

Authors without Borders: Investigating International Authorship Norms among Scientists & Engineers

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- **Sigma Xi: The Scientific Research Honor Society (ΣΞ)**
- **Peer Discussion Group Leaders**
 - **Brazil: Renato Rosental and Renan M.V.R. Almeida**
 - Graduate student assistants: Débora Monteiro Moretti and Karina de Albuquerque Rocha
 - **China: Bai Xinwen and Wang Youqing**
 - **Graduate student assistants: Huang Zhenhao and Lou Zhijiang**
 - **Germany: Alexander Mitsos and Astrid Schutz**
 - Graduate student assistants: Zhang Xiang and Kristina Burkel
 - **United States: Stephanie J. Bird**
 - Graduate student assistant: Elizabeth A. McCarthy

Rationale

- Science and engineering are increasingly international and interdisciplinary
- Authorship practices often vary according to discipline and cultural context
- Collaborators need to be aware of variations in accepted practices and context
- Collaborators need to be aware of, and promote explicit discussion of, expectations and concerns

Objectives

- Documenting authorship norms and practices, in in four countries and two broad and disparate disciplines
- Identifying frequent perceived sources of authorship conflict in international collaborations
- Distilling recommendations and points of caution for researchers embarking on international collaborations
- Building a foundation for future research and education aimed at increasing researchers' capacity to discuss authorship in a proactive, ethical and culturally sensitive manner.

Approach

- Peer Discussion Groups
 - With follow up individual interviews

Discussion Group Questions

- To what extent are criteria for authorship commonly understood and accepted?
- What aspects of authorship are most likely to lead to misunderstanding or dispute?
- Has anything surprised you in discussions with your co-authors about authorship?
- Are you aware of any particular cultural or country specific practices that have an impact on assumptions about authorship?

Selection of disciplines, countries, and participants

DISCIPLINES

Engineering

Neuroscience (broadly defined to include psychology and life sciences)

Selection of, disciplines, countries, and participants

DISCIPLINES

Engineering

Neuroscience

COUNTRIES

United States

Germany

Brazil

China

Selection of disciplines, countries, and participants

DISCIPLINES

Engineering

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PARTICIPANTS

Senior professors

Junior professors

Postdoctoral Scholars

- The total number of discussion group participants was 125 (with slightly fewer follow-up interviews)
 - 72 were in neuroscience/psychology (33 postdocs and 39 faculty; approx. 50% female)
 - 53 in engineering and the physical sciences (approx. one-third female).

- The US discussion groups were held in Boston, MA (5 meetings) and Providence RI, and convened faculty and post-docs from area universities [MIT, Harvard, Brown, Boston University, Boston College, Tufts University, Northeastern University, University of Massachusetts, Wellesley College] for both the NEUROSCIENCE/psychology [n=19] and engineering discussion groups [n=15].
- The discussion groups in China were held at the Chinese Academy of Sciences (CAS) [NEUROSCIENCE/psychology; n=21] and the Beijing University of Chemical Technology (BUCT) [engineering; n=19] and included faculty and postdocs from CAS, Renmin University, Beijing Normal University, and Beijing University.
- The German discussions were held at the University of Bamberg [NEUROSCIENCE/psychology; n=21] and RWTH Aachen University [engineering; n=9].
- The Brazilian discussion groups were both held at Universidade Federal do Rio de Janeiro. There were 11 participants in the neuroscience/psychology groups, and 10 in the engineering groups.

SOME RESULTS

“CULTURAL” FACTORS

“In my experience, Americans are easy-going. Generally speaking, they wouldn’t ask for too much. In comparison, Japanese are more stringent. They generally require ranking the authors in strict accordance with the size of contribution.”

“Take the Chinese, for example, when someone gives some suggestions, even if you believe that his suggestions are wrong, you would give a reply to him saying that you agree with their suggestions and you’ll try your best to revise the paper according to such suggestions. However, people from some countries are not like that, e.g., the British. The British are very proud. If your suggestions are wrong, he will make his utmost efforts to fight for his point of view. He would rather not publish the paper to fight for his point of view. So, I feel that there are some cultural differences in this regard.”

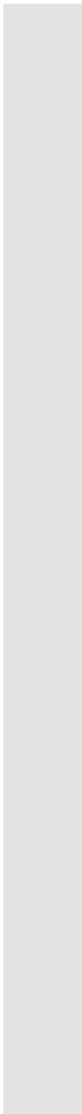
Discussion leader: *To me it sounds like the variability [in approaches to authorship decisions] depends on the style in working groups. Some groups do it this way, some heads of research groups are more generous, some are more strict. There are a lot of different cultures.*

Respondent: *It is not just research groups, it also involves the international research. I know from people at universities in the Netherlands that things are handled differently, a little bit more relaxed and in a more cooperative atmosphere... So this doesn't just involve research groups but more so it talks about some sort of national science standards.*

"I'm from the Brazilian electrical sector, whose organization is similar to a military one, since it was developed by military governments. This sector follows a very rigid hierarchy, in which the "general" is the first author and this is it, even if undeservedly. The "general" is the director of the company; therefore he is the first author. Sometimes, you may go to a congress where the director of the company is the first author in ten articles. Of course he is not. He is a very busy person. So, you have a system that focus[es] on hierarchy, not on the person's participation. Something has been developed in my department and because of that I am the first author. It isn't bad faith, it is unawareness. The same way that happens with publications. Industry prefers to send an article to a national congress with a great visibility rather than to a journal, which is not important for them."

Next Steps

- Craft survey questions
- Pilot test survey among peer discussion groups



Thank you!