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Lexical Retrieval in Diglossic Aphasia

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Introduction

While bilingual aphasia has recently gained more interest in aphasiology (Grunden et al., 2020; Kiran & Gray, 2018), there is almost no research in aphasia among the diglossic population, i.e. persons speaking a standard variety and a dialect, with each variety being able to perform a distinct sociolinguistic function. It is assumed that a high number of people worldwide speak a dialect as well as a standard variety. Diglossia may be compared to bilingualism, in as such that both variants may seem to be activated simultaneously. Nevertheless, it is still a matter of debate how the processes of lexical selection in bilinguals and diglossics are executed (Costa et al., 1999; Green, 1998; Green & Abutalebi, 2008). Recent studies investigating dialect processing suggest that lexical retrieval mechanisms are comparable to the ones found in bilinguals (Vorwerg et al., 2019). So far, hardly any study has examined diglossic aphasia (Widmer Beierlein & Vorwerg, 2020). In Switzerland, a high percentage of Swiss people is diglossic, and Swiss German dialects (SG) are used for oral communication in almost all settings regardless of the social status of the speaker, and enjoy high prestige. SG is the first language of most Swiss people. High German (HG) in contrast is used for formal communication, reading and writing (Haas, 2004). The following study addresses diglossic word retrieval of low frequent nouns and verbs of persons with aphasia (PWA), measuring correctness and naming latencies in a picture naming task.

Methods

33 PWA (20 Anomic, 7 Broca's, 5 Wernicke's, 1 Global) and 33 healthy controls, all of them with SG as first language, underwent a picture naming test containing single nouns and verbs. Half of the pictures were named in SG and the other half in HG. The analysis was performed using generalized linear mixed models.

Results

PWA are significantly less correct and slower than the control group. Furthermore, the naming latencies show that the control group is faster in SG than in HG, while PWA are faster in HG than in SG. Within the group of PWA, the naming correctness is significantly higher in HG compared to SG. A comparison of the different aphasia syndromes shows

that participants with anomic aphasia name significantly more correctly than participants with Broca's and Wernicke's aphasia. The lighter the naming severity, the more correctly and quickly PWA name.
Figure 1 shows the naming latencies for PWA and the control group.

Conclusions
The current study shows that lexical retrieval in healthy diglossic speakers may be similar to language production in bilinguals with faster lexical retrieval in the first language, i.e. the dialect. This effect could not be replicated in the aphasic group, indicating that lexical retrieval and selection mechanisms involved in differentiating between varieties, may be impaired in aphasia and should be taken into account in diagnosis and therapy.

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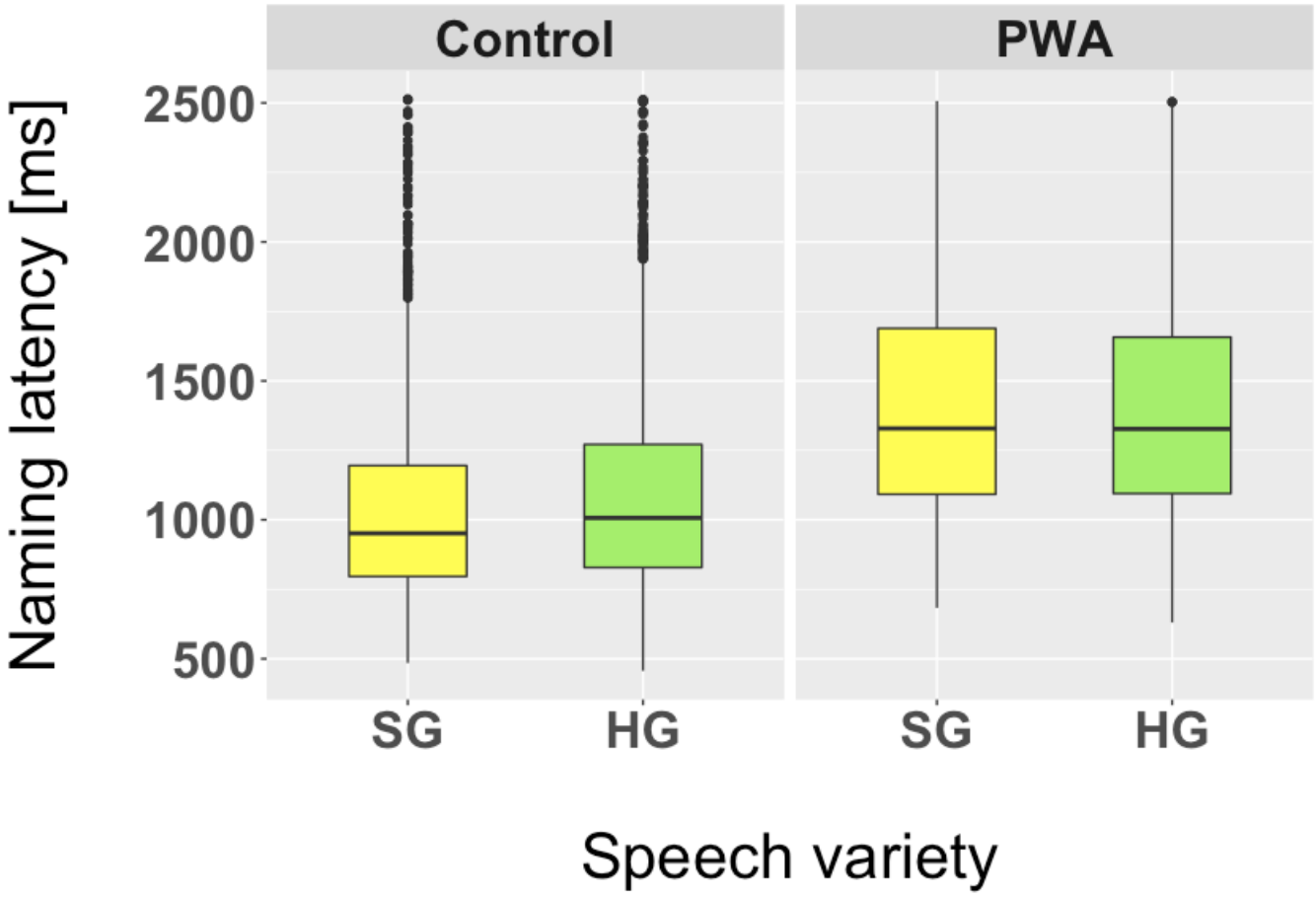

Figure 1. Naming Latency in (ms) in Swiss German (SG) and High German (HG) for the control group and PWA.