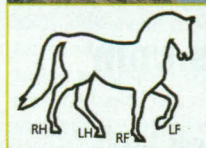


Cave Painters Had a Leg Up on Modern Artists

Prehistorians have long appreciated Paleolithic cave paintings for their intricacy, visual depth and vibrant color. Now there is further reason to admire our ancestors' artistry. According to a recent study led by Gábor Horváth, a biological physicist at Eötvös University in Hungary, cave painters understood — better than many artists of the modern age — the laws governing animal motion. With the invention of weapons and binoculars that allowed hunting from a greater distance, Horváth suggests, “modern humans really lost the skill to observe.”

THE WALKING MATRIX

To determine the accuracy of each image, researchers used an 8-by-8 matrix of the stride of a horse walking left to right. In a given cell, the forefeet attitudes belonging to the cell's row are paired with the hind feet postures belonging to the cell's column. The gray squares indicate the correct depictions. The study author often used mirror images of photos so each animal walks from left to right.



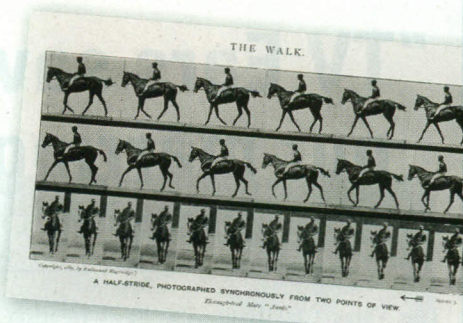
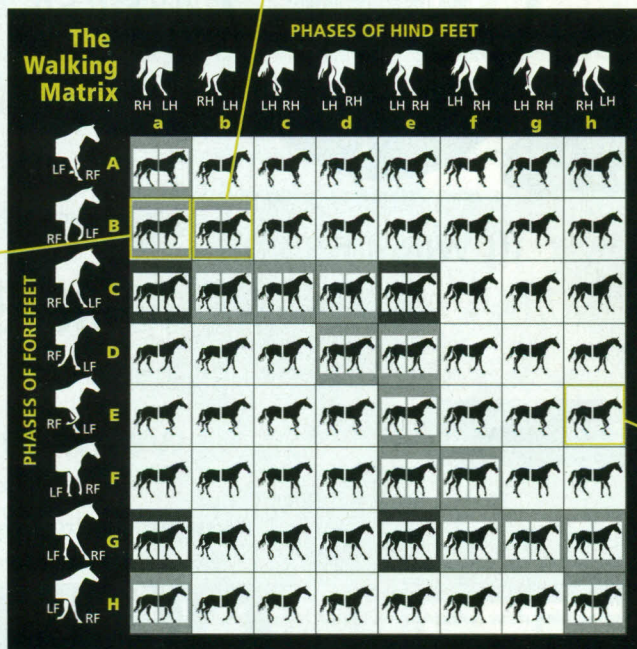
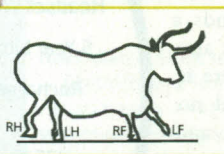
POST-MUYBRIDGE

A Hungarian cavalry statue fits into cell Ba of the walking matrix, and is therefore correct.



PREHISTORIC

A bull from the Lascaux caves in France fits into cell Bb of the matrix, and is therefore correct.



Eadweard Muybridge's groundbreaking 1887 photo studies captured animals in motion.

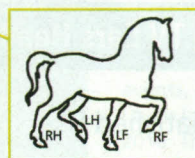
Recently, Horváth decided to find out just how deep such errors went. He suspected the worst offenders might be artists working before the advent of stop-motion photography — and in particular before the pioneering work of English photographer Eadweard Muybridge. His stop-motion studies, published in 1887, of animals walking provided incontrovertible evidence of four-legged mammals' gait.

Horváth's team collected nearly 1,000 images of walking quadrupeds from books and museum websites, dividing them into two groups: works created before Muybridge's 1887 studies and those created after 1887.

They also selected images by artists who might have known quite well how a four-legged beast moves: prehistoric peoples with ample opportunity to observe the animals they hunted.

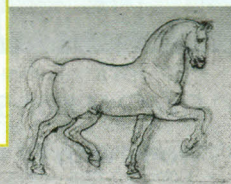
The analyses showed that works created before 1887 had incorrect walking gaits about 84 percent of the time. Later artists, perhaps inspired by Muybridge, got it wrong only 58 percent of the time.

The most reliably accurate artists were the cave painters. Of the 39 prehistoric paintings of horses, bulls, elephants and other quadrupeds the researchers examined, fewer than half were erroneous. The only inspiration the cave painters needed, it appears, was an empty stomach. — WILL HUNT (ADDITIONAL REPORTING BY LISA FEDOROWICZ)



PRE-MUYBRIDGE

A horse drawn by Leonardo da Vinci fits into cell eH of the walking matrix, and is therefore incorrect.



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