

# Collaborative research & Human participants and animal subjects

Does a project studying aggregated observational data on human subjects (say, the total number of road accident injuries per state per year) need Institutional Review Board (IRB) approval to receive federal funding?

**A.** *"In the project mentioned, the IRB has to review the research and see if it violates any right or privacy of the participants and only upon their approval, can the research have federal funding to progress."*

**B.** *"A project with aggregated observational data would not need IRB approval to receive federal funding since the data doesn't contain identifiable information about individual humans."*

Suggest some ingredients which could lead to successful collaboration between two statisticians and/or between a statistician and a scientist.

*“Mutual understanding and faith in each other is a key ingredient for successful collaboration. Both parties have to be proactive in sharing their new research results among themselves. In this way, everyone will learn new things and the project will continue smoothly.”*

- “1. Direct Communication*
- 2. Agreement of Joint Goals*
- 3. Face-to-Face Meetings*
- 4. Well-Handled Conflicts of Commitment”*

*"I think they need to have similar interests. Sometimes, the difference in characteristics can help too, because one does need some new ideas different from his to develop the understanding of a problem. An example (in mathematics) is the collaboration between Ramanujan and Hardy."*

Collaborative group sizes can be small or large. Identify some strengths and weaknesses of larger collaborative groups relative to smaller collaborative groups.

*“Larger groups can ‘get more done, faster,’ particularly work that is procedural or modular in nature. On the other hand, large groups can be difficult to organize and steer. Smaller groups permit closer one-on-one interaction and a form of efficiency.”*

*“Some projects can be only completed by a large group like taking a ‘photo’ of black-hole. These big projects require expertises from different area to work together. But in other way, when a group is big usually inefficiency would occur and some group members might take the grant while having little contribution.”*

# Some practical considerations about group size

google: The Mythical Man Month

or, google: The free rider problem

or, think about incentive structures in large vs small groups (also, think about incentive structures for the group leader deciding who to add to the author list)

or, think about the right group size for your favorite style of research

What are the advantages and disadvantages of being a conscientious collaborator who (i) makes careful, thoughtful but timely contributions to the project; (ii) reads widely and takes the time to understand as much of the project as possible.

*“Advantages:*

- Broaden one owns knowledge*
- Resulting paper will be of better quality*
- Easier to detect potential errors in the research*

*Disadvantages:*

- It takes time*
- Benefit is not guaranteed to occur*
- Others might take the credit for the hard work because of hierarchy of the authors ”*

Would you expect a PhD thesis adviser to act like the conscientious collaborator of the previous question on your own thesis research?

*"I dont think so, most of the work for thesis should be done by oneself."*

*"I think adviser should act as conscientious collaborators because their role should be more of support to the project than main contributors. Thus, the main advancements should be made by the student and the adviser maypitch in when necessary or relevant."*



*"Yes and No. Writing the thesis and acquiring the PhD is the process of a PhD student grow on himself or herself to be an independent researcher, while a lot of conscientious efforts are still needed from PhD thesis adviser since the PhD student might still not mature enough to have decent academic outputs."*

*"For my first project, I hope my advisor could help me more. For my following projects, I wish I can practice to do it mostly by myself."*

*"It depends on the personality of the thesis advisor. Sometimes PhD thesis advisors act like conscientious collaborators, particularly when co-authoring with students. On the other hand, very often advisors leave details and responsibilities on the shoulders of (capable) students while only providing high-level, general feedback."*

You help a scientist carry out a statistical procedure and you help write up the paragraph describing it; you accept coauthorship on the resulting paper, while ignoring all other aspects of the paper. Can this be responsible behavior?

**A.** *“Advantage: get a free paper. Disadvantage: harm the reputation. This is not responsible.”*

**B.** *“I believe that it is ethically permissible (although not commendable) to accept co-authorship for a relatively minor contribution. As long as the statistician in question meets the expectations of the primary authors and has no reason to question their quality of work, I do not see any reason that he or she would be obligated to thoroughly study all aspects of the paper.”*

*"In this example, I think it is reasonable to accept coauthorship if the statistical analysis was crucial to the scientist being able to achieve her desired result."*

**Is the proper price of an object**

**(i) the marginal cost of production, plus some modest markup.**

**(ii) the amount that a buyer is willing and happy to pay.**

**What is the relevance of this question to the RCRS issue?**

How can one maintain a reasonable level of agreement within a collaboration on the expected involvement of each collaborator?

*“Have group meeting regularly that involves all the collaborators.”*

*“This might seem like a simple answer, but just make a plan and stick to it. Light modifications will be required as the progression of the project moves forward. Besides that, fluctuations in the plan lead to an unstructured project and can have a wide range of negative consequences.”*