

Hand size appears to stay constant, providing natural 'ruler'

September 29 2014

People tend to perceive their dominant hand as staying relatively the same size even when it's magnified, lending support to the idea that we use our hand as a constant perceptual "ruler" to measure the world around us. The findings are published in *Psychological Science*, a journal of the Association for Psychological Science.

"These findings suggest that our bodies are used as perceptual metrics, meaning that we are more likely to attribute changes in the perceived size of the hand to changes in the world—instead of thinking that our hand has become bigger, we're more likely to think that the world around the hand has become smaller instead," explains psychological scientist and lead researcher Sally Linkenauger of Lancaster University.

To size up the world around us, we need to be able to translate the information that comes in through our eyes into units that are relevant to our everyday lives. The body is a particularly effective metric because it allows us to relate information about object size to actions that we're able to perform on or with the object.

Linkenauger and colleagues hypothesized that the [dominant hand](#) might be the most useful metric for objects of commensurate size because it is one of our primary means of interacting with our environment, through both touch and grasp. Using magnification, the researchers conducted several experiments to test whether the dominant hand is used as a constant, reliable metric.

Across five experiments, participants viewed their dominant hand, as well as various other items, under 18% magnification. Results showed that the participants consistently estimated their dominant hand to be significantly less magnified than the other items, which included their non-dominant hand, their foot, an experimenter's hand and foot, and a pen.

"In most cases, individuals knew that their dominant hand was under the same degree of magnification as another's hands, feet, and objects, yet they persisted to report that what they experience was a smaller degree of magnification for their dominant hand," says Linkenauger.

"Individuals typically like to be consistent and 'right,' but this effect seemed to override those affectations."

According to Linkenauger, the research may have implications for certain neurological conditions and physical rehabilitation. The research may even have implications for human-computer interfaces, and Linkenauger hopes to investigate whether hand size constancy also applies to virtual environments in which individuals have an animated virtual hand.

More information: pss.sagepub.com/content/early/.../97614548875.abstract

Provided by Association for Psychological Science

Citation: Hand size appears to stay constant, providing natural 'ruler' (2014, September 29)
retrieved 6 May 2024 from
<https://medicalxpress.com/news/2014-09-size-constant-natural-ruler.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.