

Institutional Dynamics & Adaptive Resource Management

Chapter 11

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Session Objectives: **By the end of this session, participants will:**

- Explain how the most common approach to institutional organization – a bureaucracy – can lose resiliency, slow decision-making, and hamper the search for creative solutions to resource-management problems.
- Describe how adaptive management can provide a way out of this trap, but nonetheless is prone to many of its own institutional pitfalls.
- Identify some techniques that have proven helpful in moving adaptive management beyond the planning stage to actual implementation.

“Adaptive management has been more influential, so far, as an idea than as a practical means of gaining insight into the behavior of ecosystems utilized and inhabited by people.” Kai Lee 1999

Outline

- Institutional dynamics: *opportunity in crisis*
- Hitting the wall: *opportunities missed*
- Laying siege: *catalysts for change*

Institutional Dynamics:

Institutions...

- are structures and mechanisms of social order and cooperation governing the behavior of a set of individuals
- are identified with social purpose – how something should be done, look, or be constituted so as to be viewed legitimate
- can take many forms depending on context: family, company, university, church, economy, government, NGOs

Institutional organization: **Bureaucracy**

- Capitalist view championed by Max Weber (1864-1920)
- Defining characteristics:
 - Well-defined division of labor
 - A personnel system with consistent rules
 - A formal hierarchy among offices and participants
 - Standardized procedures (rule-following) that dictate the execution of most or all processes

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Adaptive Management: Structured Decision Making for Recurrent Decisions

Institutional Organization: Adhocracy

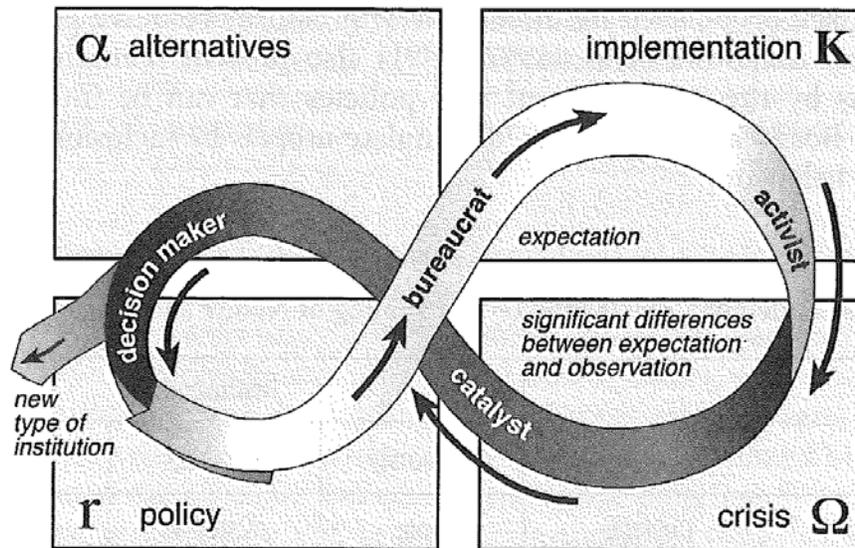
- Championed by Alvin Toffler (1928-) and Henry Mintzberg (1939-)
- Defining characteristics:
 - Roles not clearly defined
 - Specialists are grouped in functional units for housekeeping purposes, but are deployed in small interdisciplinary teams
 - Highly organic and decentralized structure
 - Low standardization of rules

Institutional Dynamics: *bureaucratic degeneracy*

- Overspecialization – few individuals can see the “big picture”
- “Common sense” discouraged (everything must be codified)
- “Group-think” due to loyalty, zealotry, and lack of critical thinking
- Disregard for dissenting opinions that may threaten the status quo
- Dichotomy of interests – individuals interested in pursuing the institution’s mission become dominated by those interested in maintaining the institution
- Procedural rigidity
 - as bureaucracy creates more rules and procedures, their complexity rises and coordination diminishes
 - resulting in an inability to adapt old procedures to new circumstances (loss of resilience)
- Procedural inertia
 - decision-making slows
 - or even becomes impossible in the face of non-routine situations
- Unanticipated surprises, resulting from, for example:
 - unexpected system behaviors/responses
 - changes in the stakeholders
 - changes in market forces
- Lead to a crisis of decision making
- The crisis deepens if there are:
 - disagreements about system dynamics
 - conflicts over how ecosystem services are valued
 - multiple (sometime competing) jurisdictions, which don’t coincide with ecological boundaries
- Increase in litigation; courts involved in decision making

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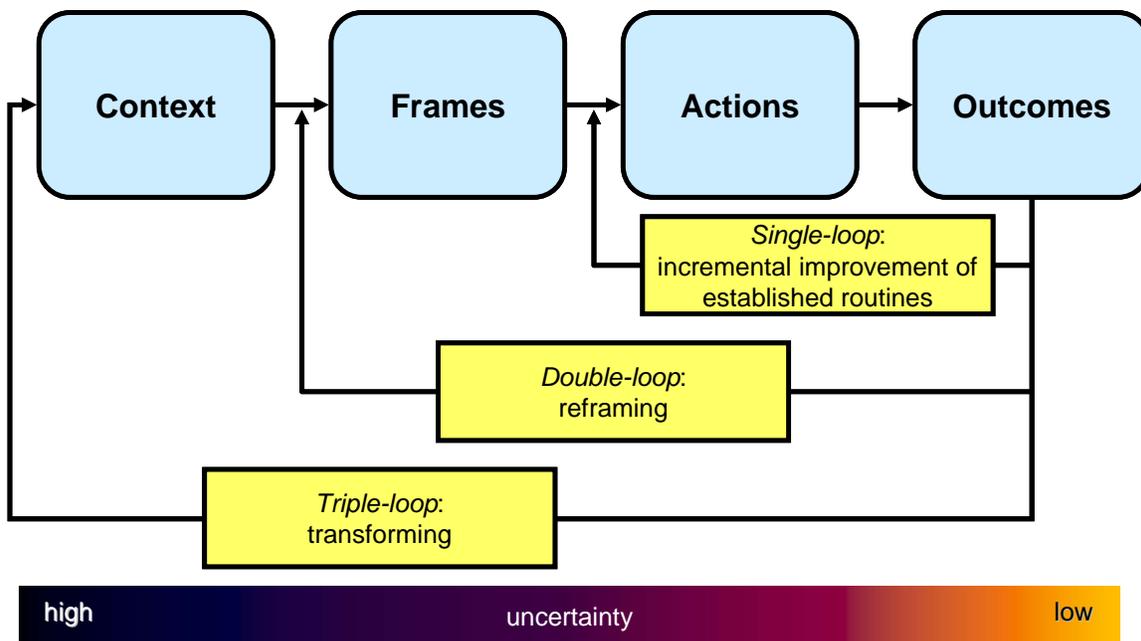
Institutional Dynamics: *opportunity in crisis*



(Gunderson and Holling 2002)

Institutional learning

- Pahl-Wostl C. 2009. A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes. *Global Environmental Change* 19:354-365.



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- Single-loop learning
Are we doing things right?
- Double-loop learning
Are we doing the right things?
- Triple-loop learning
Who has the right (or the power)?

Characterization of learning cycles

	Single loop: <i>Are we doing things right?</i>	Double loop: <i>Are we doing the right things?</i>	Triple loop: <i>Who has the right?</i>
Uncertainty	Reducing uncertainty	Managing uncertainty and risk	Decision-making under irreducible uncertainties
Actors	Independent communities of practice	Cross-networking	Changes in network boundaries and connections
Institutions	Not called into question	Established routines called into question and/or reinterpreted	Existing institutions change or new ones added
Governance	No change in relative dominance	Emergence of bottom-up processes	More diverse governance structures

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Institutional adaptation: *a nurturing environment*

- Active and ongoing engagement of stakeholders
- A melding of management & research
- Open acceptance of uncertainty and risk
- Encouragement of innovation
- Active and ongoing communication within and beyond the AM community
- Transparency in operations and open access to information
- A relatively “flat” organizational structure and flexibility in rule making (shared decision making)
- Adequate funding, staff, and training
- Commitment to long-term goals and processes
- Strong leadership; presence of “champion(s)”

Hitting the Wall: *pitfalls*

*“AM project planning reveals what managers are doing,
whether it works, and whose interests it serves.”*

Kai Lee 1999

- AM often becomes a perpetual planning exercise because:
 - Reluctance to accept accountability or share decision-making
 - Modeling becomes central focus
 - ◆ Driven by notion that more detailed analyses can eliminate uncertainties that were motivation for AM in the first place
 - ◆ Unlikely to be productive: e.g., reliance on retrospective analyses, confounding of environmental drivers, lack of sufficient contrasts in extant data, scaling issues, emergent processes
- Unrealistic expectations
 - Costs can be absorbed within traditional operating budgets
 - Managers exercise efficient control over system responses and behaviors
 - Learning can occur fast and without significant system perturbations
- Lack of follow-through
 - Monitoring, learning, adapting
 - Continuing communication with, and feedback to, stakeholders
- More often than not, perpetual planning, unrealistic expectations, and lack of follow-through...
- result is loss of enthusiasm for AM and, thus, for its implementation and sustainability;
- inaction (status quo) often seen as rational choice until more is “known”

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Laying Siege: *tips from the trenches*

1. *“Brer Fox, he lay low.” (J. C. Harris)*
 - Bottom-up AM efforts are usually easier to manage: smaller scope and number of players; more flexibility in decision making
 - Top-down: more bureaucratic (perhaps legal) rigidity; higher public profile; less acceptance of transparency and acknowledgement of uncertainty/risk
 - Avert crisis to begin with

2. *Use a “skunk works” to build your weapons (uh... case).*
 - Assemble a core development team
 - Ensure all stakeholder interests are represented
 - Ensure all skill sets are represented
 - ◆ Resource managers
 - ◆ Research scientists
 - ◆ Human-dimension / communication specialists

3. *Find a sucker (uh... champion) who...*
 - has sufficient time to devote for an extended period
 - has sufficient expertise in both management and research
 - has infectious enthusiasm and great communication skills
 - can be trusted to be impartial
 - *is persistent as hell!*