

Re-thinking scientific teams: competition, conflict and collaboration

Thoughts on the Challenges of Research
Collaboration

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Howard Gadlin, NIH

L. Michelle Bennett, CCR, NCI

Collaborative Agreement

- Overall Goals
- Who Will Do What?
- Authorship, Credit
- Contingencies & Communicating
- Conflict of Interest

Overall Goals

1. What are the scientific issues, goals, and anticipated outcomes or products of the collaboration?
2. When is the project over?

Who Will Do What?

1. What are the expected contributions of each participant?
2. Who will write any progress reports and final reports?
3. How, and by whom, will personnel decisions be made? How and by whom will personnel be supervised?
4. How and by whom will data be managed? How will access to data be managed? How will you handle long-term storage and access to data after the project is complete?

Authorship, Credit

1. What will be the criteria and the process for assigning authorship and credit?
2. How will credit be attributed to each collaborator's institution for public presentations, abstracts, and written articles?
3. How and by whom will public presentations be made?
4. How and by whom will media inquiries be handled?
5. When and how will you handle intellectual property and patent applications?

Contingencies & Communicating

1. What will be your mechanism for routine communications among members of the research team (to ensure that all appropriate members of the team are kept fully informed of relevant issues)?
2. How will you decide about redirecting the research agenda as discoveries are made?
3. How will you negotiate the development of new collaborations and spin-off projects, if any?
4. Should one of the principals of the research team move to another institution or leave the project, how will you handle, data, specimens, lab books, and authorship and credit?

Conflict of Interest

1. How will you identify potential conflicts of interest among collaborators?
2. Could a collaborator, or any close family members or associates benefit financially from the research?
3. Is a collaborator receiving money from someone who could benefit financially from the research?

The complexities of collaboration

- Collaboration – A process by which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible
Barbara Gray

Collaboration introduces into scientific work dimensions of interpersonal interaction that are not ordinarily considered very important in scientific work. Collaboration requires new social relationships/arrangements – how to integrate multiple approaches to a problem

- Shared decision making processes
 - Autonomy and Interdependence
 - Shared ownership
 - Collective responsibility and accountability
 - Solutions emerge from addressing differences
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Max Weber

"The intellect, like all cultural values, has created an aristocracy based on the possession of rational culture and independent of all personal ethical qualities of man. The aristocracy of science is hence an unbrotherly aristocracy."

Sigmund Freud

- My emotional life has always insisted that I should have an intimate friend and a hated enemy. I have always been able to provide myself afresh with both, and it has not infrequently happened that friend and enemy have come together in a single individual, though not, of course, both at once.
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The pleasures of conflict

- Need to appreciate
 - How much conflict gives to people
 - How much it affirms identities
 - How it helps people position themselves in relation to others
 - The pleasure associated with hurting
 - The pleasure of revenge
 - The pleasure of creating conflict
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Problems that lend themselves to collaboration

1. Ill-defined problems or disagreements regarding definition
 2. Multiple stakeholders with vested interests
 3. Disparity of power or resources among stakeholders
 4. Different levels of expertise and different levels of access to relevant information
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5. Problems characterized by technical complexity and scientific uncertainty
 6. Differing perspectives on a problem leading to adversarial relations
 7. Unilateral efforts unsuccessful
 8. Existing processes insufficient to address problems
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Sources of Destructive Conflict

- ❑ Difficult/dysfunctional people
 - ❑ Problematic interpersonal dynamics
 - ❑ Problematic leadership
 - ❑ Systemic problems and aspects of scientific culture
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Difficult People

- A personal characteristic of an individual (behavior, attitude, circumstance) that:
 - Helped create or fuel a dysfunctional conflict and/or
 - Significantly complicated the intervention
 - Was inherent to the individual-not primarily a reaction to the behavior of another or to organizational problems in the unit or NIH
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Problematic Interpersonal Dynamics

- Defective Communication Patterns
 - Autonomy dramas
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Defective communication Patterns

- “The autistic” pattern: absence of regular communication punctuated by occasional angry and unproductive outbursts
 - Active – An active/hyperactive communicator who insistently pressed his/her demand paired with a slow, “stingy” and laconic other
 - Passive – two very distant and uncommunicative parties
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The enmeshed pattern

- Primary mode of communication was frequent outbursts of open warfare in which the parties apparently had little ability to refrain themselves or to perceive the other with any degree of objectivity or fairness
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Autonomy dramas: implicit renegotiation of the transition from novice to autonomous scientist

- Cause: developmental mismatch between mentor and mentee
 - Developmental circumstances of the mentee
 - Pressure to establish scientific credentials
 - Often eager for more scientific independence
 - Dependent on mentor for resources and support
 - Push toward autonomy
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Developmental circumstances of the mentor

- ❑ Senior person facing serious career pressures
 - ❑ Junior scientist on the way up
 - ❑ Senior scientist in twilight of scientific productivity
 - ❑ Suffered recent career setbacks
 - ❑ Unwilling to provide resources and support
 - ❑ Actively hostile or indifferent to mentee's search
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Dysfunctional leadership

- ❑ Absentee leadership – unavailable or uninvolved
 - ❑ Inhibited leadership – “running scared” afraid of conflict and unable to deal assertively with difficult people
 - ❑ Defensive leadership – resistant to feedback about problems; inclined to rationalize unhappiness as inevitable or a reaction of trouble-makers
 - ❑ Hostile/aggressive leadership – unempathic and aggressive or duplicitous and manipulative
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Collaboration and Team Science: A Field Guide

Template Collaborative Agreement

Teamscience.NIH.GOV

Temporary site....

(<https://ccrod.cancer.gov/confluence/display/NIHOMBUD/Home>)
