

Education

Ph.D in Cognitive Science

Paris, France

ÉCOLE NORMALE SUPÉRIEURE (LNC² - IJN)

2018-2022

- Under the supervision of **Stefano Palminteri** and **Sacha Bourgeois-Gironde**

My Ph.D thesis consists in the study of human reinforcement learning through behavioral experiments and computational modeling. More specifically, I am interested in the acquisition and comparison of different kind of subjective values, namely these acquired from experience (via trial-and-error) and description (via symbolic/semantic information). The two-step model of value based decision-making posits that orderly choice is possible through the mapping of different option values on a common scale. A subsequent question is thus whether these values of different nature are commensurable, and if so, what is the decision and valuation process allowing such a comparison.

M.Sc in Cognitive science

Bordeaux, France

UNIVERSITÉ DE BORDEAUX

2016 - 2018

- 3 months internship under the supervision of **Sacha Bourgeois-Gironde**

Study of money emergence using multi-agent simulations and behavioral experiments. We show that learning using a simple reinforcement learning mechanism is a sufficient condition for a commodity money to emerge.

- 6 months internship under the supervision of **Nicolas Rougier**.

Study of strategies deployed by firms in theoretical duopoly situations through online behavioral experiments. We show that subjects rely on heuristics rather than complex learning mechanisms and decision rules.

B.Sc in Psychology

Bordeaux, France

UNIVERSITÉ DE BORDEAUX

2013 - 2016

Publications

- 2022 **The impassable gap between experiential and symbolic values**, Garcia, B., Lebreton, M., Bourgeois-Gironde, S., Palminteri, S. [Nature Human Behaviour \(under review\)](#)
- 2021 **The description-experience gap: a challenge for the neuroeconomics of decision-making under uncertainty**, Garcia, B., Cerrotti, F., Palminteri, S., [Philosophical Transactions of the Royal Society B](#)
- 2019 **Coordination over a unique medium of exchange under information scarcity**, Nioche, A.*, Garcia, B.*, Lefebvre, G., Boraud, T., Rougier, N. P., Bourgeois-Gironde, S., [Humanities and Social Sciences Communications - Nature](#)
- 2019 **Interaction effects between consumer information and firms' decision rules in a duopoly: how cognitive features can impact market dynamics**, Nioche, A.*, Garcia, B.*, Boraud, T., Rougier, N. P., Bourgeois-Gironde, S., [Humanities and Social Sciences Communications - Nature](#)

Communications

CONFERENCE POSTERS

- 2021 Subjective Probability, Utility and Decision Making Online
- 2021 Neurofrance Online
- 2019 Fourth Quadrennial Meeting on OFC Function Paris, France
- 2019 Doctoral days, Ecole Cerveau Cognition et Comportements Paris, France

SCIENCE POPULARIZATION

- 2019 Cog'Innov & Monocyte Edition collaboration, *Bavard S, *Garcia B. Les illusions économiques. Paris, France
- 2018 Organization of the Mindlab association's hackaton. Bordeaux, France

Skills

- Programming** Python, Matlab, R, C#, Javascript, HTML, CSS, L^AT_EX
- Frameworks** Django (web apps), oTree (online experiments), Unity3d (game engine)
- Languages** French (native speaker), English (C1), Spanish (B2)
- Interests** Philosophy (epistemology/politics/ethics), Social Science, Guitar, Free Software, Game Dev/Web Dev