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Collaborative Research between Scientists and Industry/University Collaborators Bibliography

Author(s)

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Description

A short annotated list of books and journal articles touching on issued related to effective collaborations.

Body

Books

Government-University-Industry Research Roundtable. 1999. *Overcoming barriers to collaborative research: report from a workshop*. Washington, D.C., National Academies Press Washington, D.C. National Academies Press.

This report describes the main findings from a workshop held in 1999 to discuss how universities and industry can overcome barriers to collaborative research. This include differences in culture and management of universities and industries, and aligning the goals of the collaborating institutions, making sure university and privacy industry incentive structures sufficiently reward key contributions of collaboration participants, and questions about proprietary rights over the final

results of collaborative projects.

Greenough, William, Phillip J. McConnaughay, and Jay P. Kesan. 2007. *Defining values for research and technology: The university's changing role.* Lanham: Rowan & Littlefield.
Explores the changing role of the university in society as the trend of collaborative research between universities and industry continues to grow. Discusses the role of government funding and policymaking for shaping the research agenda and collaborations, and challenges of scientific integrity in the changing landscape of science and technological research.

Macrina FL 2005. Chapter 8: Collaborative research. In: (Macrina FL) *Scientific Integrity: an Introductory Text with Cases*. 2nd ed., Washington, DC, ASM Press. pp. 187-209.

Macrina, F.L. *Dynamic Issues in Scientific Integrity: Collaborative Research.* American Academy of Microbiology
This report from a colloquium on "Dynamic Issues in Scientific Integrity: Collaborative Research" discusses issues involved in collaborative research, and is meant to assist instructors in developing and refining how they discuss collaborative research in courses on scientific integrity. The report discusses issues such as how to define contributions, defining authorship, defining responsibilities of researchers involved in collaborative relationships, defining accountability, and issues of monitoring.

Porter, Roger, Thomas E. Malone and Christopher C. Vaughan. 1992. *Biomedical Research: Collaboration and conflict of interest.* Baltimore: Johns Hopkins University Press.
The book explores questions surrounding the independent and objective status of biomedical researchers when their financial support comes from corporations with something to gain from the results of the research.

Shrum, W., J. Genuth and I. Chompalov. 2007. *Structures of Scientific Collaboration.* Cambridge, M.A.: MIT Press.
Focusing on the physics discipline, this book examines multi-organizational collaborations in physics, analyzes the structural elements of collaborations (group size, formation, duration, etc.) as well as participant experiences in collaborations.

Wagner, Caroline S. 2002. *Linking effectively: learning lessons from successful collaboration in science and technology.* United States Office of Science and Technology Policy, Rand Corporation, Science and Technology Policy Institute.
This documented briefing describes the results of an inquiry conducted by RAND's Science & Technology Policy Institute for the Office of Science and Technology Policy (OSTP) of the Executive Office of the President of the United States. OSTP asked RAND to provide insights into improving the efficiency and effectiveness of government-sponsored international collaboration in science and technology.

Journal Articles

Brinkman, William F. 2003. Integrity in industrial research. *Physics Today*. 56(3):56.
Comments on the issue of integrity in industrial research. Views on the allegations of misconduct in experiments reported by Jan Hendrik Schön and his collaborators; Requirements for establishing a broad-based research organization in a company; Advantage of corporate research; Discussion of issues regarding intellectual property.

Cohen, J. 1995. Share and share alike isn't always the rule in science. *Science* 258(5218): 1715-1718.

Gadlin, Howard, and Kevin Jessar. Preempting discord: Prenuptial agreements for scientists. *Office of Research Integrity, RCR Resource Products.* Last updated, September, 2009.
This short article by two ombudsmen at the National Institutes of Health discusses conflicts that can arise between collaborating scientists and suggest some precautionary steps that can be taken to avoid conflicts. This includes discussing or even writing a partnership contract that covers issues such as the anticipated goals and outcomes of the project, contributions from each participant in the project, what criteria will be used to assign authorship and credit, and how intellectual property and ownership of project data will be handled.

Evans, G.R. and D.E. Packham. 2003. Ethical issues at the university-industry interface: A way forward? *Science and Engineering Ethics* 9(1): 3-16.

This paper introduces a special issue of Science and Engineering Ethics looking at collaboration between universities and industries on research projects. The issue arose from a conference in May 2001 on 'Corruption of scientific integrity?–The commercialization of academic science'.

Healy, D. 2003. In the grip of the python: Conflicts at the University-Industry Interface. *Science and Engineering Ethics.* 9(1): 59-71.
The author discusses a case he was personally involved with where a pharmaceutical company he was working with infringed on his academic freedom. The author discusses some of the disturbing observations he made during his involvement in the case, including evidence that pharmaceutical companies have miscoded raw data on suicidal acts and suicidal ideation caused by their antidepressants, and a growing body of examples of ghostwriting of articles in the therapeutics domain. Many of the tensions evident in this case, therefore, can be linked to company abilities to keep clinical trial data out of the public domain. This, the author argues, is the point at which the pharmaceutical python gets a grip on academia.

Hwang, Kimju. 2008. International collaboration in multi-layered center-periphery in the globalization of science. *Science, Technology and Human Values.* 33(1):101-133.
The author looks at international scientific collaboration in the context of the globalization of science and technology. She examines international collaborations not only as a place where local and global identities cross, but also scientific and socio-cultural identities.

Schrag, B, G. Ferrell, and V. Weil. 2002. Barking up the wrong tree? Industry funding of academic research: A case study with commentaries. *Science and Engineering Ethics.* 9(4):569-582.
This case raises ethical issues involving conflicts of interest arising from industrial funding of academic research; ethical responsibilities of laboratories to funding agencies; ethical responsibilities in the management of a research lab; ethical considerations in appropriate research design; communication in a research group; communication between advisor and graduate student; responsibilities of researchers for the environment; misrepresentation or withholding of scientific results.

Sieber, Joan E. and B.E. Trumbo. 1995. (Not) giving credit where credit is due: Citation of Datasets. *Science and Engineering Ethics.* 1(1): 11-20.
Adequate citation of data sets is crucial to the encouragement of data sharing, to the integrity and cost-effectiveness of science and to easy access to the work of others. The citation behavior of social scientists who have published based on shared data was examined and found to be inconsistent with important ideals of science. Insights gained from the social sciences, where data sharing is somewhat customary, suggest policies and incentives that would foster adequate citation by secondary users, and greater openness and sharing in other disciplines.

Spier, Raymond E. 1998. Ethics and the funding of research and development at universities. *Science and Engineering Ethics.* 4(3): 375-384.
The author looks at the growing trend of academic institutions seeking out partnerships and funding from industry as funds from the public sector are reduced, and asks if the different mission statements of the two types of organizations give rise to additional ethical issues.

Washburn, J.J. 2008. Encouraging research collaboration through ethical and fair authorship: a model policy. *Ethics & Behavior.* 18(1):44-58.
Though this article focuses on collaborations in the psychology, the model policy described in this article can be used in any discipline where academic researchers and practicing clinicians or industry scientists are authoring a paper in research collaboration.

Weatherall, David. 2003. Problems for biomedical research at the academia-industrial interface. *Science and Engineering Ethics* 9(1): 43-48.
The author discusses some of the problems associated with university and industry collaborations in biomedical research, including the neglect of long-term research in favor of short-term projects, the curtailing of free dissemination of research information within university departments and the biasing of results of clinical trials by the financial interests of the investigators.

Welsh, Robert K. et al. 2008. Ethical and legal considerations regarding disputed authorship with the use of shared data. *Accountability in Research: Policies & Quality Assurance.* 15(2): 105-131.
Little guidance is currently available for handling disputes between research mentors and students when working with shared data. This article analyzes how the

ethical guidelines from the American Psychological Association, the Office of Research Integrity, and the American Educational Research Association can inform common disputes in this area. The author finally proposes guidelines that could help prevent this kind of conflict between faculty and students in the future.

Whitbeck, Caroline. 1995. Trust and trustworthiness in science. *Science and Engineering Ethics.* 1(4):403-416.
This paper discusses the importance of trustworthiness in science, and looks at the various forms of betrayal and defections in scientific research. The author argues that though serious breaches of trust, such as research misconduct, do occur, the majority of these are usually examples of negligence or recklessness. The author finishes by looking at the issue of trust between collaborating scientists and supervisors and trainees.

Wray, K Brad. 2006. Scientific authorship in the age of collaborative research. *Studies in the History and Philosophy of Science.* 37(3):505-514.
The author examines two challenges that arise in collaborative scientific research, that collaborative research threatens the motivations of scientists and may have adverse effects on what sorts of things scientists can effectively investigates, and that it also makes it more difficult to hold scientists accountable, as in the case of multi-authored papers.

Notes

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