Accepted Manuscript

Title: Neural network communication facilitates verbal working memory

Authors: Thomas Kustermann, Brigitte Rockstroh, Gregory A. Miller, Tzvetan Popov

 PII:
 \$0301-0511(18)30410-1

 DOI:
 https://doi.org/10.1016/j.biopsycho.2018.05.018

 Reference:
 BIOPSY 7546

To appear in:

 Received date:
 10-8-2017

 Revised date:
 8-3-2018

 Accepted date:
 22-5-2018



Please cite this article as: Kustermann, Thomas, Rockstroh, Brigitte, Miller, Gregory A., Popov, Tzvetan, Neural network communication facilitates verbal working memory.Biological Psychology https://doi.org/10.1016/j.biopsycho.2018.05.018

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Neural net communication in verbal working memory

Title

Neural network communication facilitates verbal working memory

Author names and affiliations

Thomas Kustermann^{a,*}, Brigitte Rockstroh^a, Gregory A. Miller^b, Tzvetan Popov^a

^aDepartment of Psychology, University of Konstanz, Universitätsstraße 10, 78457 Konstanz

^bDepartment of Psychology and Department of Psychiatry and Biobehavioral Sciences, UCLA,

1285 Franz Hall, Los Angeles, CA 90095-1563

Author emails: thomas.kustermann@uni-konstanz.de, brigitte.rockstroh@uni-konstanz.de, gamiller@ucla.edu, tzvetan.popov@uni-konstanz.de

*Corresponding Author

Thomas Kustermann, Department of Psychology, PO Box 905, University Konstanz, D-78457

Konstanz, Germany; email: thomas.kustermann@uni-konstanz.de

Highlights

- Lateralized working memory (WM) stimulus arrays prompt lateralized alpha and gamma changes.
- Load-dependent alpha-gamma lateralization facilitates WM encoding.
- Load-dependent posterior alpha power increase reflects item maintenance.
- Encoding and maintenance processes are implemented via lateralized oscillations and bilateral alpha power increases respectively, reflecting task demands.
- Frontal-posterior alpha-theta phase synchrony facilitates efficient memory retrieval evidenced in reaction time.

Download English Version:

https://daneshyari.com/en/article/7278091

Download Persian Version:

https://daneshyari.com/article/7278091

Daneshyari.com