

SYKE Seminar on  
Sustainability Experimentation:  
Interplay between  
Grassroots and Institutions  
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Steve Zavestoski  
University of San Francisco  
smzavestoski@usfca.edu  
044 962 8685



Fast-Tracking  
Sustainability  
Transitions:  
Tapping the  
Human Tendency  
to Experiment

# The Scene



Location: Earth  
Dateline: Anthropocene

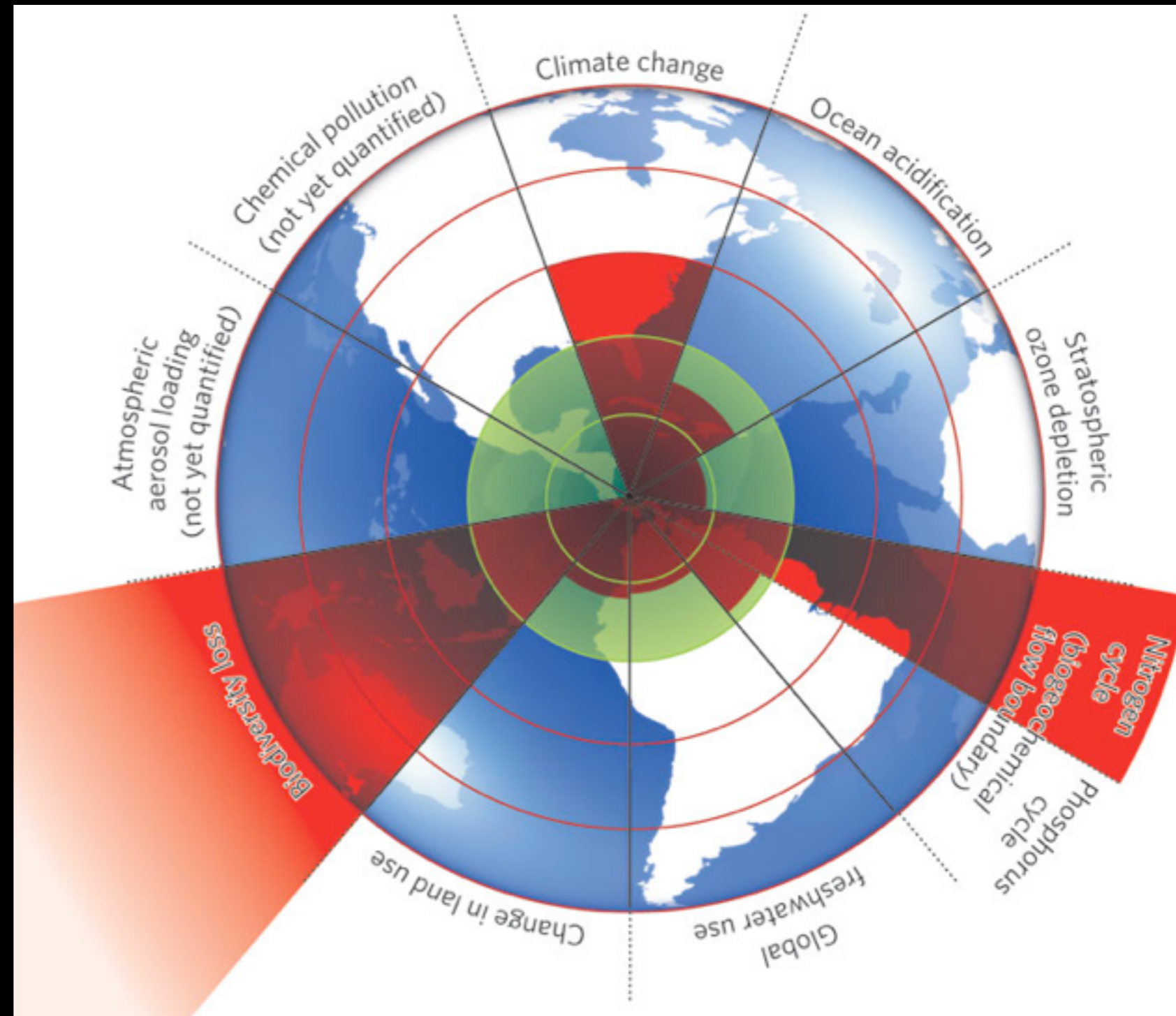


# Planetary Boundaries

The problem:

Human activity has pushed the Earth's support systems to their limits. We must pull back while at the same time addressing uneven social and economic development.

How?



from "A safe operating space for humanity,"  
Rockström et al., *Nature* 461, 472-475 (24 September 2009)

# Experimentation?

- We must learn how to adapt through experimentation and disseminate successful innovations at a rate and scale unprecedented in human history.
- In the lexicon of Silicon Valley: “Fail Fast!”

Not Silicon Valley's idea of experimentation which is rooted in:

- Science (engineering)
- Technology (big data/algorithms)
- Markets (neoliberalism)
- Governmentality (managerial mindset)



But rather a grassroots innovation idea of experimentation which is rooted in:

- social justice
- technologies for social inclusion
- social economy



...and that produces different types of knowledge:

Grassroots innovation movements constitute 'innovation spaces' for bottom-up forms of socially just and environmentally sustainable technological futures. Within these spaces, **ethnographic knowledge** is being created about the diversity of development situations and grassroots ingenuity...

–Adrian Smith, et al. (2013), "Grassroots innovation movements: challenges and contributions," *Journal of Cleaner Production* 63:114-124

...including experiential knowledge:

“In a new era of innovation in the 21st Century equal attention needs to be given to the social and material sources of changing the ways in which we live...But for that, ways will have to be found to compile **experience and deep-seated knowledge of systems**, not just data-points and not just statistics”

—Prof Sheila Jasanoff, *Science and Technology Studies*,  
Kennedy School of Government, Harvard University

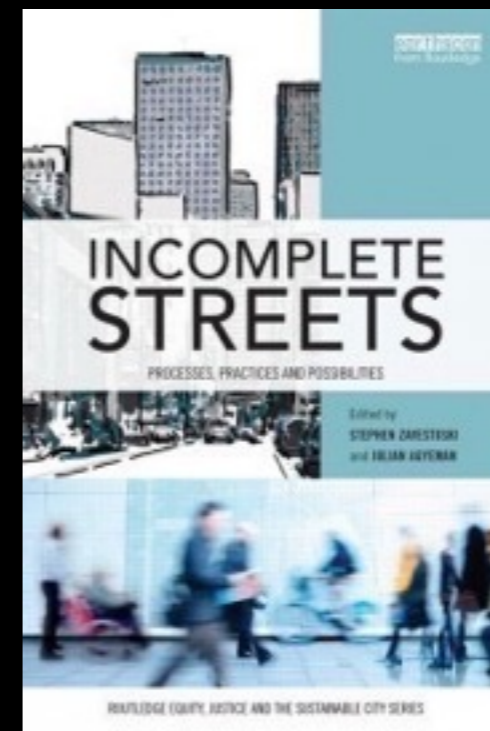
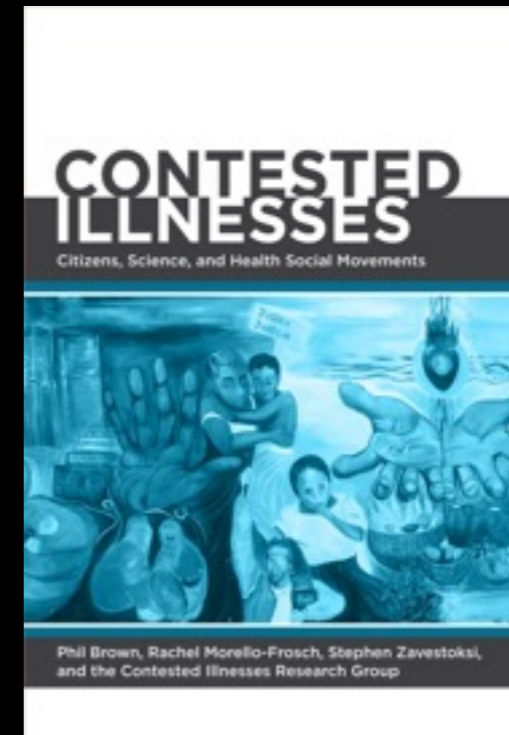


# Overview

- My background
- Origins of SEVeN
- Theoretical orientations
  - Adaptive muddling
  - Sustainability Transitions
- Introduction of SEVeN  
(Sustainability Experimentation Venture Network)

# My Background

- Sociologist by training (environmental sociology and social psychology)
- Digital democracy/public involvement
- Health social movements and contested environmental illnesses (citizen science)
- Bhopal and the global anti-toxics movement
- Urban sustainability
- Sustainability transitions



# Origins of SEVeN

- Environment, Technology & Sustainable Development, an international conference at IITM-Gwalior
- Conversations with Pradip Swarnakar over:
  - Hierarchies of Indian institutions
  - Rigid mechanisms of international funding
  - Disconnectedness of case study research

# Back to the Problem...

- We must learn how to adapt through experimentation and disseminate successful innovations at a rate and scale unprecedented in human history.

# Adaptive Muddling

- “[m]uddling is a process characterized by...a tendency to compromise, and an avoidance of significant bold or visionary steps”
- Adaptive muddling is the more urgent and potentially transformative form of the age-old tradition of “muddling through”

(De Young and Kaplan 2012, p. 290).

# Adaptive Muddling

- Adaptive muddling “emphasizes not small steps but small experiments. It offers a way of simultaneously exploring several possible solutions thus avoiding the sluggishness that plagues one-solution-at-a-time approaches...Different people applying different knowledge to the same situation creates a variety of potential solutions” (De Young, 1999: 602).
- Adaptive muddling empowers people to co-design and co-produce experiments that contribute to new forms of knowledge in a changing world.

# Sustainability Transitions

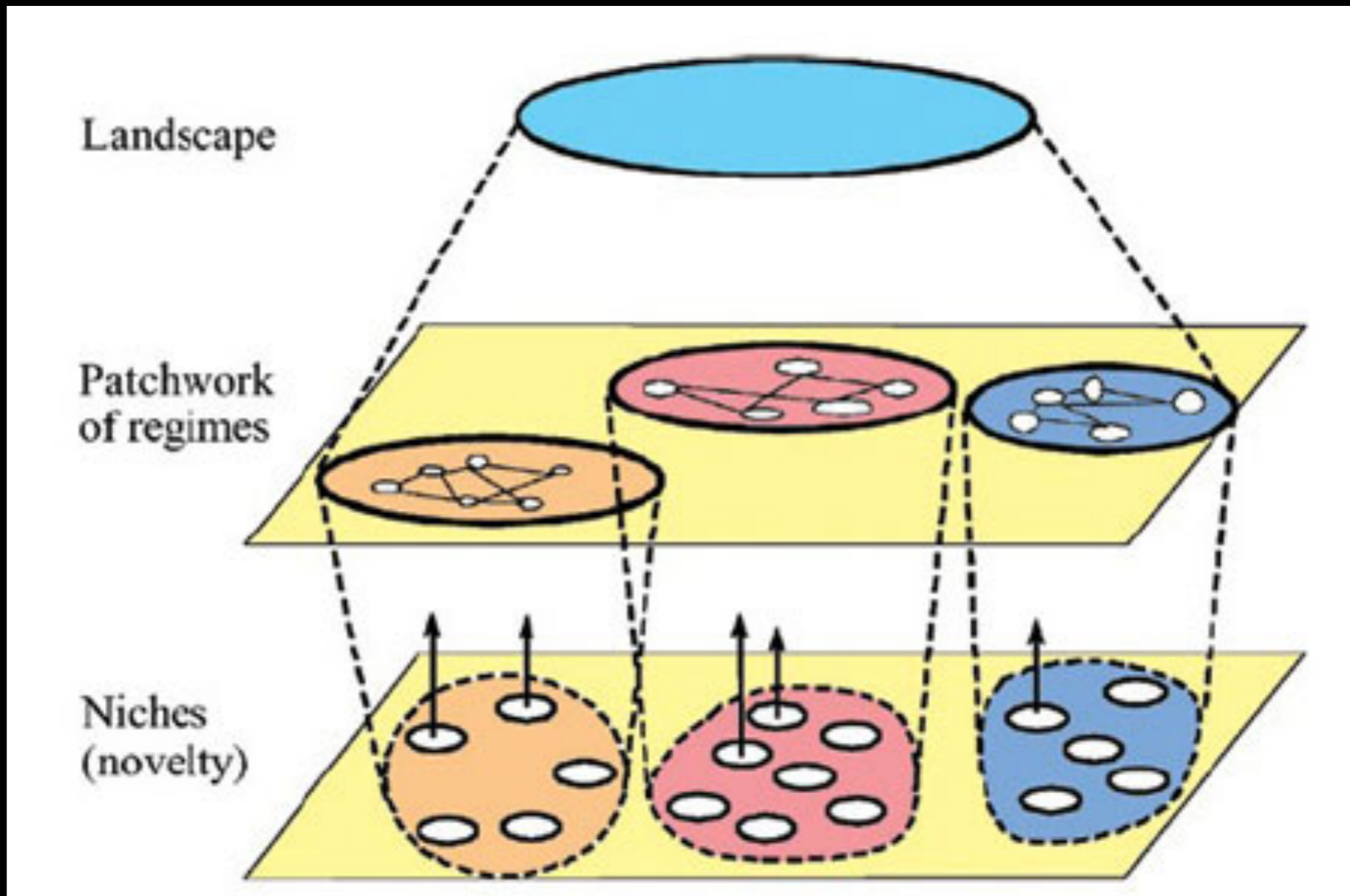


Image based on Geels (2002), available at:  
<http://reliabilityweb.com/index.php/articles/>

[Assessing Transitions to Benchmark Performance A Multi-Level Perspecti/](#)

# Grassroots Innovations

## **Definition:**

Initiatives whose networks of activists and community organisations are innovating bottom-up solutions for sustainable development; solutions that respond to the local situation and the interests and values of the communities involved.

## **Examples:**

Community energy projects, agro-ecological farming initiatives, locally-organised housing developments, village and neighbourhood materials recycling and local remanufacture, and community-led water and sanitation projects



# Grassroots Innovations

“At a time when innovation policies are increasingly called upon to address issues of poverty, social inclusion and sustainability, the **knowledges** produced by grassroots innovation movements should be taken seriously; not as a blueprint for the future, but rather as a resource for debating and constructing **different pathways** to sustainable futures” (Smith et al., 2013)

But there is a problem...

# Grassroots Innovations

- While numerous studies from various disciplines provide wide ranging insights into community sustainability initiatives they generally produce little practical knowledge that might provide guidance and directly advance the effectiveness of initiatives. The **diversity** of these studies produces **fragmented knowledge** that limits understanding of the processes involved and the effect on outcomes.

(Seyfang and Smith, 2007)

# Grassroots Innovations

- In-depth qualitative analysis is needed to understand conditions for the germination of innovative processes at the grassroots, and the conditions for successful diffusion, examining the role of social networks and movements, commercialisation, scaling up, reproduction, and policy.
- Constructive engagement between technologies for social inclusion and more mainstream innovation policy debates requires frameworks for capturing and understanding the knowledge being produced, and strategies for ensuring that knowledge feeds into debates effectively.

(Seyfang and Smith, 2007)

# A solution to the problem: SEVeN

SEVeN aims to:

- Aggregate existing sustainability experiment knowledge and facilitate accumulation of new knowledge as it emerges;
- Organize and structure this unstructured data to facilitate synthesis and analysis
- Make the data (i.e., knowledge) accessible for ease of dissemination

# Why SEVeN?

- It is not just a matter of how fast we can experiment; but also how well we can...
  - document
  - synthesize
  - disseminate
  - hybridize
- ...the knowledge emerging from experiments

# Probing Questions (applied level)

- What qualifies as a "sustainability experiment?"
- What are the motivating factors of grassroots sustainability experiments?
- How can diverse grassroots sustainability experiments be nurtured?
- How can the diverse knowledge produced by grassroots sustainability experiments be diffused (both to other grassroots contexts and to mainstream)?

# Probing Questions (meta level)

- Can grassroots innovation drive regime change and sustainability transitions?
- Given the scale of societal change required, are we wasting our time at the grassroots?
- Can highly regulated and risk-averse societies, like those in many developed nations, learn from grassroots sustainability experiments in developing societies?

# Ghana ThinkTank Project





# Hybridized Knowledge for Sustainability Experiments



jugaad

(innovative fix or a simple work-around,  
used for solutions that bend rules)

+

sisu

(cannot be translated)

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