Sara Bertagnoli

Ph.D. Student in Cognitive, Social & Affective Neuroscience Program - La Sapienza University of Rome

Psychologist and Physiotherapist

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PRIVACY (Art.15 of D.lgs. n. 33/2013)

In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorise the recipient of this document to use and process my personal details.

SELF-DECLARATION AFFIDAVIT (Art.47 and art.19 of D.P.R. n. 445/2000)

I, the undersigned, Sara Bertagnoli, aware of the consequences of making false statements, falsehood of acts and the use of false facts, punishable by law according to art. 76 D.P.R. n. 445/2000 and art. 496 of the Italian Penal Code, under my own responsibility declare that the information in this Curriculum Vitae including the information on scientific production,is true.

Verona, April 28th, 2025

Presentation

I started my research activity during my bachelor's degree in Physiotherapy when my academic interests started to lean towards neurological rehabilitation. My first research experience focused on the study of lesional correlations between neuropsychological symptoms and the brain-injured region, carried out using specific lesional techniques.
Despite my interest in clinical rehabilitation, I never stopped my research activity. I pursued my bachelor's and master's degrees in psychology while working full-time and raising my family with two children. I continued to attend NPSY-Lab.VR's seminars and workshops, increasing my skills in Lesion Analyses and getting in touch with excellent national and international researchers. I had the opportunity to use advanced lesional techniques in studies on Anosognosia for Hemiplegia, Apraxia and Personal Neglect. Recently, I increased my knowledge of Functional Neuroanatomy and the use of specific software for white matter investigation.
My future research within the PhD program will focus on the study of neural correlates in the evaluation of emotional contagion in empathetic social contexts in patients with brain damage.

Current position

November, 2022 – current

Ph.D. student in Cognitive Social and Affective Neuroscience

Department of Psychology - Sapienza University of Rome - based in Verona at NPSY-Lab.VR - University of Verona, Department of Human Sciences
Lungadige Porta Vittoria, 17 - 37129 Verona

Curriculum studiorum

September, 2018 - December 3rd, 2020

Master's Degree in Neuroscience and Neuropsychological Rehabilitation (110/110 with honours)

School of Psychology, University of Padova, Padova (Italy)

Thesis: Neuroanatomical correlates of personal and extrapersonal neglect: lesion analysis and disconnection maps. Supervisor: Prof. Daniela Mapelli

September, 2015 - July 4th, 2018

Bachelor's Degree in Psychological, Cognitive and Psychobiological Science (103/110)

School of Psychology, University of Padova, Padova (Italy)

Thesis: Lesion analysis techniques in Neuropsychology. Supervisor: Prof. Daniela Mapelli

September, 2010 - November 21st,2013

Bachelor's Degree in Physiotherapy (109/110)

School of Medicine, University of Verona, Verona (Italy)

Thesis: Anosognosia for hemiplegia: clinical assessment and lesional analyses useful to plan a rehabilitation intervention. Supervisor: Prof. Valentina Moro

September, 2004 - July, 2009

High Science School Diploma
Liceo Scientifico N. Copernico Verona

Training/Professional experience

February 2021 - January 2022

Postgraduate Internship
Laboratory of Neuropsychology (NPSY-Lab.VR), University of Verona (Italy)
Department of Human Science, University of Verona (Italy)

• Research activity in clinical and experimental neuropsychology (with specific focus on disorders in body representations)
• Literature review by means of qualitative and quantitative methods (with focus on Personal Neglect)
• Participation in seminars, laboratory meetings and Journal Club appointments
• Neuropsychological assessment and rehabilitation in traumatic brain injury, cerebrovascular disease c/o Physic Medicine and Rehabilitation Unit, Don Calabria Hospital, Verona (Italy).

Supervisor: Prof. Michele Scandola

October 2019 - May 2020

Undergraduate Internship – Master's Degree
Laboratory of Neuropsychology (NPSY-Lab.VR), University of Verona (Italy)
Department of Human Science, University of Verona (Italy)

• Participation in seminars, laboratory meetings and Journal Club appointments
• Research activity in clinical and experimental Neuropsychology.
• Qualitative and quantitative research into literature on Lesion analyses Techniques

Supervisor: Prof. Valentina Moro

February 2018 - April 2018

Undergraduate Internship – Bachelor's Degree
Laboratory of Neuropsychology (NPSY-Lab.VR), University of Verona (Italy)
Department of Human Science, University of Verona (Italy)

• Neuropsychological assessment in traumatic brain injury, cerebrovascular disease c/o Physical Medicine and Rehabilitation Unit, Don Calabria Hospital, Verona (Italy).
• Research activity in clinical and experimental Neuropsychology.
• Qualitative and quantitative research into literature on Anosognosia for Hemiplegia

Supervisor: Prof. Valentina Moro

Research activity

Collaboration contracts for research

May 2017 - November 2017

Research contract at University of Verona (Italy) Department of Human Science, University of Verona (Italy) - Laboratory of Neuropsychology (NPSY-Lab.VR)
Supervisor: Prof. Valentina Moro

January 2015 - July 2022

Collaboration contract with Physical Medicine and Rehabilitation Unit, Don Calabria Hospital, Verona (Italy). WHEN: January 2015 – April 2017; November 2018 - September 2019; June 2020 – January 2021; February 2022 - July 2022.

in 2019

I partecipated in the definition of the research agreement between the Centro Riabilitativo Veronese (CRV) and NPSY.LAB- VR

Training courses for researchers

April 15th –June 3rd 2024

University of Cambridge Advance online course on Functional Neuroanatomy – 48 hours of CPD time

January 14 th -28th – February 5th 2020

"An updating on new methods for lesional studies: Lesymap, analyses of brain disconnection- BCB Toolkit (theorical seminar with hands-on sessions)", organized by NPSY.Lab-VR. Teacher: Valentina Pacella - University of Verona, Verona, Italy

February 2018

"Neuroanatomy (theorical seminar with hands-on sessions)", organized by NPSY-Lab-VR. Teachers: Valentina Pacella and **Sara Bertagnoli** - University of Verona, Verona, Italy

February – May 2014

"Lesion analysis and brain volume: The MRICRON software" organized by NPSY.Lab-VR. Teacher: Simone Pernigo - University of Verona, Verona, Italy

Summer School Attended

May 6th-11st 2024

Gerace Spring School 2024: «Honesty in the body, the brain and the mind», Gerace (RC) Italy, organized by La Sapienza University of Rome

June 5th-9th 2023

"3rd Bayesian Statistical Analyses for the Human, social and cognitive sciences", University of Verona, Verona, Italy organized by NPSY-Lab.VR (Directors: M. Scandola and V. Moro)

May 31st - June 5th 2021

"2nd Bayesian Statistical Analyses for the Human, social and cognitive sciences", University of Verona, Verona, Italy organized by NPSY-Lab.VR (Directors: M. Scandola and V. Moro)

Work experiences

March 2015 - May 2022

Physiotherapist

Evaluation and treatment of acute and post-acute patients with acquired brain injury and focal lesions, patients with neurodegenerative diseases and general deficits in ADLs or patients with outcomes from orthopedic and neurosurgery.

Centro Riabilitativo Veronese. Piazzale R. Lambranzi, 1 – 37142 Marzana, Verona

May 2014 - December 2014

Physiotherapist

Rehabilitation work in the Stroke Unit with acute and post-acute patients

Sacro Cuore Hospital, Negrar, Verona– Via don A. Sempreboni, 5 - 37024 Negrar (VR, Italy)

Personal Skills

Native speaker Italian

Foreign Languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken Interaction	Spoken Production	
English	B2	B2	B2	B2	B2
Spanish	B1	A2	A2	A2	A2

Digital skills	SELF-ASSESSMENT				
	Information Processing	Communication	Content creation	Safety	Problem Solving
	Proficient user	Proficient user	Independent user	Independent user	Independent user

Laboratory experience and skills

• Independent in neuropsychological assessment and good knowledge of psychometrics tests and neuropsychological batteries
• Independent in brain lesion drawings and neuroimaging reading
• Basic knowledge of psychophysiological recordings (EEG, EMG, ECG, EDA, respiratory activity)
• Basic knowledge of Jasp, R and Matlab
• Average knowledge of Lesymap and Trackvis
• Expert knowledge of MRIcron and BCB-Toolkit software
• Expert knowledge of the Microsoft Office Package
• Expert knowledge of Pubmed, ScienceDirect and Google Scholar research engines
• Independent in PRISMA systematic review of literature
• Management of the tasks of the Scientific Committee
• Teamwork and team sharing
• Writing and revision of manuscripts
• Apply for a grant

Publications

1. Beccherle, M., **Bertagnoli, S.**, & Moro, V. (2025). The Assessment of the Motor and Non-Motor Aspects of Anosognosia for Hemiplegia: A Historical Review. *Brain Sciences*, 15(4), 404. https://doi.org/10.3390/brainsci15040404

2. Pacella, V., **Bertagnoli, S.**, Danese, R., Bulgarelli, C., Gobbetto, V., Ricciardi, G.

K., & Moro, V. (2025). Anarchy in the brain: Behavioural and neuroanatomical core of the anarchic hand syndrome. *Cortex; a journal devoted to the study of the nervous system and behavior*, *182*, 181–194. https://doi.org/10.1016/j.cortex.2024.10.017

3. Moro, V., Scandola, M., Gobbetto, V., **Bertagnoli, S**., Beccherle, M., Besharati, S., Ponzo, S., Fotopoulou, A., & Jenkinson, P. M. (2024). Examining the role of self-reported somatosensory sensations in body (dis)ownership: A scoping review and empirical study of patients with a disturbed sense of limb ownership. *Neuropsychologia*, 194, 108776. https://doi.org/10.1016/j.neuropsychologia.2023.108776

4. Beccherle, M., Gobbetto, V., **Bertagnoli, S**., Bulgarelli, C., Rossato, E., & Moro, V. (2023). Illusory hand movements in the absence of asomatognosia, spatial neglect and anosognosia for hemiplegia. Cortex; a journal devoted to the study of the nervous system and behavior, 168, 176–180. https://doi.org/10.1016/j.cortex.2023.08.010

5. **Bertagnoli, S**., Pacella, V., Rossato, E., Jenkinson, P. M., Fotopoulou, A., Scandola, M., & Moro, V. (2022). Disconnections in personal neglect. *Brain structure & function*, 10.1007/s00429-022-02511-z. Advance online publication. https://doi.org/10.1007/s00429-022-02511-z

6. Scandola, M., Gobbetto, V., **Bertagnoli, S.**, Bulgarelli, C., Canzano, L., Aglioti, S. M., & Moro, V. (2021). Gesture errors in left and right hemisphere damaged patients: A behavioural and anatomical study. *Neuropsychologia*,*162*, 108027. https://doi.org/10.1016/j.neuropsychologia.2021.108027

7. Scandola, M., Canzano, L., Avesani, R., Leder, M., **Bertagnoli, S**., Gobbetto, V., Aglioti, S. M., & Moro, V. (2021). Anosognosia for limb and bucco-facial apraxia as inferred from the recognition of gestural errors. *Journal of neuropsychology*, *15*(1), 20–45. https://doi.org/10.1111/jnp.12203

8. Moro, V., Besharati, S., Scandola, M., **Bertagnoli, S.**, Gobbetto, V., Ponzo, S., Bulgarelli, C., Fotopoulou, A., & Jenkinson, P. M. (2021). The Motor Unawareness Assessment (MUNA): A new tool for the assessment of Anosognosia for hemiplegia. *Journal of clinical and experimental neuropsychology*, *43*(1), 91–104. https://doi.org/10.1080/13803395.2021.1876842

9. Kirsch, L. P., Besharati, S., Papadaki, C., Crucianelli, L., **Bertagnoli, S.**, Ward, N., Moro, V., Jenkinson, P. M., & Fotopoulou, A. (2020). Damage to the right insula disrupts the perception of affective touch. e*life*, *9*, e47895. https://doi.org/10.7554/eLife.47895

10. Pacella, V., Foulon, C., Jenkinson, P. M., Scandola, M., **Bertagnoli, S.**, Avesani, R., Fotopoulou, A., Moro, V., & Thiebaut de Schotten, M. (2019). Anosognosia for hemiplegia as a tripartite disconnection syndrome. *Elife*, *8*, e46075. https://doi.org/10.7554/eLife.46075

11. D'Imperio, D., Bulgarelli, C., **Bertagnoli, S.**, Avesani, R., & Moro, V. (2017). Modulating anosognosia for hemiplegia: The role of dangerous actions in emergent awareness. *Cortex; 92*, 187–203. https://doi.org/10.1016/j.cortex.2017.04.009

Posters

Bertagnoli, S., Pacella, V., Danese, R., Bulgarelli, Gobbetto, V., Ricciardi, G.K., Moro, V "The behavioural and neuroanatomical core of the Anarchic Hand Syndrome in three patients" 43° European Workshop on Cognitive Neuropsychology, Bressanone (BZ), Italy. 27th- 31th January, 2025

Scattolin, M., Ponsi, G., Cucuzza G., **Bertagnoli, S.,** De Angelis, D., Moro, V., Panasiti, M.S., Aglioti, S.M. *The role of the Anterior Insula in interoception and moral decision-making: preliminary results from a lesion study.* VI Conference of Body Representation Network: BRNET Verona Italy. 12th- 13th September, 2024

Scandola, M; **Bertagnoli, S;** Pacella, V; Rossato, E; Jenkinson, PM; Fotopoulou, A; Moro, V. - *White matter disconnections and grey matter lesions in Personal Neglect.* OHBM Glasgow, Scotland (UK). 7th- 8th June, 2022

Pacella, V; Foulon, C; **Bertagnoli, S**; Jenkinson, PM; Avesani, R; Fotopoulou, A; Moro, V; Thiebaut De Schotten, M. *Anosognosia for Hemiplegia as tripartite disconnection syndrome.* 25th meeting of the Organization for Human Brain mapping in Rome, Italy. June 9th-13rd, 2019

Pacella, V; Foulon, C; **Bertagnoli, S**; Jenkinson, PM; Avesani, R; Fotopoulou, A; Moro, V; Thiebaut De Schotten, M. - *Neural Correlates of Anosognosia for Hemiplegia: A White Matter Disconnection Study.* Body Representation Network Workshop in Edinburgh, Scotland (UK). June 29th, 2018

Gobbetto, V; **Bertagnoli, S**; Scandola, M; Bulgarelli, C; Piccoli, S; Canzano, L Moro, V. *La qualità dell'errore aprassico: pazienti aprassici e non aprassici a confronto* Congresso annuale SINP 2016 in Milan, Italy. December 2nd-3rd, 2016

Talks

January 30th 2025 — Oral Presentation on "The behavioural and neuroanatomical core of the Anarchic Hand Syndrome in three patients" 43° European Workshop on Cognitive Neuropsychology, Bressanone (BZ), Italy.

January 23th 2025 — Journal Club on "Anarchy in the Brain: Behavioural and neuroanatomical core of the Anarchic Hand Syndrome" 43° University of Verona, Italy.

March 11st 2024 — Journal Club on "Identifying body awareness-related brain network changes after cognitive multisensory rehabilitation for neuropathic pain relief in adults with spinal cord injury: delayed treatment arm phase I randomized controlled trial (Van de Winckel et al., 2023)", University of Verona, Italy.

January 17th 2024 — Project presentation: "The Effects of laughter on empathetic responses to emotionally salient social contexts: behavioral, psychophysiological and neuroanatomical data", University of Verona, Italy.

December 15th 2023 — Project presentation: "The Effects of laughter on empathetic responses to emotionally salient social contexts: behavioral, psychophysiological and neuroanatomical data", University of Rome, Italy.

May 29th 2021 — "The neglected personal neglect", University of Verona, Italy.

February 15th 2021 — "Using machine learning-based lesion behavior mapping to identify anatomical networks of cognitive dysfunction: spatial neglect and attention", University of Verona, Italy.

February 28th 2015 — "Anosognosia per emiplegia: osservazione clinica e analisi delle lesioni per la progettazione dell'intervento riabilitativo", VII convegno "Tesi verso il futuro: Il contributo dei giovani fisioterapisti per lo sviluppo della professione", University of Venezia, Mestre (VE), Italy

Awards

2024 — Avvio alla Ricerca, University of Rome "La Sapienza". Delibera N. 239/2024 Financing for the project: "" La risata contagiosa: effetti della risata nella valutazione di situazioni sociali a valenza emozionale. Dati comportamentali, psicofisiologici e neuroanatomici"

2023 — *Top Cited Article 2021-2022* - Congratulations to Sara Bertagnoli whose paper has been recognized as a top cited paper in: Journal of Neuropsychology - Anosognosia for limb and bucco-facial apraxia as inferred from the recognition of gestural errors

2015 — *Veneto Best thesis of the year award* (second place, for the University of Verona) followed by oral presentation at Venezia Mestre, Italy. February, 28th 2015

Scientific Commitee experience

December 5th 2024 — VII edition of SEMPLICEMENTE SE STESSI 2024 meeting with Paralympic athletes **Scientific Commitee:** V. Moro, M. Badino, D. Viviani, S. Bertagnoli & G.Vianello.

Febuary 16th 2024 — IX Symposium of the Spinal Cord Injury Research Group "Work in progress for the Research Group's Projects" **Scientific Commitee:** M. Beccherle & S. Bertagnoli.

Febuary 10th 2023 — VIII Symposium of the Spinal Cord Injury Research Group "From the sensorimotor system to cognition" **Scientific Commitee:** M. Beccherle, M. Scandola, S. Bertagnoli, M. Schepisi, V. Moro

Technical Commitee experience

September 2024 – December 2025 — Corso di Perfezionamento: "Le neuroimmagini al servizio della neuropsicologia e della riabilitazione" – Human Science – University of Verona