Alexandre Bluet

Born: 15 November 1996

Birthplace: Montpellier (France)

Nationality: French

Personal details

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Current Affiliation

Departement of Clinical Neuroscience, Emotion Lab – Andreas Olsson's research group

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Interests

I am interested in cultural evolution, and more precisely the cognitive underlying of cultural evolution. I am currently studying the computational mechanism underlying social learning.

Principal interests: cognitive psychology, cognitive science, social learning, cultural evolution, modelling of social sciences, multi-agent system, artificial intelligence, reinforcement learning

Academic achievements

2019-2023 PhD in Cognitive Sciences (Highest distinction)

Lumière University, Lyon 2, Lyon, France.
Title: The Neurocognitive bases of cumulative technological evolution: insight from computational modelling and neuroimaging.
Supervisor: Emanuelle Reynaud and François Osiurak
Date of defence: 21 June 2023
Grant: Doctoral School grant (1st in the Lyon 2 competition)

2017-2019 Master: Cognitive Sciences (Distinction: Good)

Lumière University, Lyon 2, Lyon, France.

2014-2017 Bachelor: Cognitive Sciences (Distinction: Good)

Lumière University, Lyon 2, Lyon, France.

Professional experience

2023-*Present* Postdoc: reinforcement learning, social learning, and culture

Mechanisms of Social Learning in Social contagion and Cultural evolution (supervisor: Björn Lindström), Karolinska Institutet, Stockholm, Sweden.

2019-2023 PhD: Evolutionary modelling, social learning fMRI studies

Neurocognitive bases of cumulative technological evolution: insight from computational modelling and neuroimaging (supervisor: Emanuelle Reynaud and François Osiurak), Lumière University, Lyon 2, Lyon, France.

2018-2019 Master 2: Modelling cumulative culture evolution

Multi-agent model of cultural evolution (supervisor: Emanuelle Reynaud), Lumière University, Lyon 2, Lyon, France. Nine months.

2017-2018 Master 1: BCI pilot study

Towards a predictor of BCI illiteracy (supervisor: Emanuelle Reynaud), Lumière University, Lyon 2, Lyon, France. Six months.

2016-2017 Undergraduate: Driving simulator study

Cognitive factors related to driving ability (supervisor: Emanuelle Reynaud and Jordan Navarro), Lumière University, Lyon 2, Lyon, France. Two months.

Additional formation

2020-2021 Basics of statistics

Autumn school. 2020 Lyon, France.

2020-2021 Advanced statistics

Autumn school. 2020 Lyon, France.

2020-2021 Deep learning for medical imaging

Spring school. 2021 Lyon (remote), France.

2019-2020 Research ethics

Online courses.

2015-2017 Multiple computer science online courses on edX

Introduction to Python for Data Science. Microsoft.

Learning From Data (introductory Machine Learning course). CaltechX.
Introduction to Programming Using Python. UTAx.
Introduction to Linear Models and Matrix Algebra. HarvardX.
Statistics and R. HarvardX.
Introduction to Computer Science and Programming Using Python. MITx.
Using Python for Research. HardvardX

Teaching experience

2019-2023 Teaching in Computer Science (64h per year)

MSc tools for experience design. Lumière University, Lyon 2, Lyon, France.
MSc computer science and programming. Lumière University, Lyon 2, Lyon, France.

2022-2023 Teaching in statistics (24h per year)

Undergraduate class in Statistics. Lumière University, Lyon 2, Lyon, France.

2022-2023 Occasional lecturer

MSc in computer science and modelling. Lumière University, Lyon 2, Lyon, France.

2018-2019 Teaching in statistics (24h per year)

Undergraduate class in Statistics. Lumière University, Lyon 2, Lyon, France.

Other academic experience

2023 Chair at ESCoP 2023, Porto

Chair of regular talks T5: Tools and Actions Knowledge.

2020-2022 Neuroscience and Cognitive Doctoral School

PhD student representatives (https://nsco.universite-lyon.fr)

2019-2022 Communication and Research Valorisation Group

Student member (https://twitter.com/EMCLaboratory)

Oral communication

Bluet, A. et al. (2023). The technical-reasoning network is recruited when people observe others make or teach how to make tools: An fMRI study. ESCoP 2023, Porto, Portugal.

Bluet, A., Reynaud, E., Claidière, N. & Osiurak, F. (2022). Impact of technical reasoning, theory of mind and population size on cumulative technological culture: insights from a model of micro-societies. Cultural Evolution Society Conference, Aarhus University, Aarhus, Denmark.

Printed communication

Bluet, A., Reynaud, E., Claidière, N. & Osiurak, F. (2022). The Neurocognitive Bases of Cumulative Technological Culture: Insight from Computational Modelling. 22nd conference of the European Society for Cognitive Psychology, Lille, France.

Bluet, A., Reynaud, E., Lasserre, S., Arbanti, J., Brogniart, J., Navarro, J. & Osiurak, F. (2022). Technical reasoning is important for cumulative technological culture. Young researchers' conference of the French Federation of Science and Cognition, Paris, France.

Professional societies

2021-*Present* Cultural Evolution Society

Member

Peer reviewed articles

Bluet, A., Reynaud, E., Federico, G., Bryche, C., Lesourd, M., Fournel, A., Lamberton, F., Ibarrola, D., Rossetti, Y. & Osiurak, F. (*submitted*). The technical-reasoning network is recruited when people observe others make or teach how to make tools: An fMRI study.

Osiurak, F., Claidière, N., **Bluet, A.**, Brogniart, J., Lasserre, S., Bonhoure, T., Di Rollo, L., Gorry, N., Polette, Y., Saude, A., Federico, G., Uomini, N., & Reynaud, E. (2022). Technical reasoning bolsters cumulative technological culture through convergent transformations. Science Advances, 8(9), eabl7446. https://doi.org/10.1126/sciadv.abl7446

Bluet, A., Osiurak, F., Claidière, N., & Reynaud, E. (2022). Impact of technical reasoning and theory of mind on cumulative technological culture : Insights from a model of micro-societies. Humanities and Social Sciences Communications, 9(1), 231. https://doi.org/10.1057/s41599-022-01251-z

Osiurak, F., Lasserre, S., Arbanti, J., Brogniart, J., **Bluet, A.**, Navarro, J., & Reynaud, E. (2021). Technical reasoning is important for cumulative technological culture. Nature Human Behaviour, 5(12), 1643-1651. https://doi.org/10.1038/s41562-021-01159-9

Book chapters

Osiurak, F., Bryche, C., **Bluet, A.**, & Reynaud, E. 'From Technical Reasoning to Cumulative Technological Culture', in Thomas Wynn, Karenleigh A. Overmann, and Frederick L. Coolidge (eds), The Oxford Handbook of Cognitive Archaeology (online edn, Oxford Academic, 19 May 2022)

Grant and scholarships

2019-2023 PhD scholarship

Finished 1st place in the Doctoral School competition for a PhD scholarship, Lumière University, Lyon 2, Lyon, France.

Additional competences

Software

Designing/coding experiment: PsychoPy, OpenSesame
Statistical analysis: R
fMRI: SPM, SurfIce, CONN

Programming

Python, R, Matlab, NetLogo

Statistics

Non-parametric statistics
Non-linear models