverage/](http://sciencepolicy.colorado.edu/media_coverage/)
moments in time

What do we want?
Science-based policy
When do we want it?
After peer review
5 rules of the road
5 features on a road map

First, **be authentic**.
Second, **be ambitious**.
Third, **be accurate**.
Fourth, **be imaginative**.
Fifth, **be bold**.

First, **find common ground and meet people where they are on climate change**.

Second, **emphasize how climate change affects us here and now, in our everyday lives**.

Third, **focus on how climate change engagement ultimately makes our lives and livelihoods better**.

Fourth, **creatively empower people to take meaningful and purposeful action on climate change**.

Fifth, ‘**smarten up’ communications about climate change to match the demands of a 21st century communications environment**.'
burgeoning spaces creatively communicating about climate change

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