



Chiara Della Libera, PhD

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Current position

Researcher (Assistant Professor) in Physiology (BIO/09) at the Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona, Section of Physiology and Psychology, since September 1st 2011.

In January 2022 I achieved the National Scientific Qualification as Associate Professor in Physiology within the Italian higher education system, valid through January 31st 2031.

Research interests and lines of research

I investigate Selective Attention, that is the process allowing the deployment of limited processing resources on items that are deemed as relevant, while preventing distraction from non-relevant competing materials. In particular, I have an interest in the adaptive properties of Selective Attention, that allow it to become shaped by experience.

Besides conducting research on the basic mechanisms in healthy adults and children, I also try to elucidate the dysfunctions that underlie Selective Attention alterations found in special populations:

- Individuals with addiction problems
- Children with neurodevelopmental disorders such as Tourette Syndrome, Autistic Spectrum Disorders and ADHD

Personal information

Born in Verona (Italy) on July 15th 1976.

Married, two daughters.

Work experience

Dates	March 2001 – February 2002
Position	Post graduate research training, Supervisor Prof. Franca Stablum
Employer	University of Padua (Italy), Department of General Psychology
Dates	January 2002 – December 2005
Position	PhD Student, Supervisor Prof. Leonardo Chelazzi
Employer	University of Verona (Italy), Department of Neurological and Vision Sciences, Section of Physiology
Dates	January 2006 – May 2011
Position	Postdoctoral fellow, Supervisor Prof. Leonardo Chelazzi
Employer	University of Verona (Italy), Department of Neurological, Neuropsychological, Morphological and Movement Sciences, Section of Physiology and Psychology
Dates	September 2011 – present
Position	Researcher (Assistant Professor) in Physiology
Employer	University of Verona (Italy), Department of Neuroscience, Biomedicine and Movement Sciences
Dates	October – November 2015
Position	Visiting researcher
Employer	Vrije Universiteit Amsterdam (The Netherlands), Department of Experimental and Applied Psychology

Education and training

Date	June 1994
Title awarded	High school diploma
Organization	Rosemount High School, Rosemount, MN (U.S.A.)
Date	July 1995
Title awarded	High school diploma in business and foreign languages (English and German)
Organization	ITPACLE Marco Polo, Verona (Italy)
Date	February 2001
Title awarded	Degree in General and Experimental Psychology – Neuropsychology
Thesis title	Il costo residuo nel cambiamento di compito (<i>The residual cost in task switching</i>)
Supervisor	Prof. Franca Stablum
Organization	University of Padua (Italy), Faculty of Psychology
Date	October 2004
Title awarded	European Diploma in Cognitive and Brain Sciences (EDCBS)
Organization	Hanse-Wissenschaftskolleg (HWK), Delmenhorst (Germany)
Date	March 2006
Title awarded	fMRI Visiting fellowship
Organization	MGH/MIT/HMS Athinoula A. Martinos Center for Biomedical Imaging, Charlestown, MA (U.S.A.)
Date	May 2006
Title awarded	PhD in Neuroscience
Thesis title	Visual selective attention and the effects of monetary rewards
Supervisor	Prof. Leonardo Chelazzi
Organization	Department of Neurological and Vision Sciences, University of Verona (Italy)

Awards

Year	2005
Award	Young researchers grant
Organization	European Society for Cognitive Psychology (ESCoP)
Year	2006
Award	AIP award for the best PhD thesis in Psychology
Organization	Italian Psychology Association (AIP)
Year	2010
Award	Young Researchers Award
Organization	Italian Psychology Association (AIP), branch of Experimental Psychology

Competitive research grants

Year	2014
Grant	Young Researchers Grant
Project title	The effects of rewards on visual selective attention: From basic science to translational approaches
Organization	Department of Neurological and Movement Sciences, University of Verona
Year	2015
Grant	Cooperint mobility grant
Project title	Visiting researcher period at Vrije Universiteit, Amsterdam
Organization	University of Verona

Years	2016 – 2017
Grant	Basic Research Grant 2015
Project title	Learning to ignore – New adaptive features of selective attention
Organization	University of Verona
Years	2017 – 2018
Grant	Scientific Research Grant
Project title	Characterizing the nature of attentional deficits in Autistic Spectrum Disorders (ASD)
Organization	Brain Research Foundation, Verona
Years	2018 – active
Grant	Scientific Research Grant in collaboration with Dr Leonardo Zocante (PI)
Project title	In your gaze is your future. Early diagnosis of autism and eye movements
Organization	Compagnia di San Paolo, Turin, through Brain Research Foundation, Verona

Memberships

Member of the following national and international scientific societies: Italian Physiological Society (SIF); Italian Association for Psychology (AIP), branch of Experimental Psychology; Association for Neuroscience “Giuseppe Moruzzi”; European Brain and Behaviour Society (EBBS); European Society for Cognitive Psychology (ESCoP); Psychonomic Society (associate member); Vision Sciences Society (VSS). Since 2002 I am registered as a Practitioner Psychologist.

Teaching experience

Current teaching appointments

- Course of *Human Physiology* (6 credits) for the BA in Biotechnologies, University of Verona.
- Course of *Elements of Physiology* (6 credits) for the BA in Bioinformatics, University of Verona.
- Coordinator of the course of *Morphological and Functional Fundamentals of Life*, for the BA in Nursing Sciences (group with even registration numbers), Medical School, University of Verona, where I teach the *Physiology* module (3 credits).
- Module of *Physiology* (3 credits) for the BA in Biomedical Laboratory Techniques, Medical School, University of Verona, within the course of *Morphological and Functional Fundamentals of Life*.
- Module of *Neurophysiology* (1 credit) for the BA in Sport and Exercise Science, Medical School, University of Verona, within the course of *Physiology*.
- Module of *Physiology* (1 credit), for the Medical Degree in Neurosurgery, Medical School, University of Verona.
- I am a member of the examination board for the Course in *Physiology 2 and Psychology*, for the Degree in Medicine, Medical School, University of Verona.
- Module *Attention – Anatomical Fundamentals* for the 2nd Degree Master in “Clinical Neuropsychology: evaluation and treatment of Cognitive and Neuropsychological Deficits in Adults and older populations”, University of Chieti.

Public engagement

Organization of dissemination events

Dates	April – May 2006
Event	A scuola con il cervello (<i>Take your brain to school</i>)
Description	Series of meetings aiming at promulgating knowledge on neuroscience among secondary school students in the city of Verona through dedicated seminars and lectures.
Dates	November 2006 – March 2007
Event	Cerebralmente (<i>Literally: “In a cerebral way”. A wordplay with the words “brain” and “mind”</i>)
Description	Series of seminars aiming at promulgating knowledge on neuroscience among the general public, organized jointly with the Literary Society of Verona.

Dates	May 2014
Event	La bufala è servita (<i>The hoax is served</i>)
Description	National initiative, organized jointly with the group <i>Italia Unita per la Scienza</i> , aiming at raising public awareness on the diffusion through the media and social networks of scientific disinformation.
Date	March 2021
Event	Brain Awareness Week
Description	Series of conferences on the Neuroscience of Perception, Emotion and Movement control for students in Middle and High School, at the Don Nicola Mazza Institute, Verona.

Invited speaker in dissemination events

Date	March 2011
Event	Infinitamente, Verona
Description	I was invited to hold the seminar <i>Attenzione ed esperienza. La pratica rende davvero perfetti?</i> (<i>Attention and experience. Does practice really make perfect?</i>)
Date	October 2013
Event	Festival della Scienza di Genova (<i>Genoa Science Festival</i>)
Description	Invited to hold the Lectio magistralis <i>Il piacere della bellezza nel cervello di chi guarda. Le neuroscienze dell'esperienza edonica</i> (<i>The pleasure of beauty in the brain of the beholder. The neuroscience of hedonic experience</i>).
Date	November 2019
Event	TV Program <i>Fuori La Voce</i> , on national broadcast <i>Laeffe</i>
Description	I participated as a guest during the second episode of the series, discussing the neuroscience behind the perception of beauty. The program (in Italian) is now available on demand on the My Movies platform: https://www.mymovies.it/on-demand/laeffe/movie/13210-fuori-la-voce/
Date	September 2021
Event	TEDx Cremona, Ponchielli Theater (CR)
Description	Invited to discuss the role of experience on the working of attention. TEDx talk <i>I condizionamenti della mente</i> (<i>Mental conditioning: attention and behaviour</i>), available (in Italian) at the link: https://www.youtube.com/watch?v=dqiagh6Yk
Date	April 2022
Event	Armònia Cultural Association, Circolo della Scranna, Forlì
Description	Invited to hold the communication <i>Sete di bellezza: Quando il cervello incontra l'arte</i> (<i>Thirst for beauty: When the brain meets art</i>).
Date	May 2023
Event	Project Domiciliarità 2.0, Trevenzuolo Community (VR)
Description	Invited to hold the communication <i>Attenzione: Che cos'è, come funziona e come cambia nell'arco della vita</i> (<i>Attention: What it is, how it works and how it changes across life</i>).

Speaker at scientific events for schools and educational environments

Date	October 2017
School	Middle School Valerio Catullo, Verona
Description	Invited to hold the lecture <i>L'attenzione ed il cervello</i> (<i>Attention and the brain</i>) within the Brain Awareness Week events.
Date	June 2022
School	Middle School Don Nicola Mazza, Verona
Description	Invited to hold the lecture <i>Dal vedere al guardare</i> (<i>From seeing to looking</i>) to second year students.

Date	September 2022
School	Middle School Don Nicola Mazza, Verona
Description	Invited to hold the lecture <i>Oggi parliamo di... Attenzione (Today we talk about... Attention)</i> to first year students.
Date	June 2023
School	Middle School Don Nicola Mazza, Verona
Description	Invited to hold the lecture <i>Un cervello per vedere (A brain to see)</i> to second year students.
Date	November 2023
School	Middle School Don Nicola Mazza, Verona
Description	Invited to hold the lecture <i>Cervello e comportamento (Brain and behaviour)</i> to first year students.
Date	November 2023
School	Middle School Don Nicola Mazza, Verona
Description	Invited to hold the lecture <i>Noi umani, animali sociali (Us humans, social animals)</i> to second year students.
Date	December 2023
School	High School M.O. Luciano Dal Cero, San Bonifacio (VR)
Description	Invited to hold the lecture <i>Un cervello per vedere (A brain to see)</i> to high school students.

Publications

Publications in peer reviewed scientific journals

Di Caro, V., & **Della Libera, C.** (2021). Statistical learning of target selection and distractor suppression shape attentional priority according to different timeframes. *Scientific Reports*, 11, 13761.

Picelli, A., Filippetti, M., Del Piccolo, L., Schena, F., Chelazzi, L., **Della Libera, C.**, Donadelli, M., et al. (2021). Rehabilitation and Biomarkers of Stroke Recovery: Study Protocol for a Randomized Controlled Trial. *Frontiers in Neurology - Neurorehabilitation*, 11, 618200.

Pirruccio, M., Monaco, S., **Della Libera, C.**, & Cattaneo, L. (2020). Gaze direction influences grasping actions towards unseen, haptically explored, objects. *Scientific Reports*, 10(1), 15774.

Di Caro, V., Theeuwes, J., & **Della Libera, C.**, (2019). Suppression history of distractor location biases attentional and oculomotor control. *Visual Cognition*, 27(2), 142-157.

Della Libera, C., Zandonai, T., Zamboni, L., Santandrea, E., Sandri, M., Lugoboni, F., Chiamulera, C., & Chelazzi, L. (2019). Revealing dissociable attention biases in chronic smokers through an individual-differences approach. *Scientific Reports*, 9(1), 4930.

Pascucci, D., Mancuso, G., Santandrea, E., **Della Libera, C.**, Plomp, G., & Chelazzi, L. (2019). Laws of concatenated perception: Vision goes for novelty, decisions for perseverance. *PLOS Biology*, 17(3), e3000144.

Ferrante, O., Patacca, A., Di Caro, V., **Della Libera, C.**, Santandrea, E., & Chelazzi, L. (2018). Altering spatial priority maps via statistical learning of target selection and distractor filtering. *Cortex*, 102, 67-95.

Della Libera, C., Calletti, R., Estocinová, J., Chelazzi, L., & Santandrea, E. (2017). Reward-based Plasticity of Spatial Priority Maps: Exploiting Inter-subject Variability to Probe the Underlying Neurobiology. *Cognitive Neuroscience*, 8(2), 85-101.

Estocinová, J., Lo Gerfo, E., **Della Libera, C.**, Chelazzi, L., & Santandrea, E. (2016). Augmenting Distractor Filtering via Transcranial Magnetic Stimulation of the Lateral Occipital Cortex. *Cortex*, 84, 63-79.

Perlato, A., Santandrea, E., **Della Libera, C.** & Chelazzi, C. (2014). Biases of attention in chronic smokers: Men and women are not alike. *Cognitive, Affective & Behavioral Neuroscience*, 14, 742-755.

Chelazzi, L., Estocinová, J., Calletti, R., Lo Gerfo, E., Sani, I., **Della Libera, C.** & Santandrea, E. (2014). Altering spatial priority maps via reward-based learning. *The Journal of Neuroscience*. 35, 8594-8604.

Chelazzi, L., Perlato, A., Santandrea, E. & **Della Libera, C.** (2013). Rewards Teach Visual Selective Attention. *Vision Research*, 85, 58-72.

Chelazzi, L., **Della Libera, C.**, Sani, I. & Santandrea, E. (2011). Neural Basis of Visual Selective Attention. *Wiley Interdisciplinary Reviews: Cognitive Science*, 2(4), 392-407.

Della Libera, C., Perlato, A. & Chelazzi, L. (2011). Dissociable effects of reward on attentional learning: From passive associations to active monitoring. *PLoS ONE*, 6(4): e19460.

Della Libera, C. & Chelazzi, L. (2009). Learning to attend and to ignore is a matter of gains and losses. *Psychological Science*, 20(6), 778-784.

Mirabella, G., Bertini, G., Samengo, I., Kilavik, B. E., Frilli, D., **Della Libera, C.**, & Chelazzi, L. (2007). Neurons in area V4 of the macaque translate attended visual features into behaviorally relevant categories. *Neuron*, 54(2), 303-318.

Della Libera, C. & Chelazzi, L. (2006). Visual selective attention and the effects of monetary rewards. *Psychological Science*, 17(3), 222-227.

Publication in peer-reviewed non ISI journal

Della Libera, C. & Stablum, F. (2004). Processi e meccanismi sottostanti il cambiare compito (*Processes and mechanisms underlying task switching*). *Giornale Italiano di Psicologia*, (*Italian Psychology Journal*), 31(2), 279-303.

Book chapters

Della Libera, C. & Chelazzi, L. (2022). Capitolo 16. Aspetti generali della funzione visiva. In *Fisiologia Umana* (2° edizione), F. Grassi, D. Negrini, C.A. Porro, P. Borroni, G. Cerri, M. Zoli (Eds.), Milano: Poletto editore.

Della Libera, C. & Chelazzi, L. (2022). Capitolo 17. Princìpi di ottica fisiologica. In *Fisiologia Umana* (2° edizione), F. Grassi, D. Negrini, C.A. Porro, P. Borroni, G. Cerri, M. Zoli (Eds.), Milano: Poletto editore.

Della Libera, C. & Chelazzi, L. (2022). Capitolo 19. Elaborazione corticale dei segnali visivi. In *Fisiologia Umana* (2° edizione), F. Grassi, D. Negrini, C.A. Porro, P. Borroni, G. Cerri, M. Zoli (Eds.), Milano: Poletto editore.

Della Libera, C. & Chelazzi, L. (2015). Capitolo 14. Aspetti generali della funzione visiva. In *Fisiologia Umana*, F. Grassi, D. Negrini e C.A. Porro (Eds.), Milano: Poletto editore.

Della Libera, C. & Chelazzi, L. (2015). Capitolo 15. Princìpi di ottica fisiologica. In *Fisiologia Umana*, F. Grassi, D. Negrini e C.A. Porro (Eds.), Milano: Poletto editore.

Della Libera, C. & Chelazzi, L. (2015). Capitolo 17. Elaborazione corticale dei segnali visivi. In *Fisiologia Umana*, F. Grassi, D. Negrini e C.A. Porro (Eds.), Milano: Poletto editore.

Chelazzi, L., **Della Libera, C.** & Santandrea, E. (2009). Attentional mechanisms in the ventral pathway. In L. Squire, T. Albright, F. Bloom, F. Gage and N. Spitzer (Eds.), *The New Encyclopedia of Neuroscience* (pp. 647-653), Elsevier, Oxford.

Other published work

Della Libera, C. (2021). Collana “Il Vocabolario dell’Arca”. Volume 3: Conoscenza. Otranto (LE): AnimaMundi Edizioni.

Conference presentations

Since 2001 I have authored over thirty national and international peer-reviewed conference presentations, in the form of either posters or spoken communications. I was the presenting author in over half of these.

Referee activity

Since 2020 I am an Associate Editor for the journal *Psychology & Neuroscience*, APA Press.

Since 2021 I am an Editorial Board Member for the journal *Scientific Reports*, Springer Nature.

I regularly act as a referee for the following scientific journals: Annals of the New York Academy of Sciences; Attention Perception & Psychophysics; Cognition; Cognitive Affective & Behavioral Neuroscience; Current Directions in Psychological Science; Emotion; Experimental Brain Research; Frontiers in Human Neuroscience; Journal of Cognitive Psychology; Journal of Experimental Psychology: Human Perception and Performance; Journal of Experimental Psychology: Learning, Memory and Cognition; Journal of Neurology, Neurosurgery & Psychiatry; Journal of Vision; Neuropsychologia; Neuroscience Letters; Perception; Personality and Social Psychology Bulletin; Physiology & Behavior; PLoS ONE; Proceedings of the Royal Society B; Psychological Science; Psychological Research; Psychonomic Bulletin & Review; Psychophysiology; Scientific Reports; Visual Cognition.

I act as an external consultant referee for the *FWO Vlaanderen – Fonds Wetenschappelijk Onderzoek, Research Foundation – Flanders, Belgium*.

Other interests

I have studied the Flute for many years, achieving a Flute (and piccolo) intermediate degree at the Giuseppe Nicolini Conservatory of Piacenza in 1998, and I play regularly especially in chamber ensembles.

I volunteer within musical associations promoting access to music education for children and adolescents.

I am a founding member and referent for the Orchestra of the University of Verona (www.orchestraunivr.it).