

An intriguing aid to understanding this debate is the study of identical twins. Even more help is examining identical twins raised apart from one another. Since 1979, the University of Minnesota has undertaken a study of 80 such twins. Read the amazing story below about Jim Lewis and Jim Springer.

MINNEAPOLIS (AP) - A friend of Mark Newman was astonished when he met Gerald Levey at a firefighters convention: Newman and Levey looked enough alike to be twins. Only after he introduced them did they learn they actually were.

Separated as infants and reared 100 kilometres from each other in New Jersey, the two men - both of whom became fire captains have been catching up on 31 years apart since that meeting 10 months ago.

Scientists at the University of Minnesota are learning from them, too, while trying to fathom the relative importance of heredity and environment in forming individuals' personalities.

The brothers are among 80 sets of identical twins who have been studied since the Minnesota Study of Twins Reared Apart began in 1979.

Newman and Levey recently spent six days undergoing tests at the university. Researchers scanned their brain waves, monitored their heart rates, some 15,000 questions designed to reveal their personalities, habits, tastes, values and idiosyncrasies.

### INFLUENCE ON IQ

"We knew we started that there was a lot of evidence to support the theory of genetic influence in IQ and possibly personality and a few other traits," said Dr. Thomas Bouchard, who started the study.

"But we took it upon ourselves to add a lot of other kinds of measures...and one of the things that has been sort of surprising is that more things seem to be genetically influenced than we had thought."

Reflecting on Newman and Levey, Kevin Haroian, a psychologist working on the study, said "These guys had been going along separate pathways, and to end up in similar jobs like they did - that says a lot."

"I don't think there's a gene to become a firefighter, but what they do have is strong physiques. They have an aptitude for firefighting; they have a lot of small factors that somehow have a configured for them to find a similar pathway in life."

Some other separated twins examined in the study have even more in common.

Jim Springer and Jim Lewis were brought together in 1979 at age 39 after being separated when they were five weeks old.

They discovered that each had a white bench around a tree in his yard, drove a chevrolet, chain smoked the same brand of cigarettes and had divorced a woman named Linda. Both were remarried to women named Betty.

One had a son named James Alan, the other had a son named James Allen. they had dogs named Toy. the two had served as sheriff's deputies, enjoyed similar hobbies and had headaches and weight gain and loss.

### OVERWHELMINGLY SIMILAR

Some of the similarities could be coincidence, but the Minnesota researchers say they find an astonishing number of such coincidences with most of the twin sets they study.

"While every pair has a different set of circumstances, they're still overwhelmingly similar," said Dr. Nancy Segal, the project's co-director. "I find that a continuous source of fascination."

The traditional psychological theory, Bouchard said, is that children reared in the same family are similar because of their exposure to similar values, schooling and social settings.

Given that premise, the actions of criminals, for example, are often attributed primarily to their social background and family upbringing.

"I certainly believed that for many years," Bouchard said. "But our research, plus adoption research carried out by others suggests that it's not true. It's very nicely shown by looking at how similar twins reared apart are which means the common family influences have to be pretty modest."

Identical twins who grew up in different families provide an ideal means for sorting out genetic versus environmental influences the researchers said, because their genes are the same.

Bouchard emphasized that the Minnesota study did not conclude there is, for instance, a gene which makes a person a criminal. One can inherit strong tendencies, he said, but those can be countered by environmental influences.

So far, Bouchard and his colleagues have evaluated 80 pairs of identical twins reared apart and about 50 pairs of fraternal twins with a goal of 100 identicals and 75 fraternal.

Although the sample may be too small to hold up against any doubt, one researcher, psychiatrist David Lykken, said the Minnesota team hopes to create "a basis for hypotheses that can be further tested by other studies."

The closest correlations between twins are seen in IQ tests, according to Lykken and Bouchard, who said in some cases it appears as though the same person has taken the test twice.

The researchers are not ready to issue a full report of their findings, having spent most of the past seven years locating and testing twins. But data analyzed so far point consistently to a genetic influence greater than previously thought in almost every area of development, Bouchard said.