

RESEARCH ON TAP

Environmental Cultures, Power, and Equity

Wednesday, March 22, 2023

bu.edu/research/events



Agenda

- Welcome Remarks
- Presentations
 - Benjamin K. Sovacool
 - Anne Short Gianotti
 - Madeleine LK Scammel
 - James McCann
 - Joanna Davidson
 - Becky Copeland
 - Wade Campbell
 - Madison Condon
 - Adriana Craciun
- Closing Remarks

Environmental Cultures, Power, and Equity

Benjamin K. Sovacool

Professor of Earth and Environment and Director
Department of Earth and Environment and Institute for Global Sustainability



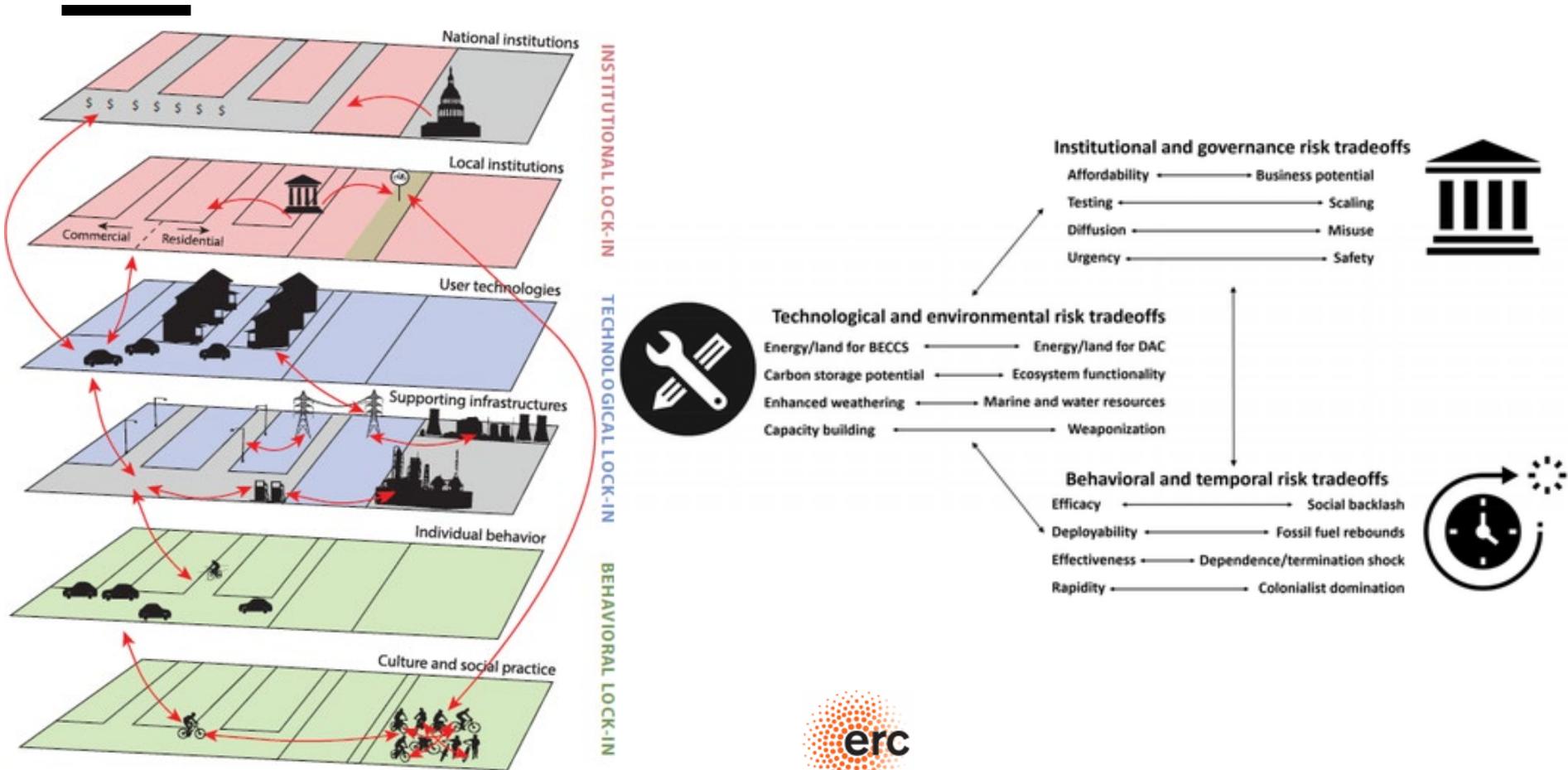
20 novel climate interventions to save the planet?

Negative emissions and carbon dioxide removal	Solar radiation management and solar geoengineering
Afforestation and reforestation	Stratospheric aerosol injection
Soil carbon sequestration	Marine cloud brightening
Biochar	Cirrus cloud thinning
Bioenergy with carbon capture and storage (BECCS)	Space-based (extra-terrestrial) reflectors
Enhanced weathering	Albedo modification via human settlements
Ocean alkalization or fertilization	Albedo management via grasslands and crops
Blue carbon and seagrass	Albedo management via deserts
Ecosystem restoration	Albedo management via clouds
Direct air capture and storage (DACCS)	Ice protection
Carbon capture utilization and storage (CCUS)	High altitude sunshades

Sovacool, BK, CM Baum, and S Low. "Determining our climate future: Expert opinions about negative emissions and solar radiation management pathways," *Mitigation and Adaptation Strategies for Global Change* 27 (58) (October, 2022), pp. 1-50.



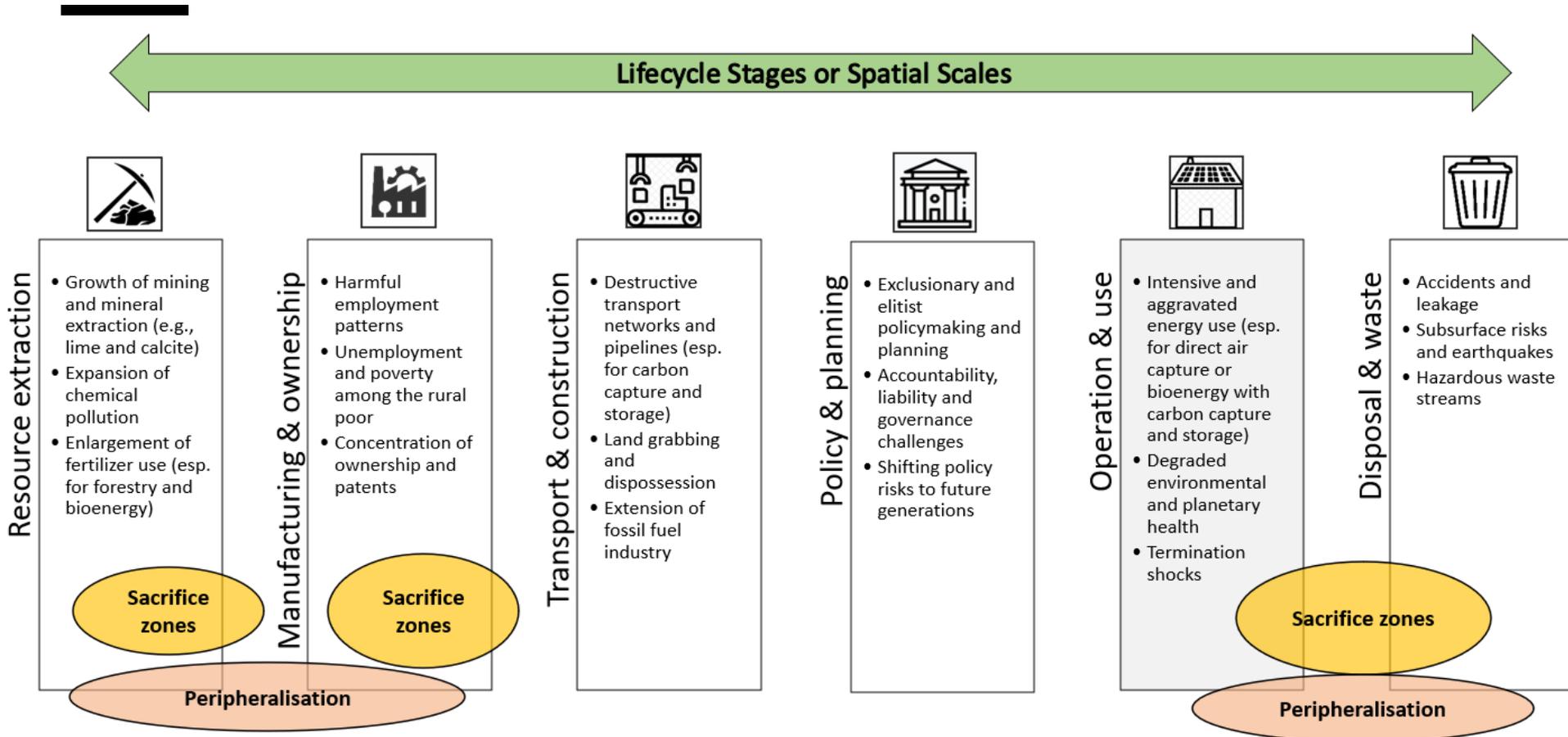
Risk-risk tradeoffs emerge across the sociotechnical system



Sovacool, BK, C Baum, and SJ Low. "Risk-risk governance in a low-carbon future: Exploring institutional, technological, and behavioral tradeoffs in climate geoengineering pathways," *Risk Analysis* (in press, 2023)



Whole-systems justice issues are multi-scalar as well



Sovacool, BK, C Baum, and S Low. "Climate protection or privilege? A whole systems justice milieu of twenty negative emissions and solar geoengineering technologies" *Political Geography* 97 (August, 2022), 102702, pp. 1-21.

They can lastly be used as weapons or for military purposes



Negotiating tool

- **Greenfinger:** Threat of blackmail or suspension of operation or deployment by non-state actors
- **Cartels and clubs:** Risk of market domination and threat of conquest
- **Concessions:** Threats of deployment to gain other strategic goals



Enhanced military capacity

- **Capacity:** Utilization of climate technology to build military infrastructure
- **Control:** Competition over technology or resource wars over supply chains
- **Deterrence:** Deployment or protection of military systems or use of military to enforce compliance



Target in conflict

- **Physical attack:** Direct damage or destruction to induce local impacts
- **Cyberattacks:** Security and hacking risks to control, command, communications, or software technology
- **Collateral damage:** Unintended disruptions during civil wars or military campaigns



Cause of conflict or weaponization

- **Weaponization:** Hostile deployment against another state or entity
- **Insecurity:** Asymmetries in climate protection creating domestic or regional instability
- **Miscalculation:** Misperception of research aims or deployment and diffusion of responsibility
- **Escalation:** Arms races, counter-geoengineering and proxy wars

	Negotiating tools	Enhanced military capacity	Targets in ongoing conflict	Cause of conflict or weaponization
<i>Negative emissions technologies</i>	Formation of carbon dioxide removal clubs, risk of a “Green OPEC”, heightened diplomatic conflict	Coupling with military industrial complex, resource curse over forestry or oceans, military enforcement of climate targets	Risk of carbon reservoirs being targeted by terrorists or geopolitical blackmail by countries storing carbon	Use of ocean techniques to devastate fisheries, or land-based techniques to devastate forests or agriculture, ability to control global thermostat, strengthening of authoritarian or populist regimes, internal insecurity due to cascading impacts
<i>Solar geoengineering techniques</i>	Pre-emptive deployment by a Greenfinger, formation of geoengineering clubs, use of “energy weapon” or “weather modification” to get concessions	Augmenting aerospace or space capacity, crossover high-technology skills, protection of military bases	Technology (aircraft, ships, balloons) and programs could be targeted as critical infrastructure, cyberattacks on control systems	Interference with rainfall, monsoons, sunlight, and ecosystems, risk of miscalculation over deployment aims, cycles of counter-geoengineering

Multispecies Politics of Urban and Suburban Wildlife

Anne Short Gianotti

Associate Professor
Earth & Environment, CAS



“The region is certainly experiencing a boom in point-and-shout animals — Deer! Turkey! Coyote! Fox! Eagle! Bear!”

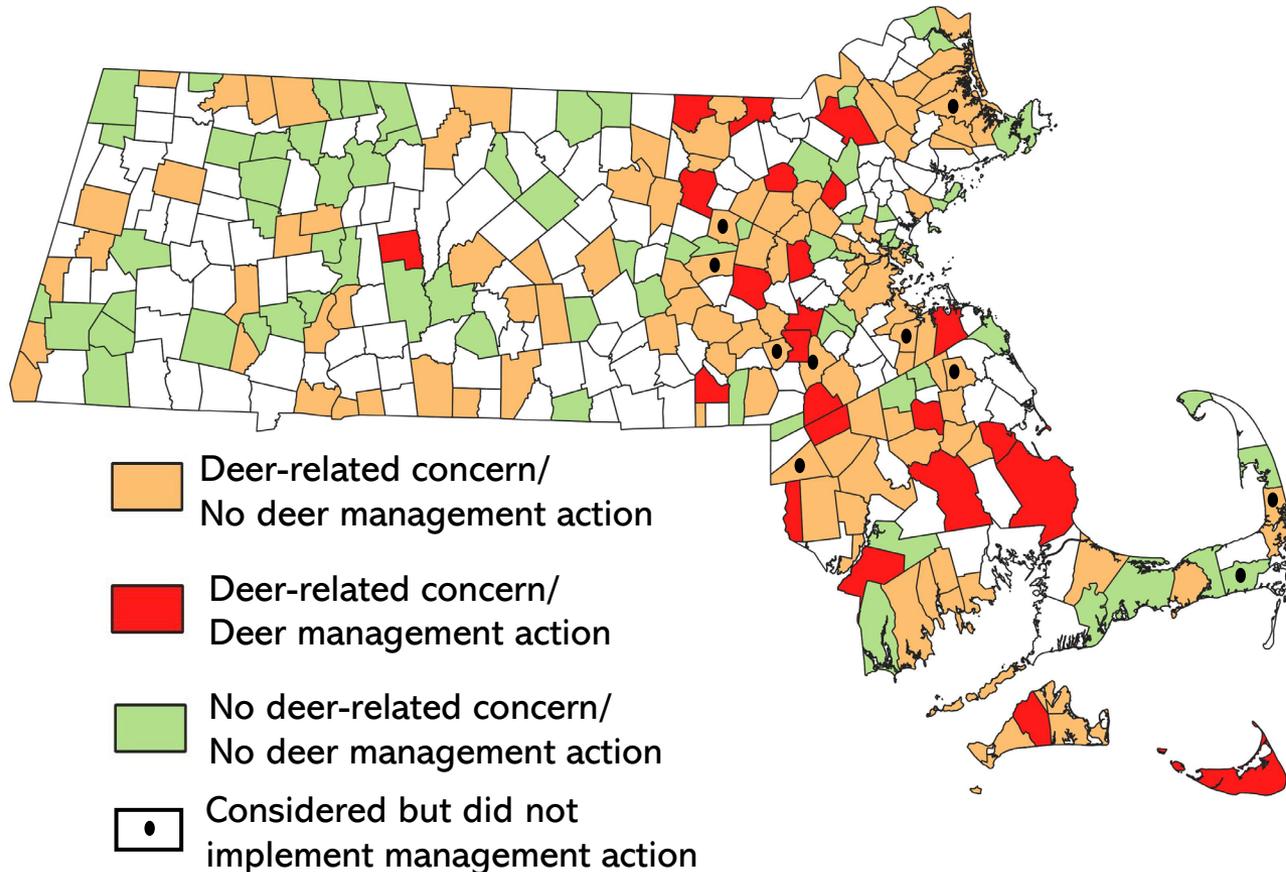
~ Journalist Billy Baker, Boston Globe 2022



Bynner at Day St, JP
Photo: Andrea Viveiros

How and why do deer become objects of (lethal) management in some towns but not others?

How does the patchwork of management programs shape deer populations and landscapes across the region?



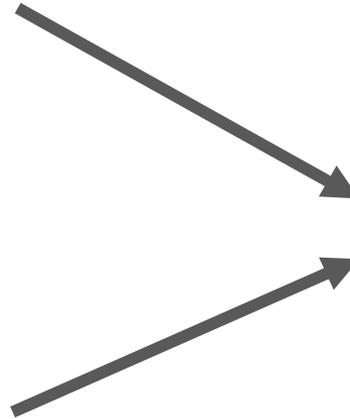
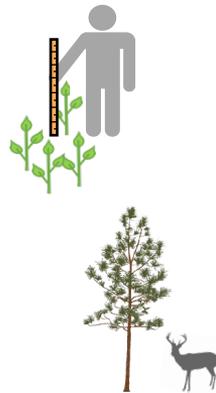
Source: MA Deer Survey, 2017

Research activities

- Census of municipal bylaws
- Survey of municipal officials (Response rate: 73%)
- Interviews (n=45)
- Meeting observation
- Document review



- Camera traps to assess deer population (and other wildlife populations)
- Deer browse surveys at plots at camera trap locations
- Roadside surveys of deer browse



Rethinking the multispecies politics of sub/urban deer



- **Non-human agency:** Dynamic human and non-human processes are remaking landscapes and management
- **Biopolitics of conservation:** Management debates reflect conflicting ideas and ethics about what and who should be saved and managed
- **Emotions and ethics in rational decision-making:** Uncertainty and data are mobilized as arguments in management crises, yet ethics and emotions underlie disagreement

Knowledge and Power

Madeleine LK Scammell

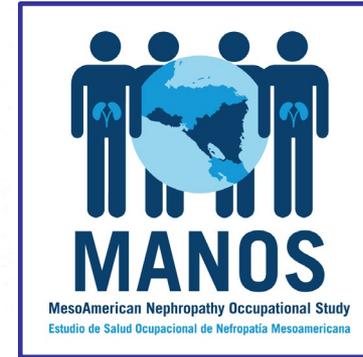
Associate Professor

Department of Environmental Health, BU School of Public Health



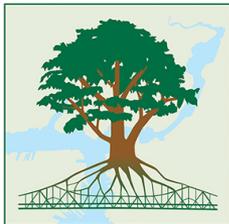
Long-term Relationships

NIH/NIDDK U01 DK130057
NIH/NIEHS R01 ES027584



Research Group for the Study of Chronic Kidney Disease in Central America <https://sites.bu.edu/buckdntresearch/>

Chelsea-East Boston Heat Study www.cheatproject.org



Celebrating **25** Years
of Fighting for Social and
Environmental Justice!

GreenRoots



The Barr Foundation



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Guiding thoughts:

- **Bottom-Up research:** Who is the base? Who is asking the question? Who wants to know the answer?

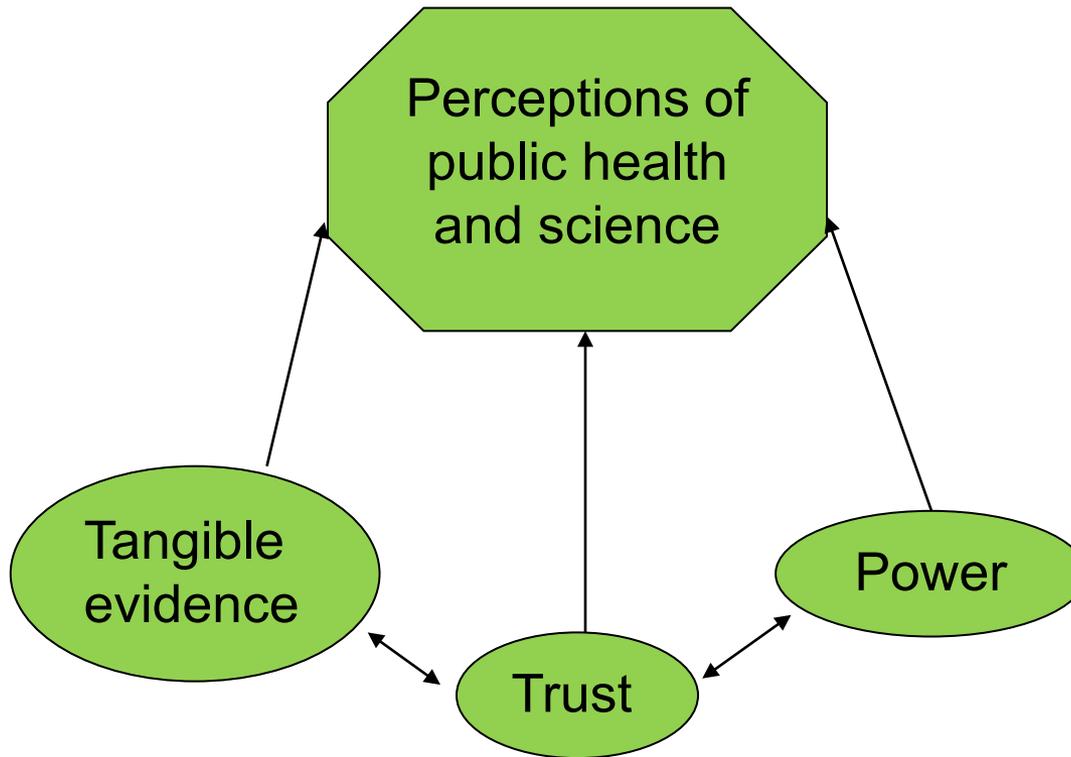
<https://www.ejnet.org/ej/jemez.pdf>

Jemez Principles for Democratic Organizing

- **Science doesn't build social movements.**
- **There is no "common sense."**



<https://www.theguardian.com/environment/2008/mar/24/climatechange.fossilfuels>



“Them as has, gets”

Scammell M, Senier L, Darrah-Okike J, Brown P, Santos S. 2009. Tangible Evidence, Trust and Power: Public Perception of Community Environmental Health. *Social Science & Medicine*. January 2009.

Environmental Justice Assistance Network

www.HEAR-DB.org

Health and Environment Assistance Resources Database

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The HEAR database aims to increase and diversify the legal, scientific, medical and technical expertise available to community groups with environmental and public health concerns.

The HEAR database is a collaborative project of Alternatives for Community & Environment (ACE), Boston University School of Public Health (BUSPH) and Community Action Works. Every day, members of community groups across New England call our organizations seeking advice on their work confronting environmental hazards. Sometimes we can handle the questions ourselves, but often we have to look outside our own networks for help. When groups need a lawyer to review siting documents or a doctor to weigh in on the effects of air pollution on health, we turn to the network of HEAR experts to match communities with volunteers. This kind of assistance, and in some cases partnership, is absolutely essential to our work and the services we provide community groups.

Do you have expertise you can share? Sign up today and join a network of scientists, lawyers and other environmental experts committed to assisting residents in building a cleaner, healthier environment.

[Become a HEAR expert](#)

[Read our success stories](#) or [See award winners](#)



Success Stories

We have been connecting communities with experts for over a decade to improve and protect our public health environment. Read on to see how it works.

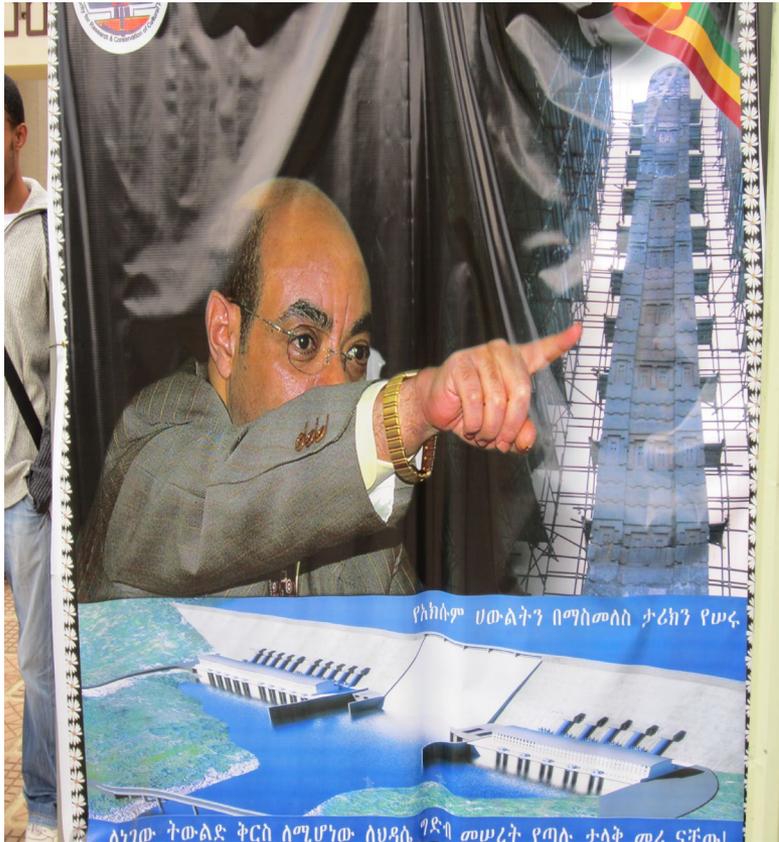


Spirituality of Waters: Religion, Identity at the Nile's Source



Ludolphus/Abba Gregorius c. 1681 map of Abyssinia: Watersheds of Identity?





PM Meles' Vision of Modern Water: Hedasse Dam



Image from a teahouse in rural town, near Blue Nile's Source

Rice & Rebirth

Climate, Gender, & Death in Rural West Africa



Joanna Davidson

Associate Professor, Department of Anthropology, CAS
& Associate Director, Kilachand Honors College



Boston University Office of Research









ISSUES OF GLOBALIZATION
CASE STUDIES IN CONTEMPORARY ANTHROPOLOGY

Sacred Rice

An Ethnography of Identity, Environment,
and Development in Rural West Africa

Joanna Davidson



OXFORD
UNIVERSITY PRESS

ae american ethnologist
JOURNAL OF THE AMERICAN ETHNOLOGICAL SOCIETY



JOANNA DAVIDSON
Boston University

The problem of widows

ABSTRACT

How does an ethnographer inquire about a social category that is neither named nor recognized as such? The Ejamat Jola language has no word for widow, even though more than a third of households in the Jola villages of Guinea-Bissau are occupied by women whose husbands have died. Over years of fieldwork, I have tried to explain why widows were not named or even seen by Jola villagers. Chronicling how each of my explanations was undercut by both Jola responses and my own critical scrutiny, I recount the impasses of an ethnographic quest and show the gradual process of gaining insight into experiences that cannot be encapsulated by either local or anthropological models. The unspeakable can signal not only profound fragilities in social relations but also openings for new social formations beyond the normative bounds of received cultural categories. (*widows, marriage, gender, production, reproduction, silence, ethnography, Jola, Guinea-Bissau, West Africa*)

Le mot « veuve » n'a pas d'équivalent en langue diola même si plus d'un tiers des familles des villages diola en Guinée-Bissau est constitué de femmes ayant perdu leur époux. Comment donc rendre compte ethnographiquement d'une catégorie sociale qui n'a pas de nom et ne jouit pas de reconnaissance au sein d'un groupe? Au fil d'années passées sur le terrain, j'ai essayé d'expliquer dans mes productions scientifiques pourquoi les veuves demeurent une catégorie non nommée voire invisible pour les villageois diolas. Cet article est d'abord une chronique de la façon dont mes interlocuteurs diolas ainsi que mon propre

Most of us, given a choice between chaos and naming . . . would choose naming. Most of us see this as a zero-sum game—as if there were no third place to be: something without a name is commonly thought not to exist. And here is where we may be able to discern the benevolence of the untranslatable. Translation is a practice, a strategy . . . that does not seem to give us a third place to be. In the presence of a word that stops itself, in that silence, one has the feeling that something has passed us and kept going, that some possibility has got free.

Anne Carson (2014, 26)

Silence is as much a part of history as noise; the invisible as much a part of history as the visible.

Max Picard (2002, 73)

S alman Rusdhié (1983) famously quipped that the key to any society is in its untranslatable words. I begin here not with an untranslatable word but with an absent one, a word to name a significant segment of a population, what you and I would call widows. More than a third of households in the Jola villages of rural Guinea-Bissau are widows' houses. Although there is no word for *widow* in the Jola language, there is a word for the houses in which women reside after their deceased husband's house is torn down.¹ Perhaps there is no word for *widow* because these houses, called *kungomaku* (sing. *hungomahu*), and the women who reside in them have, for reasons I discuss below, proliferated only recently.² But such an explanation fails to account for a range of dynamics involving women who live in *kungomaku* (who do not see themselves as part of a category into which most women eventually enter), as well as their Jola neighbors and kin (who seem

The Politics of Marriage and Gender: Global Issues in Local Contexts



OPTING OUT

Edited by
JOANNA DAVIDSON and
DINAH HANNAFORD

Women Messing
with Marriage
Around the World

**Entangled Being:
Unoriginal Sin & Wicked Environmental Problems**

Becky Copeland

Assistant Professor of Theology
Director of the Faith and Ecological Justice Program
School of Theology



Christianity, Power, and Injustices

- Dominion over all the Earth
- City on a Hill
- Christianity & Colonialism
- Manifest Destiny
- Election
- Sin as Pride
- Social Gospel Movement
- Abolition
- Suffrage
- Labor Rights
- Civil Rights
- Environmental Justice Movement

Step I: Deconstruction

- **Actual Sin**
 - Thoughts and actions by which individuals intentionally harm others
- **Too narrow**
 - Neglects the unintentional, communal, and multigenerational harm done through inequitable systems
- **Original Sin**
 - Inescapable, universal, & congenital human condition
- **Too intractable**
 - Because it is fundamental to human individuals and systems, it must be cured by divine intervention

Step II: Reconstruction

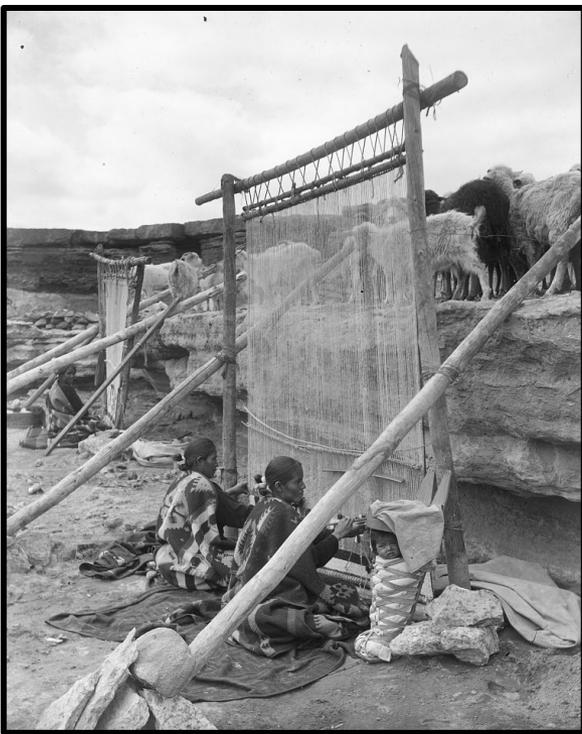
- **Scripture**
 - Sacrificial codes in Leviticus re: unintentional and communal sins
 - Eg. Lev 4:1–12, 13–21
 - Narratives of unintentional, communal, intergenerational sin
 - Eg. 2 Sam 6:6–7; Jonah 4:1–10
 - Narratives of repentance and reform
 - Eg. Luke 19:1–10
- **Marginalized Communities**
 - Moral luck: lack of control over systems, circumstances, outcomes
 - Exercising moral agency under systems of oppression
 - Feminist, mujerista, womanist, and other liberationist sources
 - Forward-looking responsibility

DINÉ PASTORAL LANDSCAPES
A Lens on Power & Equity in the US Southwest, AD 1600-
Present

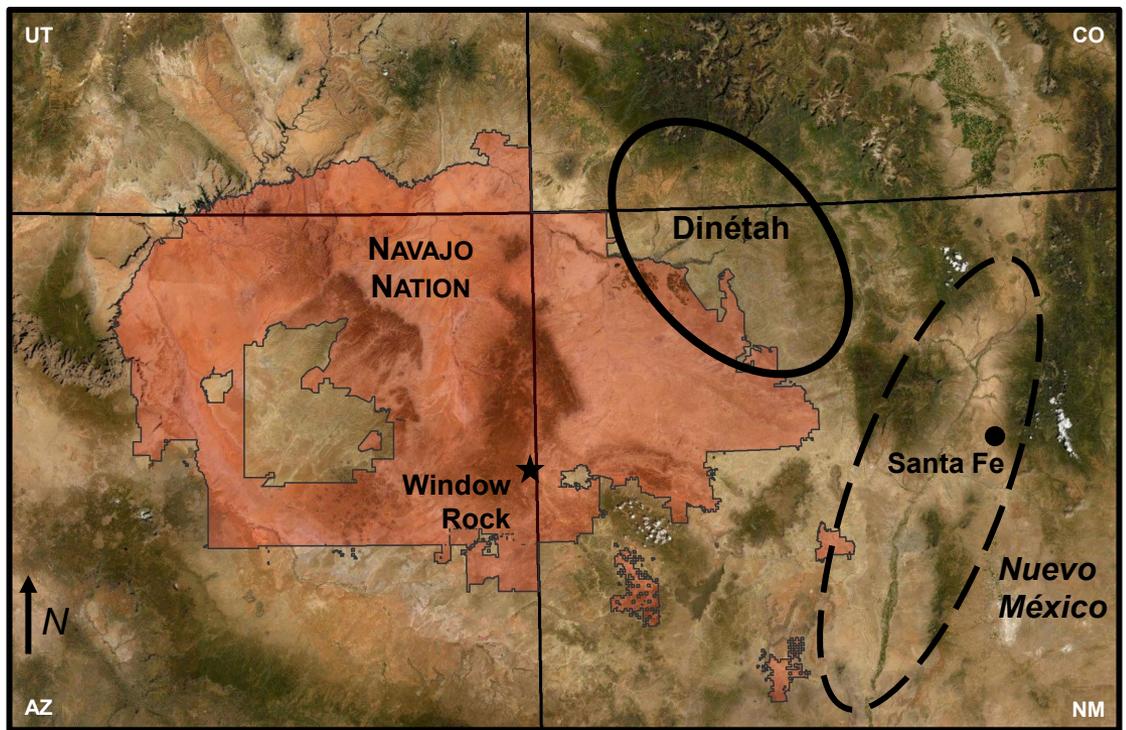
Wade Campbell

Assistant Professor
Anthropology Dept. & Archaeology Program | CAS

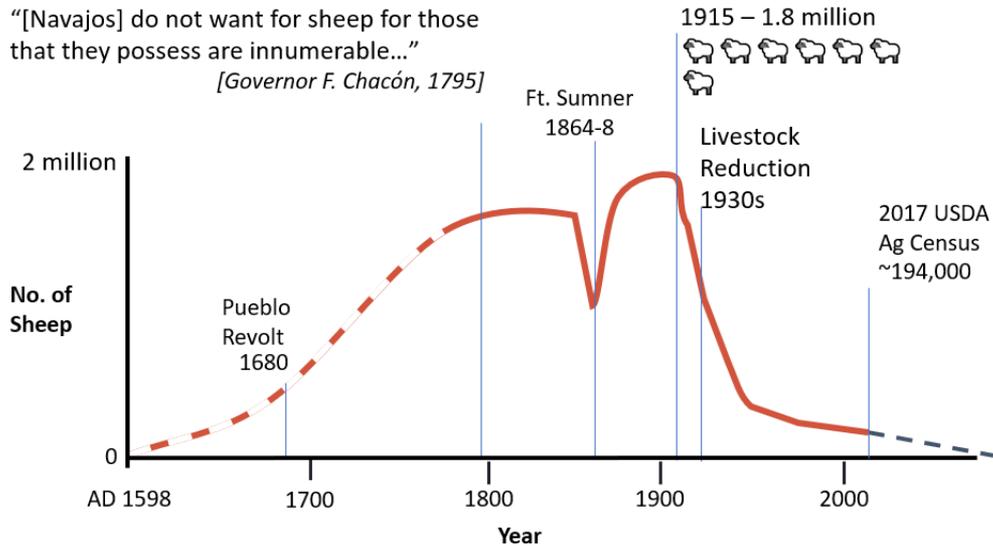




Pennington & Rowland (1914) *Navajo Weavers*. Library of Congress



“[Navajos] do not want for sheep for those that they possess are innumerable...”
 [Governor F. Chacón, 1795]



Early Diné Communities & Spanish Colonial New Mexico

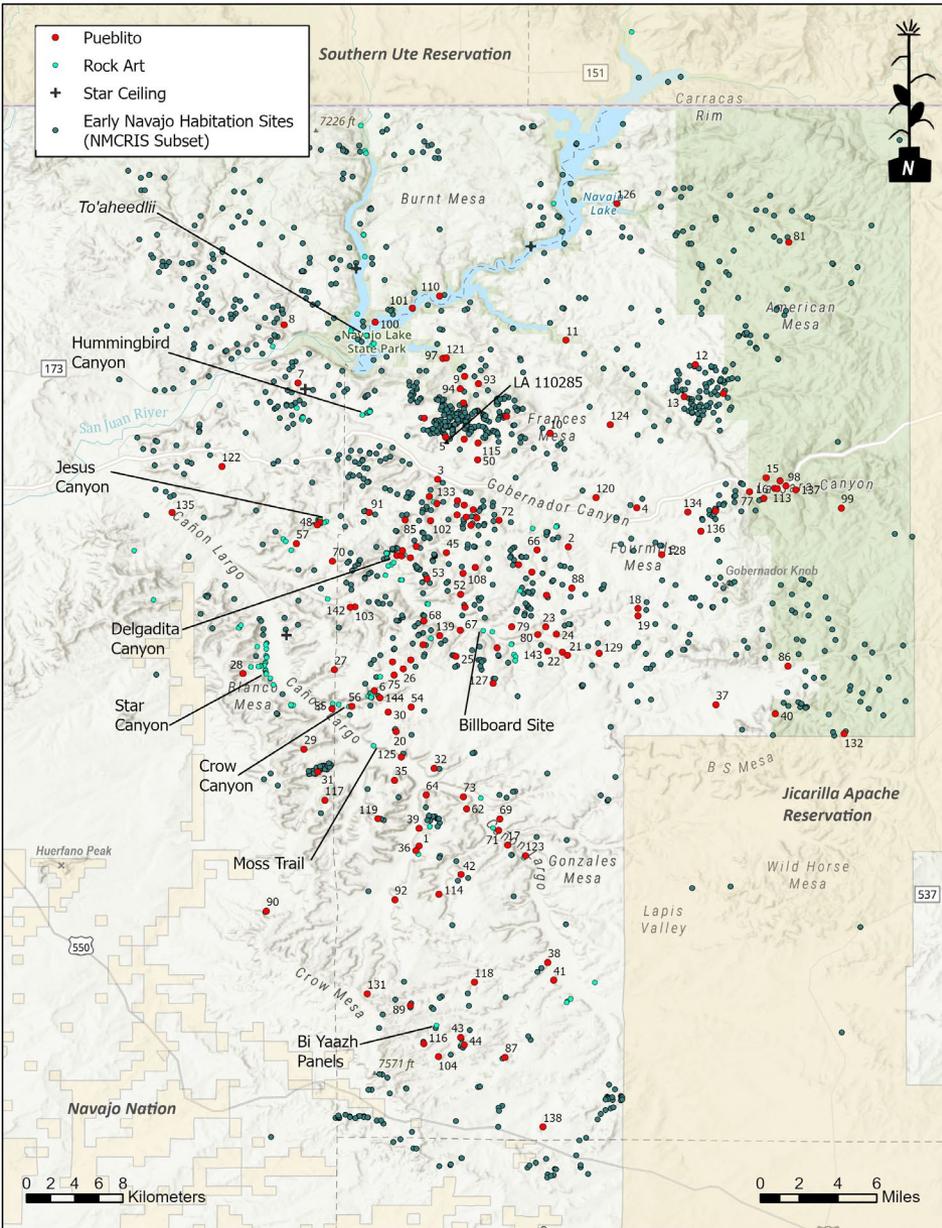


San Agustín Mission (*Pueblo of Isleta, NM*)

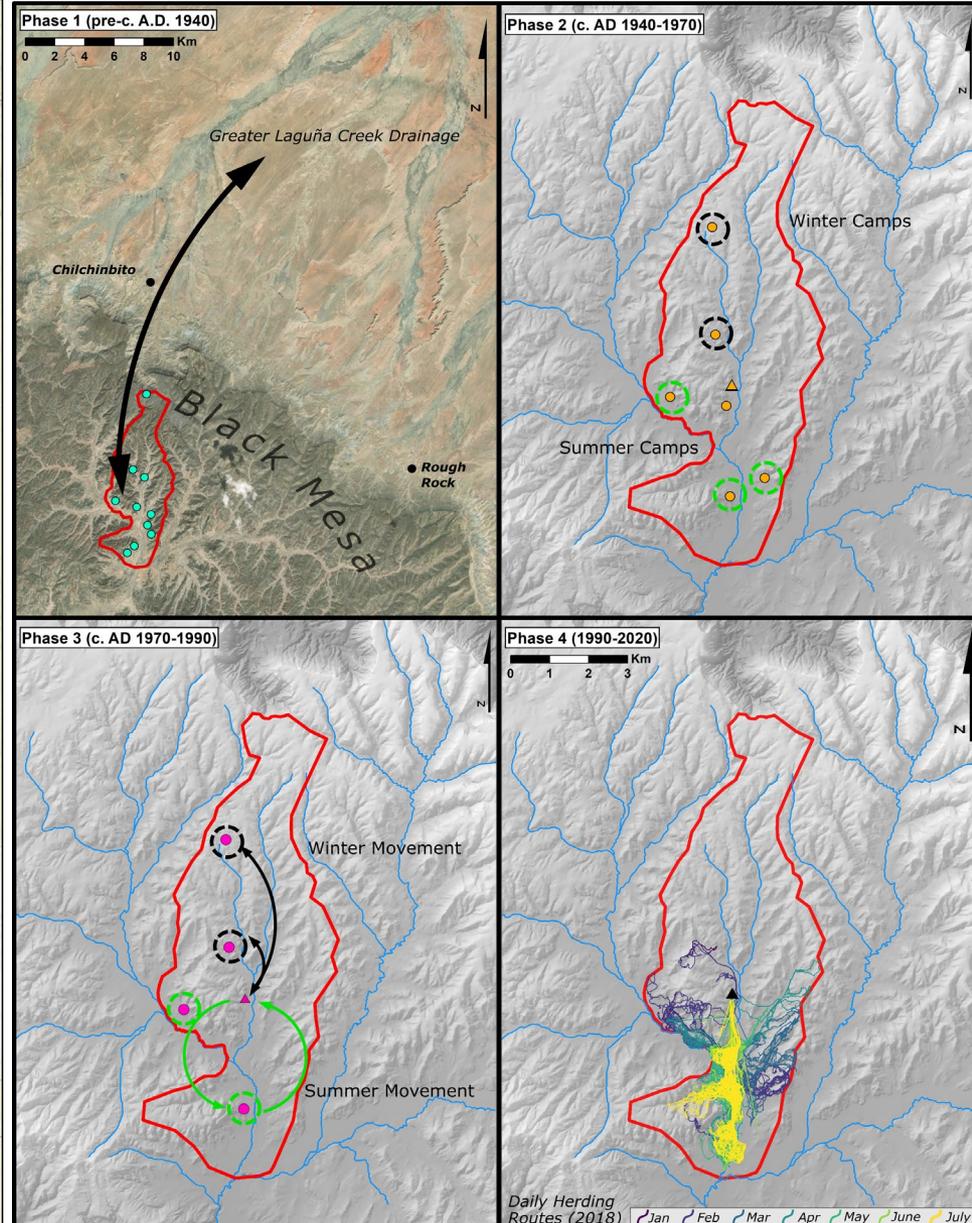


LEARNING FROM HERDING

17th & 18th Century Settlement Patterns

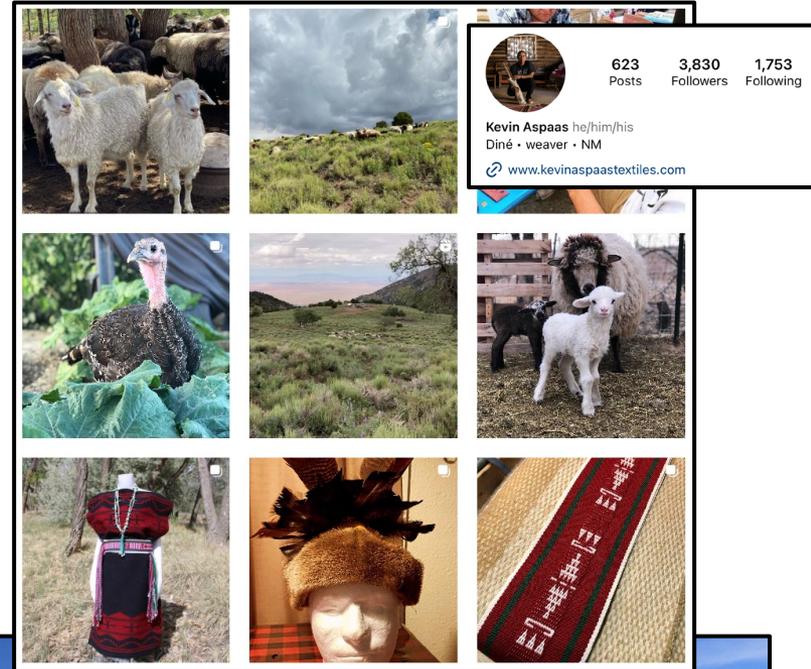
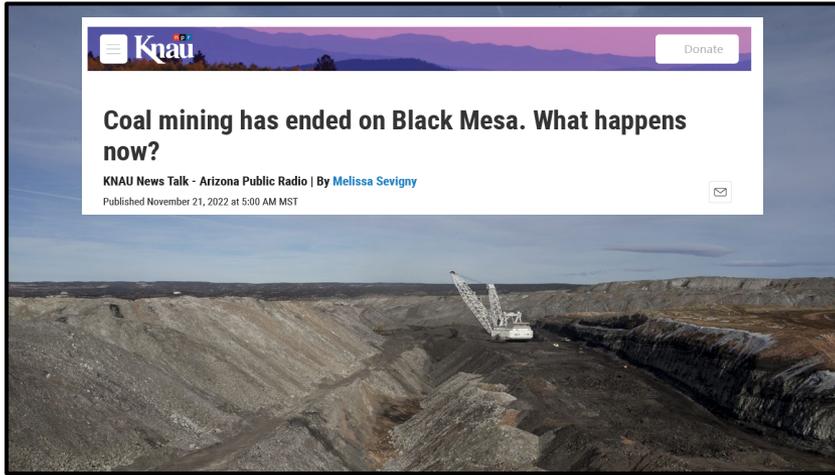


19th -21st Century Herding Strategies



DINÉ PASTORAL LANDSCAPES

A Lens on Power & Equity in the US Southwest, AD 1600-Present



Climate Change & Financial Risk

Madison Condon

Associate Professor, School of Law



The Biden Administration's "Whole of Government" Approach to Climate Change: Executive Order 14030



BRIEFING ROOM

Executive Order on Climate-Related Financial Risk

MAY 20, 2021 • PRESIDENTIAL ACTIONS



- *All* financial regulatory agencies now have a climate risk mandate
- Some are farther along than others in rulemaking proceedings, notably SEC with three rules in works
- Several agencies, in addition to the Federal Reserve (not covered by EO 14030), have joined the international Network for Greening the Financial System

Why is Climate Challenging for Markets?

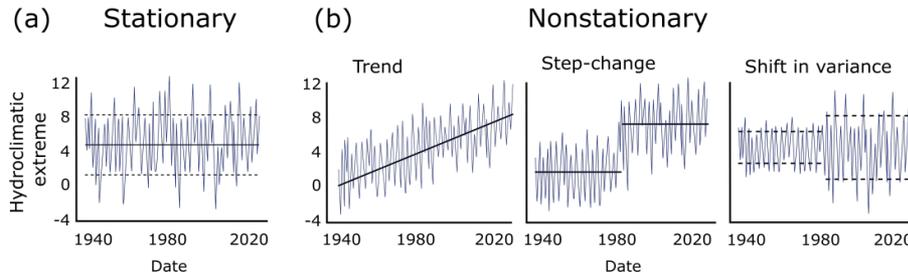


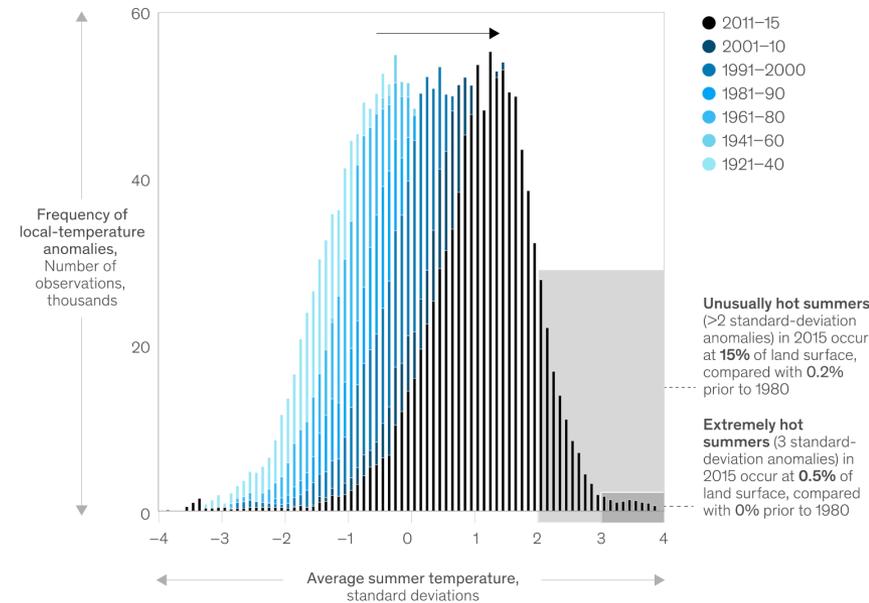
Figure 1. What is nonstationarity? Examples of (a) a stationary time series with constant mean and variance; and (b) three nonstationary time series in the form of shift in mean (trend, step-change) and shift in variance. Solid and dashed black lines represent the mean and the variance of the time series, respectively.

1. Nonstationarity

2. Extremes Really Matter

A small shift in the average can hide dramatic changes at the extremes.

Northern Hemisphere summer-temperature shift



Climate Risk and Analytics is a Big & Growing Business

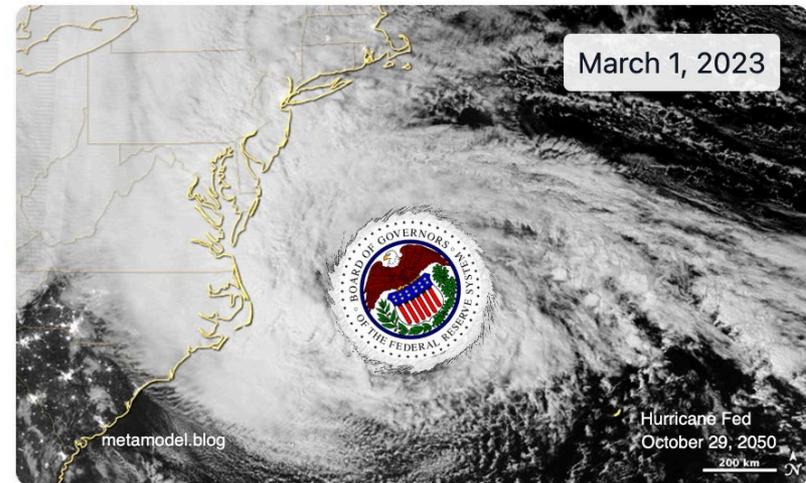
But you actually need to know things about climate change!

Accelerating M&A Activity Involving Climate or ESG Firms

Buyer	Target	Target Type	Date
Goldman Sachs	NN Investment Partners	Asset Manager	Aug. 21
Moody's	RMS	Data/Analytics	Aug. 21
AMG	Parnassus	Investment firm	Jul. 21
Blackstone	Sphera	Software/FinTech	Jul. 21
AXA	ClimateSeed	Marketplace	Jul. 21
JPMorgan	OpenInvest	Software/FinTech	Jun-21
BlackRock	Baringa Climate Change Scenario Model	Data/Analytics	Jun. 21
KKR	ERM	Consulting	May-21
Deutsche Börse	ISS	Data/Analytics	Feb-21
McKinsey	Vivid Economics & Planetrics	Data/Analytics, Consulting	Mar-21
Perpetual Asset Management	Trillium	Asset manager	Jul-20
Morningstar	Sustainalytics	Data/Analytics	Apr-20
MSCI	Carbon Delta	Data/Analytics	Sep-19
Moody's	Four Twenty Seven	Data/Analytics	Jul-19

Selected deals; list not exhaustive

Table: Shrvan Bhat • Source: Center for Climate-Aligned Finance • Created with Datawrapper



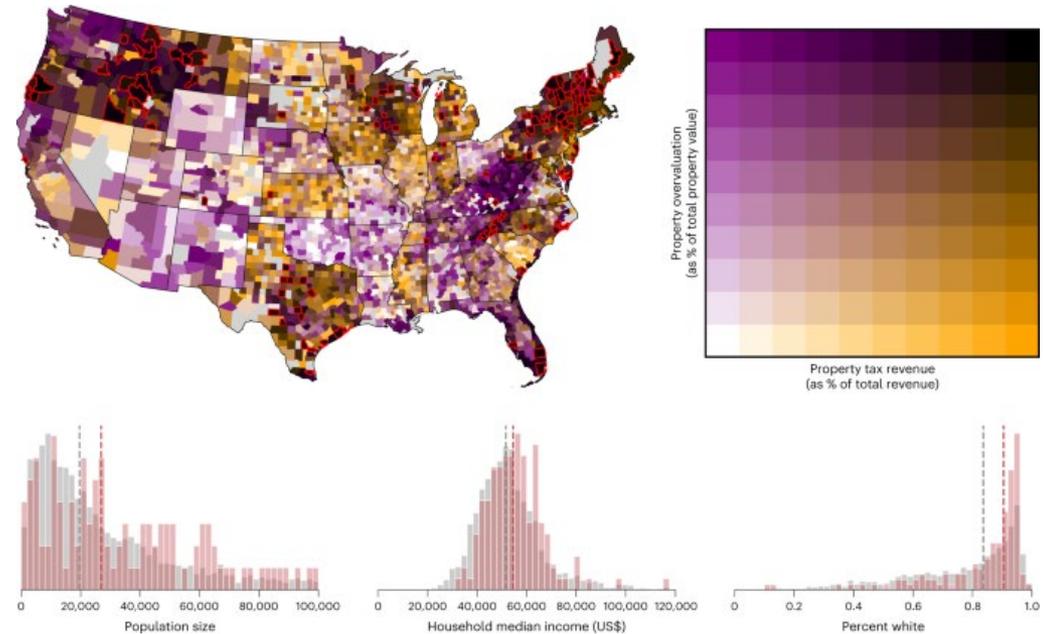
Hurricane Fed: The New Climate Stress Test for Banks



Republicans plan more attacks on ESG. Investors still plan to focus on climate risk



By Michael Copley (NPR)
Dec. 29, 2022 7:48 a.m.



Article | [Open Access](#) | [Published: 16 February 2023](#)

Unpriced climate risk and the potential consequences of overvaluation in US housing markets

[Jesse D. Gourevitch](#) , [Carolyn Kousky](#), [Yanjun \(Penny\) Liao](#), [Christoph Nolte](#), [Adam B. Pollack](#), [Jeremy R. Porter](#) & [Joakim A. Weill](#)

[Nature Climate Change](#) (2023) | [Cite this article](#)



Boston University Office of Research

The Time of Plants in the Svalbard Global Seed Vault

Adriana Craciun

Professor, CAS

*Svalbard Global Seed Vault
as dynamic meeting place
of plural temporalities:*

*archive time +
Arctic time +
plant time*



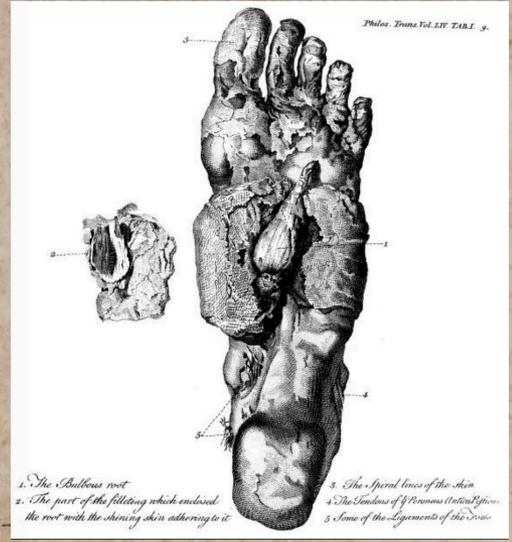
Immortal Flora?

“It was designed and constructed as though there were no end date to its use. In this regard, the Seed Vault is a unique structure. Seldom in history have people built anything to last ‘forever.’”

Seed Vault founder Cary Fowler, Seeds on Ice (2016)



J. Hadley, 'An account of
a mummy, inspected at
London 1763,'
*Philosophical
Transactions*



1. The Bulbous root
2. The part of the filling which enclosed
the root with the shewing skin adhering to it
3. The spiral lines of the skin
4. The Tendons of the Peroneus tertius
5. Some of the Ligaments of the Tarsus

“Arctic World Archive” for-profit data archive, “future-proof”

Arctic World Archive

A custodian of World Memory



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The Arctic World Archive (AWA) is a secure vault located deep inside an Arctic Mountain on the isolated archipelago, Svalbard. Here we secure the world's digital memory and treasures and ensure that it is made available for future generations in its authentic form.

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UPCOMING EVENTS

Learn more & RSVP: bu.edu/research/events

Topic ideas & feedback: bu.edu/research/topic-ideas

RESEARCH ON TAP

Broadening Participation in
Computing

Tuesday, April 18, 2023 | 4:30-6:30 pm

Neuroscience to Data Science and
Back

Tuesday, May 2, 2023 | 4-6 pm

RESEARCH HOW-TO

Finding Funding for Biomedical
Research: Meet Health Resources
in Action

Tuesday, March 28, 2023 | 1-2 pm

Finding Funding in the Sciences:
Meet the Pew Charitable Trusts
Wednesday, April 5, 2023 | 12-1 pm

