Biological Positivism

[Genetic factors]

- ‘No question that genetic influences are important to criminal & other forms of antisocial behaviour’ – Baker et al., 2010: 34

[Eugenics & ‘feeble-mindedness’]

- Eugenics, linked physiological inadequacy of some form to criminality.
- ‘Social Darwinists’ believed that a process akin to natural selection, if left largely undisturbed, would result in an increasingly healthy society.
- Eugenic = ‘well-born’ – Francis Galton (Darwin’s cousin)
- Eugenics sought to explain human behaviour through genetics.
- Traits that led either to success/to failure in life were believed to be transmitted from generation to generation.
- Katz & Abel (1984) suggest that the primary characteristic identified with individual failure was ‘feeble-mindedness’ – linked with pauperism, promiscuity & criminality.
- Positive eugenics focused its policy prescriptions on attempting to improve the gene pool, essentially through encouraging the genetically well-endowed to reproduce more frequently.
- Negative eugenics – greatest controversy. 4 main policy initiatives (permanent segregation, sterilization, restrictive marriage policies, restrictive immigration policies).
- Advances in intelligence testing made it increasingly problematic to define individuals as ‘feeble-minded’ & developments in genetics undermined the geneticists’ views of heredity.
- A study by Osborn & West in 1970s – Criminal conduct tends to run in families may be an indicator of the influence of heredity, but might equally be an indicator of the influence of environmental factors such as socialisation & peer group.
- Moffitt (2005) – Studies of genetic influence on anti-social behaviour ‘conclude that genes influence 40% to 50% of population variation in anti-social behaviour’
  - Clearest ways of testing is to see whether family members are more similar in behaviour than would be explained by genetic make-up or, alternatively, are less similar in behaviour.
  - Looking at identical/non-identical twins/children adopted at birth.

[Twin Studies]

- Twins share a genetic make-up, but may differ in their wider social experiences (monozygotic, dizygotic).
ADHD & brain dysfunction

- ‘Minimal brain dysfunction’ – associated with children & adolescents that consists of a group of factors associated with abnormal/inappropriate behaviour & cognition.
- ADHD (Attention Deficit Hyperactivity Disorder)
  - impulsivity (acting without thinking through the consequences)
  - hyperactivity (excessive activity)
  - inattentiveness (failure to concentrate)
- Children with ADHD find interacting with others problematic ⇒ problems & frustrations ⇒ aggression & violence
- ADHD – associated with biological causes such as genetic predisposition, brain damage & neurological immaturity. (Wender, 2002)
- Farrington et al. (1980) – connection between typical ADHD measures of conduct problems & offending patterns. (Unnever, 2003)
- Low cognitive abilities & low IQ & in young men coming from large families with parents likely to have criminal history & who were most likely to progress to lengthy & chaotic criminal careers.
- Young men who had more mundane criminal behaviour as adolescents but progressed later to persistent adult offending.
- Limitations:
  1. Focused on males, little about female behaviour & offending.
  2. May be some link between brain dysfunction & certain behaviours, no exclusion of social factors.
- Possibility that tissue damage resulting from some form of physical injury may have an impact on later behaviour.
- Kandel & Mednick (1991) – complications in pregnancy not linked to later offending, whereas complications in delivery (ruptured perineum/uterus) appear to be linked, though only when combined with other factors.
- Raine & colleagues (1997) – combination of delivery complications & maternal rejection in first year of life was connected with heightened risk of involvement in serious violent crime at age of 18.
- Miller (1996) – offenders more likely to have suffered such damage than offenders, though whether injury ⇒ offending or offending ⇒ injury remains unclear.
- Raine & colleagues (1994) – violent behaviour probably involves disruption of a network of multiply interacting brain mechanisms that predispose to violence in the presence of other social, environmental & psychological predispositions.
• Methological difficulties:
  1. People who are violent & get into fights are more likely to suffer brain damage.
  2. Based on samples with higher than average levels of disadvantages (disproportionate levels of offending).
  3. Pre-/post- injury studies tend to be based on most seriously injured people (unrepresentative).

{Neurotransmitters}

• Serotonin – reduce aggressiveness by inhibiting responses to external emotional stimuli
  Dopamine & norepinephrine – counteract the inhibitory impact of serotonin.
• Raine (1993) – Meta-analysis suggests that studies consistently find lower levels of serotonin in people described as ‘anti-social’, though findings in relation to the other 2 neurotransmitters were less clear out.
• Limitations:
  1. Alcohol in sufficient quantities – affect neurotransmitter levels & aggressiveness..
  2. Diet.
  3. Not at all clear, what measures of aggressiveness/violence are being used, & whether these are used consistently between experimental & control groups.

{Laterality}

• Early studies – linkage between left-handedness & delinquency, though much of this may simply have reflected social responses & other environmental factors..
• Stigma & labelling had other adverse consequences, including some delinquent behaviour.
• Association between certain cognitive & personality factors & predominance of 1 hemisphere over the other.
• Left-handed ⇒ right-hemisphere dominant ⇒ less verbally able ⇒ linked with levels of self-control ⇒ linked to anti-social conduct.

{Autonomic nervous system}

• ANS measurement – lie detectors (via sweat glands in the hands ⇒ degree of arousal).
• Slow responsiveness = Individuals require strong stimuli to arouse them, linked to poor learning skills, in relation to aversion; Characteristics of offender groups.
• Raine (1996) – evidences to suggest that anti-social individuals are characterized by under-arousal & that aggressive children may be stimulation seekers who are relatively fearless.
• 4 overlapping theoretical obstacles:
  1. Nihilistic relativism = Crude rejections of positivism, deny the existence of a reality that is ‘out there’ & which might be studied & about which claims might be made.
  2. Oversocialized gaze = Views that in focusing on the environmental influences on behaviour tend to ignore/deny the role of biology altogether.
  3. Genetic fatalism = Tendency to interpret any mention of the role of genetics as implying inevitability rather than influence (i.e. to assume that to talk of biological influence is to be deterministic).
  4. Bio-phobia = Something close to an automatic hostility to any suggestion that biology could have much, to offer in terms of explaining human social behaviour.

[Summary]

1. Biological factors almost certainly have some role in the determination of criminal conduct.
2. The extent of this role is generally very small.
3. Such effects are heavily mediated by, or only occur in interaction with, broader social/environmental factors.