

Tekst 4

Left-handedness

A sinister advantage

A possible reason why left-handedness is rare but not extinct

IT is hard to box against a southpaw, as Apollo Creed found out when he fought Rocky Balboa in the first of an interminable series of movies. While
5 “Rocky” is fiction, the strategic advantage of being left-handed in a fight is very real, simply because most right-handed people have little experience of fighting left-handers,
10 5. And the same competitive advantage is enjoyed by left-handers in other sports, such as tennis and cricket.

The orthodox view of human
15 handedness is that it is connected to the bilateral specialisation of the brain that has concentrated language-processing functions on the left side of that organ. Because, long ago in the
20 evolutionary past, an ancestor of humans (and all other vertebrate animals) underwent a contortion that twisted its head around 180° relative to its body, the left side of the brain controls the right side of the body, and the other way around. In humans, the
25 left brain (and thus the right body) is usually dominant. And on average, left-handers are smaller and lighter than right-handers. That should put them at an evolutionary disadvantage. Sporting advantage notwithstanding, therefore, the existence of left-handedness poses a problem for
30 biologists. But Charlotte Faurie and Michel Raymond, of the University of Montpellier II, in France, think they know the answer. As they report in the
35 *Proceedings of the Royal Society*,

40 there is a clue in the advantage seen in boxing.

As any schoolboy could tell you, winning fights enhances your status. If, in pre-history, this translated into
45 increased reproductive success, it might have been enough to maintain a certain proportion of left-handers in the population, by balancing the costs of being left-handed with the
50 advantages gained in fighting. If that is true, then there will be a higher proportion of left-handers in societies with higher levels of violence, since the advantages of being left-handed will be
55 enhanced in such societies. Dr Faurie and Dr Raymond put this hypothesis to the test.

Fighting in modern societies often involves the use of technology, notably
60 fire-arms, that is unlikely to give any advantage to left-handers. So Dr Faurie and Dr Raymond decided to confine their investigation to the proportion of left-handers and the
65 level of violence (by number of homicides) in traditional societies.

By trawling the literature, checking with police departments, and even going out into the field and asking
70 people, the two researchers found that the proportion of left-handers in a traditional society is, indeed,



75 correlated with its homicide rate. One
of the highest proportions of left-
handers, for example, was found
among the Yanomamo of South
America. Raiding and warfare are
central to Yanomamo culture. The
murder rate is 4 per 1,000 inhabitants
80 per year (compared with, for example,
0.068 in New York). And, according to
Dr Faurie and Dr Raymond, 22.6% of
Yanomamo are left-handed. In
contrast, Dioula-speaking people of

85 Burkina Faso in West Africa are virtual
pacifists. There are only 0.013 murders
per 1,000 inhabitants among them and
only 3.4% of the population is left-
handed.

90 While there is no suggestion that
left-handed people are more violent
than the right-handed, it looks as
though they are more successfully
violent. Perhaps that helps to explain
95 the double meaning of the word
“sinister”.

The Economist

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- 1p 5 Which of the following fits the gap in the first paragraph (lines 1-13)?
- A at least not in real life
 - B bare-fisted that is
 - C but not vice versa
- 1p 6 Which of the following can be concluded from lines 14-28 ("The orthodox ... dominant.")?
- A Due to a quirk of nature humans evolved into upright creatures.
 - B Nothing we know of the evolutionary process explains left-handedness.
 - C The human brain functions most efficiently when controlled by the left side.
 - D The supremacy of the left side of the human brain makes right-handedness the norm.
- 1p 7 The word "therefore" in line 33 refers to the fact that
- 1 from a strictly evolutionary point of view, left-handedness should have disappeared.
 - 2 right-handers have reason to fear left-handers.
- A Only 1 is right.
 - B Only 2 is right
 - C Both 1 and 2 are right.
 - D Neither 1 nor 2 is right.
- 1p 8 Which of the following is true of the third paragraph (lines 42-57)?
- A It demonstrates that every society inevitably has a certain percentage of left-handers.
 - B It sets out a theory on the persistence of left-handedness.
 - C It shows why left-handers are at an advantage as long as they are a minority.
- 1p 9 What is the main point made in the fourth paragraph (lines 58-66)?
- A Faurie and Raymond presumed that traditional societies are more violent than modern societies.
 - B Faurie and Raymond's preference for direct observation of physical violence led them to non-western societies.
 - C Lack of physical contact in fighting made modern societies unfit as research objects for Faurie and Raymond.
- 1p 10 Which of the following statements applies to the passage "One of ... are left-handed." (lines 73-83)?
- A It gives two examples of traditional societies with relatively high levels of violence.
 - B It mentions findings that confirm Faurie and Raymond's hypothesis.
 - C It suggests that rural societies are less violent than urban societies.