

Sinister business: Lefties have evolutionary boon

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US President Barack Obama uses his left hand to sign a bill on February 4, 2009. In a study published on Friday, French evolutionary biologists offer an explanation: left-handedness, they say, has survived because it is so rare.

Under Darwinian pressure, genes that don't help the struggle to survive get squeezed out of the genetic code, leaving the ones that are fitter.

Given that the vast majority of humans are right-handed, why is it that left-handedness -- of which President Barack Obama is a proud practitioner -- is still around?

In a study published on Friday, French evolutionary biologists offer an

explanation: left-handedness, they say, has survived because it is so rare.

In prehistoric times, a left-hander would gain the advantage of surprise in fighting against a right-hander, they say.

In addition, left-handers tend to be skilful with their right hand or even ambidextrous. Most right-handers greatly prefer their right paw, which is a disadvantage in a situation that demands intermanual coordination.

The paper, headed by Violaine Llaurens of the Institution of Evolutionary Sciences in Montpellier, southern France, estimates that left-handers comprise between five and 25 percent of the population, with important geographical variations.

Although the genes for left-handedness are so far elusive, there is compelling evidence that it is heritable, the authors believe.

If both of your parents are left-handed, the chance that you too will be a southpaw is more than twice than if your parents are right-handed.

Developmental factors could also play a role in left-handedness, such as the exposure to hormones in the uterus.

There is some good news for lefties in the study, which reviews published research in lateralism.

Compared with their low numbers in the general population, lefties are relatively numerous among creative men; among children rated as having an IQ higher than 131; and among individuals who are good at music and maths.

"All these advantages may play a significant role in the social status of left-handers," it says. Some research suggests that left-handed men are

better paid than right-handers.

Even though lefties are clear survivors, their condition also carries an evolutionary cost, the authors warn.

They point to statistical surveys that suggest right-handers generally live longer than left-handers, by a few months or even several years.

Why this is the case is unclear. It could be partly explained by the greater number of fatal accidents involving left-handed men grappling with industrial tools, machines and instruments designed for right-handers.

Left-handers also tend to have smaller body size, which is linked to less reproductive success, and they tend to be more numerous in the homosexual population than in the general population.

As homosexuals tend to have fewer children or no children at all, this means that the "lefty" genes are less likely to be passed on, which counts as an evolutionary disadvantage.

The study appears in *Philosophical Transactions of the Royal Society B*, a journal published by Britain's de-facto academy of sciences.

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