



## کارگاه یک روزه

## درس‌هایی از انتخاب مدل برای فلسفه علم

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**Abstract:**

There have been major developments in the second half of the twentieth century in the statistical literature on the so-called “model selection” problem, i.e., the problem of how to find the “optimal” family of hypotheses given a set of data and a body of background theories. Although these results have had some influence on philosophy of science (mostly in accounting for the evidential role of simplicity as a theoretic virtue), their importance has been largely neglected. We believe model selection criteria are far more powerful tools for philosophy of science than it has been hitherto realized and the main goal of our talks will be to convince the audience of this claim.

In the first talk, we will introduce two of the main model selection criteria in the statistical literature, namely, Akaikean Information Criterion (AIC) and Bayesian Information Criterion (BIC). We will then discuss a purported problem for these criteria called the “subfamily” problem that has been subject of much attention in the philosophical literature. We will show why this is not a genuine problem for either AIC or BIC.

In the second talk, we will discuss the bearings of these criteria on two of the most important debates in contemporary philosophy of science, viz, the plausibility of the thesis of predicitionism and the so called No-Miracle argument for scientific realism. On the first topic, we will argue that there is a rather simple and convincing argument based on AIC- and BIC-inspired frameworks of theory appraisal that shows why successfully predicting a given set of data typically provides much stronger evidence for a specified theory than accommodating that same body of data. On the second topic, we will offer an explanation for successful predictions of a theory by its ‘approximate truth,’ where this latter notion is defined in terms of a prominent notion of distance in the statistical literature. We will then argue that to be approximately true in this sense is nothing like being true (or approximately true) in an intuitively realist sense.

زمان: سه‌شنبه، ۹ مهر ۱۳۹۸.

جلسه اول: ساعت ۱۰-۱۲

جلسه دوم: ساعت ۱۴-۱۶

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ورود برای عموم آزاد است.