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Does "model-free" forecasting really outperform the "true" model? A reply to Perretti et al

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(Submitted on 15 May 2013)

Estimating population models from uncertain observations is an important problem in ecology. Perretti et al. observed that standard Bayesian state-space solutions to this problem may provide biased parameter estimates when the underlying dynamics are chaotic. Consequently, forecasts based on these estimates showed poor predictive accuracy compared to simple "model-free" methods, which lead Perretti et al. to conclude that "Model-free forecasting outperforms the correct mechanistic model for simulated and experimental data". However, a simple modification of the statistical methods also suffices to remove the bias and reverse their results.

Comments:	Letter submitted to PNAS, with additional supplementary information. R code included in the latex source
Subjects:	**Populations and Evolution (q-bio.PE)**; Chaotic

References & Citations

- NASA ADS

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