博士学位論文内容の要旨

氏　　名	安田（ヤスダ）　真章（マサアキ）
所　　属	人間健康科学研究科　人間健康科学専攻
学位の種類	博士（健康科学）
学位記番号	健博　第129号
学位授与の日付	平成29年3月25日
課程・論文の別	学位規則第4条第1項該当
学位論文題名	Peripheral bodily states affect information processing of action words （身体状況が言語処理過程に与える影響について）
論文審査委員	主査　教　授　樋口　貴広 委員　教　授　北　一郎 委員　教　授　西島　壮

【論文の内容の要旨】

Evidence is increasing that brain areas that are responsible for action planning and execution are activated during the information processing of action-related verbs (e.g., *pick* or *kick*). To obtain further evidence, we conducted six experiments to see whether constraining arm posture, which could disturb motor planning and imagery for that arm, would lead to the delayed judgment of verbs referring to arm actions. In all experiments, native Japanese speaker participants performed two tasks. In compatibility judgment task, participants judged as quickly as possible whether the presented object and the verb would be compatible (e.g., *ball–throw*) or not (e.g., *ball–pour*). Constrained arm posture was introduced to the task by asking participants to keep both hands behind their backs. Two types of verbs were used: manual action verbs (MA verbs) and non-manual action

verbs (non-MA verbs). In a word detection task, participants were asked to react as quickly as possible when a word was presented.

In experiment 1, we hypothesized that, for the compatibility judgment task, delayed judgment by constrained arm posture would be observed, particularly for manual action (MA) verbs but not for non-manual action (non-MA) verbs because only MA verbs are related to manual actions. In contrast, for the word detection task, constrained arm postures would not affect the judgment time. In Experiments 3 and 4, we addressed whether the effect of constrained arm posture would be reproduced when the compatibility judgment task was performed when the response method was changed from a finger response to a foot (Exp. 3) or voice (Exp. 4) response. Before concluding that constrained arm posture is likely to affect the processing of verbs, regardless of the type of verb, an additional experiment was planned as Experiment 5 to exclude the possibility that the results were produced merely due to the experimental condition, in which a pictured stimulus of an object was presented before a verb. Experiment 6 showed that the effect of constrained arm posture was observed even for compatibility judgments for nouns.

Based on the results of all experiments, we concluded that constrained arm posture could result in the peripheral bodily state’s affecting the information processing of words. The findings were discussed based on the idea that a body schema is involved in the information processing of action-related words.