

Learning & decision-making
in strategic interactions:
an experimental investigation of heuristics

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Who is Homo Oeconomicus?



Neoclassical assumptions in economics

H.OE. lives in a world of other H.OE.,

Neoclassical assumptions in economics

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Neoclassical assumptions in economics

H.OE. lives in a world of other H.OE., common knowledge, correct beliefs, narrowly self-interested, perfectly rational, utility maximization.

plays **Nash equilibrium**

Clearly not a realistic image of man and games...



Two communities that use H.O.E. as their strawman

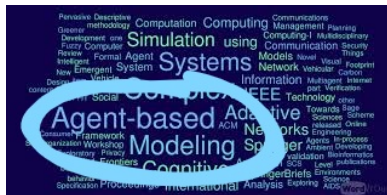


Altruism, norms, social pref's, equality, reciprocity, bounded rationality, inattention, ambiguity, biases

Two communities that use H.OE. as their strawman



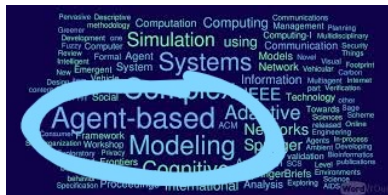
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Heterogeneity, learning, bounded rationality, evolution, dynamics

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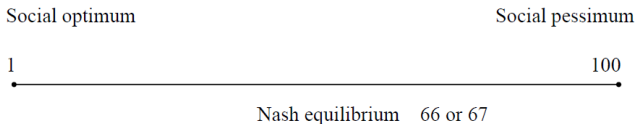
- Here:
const. m.c. $c = 10$,
outside opp. $a = 100$, and
market price $P = \frac{3,000}{\sum_{j=1}^n q_j}$.

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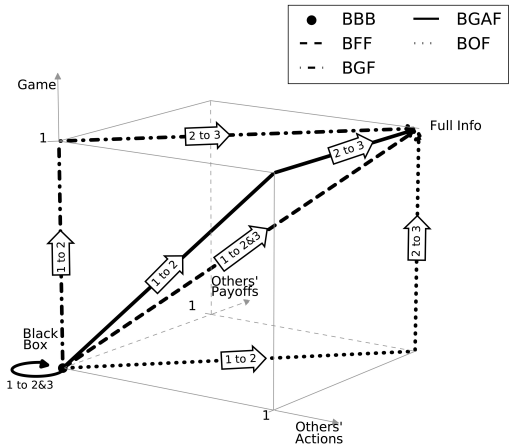
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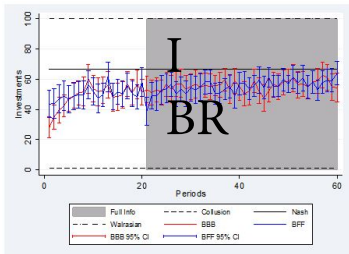
Experimental Treatments



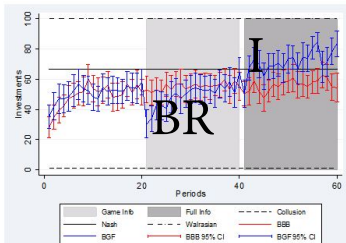
Do players learn (reinforcement learning, win-stay-lose-shift, etc. RL), behave rationally (best-respond, Bayes, etc. BR), or use other heuristics (imitate, reciprocate, etc. IM)?

Own-info only – RL
game info – BR
explicit feedback – IM

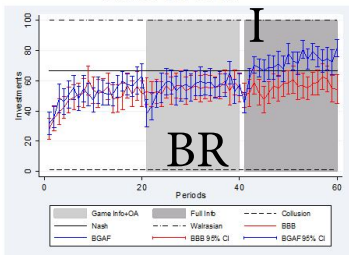
Order of information arrival matters



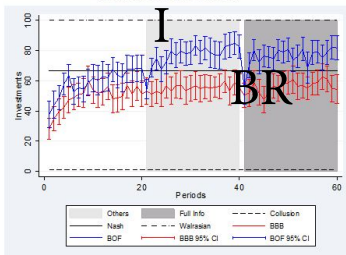
Panel A. BBB vs. BFF



Panel B. BBB vs. BGF



Panel C. BBB vs. BGAF



Panel D. BBB vs. BOF

Thanks!



*micro
behavior*

*macro
dynamics*