

# **Constructing Imaginary Worlds with Hands : Do Knowledge Levels of an Explainee Induce Different Gestures from Explainers?**

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**Abstract:** The human spontaneous gestures that accompany ones speech are a tool used to express ones thinking. Also, as the environment changes, one changes the mental representation accordingly to adjust to that environment. The present study investigates if an explainer regards a listener as part of the environment surrounding him/her and if that explainer changes gesture patterns when explaining concepts to listeners with varying knowledge levels. The findings suggest that people tend to use different types of gestures while they explain a conceptual knowledge, depending on the listeners presumed knowledge level. The results indicate that different environmental conditions shape ones mental representation and ones use of space as a cognitive sketchpad by tailoring the hands.