

## Weight of object not an issue when determining left or right-handedness

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More than 90 per cent of the world's population exhibit a strong preference for using their right hand, as opposed to their left, for grasping and lifting everything from car keys to coffee mugs. The cause of this near-global singularity is poorly understood scientifically but new research from The University of Western Ontario proves the perceived weight of an object is not a deciding factor.

The findings were recently published in *Cortex* and can be found [here](#).

Gavin Buckingham, a postdoctoral researcher at Western's Centre for Brain and Mind (CBM), together with CBM Director and Canada Research Chair in Visual Neuroscience Melvyn Goodale and undergraduate student researcher Nathalie Ranger, examined differences in how left and right-handed individuals lift, and perceive the [weight](#) of, objects that weigh more or less than one might expect.

Study participants gripped and lifted objects designed to elicit a powerful [illusion](#) of weight with both their left and right hands. These cubes, which differed in size from one another but weighed exactly the same amount, forced lifters to experience something scientists call the "size-weight illusion," which can be explained as the surprising and persistent sensation that the smaller cube feels substantially heavier than the identically-weighted larger cube.

Buckingham, who is right-handed, and his colleagues found right-handers experienced a stronger illusion when they were lifting with their

left [hand](#), suggesting that their preferred (right) hand was more resistant to the deceptive perceptual effect. Despite this illusion, participants grasped and lifted the cubes in exactly the same way, regardless of which hand did the lifting.

“Even though right-handers perceived the weight of the objects more accurately with their right hand, they did not lift them more skillfully with their right hand than they did with their left hand,” explains Buckingham, who was awarded a Banting Postdoctoral Fellowship earlier this year.

Not unlike right-handers, left-handers showed similar performance between their hands in terms of their gripping and lifting skill. However, in contrast to the right-handers, left-handers experienced the illusion equally strongly with either of their hands, adding to a growing body of evidence that left-handed individuals tend to be more ambidextrous than their right-handed counterparts.

Provided by University of Western Ontario

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