

The Handiest Tool in the World

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Long before we had inches and centimeters, we had hands. The breadth of a man's hand was the metric of choice at least as far back as ancient Egypt, and the bodily ruler is still used in a few countries, primarily to measure the height of horses.

This makes sense. As tools go, this one is, well, handy. You're not going to misplace it, and it's familiar enough that everyone knows what hand-sized means, at least roughly. And it's easier to use than, say, a foot.

But that's not enough to explain why the hand became such an enduring and popular ruler. For the hand to be reliable as a metric, our perception of it must be constant. That is, we see the world and all its objects from varied and often shifting angles, so that they sometimes seem bigger, sometimes smaller. But our trusty ruler must be the unshifting standard, with which all these other objects are contrasted and compared.

Psychological scientist Sally Linkenauger of Lancaster University, UK, decided to put this idea to the test, to see if hand size is more reliable than other possible rulers. Working with an international team of colleagues, Linkenauger wanted to see if indeed the perceptual system treats hand size as more constant than the sizes of other objects in the world, including other body parts.

The scientists ran several studies in which they used a magnification device to modify the visual information specifying size, and had subjects estimate their hand size and other objects' sizes. In one, for example, the subjects viewed their own dominant hand, their foot, plus another person's hand and foot under a glass that magnified it 18 percent. The subjects were instructed to compare the magnified images with unmagnified hands and feet, and judge how magnified these body parts were. If the perceiver's hand is in fact a natural ruler, the subjects should see it as less changed than the other candidate rulers.

And they did. As reported in a forthcoming article in the journal *Psychological Science*, they saw their own hands—and only their hands—as much less magnified than the other body parts, suggesting that the perceptual system treats the hand as more constant. Linkenauger and her colleagues also ran this experiment with a pen. They picked a pen because it is a tool typically grasped with the dominant hand, and it is also very familiar to everyone. They got the same results, as they did with other variations of the study. In all cases, the subjects reported seeing their dominant hand as more constant in size—despite the fact that they knew they were seeing it magnified exactly the same as the other objects.

So the hand is perceived as uniquely stable, and this stability suggests that this body part is a natural measuring stick, especially useful for scaling nearby graspable objects. Even though we modern humans now have yardsticks and tape measures and other, highly sophisticated tools for measurement, there are still circumstances in which we must rely on our ancient ruler to inform us about how we can interact

with the world.

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