

16893 Colloquium/Seminar

### **Progress in Brain Language Research**

Friedemann Pulvermüller

2 SWS, Seminar/Colloquium

Zeit/Time: Mi/Wed 16-18 h

Ort/Location: JK 31/122 Geschäftszimmer (Habelschwerdter Allee 45)

This research seminar focuses on reviewing and discussing recent progress in the cognitive neuroscience of language. It has three main strands. 1) External speakers will set the stage for focused discussions. 2) In depth reviews of research publications will provide insights into recent progress in specific research areas. 3) Researchers at the FU Berlin's Brain Language Laboratory and seminar participants interested in semantics, pragmatics and/or their cognitive and brain basis will present their own research plans and aspects of their ongoing work to open discussion of future perspectives. In this context, MA and BA students may present work for their theses.

Hot seminar topics in the new semester include new experimental findings in the context of three ongoing research projects, which respectively focus on experimental pragmatics, neurosemantics and therapy of language and communication.

Recommended reading:

Dreyer, F. R., & Pulvermüller, F. (2018). Abstract semantics in the motor system?—An event-related fMRI study on passive reading of semantic word categories carrying abstract emotional and mental meaning. *Cortex*, in press.

Grisoni, L., Miller, T. M., & Pulvermüller, F. (2017). Neural Correlates of Semantic Prediction and Resolution in Sentence Processing. *J Neurosci*, 37(18), 4848-4858. doi:10.1523/JNEUROSCI.2800-16.2017

Miller, T. M., Schmidt, T. T., Blankenburg, F., & Pulvermüller, F. (2017). Verbal labels facilitate tactile perception. *Cognition*, 171, 172-179. doi:10.1016/j.cognition.2017.10.010.

Pulvermüller, F. (2018). Neural reuse of action perception circuits for language, concepts and communication. *Progress in Neurobiology*, in press. doi:10.1016/j.pneurobio.2017.07.001.

Pulvermüller, F. (2018). The case of CAUSE: Neurobiological mechanisms for grounding an abstract concept. *Philosophical Transactions of the Royal Society, London, B: Biological Sciences*, in press

Schomers, M. R., Garagnani, M., & Pulvermüller, F. (2017). Neurocomputational consequences of evolutionary connectivity changes in perisylvian language cortex. *J Neurosci*, 37(11), 3045-3055.

Stahl, B., Mohr, B., Büscher, V., Dreyer, F. R., Lucchese, G., & Pulvermüller, F. (2018). Efficacy of intensive aphasia therapy in chronic stroke patients: A randomised controlled trial. *Journal of Neurology, Neurosurgery, and Psychiatry*, in press.

Tomasello, R., Garagnani, M., Wennekers, T., & Pulvermüller, F. (2017). Brain connections of words, perceptions and actions: A neurobiological model of spatio-temporal semantic activation in the human cortex. *Neuropsychologia*, 98(4), 111–129. doi:10.1016/j.neuropsychologia.2016.07.004.

## Technicalities

The course is part of the teaching offered by the Freie Universität's FB Philosophy and Humanities and by the Berlin School of Mind and Brain at the Humboldt Universität. It is open to interested students from all departments. It will be chaired by Friedemann Pulvermüller and co-organised by XXX under the admin support of Verena Arndt.

To obtain a certificate of attendance, it is necessary to

- attend most of the sessions (maximum misses: three),
- pre- and reprocess the session content by reading the recommended key papers, and
- present a key paper, own research or a research plan addressing the language mechanisms of the human brain. Presentations can be brief or last up to 30'.

Contact and more information:

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Friedemann Pulvermüller, rm JK 31/232; Office hour: Wed 12-13 h

For more information and updates, please visit:

<http://www.brainlang.fu-berlin.de/teaching>, <http://www.brainlang.fu-berlin.de/talks>

## Seminar Program

Unless otherwise noted, the Seminar will be held on Wednesdays, from 16:15 – 17:45 h in room JK 31/122 of the main building of the Freie Universität Berlin, Habelschwerdter Allee 45, 14195 Berlin.

### 05.04. Research talk

*Lea Doppelbauer, FUB: Practice talk aphasia therapy and simulation of language reorganization*

### 18.04. Seminar overview and planning of the summer term

### 25.04. Research talk

*Rosario Tomasello, FUB: A neurobiologically constrained neural network of semantic processing of the sighted and blind brain*

### Fri, 27.04., 5 pm, JK 31/102, Guest lecture/Workshop:

**Prof Yury Shtyrov, Aarhus University**

**Neurophysiology of word acquisition: EEG, MEG, MRI and TMS evidence**

### 02.05. Research talk

*Dr. Felix Dreyer, FUB: Rivera-Rivera et al. (2017): Cortical plasticity catalyzed by prehabilitation enables extensive resection of brain tumors in eloquent areas*

*Valerie Keller, FUB: The influence of the motor cortex on the perception of images and language: a study plan*

### 09.05. Research talk

*Dr. Luigi Grisoni, FUB: tba*

**16.05. Research talk**

*Lea Doppelbauer, FUB: Current research results on aphasia therapy*

**23.05. Research talk**

*Konstantina Margiotoudi, Berlin School Mind & Brain: Sound symbolism in humans and great apes. New perspectives on the evolution of language*

**30.05. Research talk**

*Isabella Boux, Einstein Centre of Neuroscience: Investigating indirectness in language: study ideas*

**Fri, 01.06., 2 pm, K 31/201, Guest lecture:**

**Prof Christina Kauschke, Philipps-Universität Marburg**

**Die Versprachlichung von Emotionen im Spracherwerb und bei klinischen Populationen**

**06.06. Research talk**

*Tally Miller, FUB: Regier, T.; Xu, Y. (2017) The Sapir-Whorf hypothesis and inference under uncertainty. Wiley Interdiscip. Rev. Cogn. Sci. 8, doi:10.1002/wcs.1440*

*Inna Vorobei: Theories of language evolution / Spracherwerbstheorien*

*Fitch, W.T. Empirical Approaches to the Study of language Evolution.*

*Psychon Bull Rev (2017) 24: 3. <https://doi.org/10.3758/s13423-017-1236-5>*

**Fri, 08.06., 4 pm, JK 31/122, Guest lecture:**

**Dr Napoleon Katsos, University of Oxford**

**How children learn “some”, “all”, and “most”, words**

**Tue, 12.06., 2pm, JK 31/102, Guest lecture:**

**Prof Dr Gunter Gebauer, FU Berlin**

**Wie können wir über Emotionen sprechen?**

*13.06. No seminar*

**20.06. Research talk**

*Dr. Felix Dreyer, FUB: fMRI correlates of aphasia therapy effects*

**27.06. Project presentations**

*Melinda Mende, Universität Potsdam: The meaning of negation*

*Maria Nikolaeva: Theories of neural correlates of abstract semantics: Similarities and contradictions*

*04.07. No seminar*

**11.07. Research talk**

**TBA**

**18.07. Seminar evaluation and outlook**

Planning of program for the semester break and winter term