The role of academic institutions in collaborative conservation of rangelands: Banishing the ‘loading dock’ model

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Where we are going

- The loading dock model
- Boundary spanning and boundary spanners
- Innovation in academia to banish the loading dock
- Strategies to get there
The Loading Dock Model of Science

- Science is delivered to the dock for anyone to use
- Users come and get it as they wish
- Maintains power of scientists as ‘the experts’
- Does not allow integration of other knowledges with science
- Keeps science isolated in an ivory tower
Improving the Loading Dock Model of Science

• Add more bays (more science available)
• Make bays more attractive (get science translated into lay terms for the public)
• Get off the loading dock entirely and redesign the process of science
Banishing the loading dock and putting science in service to society:

The role of boundary spanning
Boundary spanning and bridging

**Boundary spanners** are people who make the link among science, policy and practice and often work for boundary organizations.

**Boundary organizations** are institutions that “straddle the shifting divide between politics and science” and practice, and facilitate the interaction among actors on different sides of boundaries. (Guston 1999, p. 1)

**Bridging organizations** connect social networks to link diverse expertise for joint action and provide “an arena for knowledge co-production, trust building, sense making, learning, vertical and horizontal collaboration and conflict resolution” (Berkes, 2009, p. 1695).
Boundaries that we need to span to make better progress

- Preaching to the choir

- Boundaries that slow us down:
  - Institutional
  - Jurisdictional
  - Disciplinary
  - Political
  - Values
  - What we think we know
Position of boundary spanners and / or their organizations

- Landowners and land managers, organizations that serve them
- Local to federal government officials and agencies
- Local to national non-profit employees and their organizations
- Researchers and their organizations

Reid (this talk)
What happens when we start to span those boundaries

• A ‘third space’ opens for innovation

• New understanding = social learning

• Sometimes trust, sometimes conflict

• A chance to address larger, more complex problems

• A chance to craft more lasting solutions

• People better able to address the next challenge faster, more effectively and (sometimes) more amicably
Innovations in academia to banish the loading dock

**Innovation 1:** Boundary spanning individuals, who are responsible to serve ranchers and rangelands

**Innovation 2:** Boundary spanning institutions, from program to research to governance

**Innovation 3:** New ways to span different knowledges
Innovation 1: Boundary spanning individuals

- **Best** if these individuals are responsible to both sides of the boundary, like to both ranchers and a university, but this is rare

- **Second best**: Scientists in service to ranchers but not working for them
  - Agricultural extension agents (responsible to both sides?)
  - NRCS personnel
  - USDA-ARS personnel
  - Cooperative extension specialists
  - Other examples?

Reid (this talk)
This research grant created and funded 6 boundary individuals at the center of the team, to integrate knowledges with action in 5 ecosystems, 100 communities, 2 countries.
Who is here?

- Are you a full-time boundary spanner?
- Part-time?
- Work for a boundary spanning organization?
Innovation 2: Boundary spanning institutions and their strategies

**Goal:** To create more effective action and knowledge by bringing diverse viewpoints and knowledges together

**Institutional Strategies:**
1. Boundary spanning conversations and learning
2. Boundary spanning service and action programs
3. Boundary spanning research
4. Boundary spanning staff and governance
Institutional Strategy 1: Boundary spanning conversations and learning

Examples:
1. This meeting (CRCC and SRM)
2. Quivira Coalition meeting (academics rare here)
3. Center for Collaborative Conservation:
   • Conferences and workshops with ranchers, agencies, non-profits, private sector, universities
   • Courses co-taught by practitioners and professors
Institutional Strategy 2: Boundary spanning service and action programs (working on the ground together)

Examples:

1. Rangeland collaboratives: CRCC, Malpai, Blackfoot and many more
2. Agricultural extension
3. Old NRCS institutes (Rangeland Institute, Watershed Institute, Sociology Institute) and other NRCS programs
4. Center for Collaborative Conservation:
   • Fellows program = funding boundary spanners to learn and act together
   • Collaborative initiative program = helping to co-design and co-implement collaborative work with ranchers, govt agencies, non-profits
Institutional Strategy 3: Boundary spanning research (also working on the ground together)

Examples:
1. Many examples yesterday in the CALM symposium
2. MOR2: Mongolian Rangelands and Resilience Project
3. Reto project: Balancing pastoral livelihoods and conservation in east Africa
4. Many other examples
5. Center for Collaborative Conservation:
   • Collaborative Conservation Atlas: Research to inventory all ranching and forest collaboratives in Colorado, produced for the collaboratives
Institutional Strategy 4: Boundary spanning governance

Examples:
1. Diverse Boards of Directors or Trustees
2. Diverse working groups and standing committees
3. Diverse organizational directors and associates
4. Center for Collaborative Conservation:
   • Strategic goals all designed to boundary span
   • 50:50 rule for fellows and Executive Board
Who is here?

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Innovation 3: Spanning boundaries among different knowledges

**Goal:** To bring together different ways of knowing and co-learn to solve problems together

Reid (this talk)
Creating an enriched picture of an issue by bringing together knowledges

Integration of knowledge

Cross-fertilization of knowledge

Co-production of knowledge

Creating new knowledge together

Integrating existing knowledge

One knowledge source not dominant over the other = parallel knowledge sources. Each knowledge source has its own rules for knowing what is true.

Diverse knowledge systems

Adapted from Tengo et al 2014
A way to co-produce knowledge and learn collaboratively

Fig. 2 Outlining three phases of a multiple evidence base approach that emphasizes the need for co-production of problem definitions as well as joint analysis and evaluation of the enriched picture created in the assessment process.

Phase 1 involves defining problems and goals in a collaborative manner that recognizes cross-scale interactions of drivers and local responses and sets the stage for maintaining ongoing dialogue. This includes establishing partnerships between relevant communities, organizations and networks as appropriate and needed at different levels; investigating common interests and concerns, including power relations among actors; recognizing differences in experiences, methods, and goals across actors (Laidler 2006).

Phase 2 involves bringing together knowledge on an equal platform, using parallel systems of valuing and questions and domains. This includes acknowledging and recognizing the spatial and temporal context of knowledge and implications for scalability; acknowledging and addressing power issues among knowledge systems and holders; consideration of different areas of strength and contribution of different knowledge systems and their overlaps; and acknowledging converging and diverging evidence and perspectives across knowledge systems.

Phase 3 involves joint analysis and evaluation of knowledge and insights to generate multi-level synthesis and identify and catalyze processes for generating new knowledge. This includes identifying continuing knowledge gaps, new hypothesis, and potential areas for new collaborations across knowledge systems. To enable these processes, there is a need to develop new tools and approaches for combining and relating multiple data, including qualitative as well as quantitative.
Integrating pastoralist and scientific knowledges in east Africa

Pastoralist contributions
- Changes in land use and settlement over 50 years
- Long-term observations of wildlife locations in daytime and night-time
- Explanatory ideas of why wildlife are attracted to pastoral settlements
- Knowledge of quality and production of different grass species and parts of the landscape

Scientist contributions
- Changes in land use and settlement over 50 years
- Long-term aerial surveys of wildlife locations in 2 seasons/year
- Explanatory ideas of why wildlife are attracted to pastoral settlements
- Knowledge of quality and production of different grass species in other ecosystems in east Africa

NEW TRI-ANGULATED KNOWLEDGE for ACTION

Reid (2011)
Conclusion: How to become a boundary spanner

• Learn to ‘see’ boundaries and talk about them

• Identify a boundary you want to cross

• Talk to people who inhabit the other side of the boundary to learn their values, worries, limitations, language and incentives

• Try to walk in their shoes, explain their viewpoint when talking with others

• Design your work so you are partly responsible to the people on the other side of the boundary

• Invite others to learn about your side of the boundary