



Preferences under pressure: limited processing time increases risk aversion during monetary decision making

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Background

- Speed-accuracy trade-offs are a ubiquitous feature of perception and action
- In decision making, the relationship between processing time and stochasticity has been addressed from multiple perspectives
- But how processing time might impact preferences has received less attention
- Here, we assess the impact of processing time on risk-taking during a monetary decision-making task

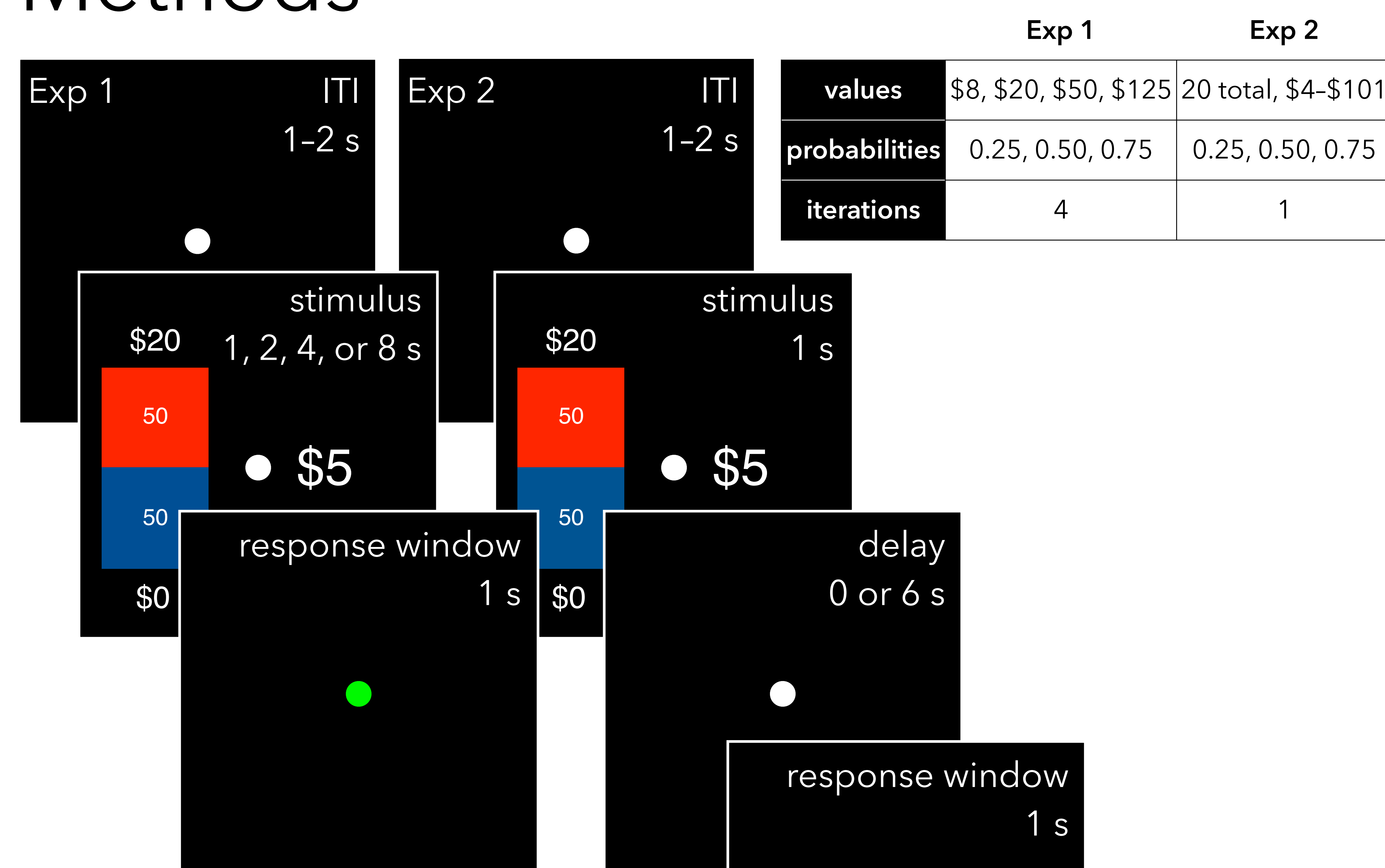
Experiment 1

Does limited viewing time modulate risk preferences?

Experiment 2

When viewing time is fixed, does limited internal processing time modulate risk preferences?

Methods



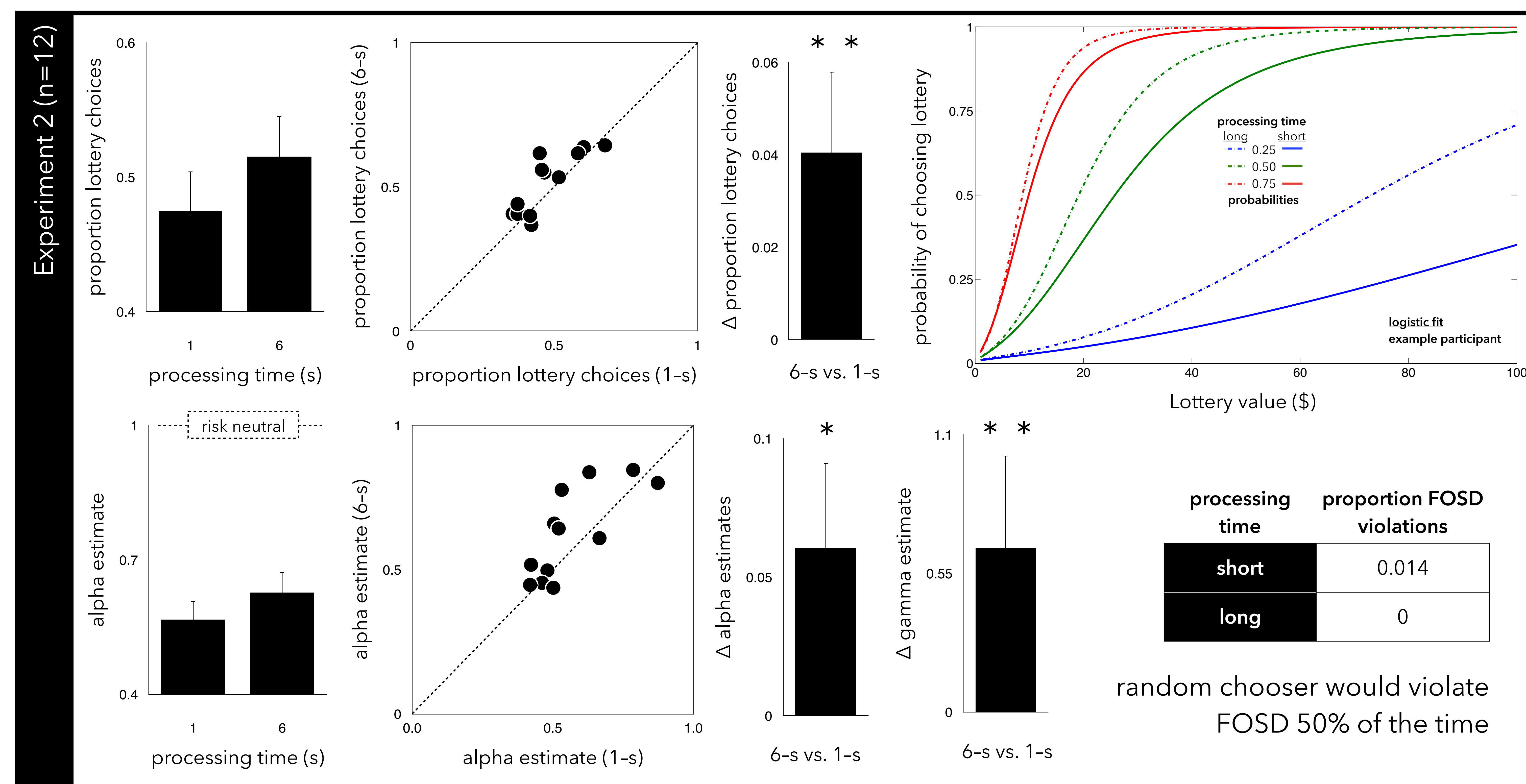
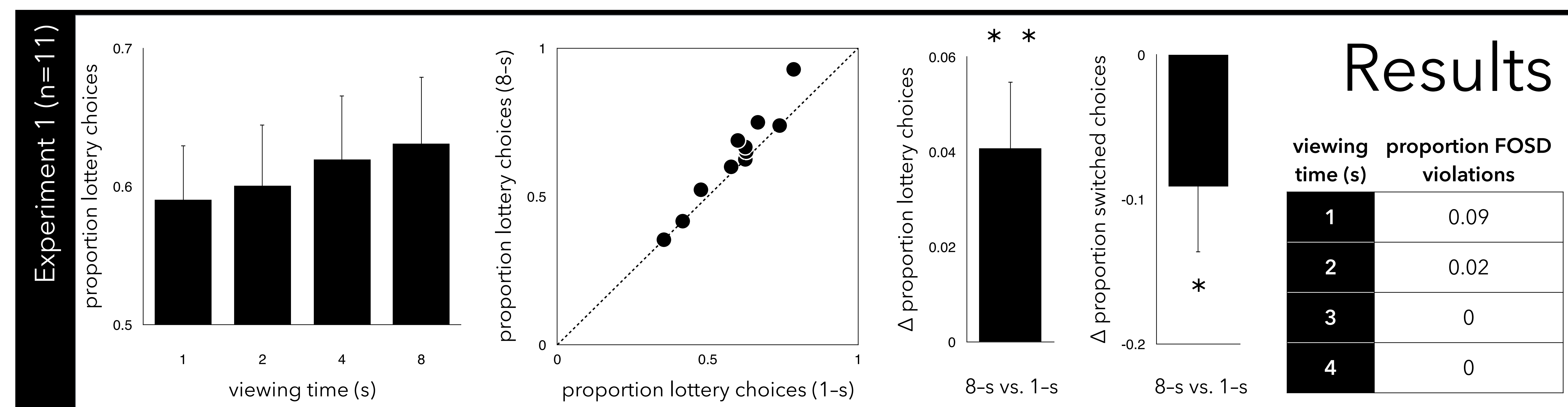
Experiment 2: parametric analysis

$$SV = p * V^\alpha$$

- ▶ SV = subjective value, p = probability, V = value, α = risk aversion parameter

$$P_L = \frac{1}{1 + e^{\gamma(SV_{ref} - SV_L)}}$$

- ▶ P_L = probability choosing lottery, γ = logistic slope



Summary

Exp 1: limited viewing time increased risk aversion and decreased consistency

Exp 2: limited internal processing time increased risk aversion and reduced slope of the logistic function

Conclusions

Temporal constraints on decision making can modulate both consistency of choice and risk preferences