Collaborative Research

Avoiding Pitfalls and Sharing Credit

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A. “Collaborative research” is here taken to mean any research in which two or more researchers work together toward a common goal, and in which all of the researchers make an important, substantive contribution to the project. Not counted as researchers are people who provide assistance but do not make a substantive contribution; for example, someone who is hired to transcribe interviews but makes no other contribution to the research is not considered a part of the collaborative team. The focus is on aspects of collaborative research that are unregulated.

Key moments in collaborative research

B. This bare-bones outline is intended to represent in rough chronological order most of the decision points in any collaborative research project. The items that strike me as critical are indicated in boldface.

1. The germ of an idea
2. Talking it over
3. Assembling a team
4. Assigning tasks
5. Designing the research protocol or methodology
6. Writing a grant application
7. Administering the approved grant
8. Paperwork and permissions (IACUC, IRB, etc.)
9. Assigning authorship
10. Collecting data
11. Analyzing data
12. Writing a first draft of the report
13. Writing the final report
14. Submitting the report for publication
15. Responding to reviewer’s comments
16. Responding to correspondence based on the publication
17. Storing the data
18. Closing out the collaboration
19. Sharing the data with members of the now-disbanded research team
20. Sharing data with other researchers
21. Initiating new research in the same general area

* These tasks first arise more-or-less when indicated, but continue throughout the project.
† In some cases, regulations or policies specify a minimum period for the storage of data.
§ These tasks are open-ended, with no set end date.

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1Prepared for presentation at a workshop sponsored by the Indiana University Office of the Vice President for Research and the Poynter Center, “Collaborative Research: Avoiding Pitfalls and Sharing Credit,” April 22, 2005 (see http://www.iupui.edu/~resed/collaborativereswkshp05intro.html). Earlier versions were presented at a Research Symposium on November 12, 2003 (http://www.iupui.edu/~resed/symposiumintrofall03.htm) and a workshop series, “Working Together: Rules, Regulations, and Etiquette of Collaborative Research,” in February and March of 2003 (http://poynter.indiana.edu/rugs/).

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C. For clarity of presentation only one grant application and one publication are considered; in real life, some collaborations require more than one grant application and produce both publications and oral presentations. Note also that in any given collaboration some of the key moments listed here might well occur simultaneously, in a different order, more than once, or not at all. Some might also take place without one or more of the researchers being consciously aware of them.

D. Many of these tasks can be shared by team members, but some absolutely require that one person, commonly called the Principal Investigator or “PI”, take primary responsibility. Such tasks include administering the approved grant, taking care of paperwork and permissions, and responding to correspondence based on the publication.

Avoiding pitfalls

E. In research, as in life, working with other people is troublesome but unavoidable. Most of the time the benefits outweigh the burdens, but sometimes the burdens are overwhelming. Probably the best time to avoid pitfalls is at points 3 and 4 in the outline above – that is, at the very beginning of the collaboration.

F. Collaborations can go wrong because of a clash of unspoken assumptions. It’s hard to talk about unspoken assumptions because they are often unconscious and can be about sensitive issues. It might be easier to raise these issues if you have a checklist of items to discuss before making a commitment to the collaboration.

G. As part of the conversation before teaming up, it might be helpful to agree on a person who will arbitrate any disputes. It might be a department chair, a lab director, or some other trusted colleague. Obviously this arbiter will have to agree to take on this responsibility.

Assembling the team and assigning tasks

H. Who will act as PI?

I. What can each researcher contribute?²
   - Trivial collaborations (e.g., I name in my grant proposal someone who will serve as a sounding board for my work, but who will not play a major part in it)
   - Routine collaborations (e.g., I have an ongoing working relationship with a statistician; another researcher and I regularly share materials)
   - True collaborations (i.e., the relationship is characterized by an ongoing, mutually beneficial, substantive cross-fertilization of ideas and effort; a true collaborator is difficult to find and replace)

J. How can you be sure your prospective collaborators actually have the expertise and the time needed?

² Peter Cherbas introduced this typology of collaborative research at the first workshop in the “Working Together” series. See note 1.
Assigning authorship

K. Authors get credit but also take responsibility

L. American Sociological Association “Code of Ethics”3

15. Authorship Credit

(a) Sociologists take responsibility and credit, including authorship credit, only for work they have actually performed or to which they have contributed.

(b) Sociologists ensure that principal authorship and other publication credits are based on the relative scientific or professional contributions of the individuals involved, regardless of their status. In claiming or determining the ordering of authorship, sociologists seek to reflect accurately the contributions of main participants in the research and writing process.

(c) A student is usually listed as principal author on any multiple authored publication that substantially derives from the student’s dissertation or thesis.

M. International Committee of Medical Journal Editors “Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication”4

II.A Authorship and Contributorship

II.A.1. Byline Authors

An “author” is generally considered to be someone who has made substantive intellectual contributions to a published study, and biomedical authorship continues to have important academic, social, and financial implications. . . .

• Authorship credit should be based on 1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Authors should meet conditions 1, 2, and 3.

• When a large, multi-center group has conducted the work, the group should identify the individuals who accept direct responsibility for the manuscript. . . . These individuals should fully meet the criteria for authorship defined above. . . . When submitting a group author manuscript, the corresponding author should clearly indicate the preferred citation and should clearly identify all individual authors as well as the group name. Journals will generally list other members of the group in the acknowledgements. . . .

• Acquisition of funding, collection of data, or general supervision of the research group, alone, does not justify authorship.

• All persons designated as authors should qualify for authorship, and all those who qualify should be listed.

• Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.

Some journals now also request that one or more authors, referred to as “guarantors,” be identified as the persons who take responsibility for the integrity of the work as a whole, from inception to published article, and publish that information.

Increasingly, authorship of multi-center trials is attributed to a group. All members of the group who

are named as authors should fully meet the above criteria for authorship. The order of authorship on the byline should be a joint decision of the co-authors. Authors should be prepared to explain the order in which authors are listed.

II.A.2. Contributors Listed in Acknowledgments

All contributors who do not meet the criteria for authorship should be listed in an acknowledgments section. Examples of those who might be acknowledged include a person who provided purely technical help, writing assistance, or a department chair who provided only general support. Financial and material support should also be acknowledged.

Groups of persons who have contributed materially to the paper but whose contributions do not justify authorship may be listed under a heading such as “clinical investigators” or “participating investigators,” and their function or contribution should be described – for example, “served as scientific advisors,” “critically reviewed the study proposal,” “collected data,” or “provided and cared for study patients.”

Because readers may infer their endorsement of the data and conclusions, all persons must give written permission to be acknowledged.

Sharing the data with members of the now-disbanded research team

N. Data ownership; data access; data use

O. American Sociological Association “Code of Ethics” 5

13.05 Data Sharing

(a) Sociologists share data and pertinent documentation as a regular practice. Sociologists make their data available after completion of the project or its major publications, except where proprietary agreements with employers, contractors, or clients preclude such accessibility or when it is impossible to share data and protect the confidentiality of the data or the anonymity of research participants (e.g., raw field notes or detailed information from ethnographic interviews).

(b) Sociologists anticipate data sharing as an integral part of a research plan whenever data sharing is feasible.

(c) Sociologists share data in a form that is consonant with research participants' interests and protect the confidentiality of the information they have been given. They maintain the confidentiality of data, whether legally required or not; remove personal identifiers before data are shared; and if necessary use other disclosure avoidance techniques.

(d) Sociologists who do not otherwise place data in public archives keep data available and retain documentation relating to the research for a reasonable period of time after publication or dissemination of results.

(e) Sociologists may ask persons who request their data for further analysis to bear the associated incremental costs, if necessary.

(f) Sociologists who use data from others for further analyses explicitly acknowledge the contribution of the initial researchers.

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