

Hunters and shoppers

Men and women navigate differently.

MEN are generally better than women on tests of spatial ability, such as mentally rotating an object through three dimensions or finding their way around in a new environment. But a new study suggests that under some circumstances a woman's way of navigating is probably more efficient.



Hunter-gatherers at work

Luis Pacheco-Cobos of the National Autonomous University of Mexico and his colleagues discovered this by following mushroom gatherers from a village in the state of Tlaxcala for two rainy seasons. Two researchers, each fitted with GPS navigation devices and heart-rate monitors, followed different gatherers on different days. They recorded the weight of the mushrooms each gatherer collected and where they visited. The GPS data allowed a map to be made of the routes taken and the heart-rate measurements provided an estimate of the amount of energy expended during their travels.

The results, to be published in *Evolution and Human Behaviour*, show that the men and women collected on average about the same weight of mushrooms. But the men travelled farther, climbed higher and used a lot more energy—70% more than the women. The men did not move any faster, but they searched for spots with lots of mushrooms. The women made many more stops, apparently satisfied with, or perhaps better at finding, patches of fewer mushrooms.

Previous work has shown that men tend to navigate by creating mental maps of a territory and then imagining their position on the maps. Women are more likely to remember their routes using landmarks. The study lends support to the idea that male and female navigational skills were honed differently by evolution for different tasks. Modern-day hunter-gatherers divide labour, so that men tend to do more hunting and women more gathering. It seems likely that early humans did much the same thing.

The theory is that the male strategy is the most useful for hunting prey; chasing an antelope, say, would mean running a long way over a winding route. But having killed his prey, the hunter would want to make a beeline for home rather than retrace his steps exactly. Women, by contrast, would be better off remembering landmarks and retracing the paths to the most productive patches of plants.

The research suggests that in certain circumstances women are better at navigating than men. Which might lend some comfort to a man desperately searching for an item in a supermarket while his exasperated wife methodically moves around the aisles filling the shopping trolley. He is simply not cut out for the job, evolutionarily speaking.

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