From integration to action: How do we promote ethical transformation?

Karen O’Brien
Department of Sociology and Human Geography
University of Oslo, Norway
2012: A DEFINING MOMENT IN HISTORY

13. Our highly interconnected global society has the potential to innovate rapidly. The Planet Under Pressure conference has taken advantage of this potential to explore new pathways. It has marked a new direction for global change research. The international scientific community must rapidly reorganize to focus on global sustainability solutions. We must develop a new strategy for creating and rapidly translating knowledge into action, which will form part of a new contract between science and society, with commitments from both sides.
Global change research
Transformation

- Defined as physical and/or qualitative changes in form, structure, or meaning-making. It can also be understood as a psycho-social process involving the unleashing of human potential to commit, care and effect change for a better life.
Research challenges

- Do we have an adequate theoretical, empirical and practical basis for understanding deliberate transformation?
- How do we increase the capacities and competencies of individuals, groups and institutions to understand, initiate and facilitate transformation towards a sustainable and resilient future?
Questions

- What types of transformation are considered necessary?
- What factors facilitate transformation in theory and in practice, across different systems, sectors, and domains?
- What types of capacities and competencies need to be developed to initiate and facilitate transformations that are both ethical and sustainable?
- How does science itself need to change, and how can new approaches to global change research contribute to transformation of both theory and practice?
Can we deliberately and effectively transform systems at the rate and magnitude that is called for in response to global environmental challenges?
How do we approach change

Change Tolerance

Change Receptive

Change-Phobic

Impact Created

Opportunity Lost

Change Initiator

Change Junkie

Low

High
Framing the problem

- Climate change as a technical problem
- Climate change as an adaptive challenge

Technical problem
One that can be diagnosed and solved by applying established know-how and procedures; amenable to authoritative expertise and management of routine processes.

Adaptive challenge
Requires a change in mindsets; priorities, beliefs, habits and loyalties. Involves shedding entrenched ways, tolerating losses, gaining new capacities.
Climate change as an adaptive challenge

- Involves recognizing how our own beliefs and assumptions influence our actions and the solutions we identify and prioritize.
- Requires acknowledging and illuminating our own blind spots.
Resistance to Change

- It is not about fear of change, but about the anxiety that results from feeling defenseless.

- “Coping and dealing are valuable skills, but they are actually insufficient for meeting today’s change challenges.”

- “Different meaning systems make sense of the world, and operate within it, in different ways.”
The socialized mind (shaped by the definitions and expectations of our personal environment)

The self-authoring mind (we are able to step back enough from the social environment to generate personal authority to make choices about external expectations)

The self-transforming mind (we can step back from and reflect on the limits of our own ideology or personal authority; hold multiple systems and perspectives)
Places to Intervene in a System
(in increasing order of effectiveness)

12. Constants, parameters, numbers (such as subsidies, taxes, standards)
11. The sizes of buffers and other stabilizing stocks, relative to their flows.
10. The structure of material stocks and flows (such as transport networks, population age structures)
9. The lengths of delays, relative to the rate of system change
8. The strength of negative feedback loops, relative to the impacts they are trying to correct against
7. The gain around driving positive feedback loops
6. The structure of information flows (who does and does not have access to what kinds of information)
5. The rules of the system (such as incentives, punishments, constraints)
4. The power to add, change, evolve, or self-organize system structure
3. The goals of the system
2. The mindset or paradigm out of which the system—its goals, structure, rules, delays, parameters—arises
1. The power to transcend paradigms

Meadows, D. 1999. Leverage Points: Places to Intervene in a System
A diagram showing a matrix with categories 'COLECTIVE', 'INDIVIDUAL', 'INTERIOR', and 'EXTERIOR'. The categories intersect to form four quadrants labeled 'UL', 'UR', 'LL', and 'LR'. The terms 'I', 'IT', 'WE', and 'ITS' are placed in the quadrants.
Experience

Intentions, values, norms, consciousness that influence our understanding of climate change

Culture

Worldviews, social norms, and myths that are unseen but nevertheless inform institutions, decision-making, and action

Behavior

Practices and actions that drive climate change, or contribute to mitigation or adaptation

Systems

Social and ecological systems that influence impacts and responses (positively or negatively)
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Interior Dimensions of Climate Change

Self  Who am I?
Cognitive  What am I aware of?
Values  What is significant to me?
Needs  What do I need?
Moral  What should I do?
Interpersonal  How should we interact?
Emotional  How do I feel about this?
Aesthetic  What is attractive to me?
Spiritual  What is of ultimate concern?
Meeting the Climate Challenge

Assumptions & Beliefs

Systems & Structures

Technical Solutions

Immediate Causes

Systems Causes

Underlying Causes

Karen O'Brien
Monica Sharma
• Should dike height be increased by 10 or 20 cm?

• What strategies might facilitate more effective future trans-boundary flood management?

• How should vulnerability to other climate change impacts be included in flood management planning?

• Should resources be allocated toward protecting existing populations and infrastructure at increasing risk in a changing climate, or should these assets be relocated or abandoned once certain risk thresholds are crossed?
Unacceptable Risk Management Burden

Point at which the costs of risk management are perceived as too high, such that measures are no longer taken to keep up with changing risk and uncertainty.

Unacceptable Risk

Point at which a lack of resilience becomes unacceptable, provoking a shift from incremental to transformative risk management approaches.
What is the role of scientists?

- Discernment: causes and consequences
- Convincing versus discussing (monologue versus dialogue)
- Inspiration versus indoctrination
- What are our own beliefs, assumptions and blind spots?
“Something hit me very hard once, thinking about what one little man could do. Think of the Queen Mary – the whole ship goes by and then comes the rudder. And there’s a tiny thing at the edge of the rudder called a trim tab. It’s a miniature rudder. Just moving the little trim tab builds a low pressure that pulls the rudder around. Takes almost no effort at all.” (Buckminster Fuller)
“The definition of insanity is to do the same thing over and over again, and expect different results.”

Rita Mae Brown
Interdisciplinarity ➔ Transdisciplinarity