Online Ethics Center
FOR ENGINEERING AND SCIENCE

# Order Out of Chaos

## Author(s)

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## Year

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## Description

This case is adapted from a case in: Brian Schrag, ed., Research Ethics: Cases and Commentaries, Volume 6, Bloomington, Indiana: Association for Practical and Professional Ethics, 2002. It is meant to encourage discussion about authorship practices in a national government-owned, government-operated lab.

## Body

Dr. Abbot Oceedee is a senior research physical scientist who leads the inverse problems program in the National Environmental Systems Laboratory (NESL). This program has its own policy about authorship, which Oceedee discusses with each new member who joins his lab. He states that only those who have made a significant intellectual contribution to a project will be included on any paper. He also states that he is the final authority regarding what is defined as a significant intellectual contribution, in the event that a disagreement arises. Everyone in the program is quickly made aware that Oceedee will be included as last author on any paper that is the result of research done in his program.

You are a post-doc in Oceedee's lab, working to characterize a novel Bayesian approach that applies chemical space concepts to microbial risk assessments,

beginning with *Entamoeba histolytica*. Based on systems medicine and bioinformatics, you are able to adapt an off-the-shelf model to characterize the absorption and distribution of this microbe in a way that has never been done (to your knowledge).

You share a cubicle and equipment with another post-doc, Dr. Conrad Inarms, a biomedical engineer with a strong background in biostatistics and systems medicine. He has given you many great ideas, even a few that relate to your work. You log them away in your memory, however, you seldom write them down.

You also work with Dr. Bill Melater, an exposure scientist in a different NESL program. Melater is the task lead for Biomarker Research; that is, he is responsible for submitting task descriptions and milestones to the National Program Director for inclusion in the National Research Action Plan. This is how all of your research is funded. In fact, you meet with Melater's task group every other week to discuss your project, along with the other projects under Melater's task. Two scientists are particularly vocal and often helpful with ideas on how to proceed in your research. Dr. Ira Gent has sent you three articles on informatics, with lengthy emails from which you have gleaned a number of insights that ultimately made it into the discussion section of the paper. Perry Fural, who has been with the NESL for 25 years understands the research planning process and has been a branch chief in the past. He usually gives you insights on how to work the system to get the extramural funds for the project. This is always in sidebar discussions after the meeting or during open discussions on the agenda items.

Bea Cuyette, a technician in Oceedee's lab, has worked very closely with you on running some routine R programs. She has done most of the trouble shooting and optimization for your meta-analysis. She also developed a novel method of using Many-Eyes to sort through droves of data.

Shore Tymer is a student services contractor. Tymer is a first year graduate student who is currently doing a six-week rotation through Oceedee's lab. He assists you in a tightly controlled and highly focused project that compares exposure of other eukaryotes to *Entamoeba*. In fact, it was his project that provided the critical evidence that this microbe would be a good indicator for what you now call "microbial space."

Another group outside of NESL who is part of the Biomarkers project is the National

Biomarker Center (NBC), whose liaison with NESL is Dr. Indira Pendant. There is a joint NESL/NBC meeting every Wednesday, which is a free-for-all discussion on the ongoing projects. You receive a lot of input, but much is not all that useful, from these meeting. Pendant has told you and Oceedee that she believes anyone working on a project and providing good ideas should be included as authors. Indeed, that does seem to be NBC's policy. So far, eight different NBC scientists have given you input during these meetings. One in particular has been quite helpful. Dr. Will Fundid has a large abiotic chemical space project that parallels your project. In fact, Fundid needs your data to do a complete risk simulation that is one of his milestones this fiscal year.

You have also consulted your advisor/mentor from your PhD program at the Raleigh State University, Dr. Fuller Pride, an internationally recognized expert in sociometrics. In fact, one of the R programs you have run is based on a homework assignment from one of the classes you took at RSU, as well as independent research for one of your dissertation chapters.

Oceedee encouraged you to submit the data for publication as quickly as possible. You do the writing, give the paper to Inarms for review, and then present the data at the lab meeting the following week. Following the meeting, Oceedee sends an email to you, copying Cuyette, discussing authorship assignments for the paper. He notes that since Cuyette offered novel ideas to the project and helped in trouble-shooting and in the review of the paper that she should be included as second author. He further recommends you consider Pendant's authorship policy. Cuyette replies to Oceedee's email that Oceedee should be the last author on the paper since the work was done in his lab and supported by funds from his program.

The working title of the paper is: "Applying Microbial Space to Inform Risk Characterization." You hope to submit it to the *Journal of Systems Biomarking.* You have asked Inarms and Melater for clearance reviews.

## Discussion Questions:

1. What do you suggest as the order of authorship for this manuscript?
2. Who should receive an acknowledgment? Who should not be omitted completely?
3. Besides the typical literary resources, what work should be cited in the references?
4. Do you agree with the recommendations by Oceedee? Why or why not?

5. Do you agree with the recommendations by Pendant? Why or why not?
6. Do you agree with the recommendations by Cuyette? Why or why not?
7. Is it ethical to include Cuyette (the technician), but not to include Tymer (the graduate student) on the list of authors for this paper?
8. Does it matter that Tymer is a contractor? Does it matter that he is rotating through the lab and not a regular project member?
9. What constitutes a significant intellectual contribution in this case? Who should decide?

## Contributor(s)

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## Rights



## Resource Type

Case Study / Scenario

## Topics

Authorship
Collaboration
Mentors and Trainees
Publication Ethics
Research and Practice

## Discipline(s)

Computer, Math, and Physical Sciences
Life and Environmental Sciences
Research Ethics

## Publisher

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