



Sarah BROCARD

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SUMMARY

PhD student at the University of Neuchâtel, I want to contribute to the deeper understanding of the evolution of human language. My project aims at examining similarities, or differences, in the way that nonhuman great apes (chimpanzees, gorillas, orangutans) and humans (adults and children) process natural events using touchscreen technology. This project is part of the Swiss National Centre of Competence in Research (NCCR) Evolving Language.

EDUCATION

2020-Present **Ph.D. in Biology**

Event cognition in great apes (NCCR and Unine funding)
Universities of Neuchâtel and Zurich (Switzerland) and Basel Zoo (Switzerland)
Supervisor: Prof. Klaus Zuberbühler

2016 **M.S. in Biology**

Biology of organisms and populations, Specialization in behavioural ecology (Hons)
University of Burgundy (France)

2014 **B.S. in Biology**

Biology, Specialization in animal behaviour (Hons)
University of Burgundy (France)

RESEARCH EXPERIENCE

2020-Present **PhD Student**

- Design and programming experiment on touchscreen for comparative studies between human and non-human great apes on Matlab software
- Implementation of new setups to improve great apes' abilities
- Ethic permit writing
- Promotion of research in zoos
- Scientific collaborations

2018-2020 **Research assistant**

- Experiment with gorillas and orangutans on risk perception and risk taking in a dietary context. Collaboration with P. Lacombe (PhD student)
- Experiment with gorillas on their recognition and fast-mapping abilities using cross-modal signals. Collaboration with E. Déaux (Post-Doc)
- Training gorillas to use eye-tracking technology and experiment on their perception of events. In collaboration with V. Wilson, S. Sauppe (Post-Docs), K. Zuberbühler and B. Bickel (Prof.)

2017-2018 **Volunteer (9 months)**

- Development and experiment with gorillas and orangutans on risk perception and risk taking in a dietary context. Collaboration with P. Lacombe (PhD student)
- Implementation and training of naïve gorillas in the use of touchscreen devices through different task. Collaboration with E. Déaux, C. Dahl (Post-Docs), K. Zuberbühler (Prof)

2016 **M.S. internship (8 months)**

Culture and social learning of gestural communication of wild vervet monkeys
Inkawu Vervet Project (South Africa)

Supervisors: E. van de Waal (Prof.) and A. Bono (PhD student)

2015 **M.S. internship (3 months)**
Influence of stallions' social profile on collective movements
CNRS (France)
Supervisors: O. Petit (Dr) and L. Briard (PhD student)

PUBLICATIONS

- Humans are sensitive to cooperative events while chimpanzees are not. C. Berton, V. Wilson, B. Bickel, K. Zuberbühler, **S. Brocard**. (*in prep.*)
- Great apes and humans actively process events in similar ways. **S. Brocard**, C. Berton, V. Wilson, B. Bickel, K. Zuberbühler. (*in prep.*)
- Primate origins of human event cognition. Primate origins of human event cognition. V. Wilson, S. Sauppe, **S. Brocard**, E. Ringen, M. Daum, S. Wermelinger, B. Bickel, K. Zuberbühler. (*in prep.*)
- Rationality and cognitive bias in captive gorillas' and orang-utans' economic decision-making. P. Lacombe, **S. Brocard**, C. Dahl and K. Zuberbühler. 2022. *PlosOne*.
- Testing variation in gestural communication between neighbouring groups of wild vervet monkeys. A. Bono, **S. Brocard**, A. Surreault and E. van de Waal. In prep

PRESENTATION & VISIBILITY

SCIENTIFIC PRESENTATION

2022 Talk: "Seeking the origins of syntax in semantic role attribution, comparative research with eye tracking and touchscreens", Workshop: The development and evolution of primate vocal communication (Neuchâtel, Switzerland)

2021 Poster presentation, Doctoral Program in Organismal Biology annual meeting (Neuchâtel, Switzerland)

2020 Poster presentation, NCCR Summer School (Les Diablerets, Switzerland)

2019 Presentation PhD Research for zoo staff, Basel Zoo (Switzerland)

2018 Presentation PhD Research for zoo staff, Basel Zoo (Switzerland)

2016 Presentation results master's thesis, IVP (South Africa)

PUBLIC MEDIA

2021 TV SRF documentary (Einstein show, NCCR project)

2020 TV SRF documentary (Einstein show, "[Gorillas unter Stress](#)")

2020 Zoo blog ([Forschung Im Affenhaus](#))

2019 Radio podcast

TEACHING & SUPERVISION

TEACHING

2022 TP Ethology, bachelor in science (28h – Neuchâtel, Switzerland)

2021 Biostatistics courses, master in science (24h – Neuchâtel, Switzerland)

2019 Poster evaluation, master in science (6h – Neuchâtel, Switzerland)

SUPERVISION

2021-2022 Master supervision (data collection, statistics and report writing and defense)

2019 Master supervision (data collection)

2016 Master supervision (data collection in the field)

KEY SKILLS

- Designing experimental protocols, data collection (in laboratory, zoo, and field), data analysis and report writing
- Control software: R • Matlab • Tobii Studio and ProLab (eye- tracking) • Socprog (social analyses) • Gephi (build social networks) • FotoMorph (morphing) • Shotcut (video editing) • Microsoft Office • Mendeley
- Writing ethical permit • Certificate TK Module 1 (accreditation to conduct animal experiments)
- French (Native) • English (Fluent) • German (Beginner)
- Clean driving licence for cars and trailers

WORKSHOPS & CONFERENCES ATTENDED

- 2022
- “The development and evolution of primate vocal communication” workshop (Neuchâtel, Switzerland)
 - Part of the organization team of the “Event role biases in language and cognition” workshop at the JCoLE 2022 (online and Japan)
 - Introduction to Bayesian Inference in Practice, Dr Daniele Silvestro (Fribourg)
 - Virtual ASAB Workshop, Ethics of Animal Behaviour and Welfare Research for the 21st Century and Beyond (online)
 - Structure Your Writing Well in English, Maura Hannon (Neuchâtel)
 - Abstract Writing Workshop, Dr Gretchen Bakke (online)
- 2021
- How to Write a Research Paper: From Blank Page to Complete Draft; Dr Kaycie Butler (online)
 - Introduction to Data Analysis with R, Prof. Jérôme Goudet (online)
 - Data Visualization with R, Dr Frédéric Schütz (online)
 - The Use of Machine Learning in the Behaviour, Ecology and Evolution, Profs. M. Enquist, F. Hartig, O. Leimar, S. Mathieson and Drs J. Hoyal Cuthill, T. Lucas (online)
 - Global Primatology Conference (online)
- 2020
- NCCR Summer School (Les Diablerets, Switzerland)