Expressible tests need not be manipulable

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ABSTRACT

A decision maker needs predictions about the realizations of a repeated experiment in each period. An expert provides a theory that, conditional on each finite history of realizations, supplies a probabilistic prediction. However, there may be false experts without any knowledge of the data-generating process who may deliver theories strategically. Hence, empirical tests for these theories are necessary. A test is manipulable if a false expert can pass the test with a high probability. For the theories to be deliverable and for tests to be implementable, they have to be computable. Consider only computable theories and tests, we show that there is a test that is not manipulable and that accepts true experts with high probabilities. In particular, the constructed test is both future independent (Olszewski and Sandroni (2008) and sequential. Our conclusion overturns earlier results that future independent tests are manipulable, and shows that computability considerations have significant effects in these problems.
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