

## Lefties Survive (Barely) Due to Element of Surprise?

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for [National Geographic News](#)

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"I'm a lefty," Barack Obama joked last month as he signed his first official papers as U.S. President.

"Get used to it."

Good advice, considering that left-handed people don't seem to be going anywhere, despite an array of evolutionary cards—from diseases to elevated risk for accidents—stacked against them.

Now scientists say there may be a slightly sinister secret behind the survival of the left-handed minority: the element of surprise.

Whether during a tennis match or a knife fight, approaching from the left often catches the other 90 percent of humanity off guard, according to a team from the Institute of Evolutionary Sciences at the University of Montpellier, France.

Another key advantage, they say: Left-handed men, on average, have greater earning power than their right-handed counterparts.

(Related: ["Gene for Left-Handed Trait Discovered."](#))

### The Case Against Left-Handed Survival

The researchers trawled through previously collected data on left-handedness for their report, which appears in the latest issue of the journal *Philosophical Transactions of the Royal Society B*.

They found numerous associated evolutionary costs, such as increased risk of schizophrenia, epilepsy, autism, and learning disabilities.

Southpaws—about one in ten people—also face higher rates of serious accidents, probably because our modern, mechanized society is tooled largely for right-handers, the team said.

Male lefties may also be at a reproductive disadvantage, because their on-average shorter stature is less attractive to females, the researchers say.

Such barriers have helped keep lefties in the minority: Around the world no population has been found to be more than 30 percent left-handed.

### From Out of Left Field

Given the evolutionary marks against them, how has the left-handed minority managed to dodge extinction?

A key clue may be the success of left-handed athletes over right-handed competitors in one-on-one sports, the researchers say. Among tennis players, for example, champions such as John McEnroe, Martina Navratilova, Jimmy Connors, Rafael Nadal—the world's current number one—are all left-handed.

Study co-author Charlotte Faurie found a close parallel in her study of homicides resulting from violent fights.

Because left-handers are less common, "their opponents will be surprised by the way they fight, and this will provide [lefties] an advantage," she added.

"It's exactly the same in tennis or in boxing or in any sport where there is face-to-face opposition," Faurie added.

Faurie studied the use of traditional weapons such as knives and arrows.

But "it could be the same way with guns, because the direction of the bullet will also be different when it comes from the right or the left," she said.

And "because left-handers have a strategic advantage in fights, [left-handers] become more frequent generation after generation, through natural selection," Faurie said—though those gains are tempered by the evolutionary disadvantages.

Fight winners, she said, also "attract more sex partners and are therefore more likely to reproduce."

Since mortal combat is traditionally a male activity, left-handed females didn't need this deadly element of surprise. Yet left-handedness is most commonly passed from mothers to sons, Faurie noted ([quick human-genetics overview](#)).

"So for women, there could be an indirect advantage through [the success of] their sons," she said.

### **Left-Handed Benefits**

The left-handed 10 percent of humanity has a lot more to be thankful for than just fighting prowess.

The team noted, for example, that lefties are more likely to show better coordination between both hands. And gifted children with IQs higher than 131 are more likely to be left-handed.

The team also found that left-handed French men have a higher average income than right-handers, mirroring findings from other European countries.

Since economic status is known to promote reproductive success, those riches may result in higher birth rates for left-handers—and therefore more lefties, Faurie said.

Faurie said economic status is known to promote reproductive success, even in industrialized countries. And "in traditional society, having a higher socioeconomic status is strongly correlated to the number of offspring produced," she said.

"That's relevant in natural selection," Faurie added, "because it increases the likelihood [one will] have a child," Faurie added.