SLAPSA 2015: Program

St. Louis University Philosophy Department
Adorjan Hall, Room 142
Feb 28, 9:30AM to 6PM

Speakers

Irina Mikhalevich (WUSTL)
Andre Ariew (Missou)
Eric Hochstein (WUSTL)
Mark Povich (WUSTL)
Robert Strikwerda (SLU)
Allison Reiheld (SIUE)

Schedule

9:30	Coffee and general congregation
10:00	Eric Hochstein (WUStL), "Dimensions of Explanation"
11:00	Break
11:15	Alison Reiheld (SIUE), "Beyond Mere Risk: The Medicalization of Obesity and Ontological Creep"
12:15	Lunch
1:30	Mark Povich (WUStL, "Cognitive Models, Mechanism-Sketches, and Realization"
2:30	Break
2:45	Andre Ariew (Missou), "Four Pillars of Statisticalism"
3:45	Break
4:00	Robert Strikwerda (SLU), "Analogies, Representations, and Morphological Explanation in Durkheim's Research Program"
5:00	Break
5:15	Irina Mikhalevich (WUStL), "Starting Simple: Rethinking the Default Hypothesis in Experimental Comparative Cognition"
6:30	After Hours TBD

Titles/Abstracts

Dimension of Explanation

Eric Hochstein

Over the years, there have been many different philosophical accounts about what constitutes a good scientific explanation and why. Many of these accounts can be fit into one of three broad categories:

1. Representational: These accounts define good scientific explanations in terms of the structure of the scientific representations and models we employ.
2. Ontic: Under these accounts, what gives a scientific representation or model its explanatory power is dependent on whether it provides us with relevant information about the ontic structure of the world, and not what sort of form or structure the models take.
3. Social: According to these views, scientific explanation is best understood as a social practice in which one person explains some phenomenon to another. Under these accounts, good scientific explanations are those that meet the appropriate social and pragmatic conditions necessary to successfully engage in the act of explaining.

In this paper, I argue that we should not view these as competing theories of scientific explanation. Instead, I propose that we consider them as different dimensions along which we can analyze a single explanation. In other words, the same explanation can be analyzed at the social level, the representational level, and the ontic level. All of these levels are a necessary part of the overall explanation, but other concerns may lead us to focus our attention on one dimension over others depending on our interests. Moreover, each of these dimensions has their own set of norms for what constitutes a good. Current debates regarding scientific explanation in philosophy of science stem from the fact that the norms operating along these different dimensions can often conflict with one another. In a particular context, the norms of good explanation operating on the ontic level may run counter to the norms of good explanation operating on the representational level, and force the norms of one dimension to trump the norms of the other. As a result, the act of scientific explanation requires that we balance the norms operating along these different dimensions and make the appropriate trade-offs to best accommodate our interests.

Cognitive Models, Mechanism-Sketches, and Realization

Mark Povich

Part of the mechanistic attack on the autonomy of psychological explanation is an argument that psychological explanations are mechanism-sketches, i.e. incomplete descriptions of mechanisms that contain filler terms, black boxes, and omit various structural and organizational details. Call this claim the “sketch thesis”. To date, arguments for the sketch thesis have relied on the demonstration of constraints from function to structure and from structure to function. My aim in this paper is not to assess these arguments but to provide a novel argument for the sketch thesis that relies on the metaphysics of realization. I will argue that psychological models are mechanism-sketches because for every explanatory cognitive model there is a what I will call a "realization elaboration" of the model that 1) includes the realization base of the components of the

model, 2) is not at a different mechanistic level than the model, and 3) is more explanatory than the model.

Analogies, Representations, and Morphological Explanation in Durkheim's Research Program

Robert Strikwerda

In 1898 Emile Durkheim published "Individual and Collective Representations" (ICR), a close analysis of physiological and psychological theories of memory. Why would an anti-reductionist sociologist devote considerable energy to questions about the plausibility of understanding memory physiologically, for example, as localized within the cerebral cortex, versus more holist or mentalist analyses? He had already stressed importance of freeing sociology from psychology in The Rules of Sociological Method (1895a): "The determining cause of a social fact must be sought among antecedent social facts, and not among states of individual consciousness." How does one fit ICR into his research program? There is no claim that resolution of these psychological disputes has any *direct* import for sociology. The implications are more subtle.

Beyond Mere Risk: The Medicalization of Obesity and Ontological Creep

Alison Reiheld

In 2013, the American Medical Association joined the World Health Organization and a number of other medical professional organizations in labeling obesity a disease. Prior to this shift to disease, obesity had been considered simply a risk condition for diseases such as osteoarthritis, diabetes, and various cardiovascular conditions. The AMA made this move despite the recommendation of its own committee tasked to study obesity, which had recommended against further medicalization of obesity.

The reasons for this counter-recommendation are, I will show, that obesity is characterized in a reductivist manner that makes obesity as a disease vs. a risk condition deeply problematic. This reduction involves, in part, a misplacement of the causal explanation of disease from poor diet and lack of exercise onto obesity, the diagnostic criterion for which is a simple calculation of body size called Body Mass Index (BMI). This reductivist view will classify as diseased large-bodied people who are healthy (the "fat fit" or "obese healthy" person) and lead physicians to assume that thin persons are healthy. Sociological evidence indicates that this was already happening when obesity was considered a mere risk condition. The ontological creep of obesity's disease status stands to reinforce and legitimate such reductivist judgments. The result is that the target of public health becomes body size instead of nutrition or fitness, of people with large bodies rather than "obesogenic" environments. This approach misses the mark both scientifically and ethically.

Starting Simple: Rethinking the Default Hypothesis in Experimental Comparative Cognition

Irina Mikhalevich

Comparative cognition researchers commonly treat as the default hypothesis that which imputes the simplest cognitive ontology to animal subjects. This default hypothesis, in turn, must be experimentally disproven before more complex alternatives can be accepted. In this talk, I argue that the general scientific practice of treating the simplest hypothesis as the default, which I term *starting simple*, is unjustified on both empirical and methodological

grounds. I begin by formulating and rejecting two empirical evolutionary arguments for *starting simple* in comparative cognition: the energetic cost argument and the argument from cognitive modularity. Next, I identify three methodological arguments in its favor– the argument from manageability, the argument from theory-development, and the argument from prediction – and show why these fail to withstand critical scrutiny both in comparative cognition and in science more broadly. I recommend abandoning the *starting simple* strategy in favor of one that takes as default experimental hypotheses that have the highest prior probability.

Four Pillars of Statisticalism

Denis M. Walsh, André Ariew, and Mohan Matthen (to be presented by Ariew)

An evolutionary population dynamics model explains the large scale patterns of change and stasis in the trait structure of a population. They do so by describing the variation in fitness in the population. When a population varies in its fitness, it is said to be undergoing natural selection. When the outcome of a population differs from that predicted by the variation in fitness, the population is said to be undergoing drift. Over the past fifteen years there has been a considerable amount of debate about what theoretical population dynamic models tell us about biological reality. Two major positions have emerged, the traditional and the statistical. While the debate between the orthodox and statistical factions has been vigorous, it has not always been particularly productive or germane. This may be due, in large measure, to a widespread misapprehension of the statisticalist position. Our objective here is to outline as clearly and simply as possible the fundamental features of the statistical interpretation, in an attempt to forestall some of the more common misunderstandings.

As we see it, statisticalism rests on four core commitments: (i) evolution is a higher-order effect (as are selection and drift), (ii) trait fitness is a primitive concept in population models, (iii) population dynamics models explicitly represent only the relative growth rates of abstract trait types, and (iv) selection and drift are description dependent, that is to say a population can only be said to be undergoing selection and/or drift relative to a model. Together, these constitute the four pillars on which the statistical interpretation rests. Our objective in this presentation is to expand on these four core commitments and provide reasons for why we remain committed to statisticalism in the face of objections from the traditional perspective. We begin with some preliminary remarks about the terms of the debate and clarification about some core terms, including what constitutes natural selection theory and trait fitness.