Toward "Smarter" Transdisciplinary Research and Training in Team Science Initiatives: Discussant Comments

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Key Questions for the TD Field

- Empirical questions where good progress has been made in answering

- Empirical questions that constitute an agenda for future research

- Larger, philosophical questions

1. What does "successful" TD science look like?

- Process
- Outcomes

2. What are the key factors that either *facilitate* or *obstruct* successful TD science?

Stokols et al (2006)

- Intrapersonal characteristics
  - Participants
  - Leaders
- Interpersonal interactions & relationships
- Organizational structure / Process design / Problem-solving space
- Physical environment
- Technologies and technological readiness
- Social/political factors
  - Policies
  - Crises

2. What are the key factors that either *facilitate* or *obstruct* successful TD science?

- Motivated by the right kind of scientific problem/research question
  - Complex
  - Critical to well-being of the world (or at least a significant segment)
  - Potentially solvable
  - Evaluable: It will be clear if the problem has been solved

3. What should we do to promote more (and more successful) TD science teams?

Promising Directions:

1. More effective collaborative processes
2. Technologies and facilities that are conducive to successful TD science
3. Construct better teams (participants, leaders)
4. Train scientists more broadly
5. Train scientists in team-building skills
6. Reform promotion policies and criteria to value TD science
7. More funding for TD science effforts
8. Better selection of teams that are ready for TD science

4. Should we be more strategic in targeting specific scientific problems for TD approaches?

- What proportion of scientific problems are amenable to TD approaches?
    - Where can TD science add value?
- Which problems currently being studied should be held up for TD approaches?
    - Social determinants of CA?
    - Should this be a more specific question?
- Are there some additional high-payoff problems that science has traditionally shied away from?

5. How much do we want TD science to displace traditional science?

- Consider **science** as a **marketplace** of knowledge-generating firms
- Mix of individual scientists and science teams
- Among teams, there is a mix of unidisciplinary, multidisciplinary, interdisciplinary, TD approaches
- What does the marketplace look like now?
- What do we want the marketplace to look like?
- What proportion of scientists *should* be working within a TD paradigm?
- *Which* scientists do we want to move to TD approach?
- Which problems do we want TD science to claim?

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d) Because we want to democratize science so that it respects and incorporates indigenous wisdom