

## Yifei He, Dr. phil., M. Sc.

Birth: 1984 in Wuhan, China  
Nationality: Chinese  
Family status: Married, two children (07.2014/07.2021)  
Affiliation: Translational Neuroimaging Lab, Department of Psychiatry and Psychotherapy, School of Medicine, Philipps University Marburg  
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### Education

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- 2010 – 2016 Dr. phil. in Linguistics, Johannes Gutenberg University Mainz, Germany  
- thesis title: *Interactive processing within and beyond sentence-level: An ERP investigation of simple and complex Chinese sentences*  
- summa cum laude; supervisor: Prof. Dr. Matthias Schlesewsky
- 2007 – 2009 M. Sc. in Clinical Linguistics, European Master in Clinical Linguistics (EMCL):  
University of Milano-Bicocca, Italy || University of Groningen, the Netherlands ||  
University of Potsdam, Germany  
- thesis title: *Semantics, syntax, and distance: An ERP study on Chinese classifiers*  
- excellent (A); supervisor: Dr. Laurie Stowe
- 2002 – 2006 B. A. in English linguistics and literature, Renmin University of China, China

### Research positions

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- 2016 – present Post-doc (Wissenschaftlicher Mitarbeiter), Translational Neuroimaging Lab, Department of Psychiatry and Psychotherapy, Philipps University Marburg, Germany; advisor: Prof. Dr. Benjamin Straube
- 2015 Parental leave (full-time, 3 months)
- 2012 – 2016 Pre-doctoral researcher (Wissenschaftlicher Mitarbeiter), Department of Psychiatry and Psychotherapy, Philipps University Marburg, Germany; advisor: Prof. Dr. Benjamin Straube
- 2010 – 2012 Doctoral student (Stipendiat), Department of Linguistics, Johannes Gutenberg University Mainz, Germany; supervisor: Prof. Dr. Matthias Schlesewsky

### Research grants

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- 2021 – 2023 Cooperation Research Project funded by University Hospital Giessen Marburg (UKGM): *The role of N-methyl-D-aspartate glutamate receptor (NMDAR) during sensory and semantic prediction in schizophrenia: a cross-sectional EEG investigation on brain oscillations*. Volume: €116,000, PI: **Dr. Yifei He**, Co-PI: Prof. Dr. Arne Nagels, Prof. Dr. Christoph Mulert
- 2020 – 2022 DFG-funded Individual Research Grant: *Multistage-integration during co-speech gesture integration: a systematic investigation combining EEG and fMRI* (HE8029/2-1). Volume: €250,000, PI: **Dr. Yifei He**, Co-PI: Prof. Dr. Benjamin Straube
- 2020 – 2022 Cooperation Research Project funded by University Hospital Giessen Marburg (UKGM): *Developing and investigating the neurobiological basis for social-cognitive intervention*

*Preprints or manuscripts submitted & under revision in peer-reviewed journals*

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- preprint Sommer, J., Hansen-Schirra, S., Nagels, A., & **He, Y.** (2021). Processing linguistic negation with and without truth-value evaluation: Evidence from N400 and theta oscillations. *PsyArXiv*.
- preprint Cuevas, P.\*, **He, Y.\***, Steines, M., & Straube, B. (2021). The processing of semantic complexity and co-speech gestures in schizophrenia: a naturalistic, multimodal fMRI study. *bioRxiv*. (\* contributed equally).

*Peer-reviewed publications*

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- 2021 Meyer, L., Lakatos, P., & **He, Y.** (2021). Language Dysfunction in Schizophrenia: Assessing Neural Tracking to Characterize the Underlying Disorder (s)? *Frontiers in Neuroscience*, 15, 163.
- 2021 **He, Y.**, Steines, M., Sammer, G., Nagels, A., Kircher, T., & Straube, B. (2021). Modality-specific dysfunctional neural processing of social and non-social information in schizophrenia. *Neuroimage Clinical*, 29, 102568.
- 2021 Cuevas, P., **He, Y.**, Billino, J., Kozasa, E., & Straube, B. (2021). Age-related effects on the neural processing of semantic complexity in a continuous narrative: Modulation by gestures already present in young to mid-aged adults. *Neuropsychologia*, 151, 107725.
- 2020 **He, Y.**, Luell, S., Muralikrishnan, R., Straube, B., & Nagels, A. (2020). Gesture's body orientation modulates the N400 for visual sentences primed by gestures. *Human Brain Mapping*, 41(17), 4901-4911.
- 2020 Wroblewski, A., **He, Y.**, & Straube, B. (2020). Dynamic Causal Modelling suggests impaired effective connectivity in patients with schizophrenia spectrum disorders during gesture-speech integration. *Schizophrenia Research*, 216, 175-283.
- 2020 Hou, J., **He, Y.**, Zhao, X., Thai, J., Fan, M., Feng, Y., & Huang, L. (2020). The effects of job satisfaction and psychological resilience on job performance among residents of the Standardized Residency Training: a nationwide study in China. *Psychology, Health & Medicine*. 1-13.
- 2019 Cuevas, P., Steines, M., **He, Y.**, Nagels, A., Culham, J., & Straube, B. (2019). The facilitative effect of gestures on the neural processing of semantic complexity in a continuous narrative. *Neuroimage*, 195, 38-47.
- 2018 Straube, B., Wroblewski, A., Jansen, A., **He, Y.** (2018). The connectivity signature of co-speech gesture integration: the superior temporal sulcus modulates connectivity between areas related to visual gesture and auditory speech processing. *Neuroimage*, 181, 539-549.
- 2018 **He, Y.**, Nagels, A., Schlesewsky, M., & Straube, B. (2018). The role of gamma oscillations during integration of metaphoric gestures and abstract speech. *Frontiers in Psychology*, 9, 1348.
- 2018 **He, Y.**, Steines, M., Gebhardt, H., Sammer, G., Kircher, T., Nagels, A., & Straube, B. (2018). Spatial-temporal dynamics of gesture-speech integration: a simultaneous EEG-fMRI study. *Brain Structure and Function*, 223(7), 3073-3089.
- 2018 **He, Y.**, Steines, M., Sammer, G., Nagels, A., Kircher, T., & Straube, B. (2018). Action-related speech modulates beta oscillations during observation of tool-use gestures. *Brain Topography*, 31, 8, 838-847.

- 2015 **He, Y.**, Gebhardt, H., Steines, M., Sammer, G., Kircher, T., Nagels, A., & Straube, B. (2015). The spatial and temporal signatures of neural integration: an fMRI and EEG investigation of meaningful gestures and corresponding speech. *Neuropsychologia*, 72, 27-42.
- 2013 Straube, B., **He, Y.**, Steines, M., Gebhardt, H., Kircher, T., Sammer, G., & Nagels, A. (2013). Supramodal neural processing of abstract information conveyed by speech and gesture. *Frontiers in Behavioral Neuroscience*, 7, 120.

#### *Talks (invited)*

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- 2021 *Investigating multimodal language processing with multimodal neuroimaging methods*  
– Max Planck Institute for Psycholinguistics, Nijmegen, the Netherlands
- 2021 *How gesture integrates and interacts with speech during online comprehension*  
– Center for Language Evolution, The University of Edinburgh
- 2019 *Exploring gesture-speech interaction using multimodal neuroscientific methods: a translational perspective*  
– Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 2019 *Investigating gesture-speech interaction using multimodal neuroscientific methods*  
– Johannes Gutenberg University Mainz, Mainz, Germany
- 2018 *Gesture-speech interaction in time, frequency, and space*  
– Albert-Einstein Hospital, São Paulo, Brazil
- 2018 *Unveiling the brain dynamics of gesture-speech interaction using EEG, fMRI, simultaneous EEG-fMRI, and tDCS*  
– Zhejiang University of Technology, Hangzhou, China
- 2018 *Investigating human cognitive functions and dysfunctions with neuroscientific methods*  
– Harbin Institute of Technology, Harbin, China
- 2017 *Hand gestures alert auditory cortices to process foreign language*  
– Johannes Gutenberg University Mainz, Mainz, Germany

#### *Talks (other)*

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- 2020 *Polarity effects in negated sentences with and without truth value reversal: Evidence from N400 and theta oscillations.*  
– ‘The Processing of Negation and Polarity’ workshop, Berlin, Germany
- 2018 *Gamma band oscillations mediate comprehension of metaphoric co-speech gestures.*  
– The Conference of Experimental Psychologists (TEAP), Marburg, Germany
- 2016 *Gesture-speech integration in time and space: a combined EEG-fMRI study.*  
– International Society of Gesture Studies (ISGS), Paris, France
- 2014 *Subject relative clause preference in Chinese: processing relative clause with two gaps.*  
– Annual meeting of the German Linguistic Society (DGfS), Marburg, Germany
- 2013 *The missing power: Language mediates sensorimotor-related beta oscillations during online comprehension of different types of co-speech gestures*  
– Tilburg Gesture Research Meeting (TiGER), Tilburg, the Netherlands
- 2011 *Prominence beyond sentence: an ERP study of ‘pro-drop’ constructions in Chinese.*  
– Workshop of Experimental Pragmatics, Mainz, Germany

### *Posters (first author)*

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**2019:** Ling-Cologne Multimodal Language, Cologne, Germany; **2014:** International Society of Gesture Studies (ISGS), San Diego, USA; The Conference of Experimental Psychologists (TEAP), Giessen, Germany; **2013:** Architectures and Mechanisms for Language Processing (AMLaP), Marseille, France; Robert Sommer Award Symposium (RSA), Giessen, Germany; **2011:** Neurobiology of Language (SNL), Annapolis, USA

### *Posters (co-author)*

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**2019:** International Conference on Education, Economics and Management Research (ICEEMR), Singapore; **2017:** Organization for Human Brain Mapping (OHBM), Vancouver, Canada; **2016:** Robert Sommer Award Symposium (RSA), Giessen, Germany (n = 2); **2010:** Organization for Human Brain Mapping (OHBM), Barcelona, Spain; **2009:** Formal vs. Processing Explanations of Processing Phenomena Conference, York, UK

### *Fellowships and awards*

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2019	Best Poster Award, Ling-Cologne 2019 Conference in Multimodal Language (€500)
2010	Pro Geistes- und Sozialwissenschaften Stipendium, Johannes Gutenberg University Mainz (€30,000)
2007	Erasmus Mundus Master's Scholarship, the European Union (€24,000)

### *Editorial service*

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Frontiers in Human Neuroscience: Review Editor (from 2020)  
Cognitive Processing: Handling Editor (from 2020)

### *Ad hoc review*

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Cerebral Cortex; Developmental Psychobiology; Language, Cognition and Neuroscience; Neuropsychologia; Neuroimage Clinical; Frontiers in Psychology; Journal of Neuroscience; IEEE Transactions on Neural Systems & Rehabilitation Engineering; Cognitive Processing; Neuroimage; Brain Research; European Archives of Psychiatry and Clinical Neuroscience; Human Brain Mapping; Biological Psychology; Psychological Medicine; Frontiers in Human Neuroscience; Pragmatics and Cognition; Journal of Clinical Medicine; Brain Sciences