Changes are like Cherries after all

We like them
We wait the next season

And they appear in pairs

Silvio Ravaioli

November 19, 2019

Motivation

- **Observation 1** (inertia): changes are difficult to generate
- **Observation 2** (bundles): many simultaneous choices

- **Main Hypothesis** (+ correlation): Changes occur more often together than in isolation
- **Opposite Hypothesis** (- correlation): Changes occur more often in isolation than together

- Framework: price adjustments
- Empirical motivation: sticky prices over time (Bils and Klenow 2004 JPE), but also uniform prices across stores (Della Vigna and Gentzkow 2019 QJE)

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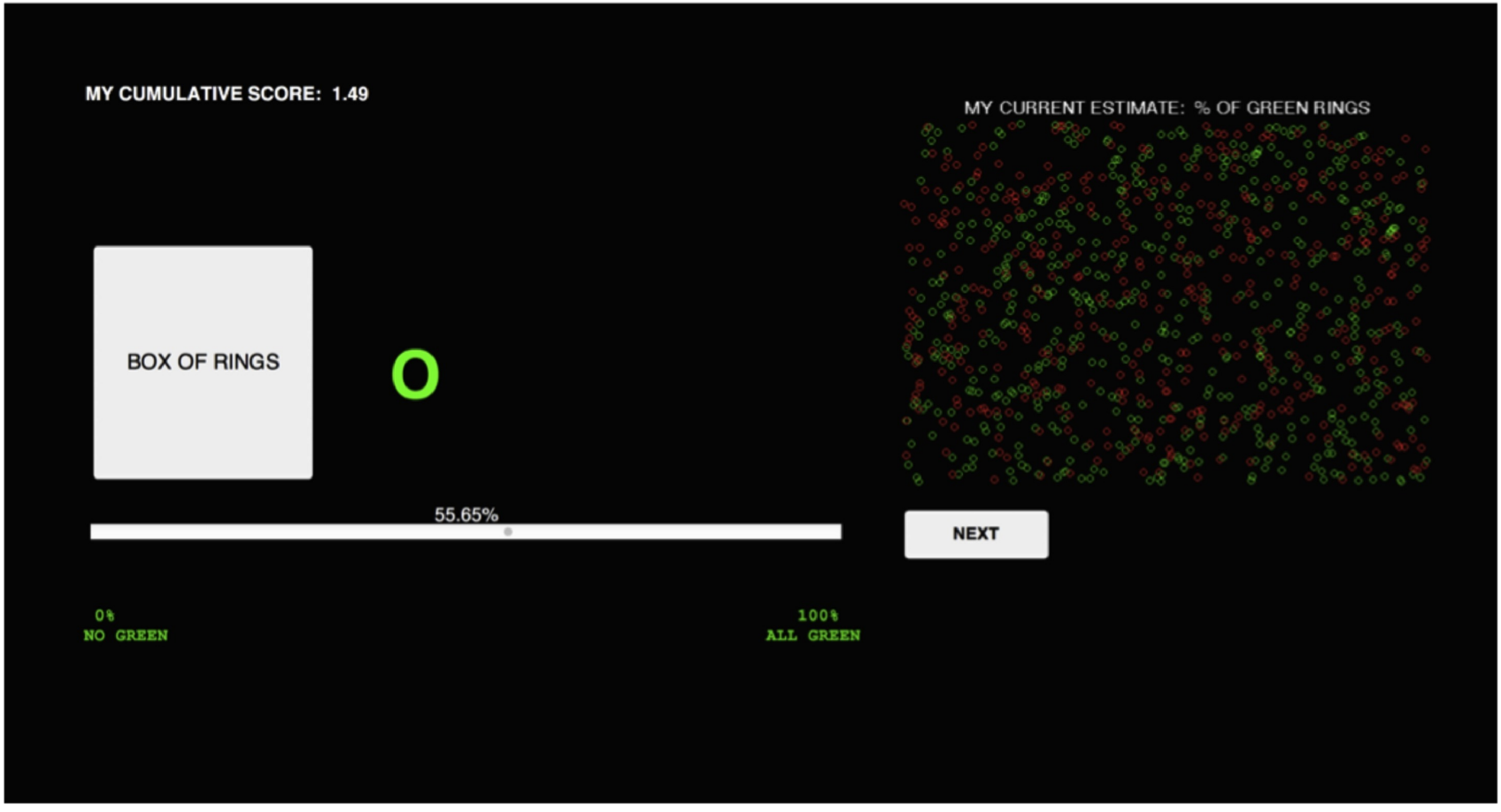
Lab experiment - Old vs New



Khaw et al. 2017 - Discrete adjustment to a changing environment

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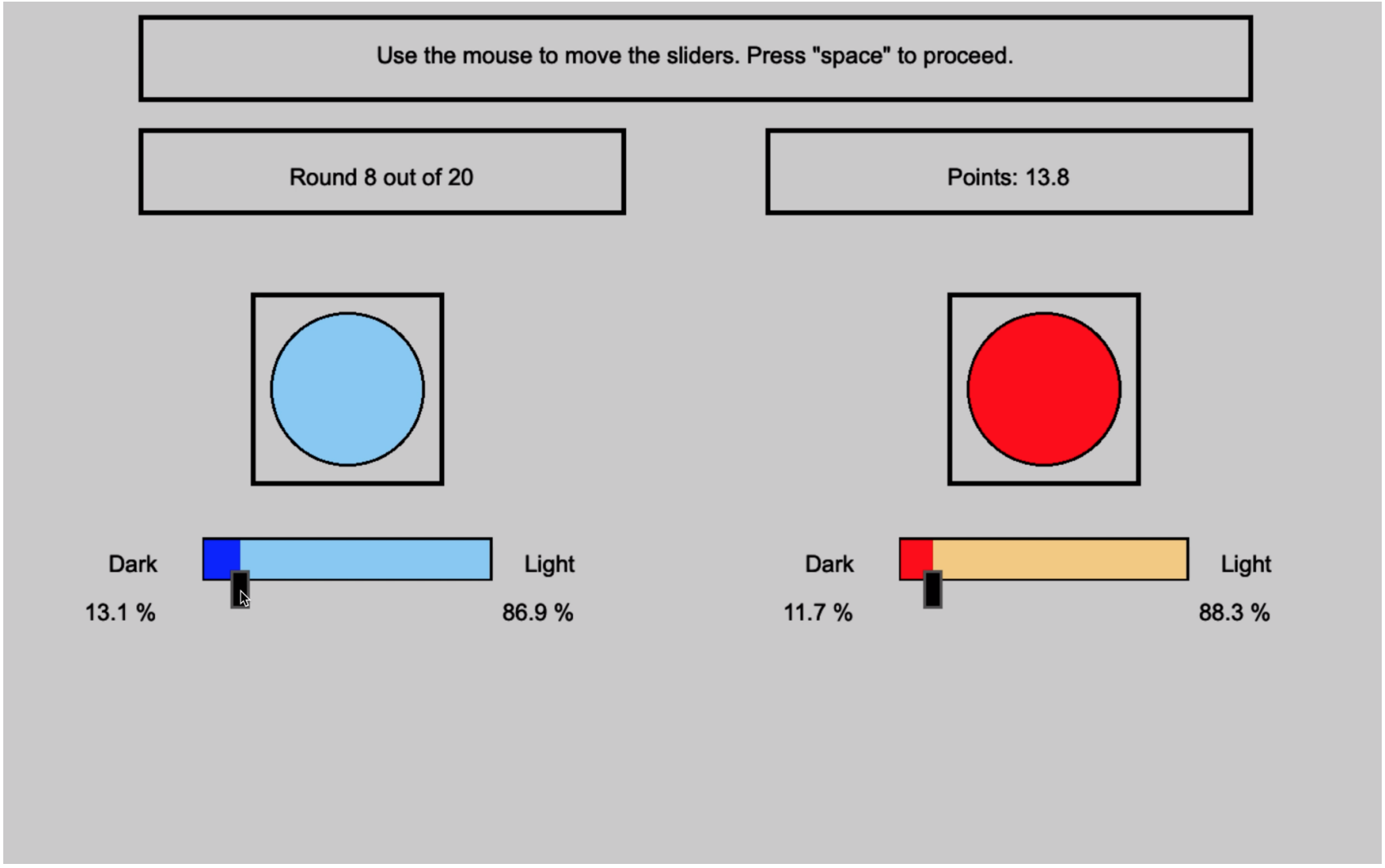
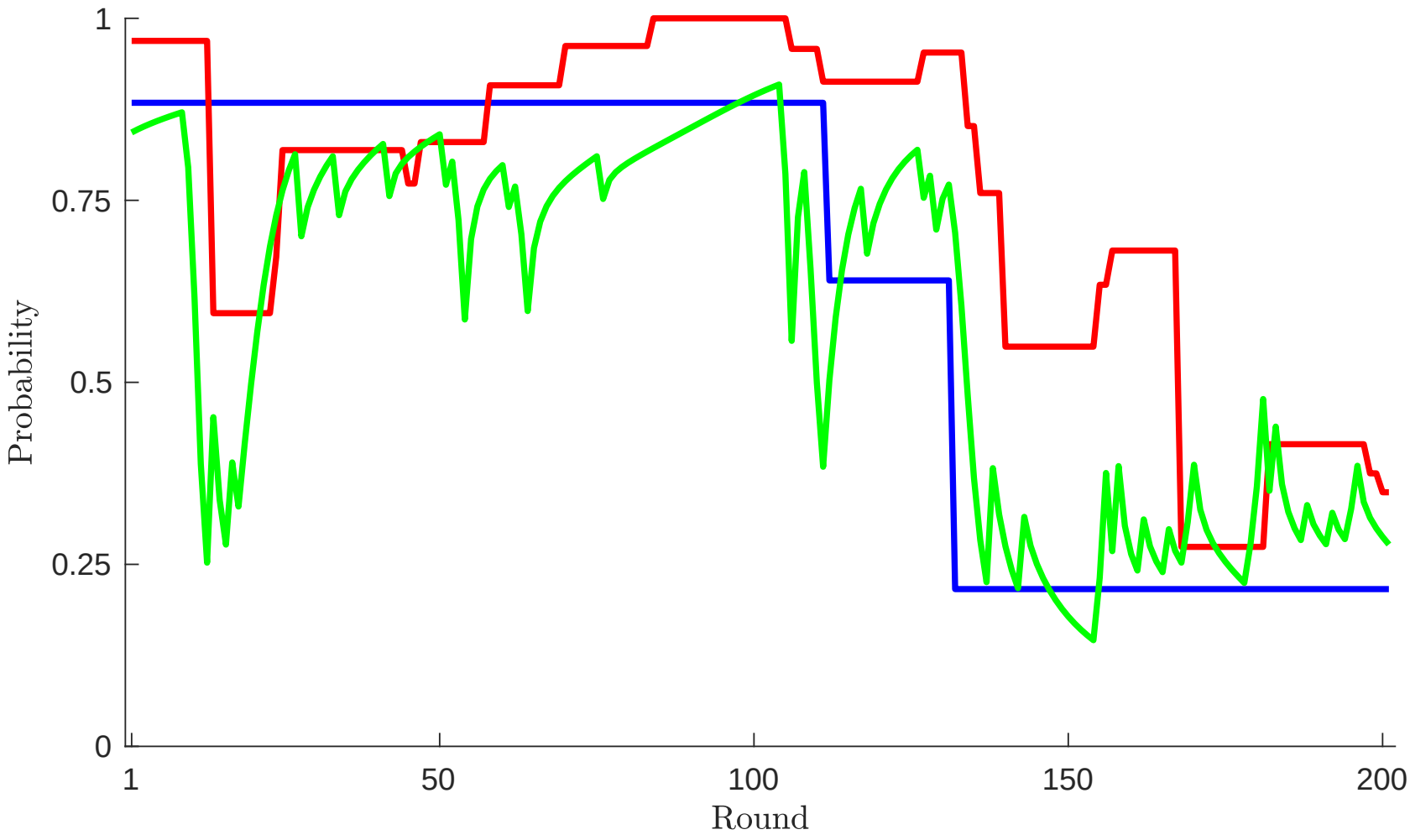
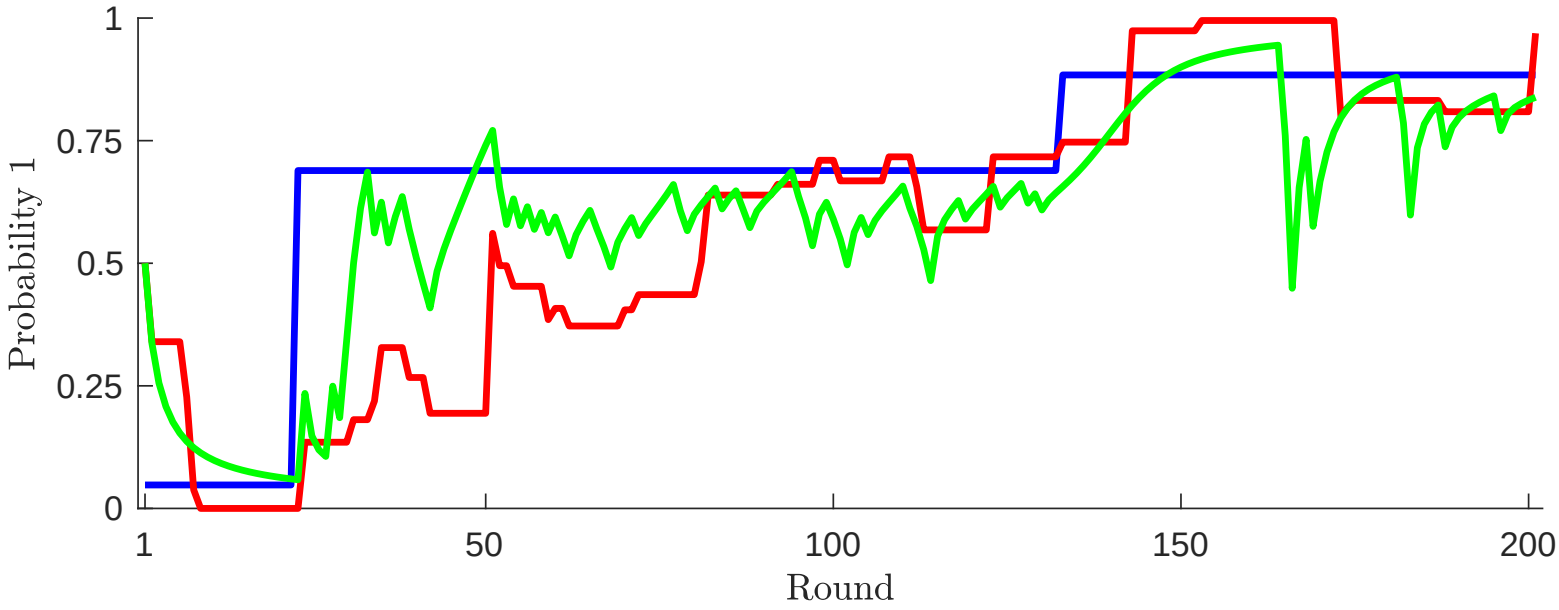


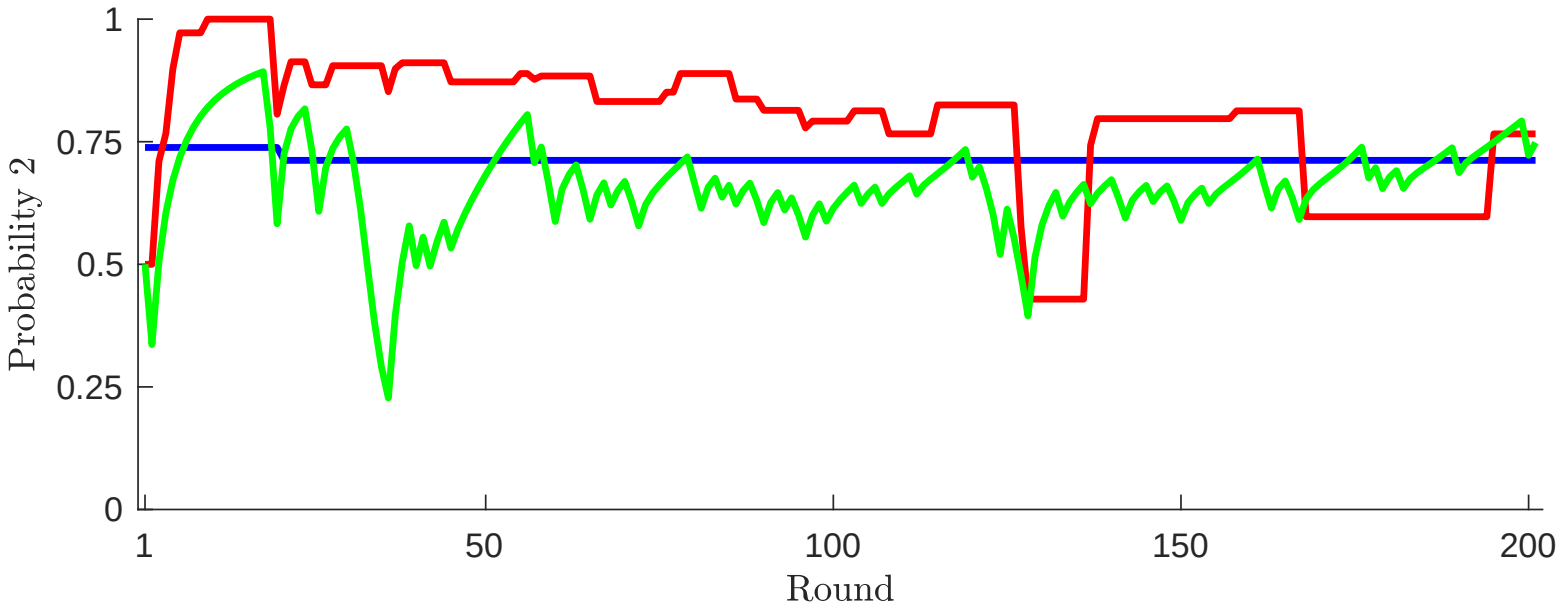
Adapted task with two independent states

Collected Data - Time Series



Collected Data - Time Series





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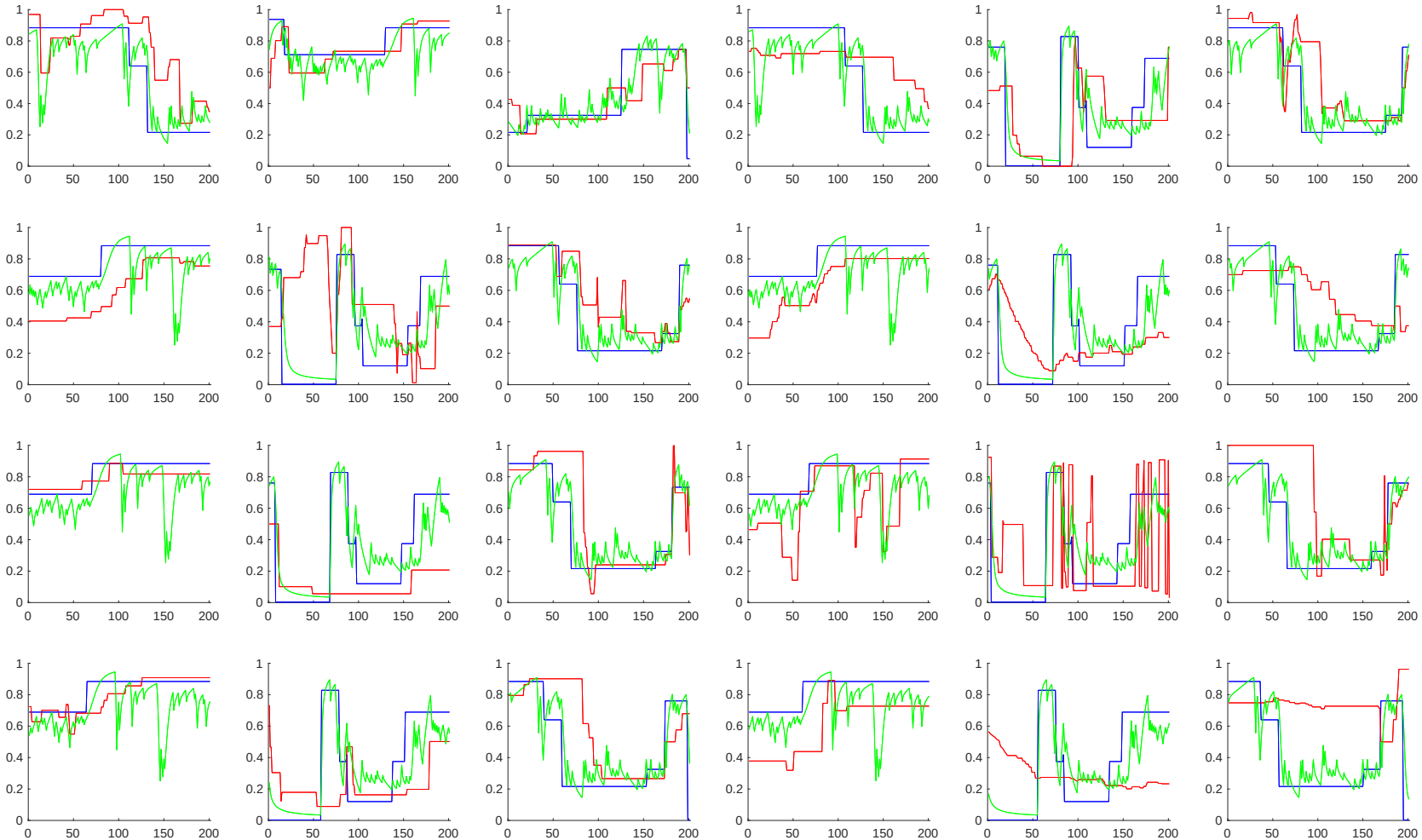
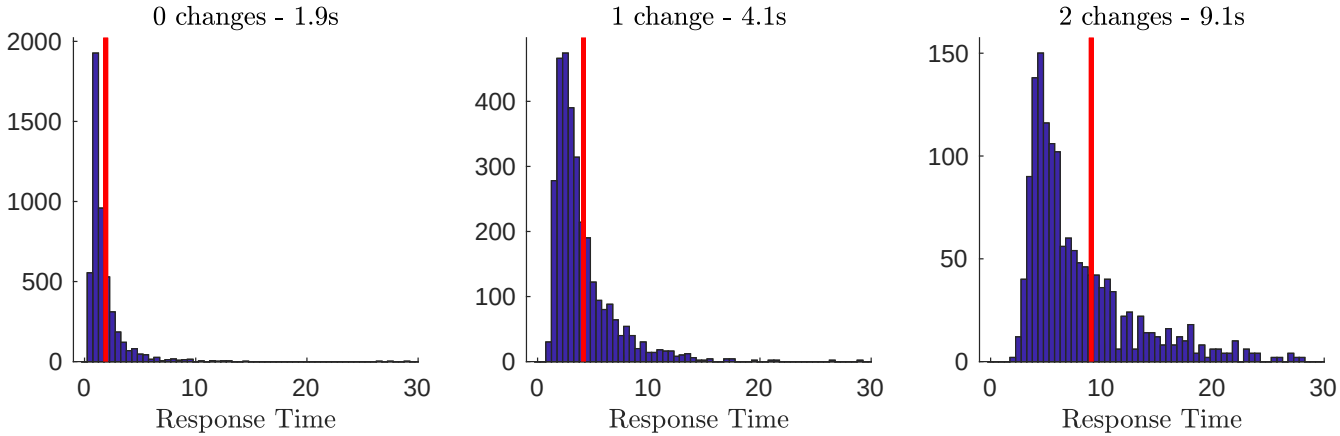


Preliminary results

- Inertia: no change in 51% of the rounds
- Correlated changes: a change in p1 increases the likelihood of changing p2 from 1/4 to 1/2

	All	Conditional on p1 changed	Conditional on p1 unchanged
Pr(p2 change)	**32%**	**49%**	**24%**
Avg p2 change	3.44%	4.25%	3.05%
Avg p2 c (cond.)	10.73%	8.68%	12.71%



Implications/Applications

- **Descriptive**: the uniform pricing pattern is recent and poorly understood. Similar scenarios?
- **Normative**: inertia and correlated changes are possibly optimal under a "menu-cost" model with cognitive costs
- **Behavioral**: use small changes to prepare for bigger ones (possibly consistent with baby-steps approach)
- **Strategic**: predict competitor's behavior (phase transition), avoid or facilitate further changes

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