OVPR PAD Seminar: 19 November 2013
Building Research Teams and Developing Collegial Environments
"Mutual Learning in Research Teams"
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Mutual learning is a cornerstone principle of inter/transdisciplinary collaboration. Key concepts:

- **Situated learning**: occurs in context, not simply by applying an a priori or rote-step model.
- **Constructivist theory of learning:** knowledge not simply exchanged; it is constructed as individuals with differing views and stakes work together to create **mutual knowledge.**
- **Adaptive Behavior:** occurs in an **iterative and recursive process;** achieving common understanding requires identifying and moving beyond discipline-bound "**habits of mind.**"
- **Social and cognitive integration**: **interwoven** within **trading zones of expertise.**
- **Heuristics**: process of **discovery**. A robust toolkit helpful, but rules of thumb, guidelines emanating from practice, comparative weighing of possibilities in context of particular problem equally important. Learning <dialogue, trial and error, reflection on a team's art of invention.

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Team Science Toolkit: https://www.teamsciencetoolkit.cancer.gov/public/home.aspx?js=1; Vogel, S., Hall, K. Klein, J.T., et al. "The Team Science Toolkit: Enhancing Research Collaboration Through Online Knowledge Sharing," *Amer J of Preventive Medicine*, 45, 6 (2013): 787-89; Klein, J.T., "Media Review" of website <http://www.teamscience.net> in *Clinical Anatomy*, 25, 5 (2012): 670-72.

Communicative Action

Most misunderstandings occur because the same words are used with different meanings. **Presence** in form of **engagement** and **deep listening** are crucial, requiring **self-consciousness** and awareness of impact of individual behavior and assertions of personal status on group dynamics. **Reflexive communicatio**n helps reinforce **mutual trust** and **individual confidence.**

- **Bilingualism** is an inaccurate metaphor for inter/metalanguages. **"Pidgin"** is an interim trade language. **"Creole"** is first language of new social and cognitive communities.

Jessica Leigh Thompson's Concept of Collective Communication Competence (CCC)

Based on premise there are interrelationships among communicators, goals, and abilities to integrate knowledge and expertise from different sources. Her ethnographic study of a team focused on human behaviors related to production of greenhouse gas emissions in urban areas and processes that facilitated and hindered communication prompted several suggestions:

- plan trust-building time
- host explicit discussions about language differences
- schedule social time
- confront communication challenges early
- use a facilitator to reflect on and navigate challenges that require negotiating standards for CCC.

Thompson, J. L. (2009). "Building collective communication competence in interdisciplinary research team." *Journal of Applied Communication Research*. 37, 3: 278-97.

The first two principles accentuate need to **surrender degree of individual control** and **need for mutual granting of power.**

• ***Intellectual generosity***: **Sincere acknowledgment** of work of others expressed explicitly to them and in citation practices. **Showing appreciation for other ideas** in face-to-face dialogue and throughout the collaborative process sows seeds for intellectual risk-taking and courageous acts of creativity.

• ***Intellectual confidence:*** The understanding that one has something important to contribute to the collaborative process. This commitment makes individuals **accountable for their contribution** to collaboration by **being reliable** and thorough while **refusing shortcuts and guarding against intellectual laziness.**

The second two principles move from individual to group responsibility in a form of **intersubjectivity. Reflexive self-awareness of one's own values is crucial.** Socialization in disciplinary worldviews creates underlying assumptions about truth among team members, in the form of default "right" methods and tools, concepts and theories. **Differences in worldviews and even the meaning of same words must be recognized and mutual learning occur through listening to others and developing respect for their approaches, rather than defaulting to orthodox disciplinary expertise.**

• ***Intellectual humility***: The understanding that **one's knowledge is always partial and incomplete and can always be extended and revised by insights from others.** This quality allows people to **admit they don't know something without suffering loss of confidence or a blow to self-esteem.**

• ***Intellectual flexibility***: **The ability to change one's perspective based on new insights that come from others.** This capacity fosters play and re-imagining the rules of reality, suspending judgment, and envisioning other ways of being in the world and other worlds to be within.

An overriding principle of integrity emerges from foregoing principles that foster **movement from secondary- to primary-group relations.** Young teams lean towards secondary-group relations protective of the individual. Older teams shift consciousness **from "I" to "we,"** forging primary-group relations dedicated to a common task and shared cognitive framework.

• ***Intellectual integrity***: The habit of **responsible participation** that serves as a basis for developing trust among collaborators. This quality compels colleagues to bring their best work and contribute their best thinking to collaborative efforts.

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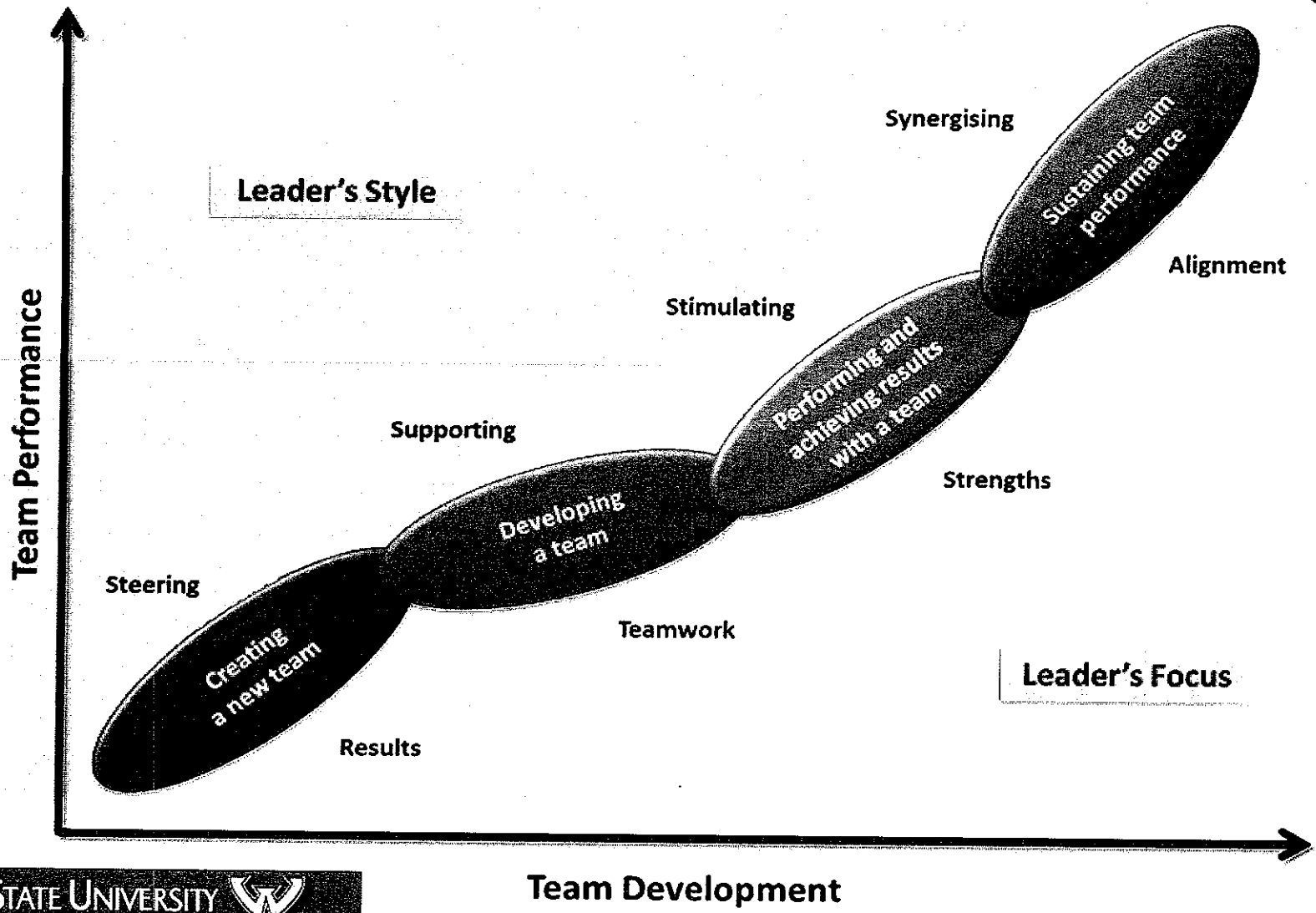
Bennett, L. M, Gadlin, H., and Levine-Finley, S. (2010). *Collaboration and Team Science: a Field Guide.* Bethesda, MD: National Institutes of Health. (downloadable)

Ledford, H. "Collaborations: With all Good Intentions." *Nature* **452**, (2008): 682-684. Contains "The Collaborators' Pre-Nup."

Lyall, C., Bruce, A., Tait, J. and Meagher, L. (2011). *Interdisciplinary Research Journeys: Practical Strategies for Capturing Creativity*. London: Bloomsbury Academic.

Creating and leading teams



WAYNE STATE UNIVERSITY

Collaboration and Team Science: A Field Guide

L. Michelle Bennett
Howard Gadlin
Samantha Levine-Finley

National Institutes of Health

August 2010

For an electronic version of this document, visit: http://teamscience.nih.gov.

Resources:

Web:

http://**teamscience.nih.gov**

https://ccrod.cancer.gov/confluence/.../TeamScience_FieldGuide.pdf

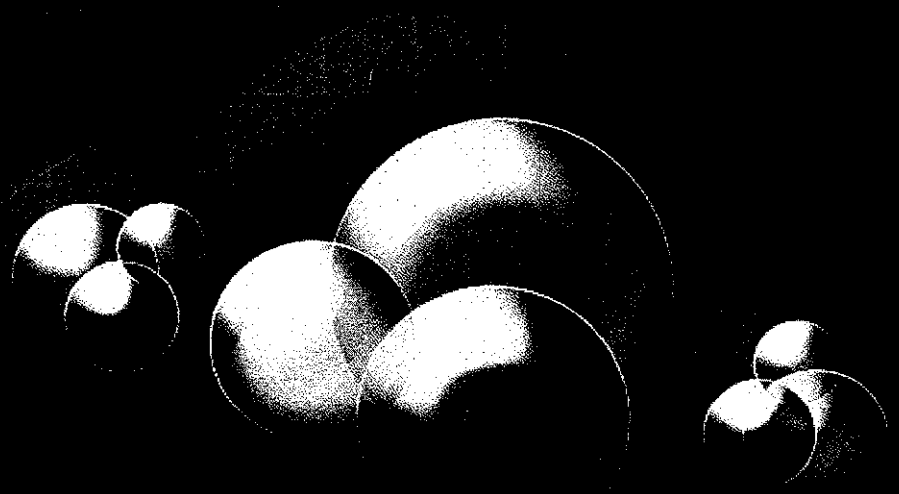
http://research.uiowa.edu/team-science-building-successful-research-collaborations

- Bennett, L.M. & Gadlin, H. (2013) Team Science: Building Successful Research Collaborations. Workshop on Team Science, University of Iowa.

http://learning.ucdavis.edu/LabAct/

Books:

Bolton, R (1986). People skills: How to assert yourself, listen to others and resolve conflicts. Touchstone Publishers.
Egolf, D.B. & Chester, S.L. (2013). Forming Storming Norming Performing: Successful Communication in Groups and Teams (Third Edition). IUniverse
Stone, D., Patton, B., Heen, S. & Fisher, R. (2010). Difficult conversations: How to discuss what matters most. Revised Edition. Penguin Books.



Developing Multidisciplinary Teams for NIH Applications

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Key Questions

- 1. Which comes first, the team or the application?
- 2. What do grant reviewers expect to see in team-based applications (e.g., investigator-initiated R03, R21, R01 vs. U grants, program project grants, etc.)?
- 3. What about Co-PI/PD arrangements?
- 4. What is expected regarding a consortium/ subcontract arrangement in a team application?
- 5. "Multiplex" relationships are the foundation for the spark, the trust and the glue... What are they?