

Losing your mind? The answer is in the mirror

► Men with asymmetrical faces are more likely to see their mental powers fade with age, scientists have discovered

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SCIENCE EDITOR

MEN WORRIED about keeping their marbles should take a long look at themselves in the shaving mirror. Scientists have found that the more symmetrical a man's face is, the less likely he is to suffer mental decline in very old age.

Although the connection between a symmetrical face and cognitive ability may seem surprising, scientists believe that it could be explained by the idea that a good set of genes for facial symmetry may be linked with an equally good set of genes for brain preservation.

The same study, however, failed to find any link between facial symmetry in women and mental decline in old age. Scientists said that they were surprised to find the link in men but not in women of the same age.

The study is based on the Scottish Mental Survey undertaken in 1932 when hundreds of 11-year-olds were given an IQ test. A sample of the survivors of this study were tested again when they reached the age of 79, and then 216 of them were given a further IQ test when they reached the age of 83.

Data from the health survey have enabled scientists to study the mental decline that occurs over a lifetime, and especially the more rapid decline that takes place in much later life in the years just prior to death.

A research team led by Lars Penke of the University of Edinburgh analysed photographs of the 216 pensioners and compared their facial symmetries – how similar the left side is to the right – with the degree of mental decline they suffered between the ages of 79 and 83. “Mental decline accelerates in old ages

especially in the four years before death. We found a link between facial symmetry and this decline, but only in men

“We haven’t found the single factor behind cognitive decline, but this is one of the predictors”

DR LARS PENKE
UNIVERSITY OF EDINBURGH

and no link with the overall cognitive decline we see during a lifetime,” Dr Penke said. “Statistically, it’s strongly significant with facial symmetry explaining about 10 per cent of the cognitive differences for that age group. And although we haven’t found the single factor that explains cognitive decline in old age, it’s one of the better predictors of it,” he said.

The reason why the study did not identify a similar link in women may be due to the fact that women tend to die about four years later than men on average, and that the people in the study were still not old enough to pick up the rapid decline in female mental ability in old age, he said.

Facial symmetry is measured by studying various “landmarks” on the face that are not affected by skin or fat, such as the relative positions of the corners of the eyes, as well as the ears, mouth, chin and nose. The study is published in the journal *Evolution and Human Behaviour*.

Dr Penke emphasised that there is no cause-and-effect relationship between facial symmetry and mental decline, only a link that could be explained by the fact that the genes influencing both features are linked in some way.

There is a growing body of emphasis suggesting that the “fitness” of the genes involved in the development of the embryo in the womb, and of the body during childhood, can be measured by analysing the left-right symmetry of the body.

It may be possible to develop the findings into some kind of rudimentary test to screen people at higher risk of rapid mental decline in old age. Facial symmetry is easily measured and anything that indicates an increased risk of mental decline would be useful, Dr Penke said.





Picasso's stylistic lop-sided trait portrayed in *Portrait of Man in Hat* - scientists believe such facial asymmetry may predict mental decline in men