

# 5 Crime

## Text

### Genetics and crime

Early biological theorists believed that criminality ran in families. Although research on deviant families is not taken seriously today, modern biosocial theorists are still interested in the role of genetics. Some believe antisocial behaviour characteristics and mental disorders may be inherited. According to this view, (a) antisocial behaviour is inherited, (b) the genetic make-up of parents is passed on to children, and (c) genetic abnormality is linked to a variety of antisocial behaviours.

This view, while controversial, is not strange or unusual. There is evidence that animals can be bred to have aggressive traits: pit-bull dogs, fighting bulls and fighting cocks have been selectively mated to produce superior predators. Although no similar data exist with regard to people, a growing body of research is focusing on the genetic factors associated with human behaviour. There is evidence that personality traits such as extroversion, openness, agreeableness and conscientiousness are genetically determined. There are also data suggesting that human traits associated with criminality have a genetic basis.

The relationship may be either direct or indirect. A direct association might include possessing particular genes highly correlated with crime or, conversely, having genes that make one crime-avoidant. An indirect association occurs when genetic make-up is associated with a personality/physical trait that is linked to antisocial behaviour. Personality conditions linked to aggression (such as psychopathy, impulsivity and neuroticism) and psychopathology (such as schizophrenia) have been found to be heritable.

This line of reasoning was cast into the spotlight in the 1970s when genetic testing showed that Richard Speck, the convicted killer of eight nurses in Chicago, allegedly had an abnormal XYY chromosomal structure (XY is normal in males). There was much public concern that all people with XYYs were potential killers and should be closely controlled. Civil libertarians expressed fear that all XYYs could be labelled dangerous and violent, regardless of whether they had engaged in violent activities. When it was disclosed that neither Speck

nor most violent offenders actually had an extra Y chromosome, interest in the XYY theory dissipated. However, the Speck case drew researchers' attention to looking for a genetic basis of crime.

Researchers have carefully explored the heritability of criminal tendencies by looking at a variety of factors. Some of the most important are described here.

#### Parental deviance

If criminal tendencies are inherited, then it stands to reason that the children of criminal parents should be more likely to become law violators than the offspring of conventional parents. A number of studies have found that parental criminality and deviance do, in fact, have a powerful influence on delinquent behaviour. Some of the most important data on parental deviance were gathered by Donald J. West and David P. Farrington as part of a long-term study of English youth called the Cambridge Study in Delinquent Development (CSDD). Now directed by Farrington, this research has followed a group of about 1,000 males from the time they were eight years old until today, when many are in their 30s and older. The boys in the study have been repeatedly interviewed and their school and police records evaluated. The cohort data indicate that a significant number of delinquent youths have criminal fathers. While 8.4 per cent of the sons of non-criminal fathers eventually became chronic offenders, about 37 per cent of youths with criminal fathers were multiple offenders. More recent analysis of the data confirms that delinquent youths grow up to become the parents of antisocial children.

The cause of intergenerational deviance is still uncertain. It is possible that environmental, genetic, psychological or child-rearing factors are responsible for the linkage between generations. The link might also have some biological basis. Research on the sons of alcoholic parents shows that these boys suffer many neurological impairments related to chronic delinquency. These results may indicate that (a) prolonged parental alcoholism causes genetic problems related to developmental impairment, or (b) the children of substance-abusing

parents are more prone to suffer neurological impairment before, during or after birth.

The quality of family life may be key in determining children's behaviour. Criminal parents should be the ones least likely to have close, intimate relationships with their offspring. Research shows that substance-abusing and/or criminal parents are the ones most likely to use harsh and inconsistent discipline, a factor closely linked to delinquent behaviour.

### **Sibling similarities**

It stands to reason that if the cause of crime is in part genetic, then the behaviour of siblings should be similar because they share genetic material. Research does show that if one sibling engages in antisocial behaviour, so do his/her brothers and sisters. The effect is greatest among same-sex siblings. Sibling pairs who report warm, mutual relationships and share friends are the most likely to behave in a similar fashion; those who maintain a close relationship also have similar rates of crime and drug abuse.

While the similarity of siblings' behaviour seems striking, what appears to be a genetic effect may also be explained by other factors:

- Siblings who live in the same environment are influenced by similar social and economic factors.
- Deviant siblings may grow closer because of shared interests.
- Younger siblings who admire their older siblings may imitate the elders' behaviour.
- The deviant sibling forces or threatens the brother or sister into committing criminal acts.
- Siblings living in a similar environment may develop similar types of friends; it is peer behaviour that is the critical influence. The influence of peers may negate any observed interdependence of sibling behaviour.

### **Twin behaviour**

As mentioned above, because siblings are usually brought up in the same household and share common life experiences, any similarity in their antisocial behaviour might be a function of environmental influences and experiences and not genetics at all. To guard against this, biosocial theorists have compared the behaviour of same-sex twins and again found concordance in their behaviour patterns.

However, an even more rigorous test of genetic theory involves comparison of the behaviour of identical monozygotic (MZ) twins with fraternal dizygotic (DZ) twins; while the former have an identical genetic make-up, the latter share only

about 50 per cent of their genetic combinations. Research has shown that MZ twins are significantly closer in their personal characteristics, such as intelligence, than are DZ twins.

The earliest studies conducted on the behaviour of twins detected a significant relationship between the criminal activities of MZ twins and a much lower association between those of DZ twins. A review of relevant studies conducted between 1929 and 1961 found that 60 per cent of MZ twins shared criminal behaviour patterns (if one twin was criminal so was the other), whereas only 30 per cent of DZ twin behaviour was similarly related. These findings may be viewed as powerful evidence that a genetic basis for criminality exists.

One famous study of twin behaviour still underway is the Minnesota Twin Family Study. This research compares the behaviour of MZ and DZ twin pairs who were raised together with others who were separated at birth and in some cases did not even know of each other's existence. The study shows some striking similarities in behaviour and ability for twin pairs raised apart. An MZ twin reared away from a co-twin has about as good a chance of being similar to the co-twin in terms of personality, interests and attitudes as one who has been reared with his or her co-twin. The conclusion: identical twins are genetically wired to be similar; any differences in their behaviours or activities would be forced upon them by their living conditions.

### **Evaluating genetic research**

Twin studies also have their detractors. Some opponents suggest that available evidence provides little conclusive proof that crime is genetically predetermined. Not all research efforts have found that MZ twin pairs are more closely related in their criminal behaviour than DZ or ordinary sibling pairs, and some have found an association note that is at best 'modest'. Those who oppose the genes-crime relationship point to the inadequate research designs and weak methodologies of supporting research. The new, better-designed research studies, critics charge, provide less support than earlier, less methodically sound studies.

Even if the behaviour similarities between MZ twins are greater than those between DZ twins, the association may be explained by environmental factors. MZ twins are more likely to look alike and to share physical traits than DZ twins, and they are more likely to be treated similarly. Similarities in their shared behaviour patterns may therefore be a function of socialization and/or environment and not heredity.

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