

Slight male navigational advantage likely due to cultural differences, researchers find

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A team of psychologists, social scientists, philosophers and evolutionary researchers affiliated with multiple institutions in the U.S. has found evidence suggesting that the slight advantage males have in navigation

ability is likely due to differences in the ways male and female children are raised.

In their paper [published](#) in the journal *Royal Society Open Science*, the group describes how they studied [navigational skills](#) in multiple species to find out if there might be an [evolutionary basis](#) for one gender or the other having better skills.

Prior research has suggested that human males may have slightly better navigational skills than females—[field tests](#) have consistently shown that men generally outperform women during navigation tasks. These findings have led some in the field to conclude that such results point to a navigational evolutionary advantage for males. Such an advantage, theories suggest, came about due to males having to move around in large tracts of land while hunting, while women stayed closer to home as they foraged.

But as the researchers with this new effort, note, such an advantage by men would have had to have been passed down through their Y chromosome, and thus far there is no evidence of that.

To find out if there may be evidence of an evolutionary navigational advantage, the research team studied data from 21 [animal species](#), including humans, obtained through prior research efforts. They found a slight navigational advantage in males across the board. They suggest this indicates that rather than such skills coming about via evolution, it is more likely due to [cultural differences](#), such as males being taught to navigate while females are not.

The researchers state that in most modern societies, boys tend to roam farther from home than girls, due to many factors, including fewer constraints and personal safety issues. Due to behavioral issues, boys are much more often encouraged to play outside, where their playmaking

can lead them to roam to places far from home. Quite often such activities are conducted with male peers, allowing the group as a whole to improve their navigational skills. The researchers conclude by pointing out that navigational skills tend to improve as they are used in practical real-world situations.

More information: Connor M. Hulst et al, Still little evidence sex differences in spatial navigation are evolutionary adaptations, *Royal Society Open Science* (2024). [DOI: 10.1098/rsos.231532](https://doi.org/10.1098/rsos.231532)

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