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Improving preoperative nTMS with a dual-task protocol

Ohlerth, Ann-Katrin

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PROPOSITIONS
accompanying the thesis

IMPROVING PREOPERATIVE NTMS WITH A DUAL-TASK PROTOCOL
-
THE CONTRIBUTION OF ACTION NAMING TO LANGUAGE MAPPING

by
Ann-Katrin Ohlerth

1. Action Naming recruits a more extensive cortico-subcortical network than Object Naming and, hence, increases the sensitivity of preoperative language mapping with navigated Transcranial Magnetic Stimulation.
(This Dissertation, Chapters 3-5)
2. No classical inter-lobe, but smaller intra-lobe differences in left temporal areas distinguish Action from Object Naming involvement at the group level; larger differences are only found at the single case level.
(This Dissertation, Chapters 3+5)
3. The ventral stream tracts Inferior Fronto-Occipital Fascicle and Inferior Longitudinal Fascicle are particularly involved in Action Naming and are, therefore, network components that are fragile during neurosurgical intervention.
(This Dissertation, Chapter 4+5)
4. Action Naming requires greater cognitive demands on lexico-semantic retrieval than Object Naming when verbs are embedded in sentence contexts compared to nouns.
(This Dissertation, Chapter 2-5)
5. The right hemisphere pattern of cortical and subcortical involvement mirrors that of the left hemisphere more closely for both Object and Action Naming than is classically assumed.
(This Dissertation, Chapters 3+4)
6. Perioperative language assessment should rely on a dual-task approach using both Object and Action Naming, since double dissociations in single cases are to be expected both behaviorally and anatomically.
(This Dissertation, Chapters 5)
7. It is pivotal to employ test batteries with standardized, linguistically motivated tasks and a detailed error analysis in order to reveal the individual language status and inform preoperative mapping.
(This Dissertation, Chapters 2-5)
8. If the human brain were so simple that we could understand it, we would be so simple that we couldn't.
*(Emerson M. Pugh, *Author's note: Quote from his father around 1938.)*
9. You're only as good as the person you are sitting next to.
(Anja Latrouite, Introduction lecture to B.A. Linguistics at Heinrich-Heine-Universität Düsseldorf, October 2010)
10. Am Engk, wer weeiß.
(A popular saying in regional dialect Eifler Platt: "In the end, who knows". Meaning: You will never know what this current, possibly unfortunate, circumstance might lead to in the end.)