



**University of
Zurich** ^{UZH}

Department of Economics – Neuroeconomics Seminar

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Luca Polonio

IMT School for Advanced Studies Lucca

The process of choice in normal-form games

A central question in game theory is the identification of possible causes of heterogeneity in players' behavior. Eye-tracking can help to achieve this goal by allowing the exploration of dynamical information-processing mechanisms.

In different eye-tracking studies, we register eye movements of participants while playing normal-form games of different relational complexity (2x2 and 3x3 matrices), and we analyze individual patterns of information acquisition to reveal the ongoing process of game representation-building. The analysis of the gaze patterns, combined with other sources of data, allows us to 1) attribute out- of-equilibrium responses to limited cognitive capacities or social motives; 2) identify possible causes of inconsistency between choices and beliefs; 3) identify cognitive factors driving heterogeneity in strategic thinking; 4) examine how different strategic environments affects players' ability to learn from the feedback they receive; and 5) identify the brain networks sustaining decision making processes of different types of players.

Our results suggest the existence of individually heterogeneous-but-stable patterns of visual information acquisition based on subjective levels of strategic sophistication and social preferences.