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From oscillations to language: behavioural and electroencephalographic studies on cross-language interactions

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From oscillations to language



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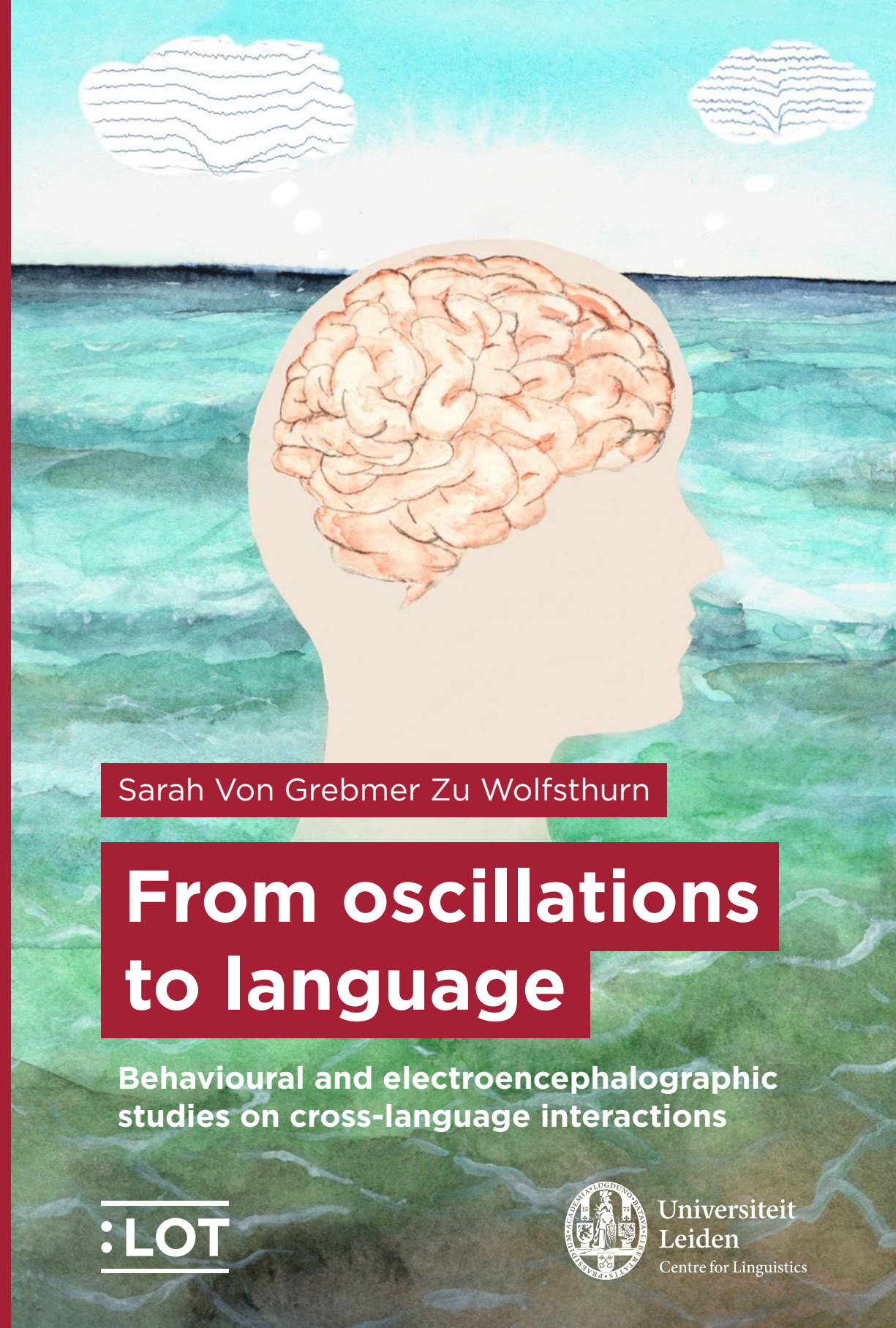
Behavioural and electroencephalographic studies on cross-language interactions

Speaking more than one language has a profound impact on both the mind and the brain. But how does the multilingual brain manage a native language as well as a non-native language, specifically when the non-native language was acquired later in development? In this thesis, we aimed to characterise the multilingual experience of late language learners in three ways. First, we examined how the cross-linguistic influence (CLI) between the native language and the non-native language influenced non-native comprehension and non-native production. Second, we directly compared different multilingual populations to quantify the broader impact of language similarity on both CLI and non-native comprehension and production. Third, we examined whether and how language similarity played a modulating role beyond language processing in terms of higher cognitive functioning, for example inhibitory control. These are critical issues because they speak directly to the notion of how the native language and the non-native language co-exist in the brain. Further, they help us characterise the functional organisation of these languages in the multilingual brain. Across several studies, we systematically explored these three issues by using a range of different experimental paradigms as well as a combination of behavioural and electroencephalographic measures. In this, we pushed the theoretical boundaries of the issues in question and contributed novel evidence to this area of research.

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