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Authors

Fukada, Chie
Nishizaki, Yukiko
Sasaki, Kaishi
et al.

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Our construal and bodily actions are impacted by changes in language and virtual viewpoints

Chie Fukada

Kyoto Institute of Technology, Kyoto, Japan

Yukiko Nishizaki

Kyoto Institute of Technology, Kyoto, Japan

Kaishi Sasaki

Kyoto Institute of Technology, Kyoto, Japan

Noriyuki Kida

Kyoto Institute of Technology, Kyoto, Japan

Abstract

Language reflects our construal of the world which is grounded in everyday sensorimotor experience. Thus, when we experience a particular world including our real physical world, linguistic explanations about it induce particular ways to see it which sometimes influences our behaviors. This study explores such effects of language, especially when the world is virtually presented on a head-mounted display (HMD). We showed university student participants an on-campus view, which was familiar to them but captured from a height of three meters, via a HMD with either of the following two linguistic instructions, “You gradually grow huge.” and “You gradually float up in the air.” Then, they were asked to produce some physical actions while wearing the HMD and answer questions on their bodily images and imagination levels. We discuss a possible interrelationship between language, visual perception, imagination and bodily action, including how they facilitate or restrict each other.