THE HISTORY AND PHILOSOPHY OF SCIENCE DEPARTMENT

Announces

THE ANNUAL HPS ALUMNI LECTURE

“Individuation, Individuality, and Experimental Practice in Developmental Biology”

given by Alumnus

Alan C. Love, Class of 2005
University of Minnesota

Thursday, March 26, 2015

5:00 pm

University Club – Conference Room A

Abstract: Philosophical analyses of individuals in biology have focused on theories of individuality in the context of evolution, where the capacity of an object to undergo selection is paramount. How individuals are determined in experimental practice and what those individuation practices look like in different investigative contexts has been largely neglected. Individuation in biological science is governed by structured problems that lead to variable and divergent conceptualizations of what qualifies as an individual. The result is a pluralist perspective on individuality in the life sciences where different kinds of individuals are tracked in experimental practices. I use the problem agenda of
growth in developmental biology to illustrate this situation in the context of an experimental inquiry into the coordination of relative sizes between the whole organism and its constituent parts. The problem-relative nature of biological individuation dissolves the so-called “problem of biological individuality,” which is an artifact of monist assumptions about scientific knowledge, and captures more accurately how biologists engage in successful practices that contribute to the manipulation, prediction, and explanation of biological individuals.