Poster Title: Identifying and Modeling Philosopher-Scientist Collaborations: The Case of Biology and Philosophy, 1985-2005

Author: Phillip Honenberger, PhD
Affiliation: Consortium for History of Science, Technology and Medicine Philadelphia, PA
Email: philliphonenberger@gmail.com / ph@chstm.org

Abstract: Philosophers of science have been interested in interdisciplinary collaborations in at least two ways: (1) as objects of analysis and evaluation, and (2) as arrangements in which they themselves may be involved. Yet neither the new literature on the structures and dynamics of interdisciplinary collaborations (Gerson 2012, Anderson 2016), nor the numerous eulogies to the collaborative spirit between philosophers of science and working scientists (Callebaut 1993, Gould 2002), have involved much detailed investigation of how philosopher-scientist collaborations actually function at either an individual or aggregate level. I adopt published articles in Biology and Philosophy from 1985-2005 as a primary data set. Using statistical analysis and the open-source modeling software Cytoscape, I produce visualizations of the distribution of disciplinary affiliation and a variety of interdisciplinary relationships among authors or co-authors of papers in B&P during this period. Among other things, the data reveals 30 distinct teams of co-authors that included at least one professional scientist and one professional philosopher, and 20 distinct individuals with dual appointments in both a biology and a philosophy department or research center. Drawing on this data and the existing literature on interdisciplinarity and scientific collaborations, I distinguish a variety of possible motivations, mechanisms, consequences, and standards of evaluation for these collaborations. I point to techniques such as archival research and interviews as possible next stages of the project, which could enable increasingly detailed and instructive modeling at a variety of levels (including historical case studies comparable, for instance, to Gerson and Griesemer 1993 and Maienschein 1993).

Authors in Biology and Philosophy, 1986-2005. Each node represents 1 author. Size of node corresponds to number of appearances as author or co-author; color of nodes corresponds to primary disciplinary affiliation (blue = philosophy; green = biology; red = dual appointment; etc.). Further details given in the poster.