

On the other hand...

Whether you are left- or right-handed is genetic, say researchers. But that has not stopped generations of left-handed people being discriminated against just because of this small difference

RESearchers have found around 15 percent of all humans are left-handed. Most people believe that using your left hand is a natural habit and is not **detrimental** to others.

But we can still notice the inconvenience from time to time – for example, when eating with chopsticks at the dinner table. No wonder that in the old days, Chinese parents always tried to force their left-handed children to change their habit. Indeed, such a forceful correction used to happen all over the world.

Horrible history

IN Europe (歐洲), left-handers were regarded as immoral from about the 16th century until the early 20th century, when the discrimination developed to an extreme level. Politicians, doctors, educators and even scientists joined the **symphony** of critics who **defamed** left-handers.

The notorious Jack the Ripper, the alias given to a serial killer in London (倫敦) in 1888, was widely reported by the media as being a left-hander, although the legal medical expert said the killer used his left hand in only one case. But many people – including professionals – continued to believe that left-handers had a criminal nature.

Meanwhile, left-handed children in France (法國) were asked to abandon their 'bad habit' when compulsory school education was introduced in 1882. The purpose was to **eliminate** left-handers.

The Nazis (納粹), who conducted **genocides** killing 11 million people between 1933 and 1945, also believed left-handers should be wiped out. Their ideological belief was that left-handers had **degenerated** and lost their virtue.



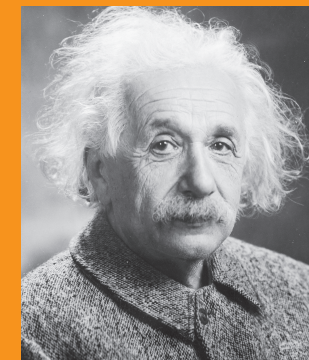
'Jack the Ripper' was described as a left-hander.

Joining hands

EVEN though some education experts in the United States (美國) appealed for an end to 'correcting' left-handers from the early 1900s, the situation did not fundamentally change until the end of World War II in the mid-20th century. One reason was that many veterans were forced to be left-handers after losing their right hands during the war. But more importantly, human rights – including the right to write with the left hand – increasingly became a core value among people. Further research at the time revealed that hand preference was **innate**.

Now the situation seems to have reversed: people tend to believe left-handers are smarter. One example that is often cited as proof of this is that four of the last seven US presidents are left-handed, including Barack Obama (奧巴馬). Ronald Reagan (列根) was born left-handed but was forced to switch at school. So in all, the number should be five of seven presidents! Other left-handed celebrities include physicists Albert Einstein (愛因斯坦) and Franklin Yang Chen-ning (楊振寧), and the world's richest man, Bill Gates (比爾·蓋茨). However, whether there is a link between smartness and left-handedness has yet to be confirmed.

Famous left-handers



Albert Einstein



Franklin Yang



Bill Gates

US President Barack Obama is left handed.

Why some people are left-handed

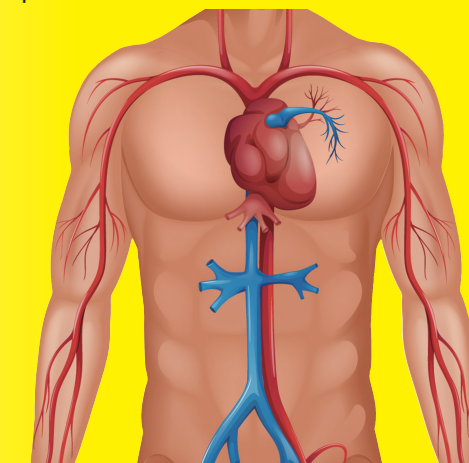
The scientists who study the human hand preference believe that it is determined by genes, although it is still unknown that how they specifically decide whether you are a leftie or rightie.

A paper published in *PLOS Genetics* in 2013 reported finding a network of genes that relate to handedness. Among them is one called PCSK6, which has been known to have a connection with dyslexia (difficulty with reading and writing) and left-right asymmetry in the body (such as how the heart is on the left of our body).

The researchers speculated that the more mutations of those genes a person has in any one direction – left or right – the more likely that hand will be the persons' dominant one.

Researchers also attribute the dominant majority of right-handers to social pressure, as the hand preference in chimpanzees is around 50/50.

Scientists believe that handedness is determined by genes



Vocabulary

symphony (n) 交響樂

M: Meaning E: Example

M: a long piece of music written to be played by an orchestra

E: Beethoven's *Fifth Symphony* is popular with many classical music lovers.

'Symphony' can also be regarded as a composition of different elements.

E: The laughter bounces against the walls and mixes into a **symphony** of sounds.

E: I woke to a **symphony** of breaking glass and metal, and steam hissing when the earthquake hit.

1 detrimental (adj) 有害的

M: having a harmful or damaging effect on something

E: Many foods are suspected of being **detrimental** to health because of the chemicals and additives.

2 defame (v) 誹謗

M: say bad and untrue things about someone or something

E: The lawyer complained that the article **defamed** him.

3 eliminate (v) 根除

M: remove something completely

E: The measures have not **eliminated** discrimination in education.

4 genocide (n) 種族屠殺

M: deliberate murder of a whole community or race

E: The site is a reminder of the **genocide** that occurred during the tyrant's rule.

5 degenerate (v) 退化

M: become worse, weaker, lower in quality, or more dangerous

E: The patient's health **degenerated** as the disease took over his body.

6 innate (adj) 先天的

M: describing something that a person is born with

E: Many people have an **innate** sense of fairness.