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### Natural Selection and Veridical Perceptions

Does natural selection favor veridical perceptions, those that more accurately depict the objective environment? Students of perception often claim that it does. But this claim, though influential, has not been adequately tested. In this talk I formalize the claim and a few alternatives. To test them, I introduce interface games, a class of evolutionary games in which perceptual strategies compete. I present the results of Monte Carlo simulations of some simpler games that assume frequency-dependent selection and complete mixing in infinite populations. These simulations show that veridical perceptions can be driven to extinction by non-veridical strategies that are tuned to utility rather than objective reality. This suggests that natural selection need not favor veridical perceptions, and that the effects of selection on sensory perception deserve further study.

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