Chapter 4
Aggression

SPECIFICATION

Aggression	
Social psychological approaches to explaining aggression	• Social psychological theories of aggression, for example, social learning theory, deindividuation • Explanations of institutional aggression
Biological explanations of aggression	• The role of neural and hormonal mechanisms in aggression • The role of genetic factors in aggression
Aggression as an adaptive response	• Evolutionary explanations of human aggression, including infidelity and jealousy • Explanations of group display in humans, for example sports events and lynch mob

SOCIAL LEARNING THEORY

Aggressive behaviour is viewed as one of the most disturbing forms of human social behaviour. Some psychologists believe that aggression is a legacy of our evolutionary ancestry, while others believe it is best explained in physiological terms, e.g. an imbalance in hormones or neurotransmitters in the brain. Social psychological theories, however, see the cause of our aggressive behaviour arising out of our interactions with others in our social world.

Conditions for effective social learning

A person must:
1 *Pay attention to the model performing the action.*
2 *Be able to remember the action.*
3 *Have the ability to replicate the action.*
4 *Be motivated to replicate the action.*

THE BOBO DOLL STUDY

This experiment by Bandura *et al.* (1961) involved children observing aggressive and non-aggressive adult models and then being tested for imitative learning in the absence of the model.

- The participants were male and female children ranging from three to five years. Half were exposed to adult models interacting aggressively with a life-sized inflatable Bobo doll and half exposed to models that were non-aggressive towards the doll.
- The model displayed distinctive physically aggressive acts toward the doll, e.g. striking it on the head with the mallet and kicking it about the room, accompanied by verbal aggression such as saying 'POW'.
- Following exposure to the model, children were frustrated by being shown attractive toys which they were not allowed to play with. They were then taken to a room where, among other toys, there was a Bobo doll.
- Children in the aggression condition reproduced a good deal of physical and verbal aggressive behaviour resembling that of the model. Children in the non-aggressive group exhibited virtually no aggression toward the doll.
- Approximately one-third of the children in the aggressive condition repeated the model's verbal responses while none of the children in the non-aggressive group made such remarks. Boys reproduced more imitative physical aggression than girls but they did not differ in their imitation of verbal aggression.

SOCIAL LEARNING THEORY (Bandura, 1963)

Albert Bandura (1963) believed that aggression could not be explained using traditional learning theory where only *direct* experience was seen as responsible for the acquisition of new behaviours. **Social learning theory (SLT)** suggests that we also learn by observing others. We learn the specifics of aggressive behaviour (e.g. the forms it takes, how often it is enacted, the situations that produce it and the targets towards which it is directed). This is not to suggest that the role of biological factors is ignored in this theory, but rather that a person's biological make-up creates a potential for aggression and it is the actual *expression* of aggression that is learned. Bandura *et al.*'s classic study (see left) illustrates many of the important principles of this theory.

Observation

Children primarily learn their aggressive responses through *observation* – watching the behaviour of role models and then *imitating* that behaviour. Whereas Skinner's **operant conditioning** theory claimed that learning takes place through direct reinforcement, Bandura suggested that children learn just by observing role models with whom they identify.

Children also observe and learn about the consequences of aggressive behaviour by watching others being reinforced or punished. This is called indirect or **vicarious reinforcement**. Children witness many examples of aggressive behaviour at home and at school, as well as on television and in films. By observing the *consequences* of aggressive behaviour for those who use it, a child gradually learns something about what is considered appropriate (and effective) conduct in the world around them. Thus they learn the behaviours (through observation) and they also learn whether and when such behaviours are worth repeating (through vicarious reinforcement).

Mental representation

Bandura (1986) claimed that in order for social learning to take place, the child must form mental representations of events in their social environment. The child must also represent possible rewards and punishments for their aggressive behaviour in terms of *expectancies* of future outcomes. When appropriate opportunities arise in the future, the child will display the learned behaviour *as long as* the expectation of reward is greater than the expectation of punishment.

Production of behaviour

Maintenance through direct experience – If a child is rewarded (i.e. gets what he wants or is praised by others) for a behaviour, he or she is likely to repeat the same action in similar situations in the future. A child who has a history of successfully bullying other children will therefore come to attach considerable value to aggression.

Self-efficacy expectancies – In addition to forming expectancies of the likely outcomes of their aggression, children also develop confidence in their ability to carry out the necessary aggressive actions. Children for whom this form of behaviour has been particularly disastrous in the past (e.g. they weren't very good at it) have less confidence (lower sense of **self-efficacy**) in their ability to use aggression successfully to resolve conflicts, and therefore may turn to other means.

EXAM TIP:
Beware of exam questions that ask for theories of aggression. Bandura et al's Bobo doll study illustrates the principles of the theory but it is the material elsewhere on this spread that explains the theory of social learning.

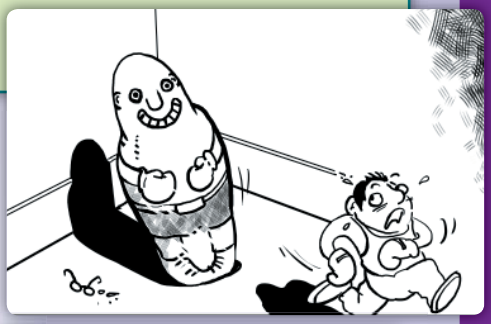
MOTIVATION TO AGGRESS

Although Bandura *et al*'s (1961) study (opposite) tells us that children do acquire aggressive responses as a result of watching others, it does not tell us much about *why* a child would be motivated to perform the same behaviours in the absence of the model. Bandura and Walters' (1963) classic experiment fills this gap.

In this experiment, children were divided into three groups, each seeing a different ending to a film of an adult model behaving aggressively towards a Bobo doll.

- Group 1 saw the model rewarded for showing aggressive behaviour.
- Group 2 saw the model punished for showing aggressive behaviour.
- Group 3 observed the model but there were no consequences for aggressive behaviour.

Bandura and Walters found that children's subsequent play with the doll was influenced by whichever film ending they had seen. Those who had seen the model being rewarded for aggressive acts showed a high level of aggression in their own play. Those who had seen the model punished showed a low level of aggression in their play, while those in the no-reward, no-punishment control group were somewhere in between these two levels of aggression. Bandura called this type of learning *vicarious learning* – the children were learning about the likely consequences of actions, and then adjusting their subsequent behaviour accordingly.



COMMENTARY

Research support

The role of punishment – In the Bandura and Walters study above, did the children in Group 2 show low levels of aggression because the punishment prevented *learning* or did the punishment prevent *performance* of the behaviour? To test this, Bandura (1965) repeated the study but now, after exposure to the model, offered rewards to all the children for performing the model's aggressive behaviours. In this case all three groups performed a similar number of imitative acts. This shows that learning does take place regardless of reinforcements but that *production* of behaviours is related to selective reinforcements.

Applicability to adults – The studies on this spread have involved children, but does SLT explain adult behaviour as well? Phillips (1986) found that daily homicide rates in the US almost always increased in the week following a major boxing match, suggesting that viewers were imitating behaviour they watched and that social learning is evident in adults as well as children.

Strengths

The role of vicarious learning – A major strength of SLT is that, unlike operant conditioning theory, it can explain aggressive behaviour in the *absence* of direct reinforcement. Although Bandura *et al.*'s (1963) participants behaved more aggressively after observing an aggressive model, at no point were the children directly rewarded for any action, either aggressive or non-aggressive. Consequently, the concept of vicarious learning is necessary to explain these findings.

Individual differences in aggressive behaviour – A second strength of this theory is that it can explain differences in aggressive and non-aggressive behaviour both *between* and *within* individuals. The 'culture of violence' theory (Wolfgang and Ferracuti, 1967), for example, proposes that, in large societies, some subcultures develop norms that sanction violence to a greater degree than the dominant culture. Some cultures may emphasise and model *non*-aggressive behaviour, producing individuals that show low levels of aggression (see 'cultural differences' box). Differences *within* individuals can be related to selective reinforcement and **context-dependent learning**. People respond differently in different situations because they have observed that aggression is rewarded in some situations and not others, i.e. they learn behaviours that are appropriate to particular contexts.

CULTURAL DIFFERENCES

Social learning theory can be used to explain cultural differences in aggression. Among the !Kung San of the Kalahari Desert, aggression is comparatively rare, so why is this the case?

The answer lies in the child-rearing practices of the !Kung San. First, when two children argue or fight, parents neither reward nor punish them, but physically separate them and try to distract their attention onto other things. Second, parents do not use physical punishment, and aggressive postures are avoided by adults and devalued by the society as a whole. The absence of direct reinforcement of aggressive behaviour as well as the absence of aggressive models means there is little opportunity or motivation for !Kung San children to acquire aggressive behaviours.

VALIDITY

It is possible that the children in Bandura's studies were aware of what was expected of them (**demand characteristics**). In fact Noble (1975) reports that one child arriving at the laboratory for the experiment said, 'Look Mummy, there's the doll we have to hit.' These studies also focus on aggression towards a doll rather than a real person (who tends to hit back). However, responding to this criticism, Bandura produced a film of a young woman beating up a live clown. When the children went into the other room, there was the live clown! They proceeded to punch him, kick him, hit him with hammers, and so on.

CAN YOU...? No.4.1

...**1** Describe the social learning theory of aggression in approximately 200–300 words, and then produce a summary in about 150 words.

...**2** Select **three** studies related to the social learning of aggression as well as **(a)** stating the conclusions that can be drawn from these studies and **(b)** giving **one** methodological criticism of each study.

...**3** Identify **three** critical points relating to this theory of aggression, including **at least two** topics from the synoptic toolkit (see Introduction). Each criticism should be about 50 words.

...**4** Use this material to write a 600-word answer to the following question: '*Discuss one social psychological theory of aggression.*' (9 marks + 16 marks)

DEINDIVIDUATION

Not all aggressive behaviour is between individuals. Psychologists have explored the idea that membership of large, anonymous groups leads individuals to behave in a more antisocial manner than they would on their own. To explain this, Zimbardo (1969) introduced the theory of **deindividuation**, whereby people, when part of a relatively anonymous group, lose their personal identity and hence their inhibitions about violence. Deindividuation theory has been used as an explanation of the collective behaviour of violent crowds, mindless hooligans and social atrocities such as genocide. In some countries, deindividuation has even been accepted as grounds for extenuating circumstances in murder trials (Colman, 1991).

'Sure this robe of mine doth change my disposition.'

William Shakespeare – The Winter's Tale

DEINDIVIDUATION THEORY

Deindividuation theory is based, to a large extent, on the classic crowd theory of Gustave Le Bon (1895). Le Bon described how an individual was transformed when part of a crowd. He claimed that, in a crowd, the combination of anonymity, suggestibility and contagion mean that a 'collective mind' takes possession of the individual. As a consequence, the individual loses self-control and becomes capable of acting in a way that goes against personal or social norms.

The nature of deindividuation

Deindividuation is a psychological state characterised by lowered self-evaluation and decreased concerns about evaluation by others. This leads to an increase in behaviour that would normally be inhibited by personal or social norms. The psychological state of deindividuation is aroused when individuals join crowds or large groups. Factors that contribute to deindividuation include anonymity (e.g. wearing a uniform) and altered consciousness due to drugs or alcohol (Zimbardo, 1969). Although Zimbardo has stressed that these same conditions may also lead to an increase in *prosocial* behaviours (for example crowds at music festivals and large religious gatherings), the focus of deindividuation theory has been almost exclusively on *antisocial* behaviour.

The process of deindividuation

People normally refrain from acting in an aggressive manner partly because there are social norms inhibiting such 'uncivilised' behaviour and partly because they are easily identifiable. Being anonymous (and therefore effectively unaccountable) in a crowd has the psychological consequence of reducing inner restraints and increasing behaviours that are usually inhibited.

According to Zimbardo, being part of a crowd can diminish awareness of our own individuality. In a large crowd, each person is faceless and anonymous – the larger the group, the greater the anonymity. There is diminished fear of negative evaluation of actions and a reduced sense of guilt. Conditions that increase anonymity also minimise concerns about evaluation by others, and so weaken the normal barriers to antisocial behaviour that are based on guilt or shame.

Research on deindividuation

Anonymity – Zimbardo (1969) carried out a series of experiments that were instrumental in the development of deindividuation theory. One of these studies is described in the box below. This study led to the suggestion that anonymity, a key component of the deindividuation process, increased aggressiveness. Rehm *et al.* (1987) investigated whether wearing a uniform when part of a sports team also increased aggressive behaviour. They randomly assigned German schoolchildren to handball teams of five people, half the teams wearing the same orange shirts, and the other half their normal street clothes. The children wearing orange (who were harder to tell apart) played the game consistently more aggressively than the children in their everyday clothes.

The faceless crowd – Mullen (1986) analysed newspaper cuttings of sixty lynchings in the United States between 1899 and 1946. He found that the more people there were in the mob, the greater the savagery with which they killed their victims. Another example of the deindividuated crowd can be seen in Mann's 'baiting crowd' research (see far right).

Reduced private self-awareness

Prentice-Dunn *et al.* (1982) offer an alternative perspective to Zimbardo's conclusion that anonymity is an important determinant of deindividuation. They claim that it is reduced self-awareness, rather than simply anonymity, that leads to deindividuation. If an individual is self-focused, they tend to focus on, and act according to, their internalised attitudes and moral standards, thus reducing the likelihood of antisocial behaviour. If the individual submerges themselves within a group, they may lose this focus, becoming less privately self-aware, and therefore less able to regulate their own behaviour.

RESEARCH ON DEINDIVIDUATION

In the first of Zimbardo's experiments on deindividuation (Zimbardo, 1969), groups of four female undergraduates were required to deliver electric shocks to another student to 'aid learning'. Half of the participants wore bulky lab coats and hoods that hid their faces, sat in separate cubicles, and were never referred to by name. The other participants wore their normal clothes, were given large name tags to wear and were introduced to each other by name. They were also able to see each other when seated at the shock machines. Both sets of participants were told they could see the person being shocked. Participants in the deindividuation condition (i.e. hooded and no name tags) shocked 'the learner' for twice as long as did identifiable participants.

Deindividuated condition	Individuated condition
Wore bulky lab coats and hoods	Wore normal clothing with large name tag
Addressed as a group when given instructions	Given instructions individually
Not introduced to each other	Introduced to each other by name

► Deindividuated condition

GENDER DIFFERENCE

Cannavale *et al.* (1970) found that male and female groups responded differently under deindividuation conditions. An increase in aggression was obtained only in the all-male groups. This was also the finding of Diener *et al.* (1973), who found greater **disinhibition** of aggression (i.e. removal of the normal inhibitions concerning aggression) in males. Thus, evidence indicates that males may be more prone to disinhibition of aggressive behaviour when deindividuated, than females.

REAL-WORLD APPLICATION – THE BAITING CROWD AND SUICIDE JUMPERS

'When darkness fell,
Excitement kissed the crowd
And made them wild,
In an atmosphere of freaky holiday
When the spotlight hit the boy,
The crowd began to cheer
He flew away'. (Simon and Garfunkel – 'Save the life of my child')

Mann (1981) used the concept of deindividuation to explain a bizarre aspect of collective behaviour – the 'baiting crowd'. The baiting crowd lends support to the notion of the crowd as a deindividuated 'mob'. Mann analysed 21 suicide leaps reported in US newspapers in the 1960s and 1970s. He found that in 10 of the 21 cases where a crowd had gathered to watch, baiting had occurred (i.e. the crowd had urged the potential suicide to jump). These incidents tended to occur at night, when the crowd was large and some distance from the person being taunted (particularly when the 'jumper' was high above them). All these features were likely to produce a state of deindividuation in the members of the crowd.

COMMENTARY

The importance of local group norms

Johnson and Downing (1979) explored the idea that rather than deindividuation automatically increasing the incidence of aggression, any behaviour produced could be a product of local group norms. They used the same experimental conditions as Zimbardo (see below), but this time participants were made anonymous by means of a mask and overalls (reminiscent of the **Ku Klux Klan**), or by means of nurses' uniforms. Participants shocked more than a control condition when dressed in the Ku Klux Klan uniforms, but actually shocked less than the controls when dressed as nurses. This finding illustrates that, as was the case in Zimbardo *et al.*'s Stanford Prison Experiment (1972), people respond to normative cues associated with the social context in which they find themselves. In this study, participants dressed as Ku Klux Klansmen clearly felt that aggressive behaviour was more appropriate than did the participants dressed as nurses.

Lack of support for deindividuation

Evidence for deindividuation theory appears to be mixed. A **meta-analysis** of 60 studies of deindividuation (Postmes and Spears 1998) concludes that there is insufficient support for the major claims of deindividuation theory. For example, Postmes and Spears found that **disinhibition** and antisocial behaviour are not more common in large groups and anonymous settings. Neither was there much evidence that deindividuation is associated with reduced self-awareness, or that reduced self-awareness increases disinhibition of aggressive behaviour.

Prosocial consequences of deindividuation

Although most of the research on this spread has attempted to find a relationship between deindividuation and antisocial behaviour, some studies have shown that deindividuation may also increase the incidence of *pro*social behaviour. Spivey and Prentice-Dunn (1990) found that deindividuation could lead to either prosocial or antisocial behaviour depending on situational factors. When prosocial environmental cues were present (such as a prosocial model), deindividuated participants performed significantly more altruistic acts (giving money) and significantly fewer antisocial acts (giving electric shocks) compared to a control group.

The desirable effects of deindividuation can also be found in cyberspace. Adolescents reported feeling significantly more comfortable seeking help with mental health problems under the deindividuated circumstances of Internet chatrooms compared to the individuated circumstances of a personal appointment with a health professional (Francis *et al.*, 2006).

CULTURAL DIFFERENCES

One of the most dramatic demonstrations of the deadly influence of deindividuation comes from a study by anthropologist Robert Watson (1973). He collected data on the extent to which warriors in 23 societies changed their appearance prior to going to war and the extent to which they killed, tortured or mutilated their victims. As can be seen from the figures below, those societies where warriors changed their appearance (e.g. through war paint, tribal costumes etc.) were more destructive toward their victims compared to those who did not change their appearance. As Zimbardo (2007) comments, when we want '…usually peaceful young men to harm and kill other young men…it is easier to do so if they first change their appearance to alter their usual external façade'.

▲ Levels of killing, torture and mutilation in warriors who significantly change or don't change their appearance when going to war

	No change	Changed
Low	7	3
High	1	12

Source: Watson, 1973.

CAN YOU…? No.4.2

…1 Describe the deindividuation theory of aggression in approximately 200–300 words, and then produce a summary in about 150 words.

…2 Select **three** studies related to the deindividuation theory of aggression, then **(a)** state the conclusions that can be drawn from these studies, and **(b)** give **one** methodological criticism of each study.

…3 Identify **three** critical points relating to this theory of aggression, including **at least two** topics from the synoptic toolkit (see Introduction). Each criticism should be about 50 words.

…4 Use this material and the material on the previous spread to write a 600-word answer to the question: '*Outline and evaluate two social psychological theories of aggression.*' (9 marks + 16 marks)

INSTITUTIONAL AGGRESSION

Human aggression occurs at both interpersonal and institutional levels. Interpersonal aggression involves direct actions against a specific individual and is restricted to a specific place and time. On the previous two spreads we have looked at explanations of interpersonal aggression, but we now turn our attention to aggression at an institutional or group level.

Institutional aggression may occur *within* groups or institutions such as the armed forces, prisons or mental institutions, or *between* different groups. Thus it involves more complex processes and conditions than interpersonal aggression, and can, on occasion, lead to the most terrible consequences for its victims.

INSTITUTIONAL AGGRESSION WITHIN GROUPS

A recent survey of National Health Service trusts in the UK reported over 84,000 violent or abusive incidents against staff in 2000/01 (Department of Health, 2002). There is a similar picture in prison settings, with over 26,000 reported prisoner-prisoner assaults in US prisons, resulting in 83 deaths (Wortley, 2002).

The origins of institutional aggression

Interpersonal factors – the 'importation model' – Irwin and Cressey (1962) claim that prisoners bring their own social histories and traits with them into prison, and this influences their adaptation to the prison environment. Irwin and Cressey argue that prisoners are not 'blank slates' when they enter prison, and that many of the normative systems developed on the outside would be 'imported' into the prison.

Situational factors – the 'deprivation model' – This model argues that prisoner or patient aggression is the product of the stressful and oppressive conditions of the institution itself (Paterline and Peterson, 1999). These include crowding, assumed to increase fear and frustration levels, and staff experience. For example, Hodgkinson *et al.* (1985) found that trainee nurses are more likely to suffer violent assault than experienced nurses, and in the prison setting, length of service was also a significant factor, with more experienced officers being less likely to suffer an assault (Davies and Burgess, 1988).

Hazing

In February 2006, Private Andrei Sychev was so brutally beaten by older soldiers at the Chelyabinsk Military School in southern Russia, that he required amputation of his legs and genitalia (Vyugin, 2006). Sychev was a victim of hazing, a form of institutional bullying based on a tradition within many groups to discipline junior members and maintain a strict pecking order. These traditions of initiation can spiral out of control and cause lasting physical and/or psychological damage. An extensive study of over 11,000 US students involved in clubs and teams revealed that over half had experienced hazing (Allan and Madden, 2008).

Why does it happen? Social psychological research has revealed that the social context has a powerful influence on people's willingness to inflict harm on others (e.g. Zimbardo *et al.*, 1972). In Zimbardo's prison experiment, the study had to be stopped after six days because the 'guards' had become so vicious toward the 'prisoners'. Culturally constructed notions of what it takes to be a 'real man' lead to an emphasis on physical and mental toughness and obedience to superiors. It is perhaps significant that of the sixty or so reported deaths due to hazing, only three have been women (Nuwer, 1999).

WWW Learn more about hazing at www.hazing.cornell.edu/issues/research_theory.html

STAGES IN THE PROCESS OF GENOCIDE

1. Difficult social conditions, leading to…
2. Scapegoating of a less powerful group, leading to…
3. Negative evaluation and dehumanisation of the target group, leading to…
4. Moral values and rules becoming inapplicable, and the killing begins.
5. The passivity of bystanders (e.g. the UN) enhances the process.

Staub (1999)

▶ A Tutsi survivor of the Rwandan genocide clearly shows the machete scars inflicted on him by Hutu extremists.

INSTITUTIONAL AGGRESSION BETWEEN GROUPS

Genocide

The murder of six million Jews by Nazis during World War II, and more recently the murder of 800,000 Tutsi and moderate Hutu by Hutu extremists in Rwanda in 1994, are examples of this special form of institutional aggression. Staub (1999) outlined five stages in the process of genocide (see above) that explain how difficult social conditions such as those found in pre-war Germany can rapidly escalate into victimisation of a target group.

Dehumanisation – Although human beings usually have moral inhibitions about killing fellow humans, this changes if the target group is **dehumanised** so that its members are seen as worthless animals and therefore not worthy of moral consideration. In the Rwandan genocide, the influential Hutu-controlled 'hate' radio station RTLM encouraged Hutu listeners to murder their Tutsi neighbours by referring to the minority Tutsi as 'cockroaches'.

Obedience to authority

> *'The Nazi extermination of European Jews is the most extreme instance of abhorrent immoral acts carried out by thousands of people in the name of obedience'.* (Milgram, 1974)

Milgram believed that the Holocaust was primarily the result of situational pressures that forced Nazi soldiers to obey their leaders regardless of any personal moral repugnance. If, he argued, so many participants in his study could administer painful electric shocks to a victim simply because they were told to do so by someone in authority, the mighty Nazi regime would have no trouble making soldiers kill innocent, unarmed people.

PROBLEMS OF INVESTIGATION

The study of institutional aggression creates special problems for the researcher. We have seen how, in some studies of hazing, victims frequently reject researchers' definitions of such behaviours having been aggressively motivated. Similarly, although dehumanisation appears to be a common human phenomenon, it is difficult to investigate empirically. Haslam (2006) suggests that part of this problem is that it is difficult to define what is and what is not dehumanising behaviour. An additional problem for researchers is that there are significant ethical issues in studying people who have been subjected to dehumanising violence.

REAL-WORLD APPLICATIONS

Can we use insights into dehumanisation to explain a fairly recent social phenomenon – violence against foreign refugees or asylum seekers? Recent research suggests that personality may play an important role in this respect. *Social dominance orientation* (SDO) is a personality variable which predicts social and political attitudes. People who are high in SDO endorse social hierarchies and inter-group inequality, and see the world as a 'competitive jungle'. Esses *et al.*, (2008) has demonstrated that individuals high in SDO have a tendency to dehumanise **outgroup** members, and in particular foreign refugees and asylum seekers. Media depictions of refugees portrayed as violating immigration procedures and trying to cheat the system cause greater contempt in high SDO individuals than in low SDO individuals and lack of sympathy for refugees in general. These negative attitudes become rationalised through 'legitimising myths' (e.g. that foreign refugees are by nature socially deviant) which indicate to the high SDO individual that these groups deserve our hostility because they are somehow less human than others.

▲ A stereotypical view of asylum seekers. Young Iraqi Kurds wait in Calais before trying to smuggle themselves into the UK.

COMMENTARY

The origins of institutional aggression

The importation model – This model has received some research support, particularly in terms of individual factors such as age, education level and race. For example, Harer and Steffensmeier (2006) collected data from 58 US prisons and found that black inmates had significantly higher rates of violent behaviour but lower rates of alcohol-related and drug-related misconduct than white inmates. These patterns parallel racial differences in these behaviours in US society and so support the importation model.

The deprivation model -- There is substantial research evidence to support the claim that peer violence is used to relieve the deprivation imposed by institutional cultures such as prisons. McCorkle *et al.* (1995) found that overcrowding, lack of privacy and the lack of meaningful activity all significantly influence peer violence. However, research in this area is not consistent in its findings. Research in psychiatric institutions, for example, (Nijman *et al.*, 1999) found that increased personal space failed to decrease the level of violent incidents among patients.

Hazing

Research support – Studies have supported the concept of hazing with the finding that it is also used to establish dominance in institutions other than colleges. McCorkle (1992) found that in prisons, the domination of the weak was seen by inmates as essential to maintaining status, with passive behaviour generally being interpreted as weakness or vulnerability, and so likely to provoke exploitation.

Problems of definition – Problems arise in determining what is and what is not considered 'aggressive behaviour' in this area. For example, many people who are exposed to hazing appear to regard it as nothing more than innocent fun. In a survey of US students, one out of five reported they had experienced behaviours that met the researcher's definition of hazing, yet only one in 20 of these students regarded themselves as having experienced hazing.

Institutional aggression between groups

The importance of bystanders – Staub's model emphasises the importance of bystander intervention in preventing genocide. Doing nothing, it appears, merely allows the killing to continue unabated, and may even escalate it by signalling apathy or consent. However, bystander intervention does not necessarily end institutional aggression, as there is an important difference between the effect of intervention on duration and on *severity* of violence. In international or civil conflict, although intervention by outside agencies such as the UN can shorten a conflict, it might also hasten perpetrators to step up their genocidal policy within that period of time. In the Rwandan genocide, for example, 800,000 people died in just 100 days, a staggering rate of 8,000 deaths per day.

Dehumanisation – Evidence for the destructive consequences of dehumanisation can be seen in many conflicts (Jews in the Holocaust, Bosnians in the Balkan wars and Tutsis in Rwanda). However, dehumanisation may also explain violence against immigrants, seen by some as 'polluting threats to the social order' (O'Brien, 2003). This claim is examined in more detail in 'Real-world applications' above.

Obedience to authority – Mandel (1998) rejects Milgram's claims that obedience to authority was sufficient to explain the behaviour of Holocaust perpetrators. He argues that Milgram's account is *monocausal* (i.e. ignores other possible causes) and simply does not match the historical record. For example, Goldhagen (1996) suggests that the main causal factor in the atrocities was a form of anti-Semitism so deeply entrenched in the German people that they implicitly condoned the elimination of millions of innocent Jews.

CAN YOU…? No.4.3

…1 Describe three types of institutional aggression, giving **two** explanations for each.

…2 Identify **eight** critical points relating to institutional aggression, including **at least two** topics from the synoptic toolkit (see Introduction). Each criticism should be about 50 words. Ensure that any synoptic points are fully contextualised.

…3 Use this material to write a 600-word answer to the question: '*Discuss psychological explanations of two or more forms of institutional aggression*.' (9 marks + 16 marks)

NEURAL AND HORMONAL MECHANISMS IN AGGRESSION

Biological explanations of aggression offer a completely different perspective to the social psychological explanations we have looked at so far. Biological models assume that aggression is located within the biological make-up of the individual rather than in the environment around them. Many research studies in the last 30 years have shown that violent criminals were high in the hormone testosterone, encouraging some people to conclude that castration of highly aggressive males would stop them from killing or injuring innocent people. However, the relationship between biological mechanisms and aggressive behaviour is not that simple.

NEUROTRANSMITTERS AND AGGRESSION LINK

A **meta-analysis** of 29 studies published before 1992 (Scerbo and Raine, 1993), examined **neurotransmitter** levels in antisocial children and adults. These studies consistently found lower levels of serotonin in individuals described as being aggressive, but found no significant rise or fall in dopamine levels. Indications of reduced levels of serotonin were found in all antisocial groups, but were particularly marked in those individuals who had attempted suicide. This suggests that serotonin depletion leads to impulsive behaviour, which in turn may lead to aggressive behaviour in various forms.

NEUROTRANSMITTERS

Neurotransmitters are chemicals that enable impulses within the brain to be transmitted from one area of the brain to another. There is some evidence that at least two of these neurotransmitters, serotonin and dopamine, are linked to aggressive behaviour. **Serotonin** and **dopamine** are of particular interest because low levels of serotonin and high levels of dopamine have been associated with aggression in animals and humans.

Serotonin

Serotonin is thought to reduce aggression by inhibiting responses to emotional stimuli that might otherwise lead to an aggressive response. Low levels of serotonin in the brain have been associated with an increased susceptibility to impulsive behaviour, aggression, and even violent suicide. Some drugs are thought to alter serotonin levels and thus increase aggressive behaviour. Mann *et al.* (1990) gave 35 healthy subjects *dexfenfluramine*, which is known to deplete serotonin. Using a questionnaire to assess hostility and aggression levels, they found that *dexfenfluramine* treatment in males (but not females) was associated with an increase in hostility and aggression scores.

Dopamine

Although the link between high levels of dopamine and aggressive behaviour is not as well established as with serotonin, there is some evidence to suggest that such a link exists. For example, increases in dopamine activity via the use of amphetamines have also been associated with increases in aggressive behaviour (Lavine, 1997). **Antipsychotics**, which reduce dopamine activity in the brain, have been shown to reduce aggressive behaviour in violent delinquents (Buitelaar, 2003).

TESTOSTERONE AND AGGRESSION LINK

Two meta-analyses have established a weak but positive relationship between testosterone and aggression.

- Archer (1991) analysed the results of 230 males over five studies and found a low positive correlation between testosterone and aggression. However, the type of participant, and the form and measurement of aggression, differed substantially between studies.
- A larger meta-analysis of 45 studies (Book *et al.*, 2001) established a mean correlation of 0.14 between testosterone and aggression, although Archer *et al.* (2005) claims that methodological problems with this study meant that a correlation of 0.08 was more appropriate.

HORMONAL MECHANISMS

Testosterone

The male sex hormone **testosterone** is thought to influence aggression from young adulthood onwards due to its action on brain areas involved in controlling aggression. Evidence for this association comes from a number of sources.

Research studies – Dabbs *et al.* (1987) measured salivary testosterone in violent and non-violent criminals. Those with the highest testosterone levels had a history of primarily violent crimes, whereas those with the lowest levels had committed only non-violent crimes. Studies of non-prison populations have found similar trends. Lindman *et al.* (1987) found that young males who behaved aggressively when drunk had higher testosterone levels that those who did not act aggressively.

The challenge hypothesis (Wingfield *et al.*, 1990) proposes that, in **monogamous** species, testosterone levels should only rise above the baseline breeding level in response to social challenges such as male-male aggression or threats to status. As the human species is considered to be monogamous, this would predict that male testosterone levels would rise sharply in response to such challenges. In such situations, a testosterone surge is to be expected, with a consequent increase in aggression, provided the threat is deemed relevant to reproductive competition, e.g. a dispute over a female.

Cortisol

Cortisol appears to have a mediating effect on other aggression-related hormones such as testosterone, possibly because it increases anxiety and the likelihood of social withdrawal (Dabbs *et al.*, 1991). High levels of cortisol inhibit testosterone levels and so inhibit aggression. Studies have reported low levels of cortisol in habitual violent offenders (Virkkunen, 1985) and in violent schoolchildren (Tennes and Kreye, 1985). This suggests that although relatively high testosterone is the primary biochemical influence on aggression, low cortisol plays an important role by increasing the *likelihood* of aggressive behaviour.

REDUCTIONISM AND BIOLOGICAL MECHANISMS

The links between biological mechanisms such as serotonin and aggression, and testosterone and aggression are well established in non-human animals. However, the position is not quite so clear in the case of humans. This is not to deny that such links exist, but rather that the complexity of human social behaviour means that a biological explanation for human aggression is insufficient on its own to explain all the many different aspects of aggressive and violent behaviour.

COMMENTARY

Serotonin

Evidence from non-human studies – Raleigh *et al.* (1991) have added support for the importance of serotonin in aggressive behaviour in a study of vervet monkeys. They found that individuals fed on experimental diets high in tryptophan (which increases serotonin levels in the brain) exhibited decreased levels of aggression. Individuals fed on diets that were low in tryptophan exhibited increased aggressive behaviour, suggesting that the difference in aggression could be attributed to their serotonin levels. Other evidence for the importance of serotonin in aggression has shown that in animals that are selectively bred for domestication and for increasingly docile temperaments, there is a corresponding increase, over generations, in brain concentrations of serotonin (Popova *et al.*, 1991).

Evidence from antidepressants – If low levels of serotonin are associated with low impulse control and aggressive behaviour, drugs that clinically raise serotonin levels should produce a concurrent lowering in aggression. Bond (2005) has established that this is exactly what happens in clinical studies of antidepressant drugs that elevate serotonin levels. She established that such drugs do tend to reduce irritability and impulsive aggression.

Dopamine

Although research is fairly inconclusive about the *causal* role of dopamine in aggression, recent research suggests that its influence might be as a *consequence* instead. Couppis and Kennedy (2008) found that in mice, a reward pathway in the brain becomes engaged in response to an aggressive event and that dopamine is involved as a positive reinforcer in this pathway. This suggests that individuals will intentionally seek out an aggressive encounter solely because they experience a rewarding sensation from it.

COMMENTARY

Testosterone

Inconsistent evidence – Albert *et al.* (1993) claim that despite many studies showing a positive correlation between testosterone and aggression, other studies find no such relationship, particularly those that have compared testosterone levels of aggressive versus less aggressive individuals. In addition, most studies showing a positive correlation have involved small samples of men within prisons, using either self-report measures of aggression or judgements based solely on the severity of the crime committed.

Aggression or dominance? – Mazur (1985) suggests we should distinguish aggression from *dominance*. Individuals act aggressively when their intent is to inflict injury, whereas they act dominantly if their wish is to achieve or maintain status over another. Mazur claims that aggression is just one form of dominance behaviour. In non-human animals the influence of testosterone on dominance behaviour might be shown in aggressive behaviour. In humans, however, the influence of testosterone on dominance is likely to be expressed in more varied and subtle ways (e.g. through status-striving behaviour).

Cortisol

The moderating effect of cortisol on aggressive behaviour is supported in a four-year study of boys with behavioural problems (McBurnett *et al.*, 2000). Those boys with consistently low cortisol levels began antisocial acts at a younger age and exhibited three times the number of aggressive symptoms compared to boys with higher or fluctuating cortisol levels. Researchers concluded that cortisol levels were 'strongly and inversely related to aggressive conduct disorder'.

REAL-WORLD APPLICATIONS

Statistics suggest a sharp increase in gun-related crime in the UK, but *why* does the presence of guns in the environment lead to increased aggression? Perhaps the presence of a stimulus, such as a gun or knife, triggers increases in testosterone levels (the gun is seen as a threat), which in turn increases aggressive behaviour, a chain of events that would be predicted by the challenge hypothesis (see facing page). To test this, Klinesmith *et al.* (2006) had male college students provide a saliva sample (to measure testosterone), interact either with a gun or a child's toy for 15 minutes, and then provide another saliva sample. Males who interacted with the gun showed significantly greater increases in testosterone and behaved more aggressively toward another participant compared to those who played with the child's toy.

GENDER BIAS

Most studies concerned with testosterone and aggression have involved male participants, but does testosterone also increase aggression in females? If anything, research suggests that the association between testosterone and aggression is higher for female than male samples (Archer *et al.*, 2005). A further study showed that women with higher testosterone levels had higher occupational status, possibly as a result of being more assertive (Baucom *et al.*, 1985). These studies indicate that women may also respond to challenging situations with increased testosterone, displaying characteristics such as aggressiveness and dominance. However, in some circumstances this may be a disadvantage, as high testosterone levels are associated with an assertive style that hinders the formation of alliances as well as the more subtle forms of competition that occur in female groups (Archer and Coyne, 2005).

CAN YOU...? No.4.4

...**1** Outline (in 100–150 words each) the role of neural and hormonal mechanisms in human aggressive behaviour.

...**2** Outline **two** studies that either support or challenge the role of neural mechanisms and **two** that support or challenge the role of hormonal mechanisms and comment on any methodological issues.

...**3** Choose **two** critical points from the synoptic toolkit (see Introduction) and elaborate on them in 50 words.

...**4** Use all this material to write a 600-word answer to the question: '*Discuss the role of neural and hormonal mechanisms in human aggression.*' (9 marks + 16 marks)

GENETIC FACTORS IN AGGRESSIVE BEHAVIOUR

The biological approach to aggression includes the belief that the propensity for aggressive behaviour lies in an individual's genetic make-up. Researchers must try to establish whether genetically related individuals are more similar in their aggressive tendencies than non-related individuals. This also has important implications for understanding the origins of violent crime. Although the question of genetic influences for aggression and violent crime has perhaps not interested researchers quite as much as the general public, research suggests that aggressive tendencies may, at least in part, be inherited.

Why are meta-analyses so important? They provide a way of summarising the results of many different studies, and so give us a more accurate overall view of genetic influences.

IS AGGRESSION INHERITED?

Trying to determine the role of genetic factors in aggression is essentially a question of **nature** and **nurture**. To disentangle the relative contributions of nature (genetic inheritance) and nurture (environmental influences), researchers have employed a variety of methodological techniques, including twin and adoption studies, studies of individual genes and studies of violent populations.

Twin studies

Monozygotic (identical) twins share all of their genes, while **dizygotic** (non-identical) twins share only 50 per cent. In twin studies, researchers compare the degree of similarity for a particular trait (such as aggression) between sets of monozygotic (MZ) twins to the similarity between sets of dizygotic (DZ) twins. If the MZ twins are more alike in terms of their aggressive behaviour, then this should be due to genes rather than environment (both types of twin share the same environment as each other but monozygotic twins are more genetically alike). Most twin studies have focused on criminal behaviour generally, but one of the few studies to specifically study aggressive behaviour using adult twin pairs found that nearly 50% of the variance in direct aggressive behaviour (i.e. aggression toward others) could be attributed to genetic factors (Coccaro *et al.*, 1997).

Adoption studies

Adoption studies can help to untangle the relative contributions of environment and heredity in aggression. If a positive correlation is found between aggressive behaviour in adopted children and aggressive behaviour in their biological parents, a genetic effect is implied. If a positive correlation is found between the adoptee's aggressive behaviour and the rearing family, then an environmental effect is implied. A study of over 14,000 adoptions in Denmark found that a significant number of adopted boys with criminal convictions had biological parents (particularly fathers) with criminal convictions (Hutchings and Mednick, 1975), providing evidence for a genetic effect.

A gene for aggression?

The role of MAOA – Although no individual gene for aggression has been identified in humans, a gene responsible for producing a protein called monoamine oxidase A (MAOA) has been associated with aggressive behaviour. MAOA regulates the metabolism of **serotonin** in the brain, and low levels of serotonin are associated with impulsive and aggressive behaviour (page 66). In the 1980s, a study of a Dutch family found that many of its male members behaved in a particularly violent and aggressive manner, and a large proportion had been involved in serious crimes of violence including rape and arson. These men were found to have abnormally low levels of MAOA in their bodies, and a defect in this gene was later identified (Brunner *et al.*, 1993).

Gene-environment interaction – A second study (Caspi *et al.*, 2002), linking MAOA to aggressive behaviour, involved 500 male children. Researchers discovered a variant of the gene associated with high levels of MAOA and a variant associated with low levels. Those with low levels of MAOA were significantly more likely to grow up to exhibit antisocial behaviour but *only* if they had been maltreated as children. Children with high levels of MAOA who were maltreated, and those with low levels who were not maltreated, did not display antisocial behaviour. This shows that it is the *interaction* between genes and environment that determines behaviours such as aggression.

Genetics and violent crime

Researchers do not suggest that there is a gene for violent crime per se. Rather it is claimed that inherited temperamental or personality characteristics place some individuals more at risk of committing violent crime. Adoption studies have shown that the highest rates of criminal violence in adopted children occur when both biological *and* adoptive parents have a history of violent crime – clear evidence of a gene-environment interaction. However, a series of adoption studies in which the criminal history of an adopted male was compared with the criminal history of both his biological and his adoptive fathers, found that genetic influences were significant in cases of property crime but *not* in cases of violent crime (Brennan, 1993).

META-ANALYSES

Miles and Carey (1997) carried out a **meta-analysis** of 24 twin and adoption studies that had investigated the genetic basis of aggression. Most studies had relied on parental or participants' self-reports of aggressive tendencies, although some involved observation of aggressive behaviour. The results suggested a strong genetic influence that could account for as much as 50% of the variance in aggression. Age differences were notably important, with both genes and family environment being influential in determining aggression in youth, but at later ages the influence of rearing environment decreased and the influence of genes increased. A later meta-analysis by Rhee and Waldman (2002) combined the results of 51 twin and adoption studies and concluded that aggressive antisocial behaviour was largely a product of genetic contributions. However, in this study, as with the Miles and Carey study above, several variables, including age of participant and assessment method for aggression moderated the genetic influence on aggression, suggesting that although genetic factors play a significant part in the development of aggressive behaviours, the influence of other factors affects their expression.

▶ Gangland killers and identical twins Ronnie and Reggie Kray in 1966.

PROBLEMS OF SAMPLING

Many of the studies in this area have focused on individuals convicted of violent crime. Two particular difficulties arise when trying to draw meaningful conclusions from these studies. The first problem lies with the participants themselves. Convictions for violent crime are relatively few compared to the vast number of violent attacks by individuals that never result in a conviction, therefore they represent just a small minority of those regularly involved in aggressive behaviour. Second, contrary to popular belief, offenders designated as 'violent' on the basis of a court conviction are not necessarily the most serious, persistent offenders. For example, a convicted murderer would be designated as violent for one offence despite, perhaps, having otherwise had a lifetime free from crime. This might explain why so many studies have found little or no evidence of heritability for violence.

COMMENTARY

Difficulties of determining the role of genetic factors

We have discussed the role of genetic factors in aggression, but what does this really mean? The connection between genetic factors and aggression is far from straightforward because of problems determining what is, and what is not, a product of genetic inheritance. It is difficult to establish genetic contributions to aggressive behaviour for the following reasons:

- More than one gene usually contributes to a given behaviour.
- As well as genetic factors there are many non-genetic (i.e. environmental) influences on the manifestation of aggressive behaviour.
- These influences may interact with each other. Genetic factors may affect which environmental factors have an influence, and *vice versa* (gene-environment interaction).

This last point is clearly demonstrated in the study by Caspi *et al.* (2002) described on the left.

Problems of assessing aggression

Many of the reported studies of aggression have relied on either parental or self-reports of aggressive behaviour, whereas other studies have made use of observational techniques. In the Miles and Carey meta-analysis reported on the left, mode of assessment was found to be a significant moderator of aggressive behaviour in the 24 studies that made up their analysis. They found that genetic factors explained a large proportion of the variance in aggressive behaviour in studies that had used parental or self-reports. However those that had made use of observational ratings showed significantly *less* genetic contribution and a greater influence of environmental factors. For example, in a replication of Bandura *et al.*'s Bobo doll study (see page 60), twin pairs were encouraged to act aggressively towards the doll by being exposed to an adult model who also acted aggressively towards it. Researchers found no difference in correlations between monozygotic and dizygotic twin pairs, suggesting that individual differences in aggression were more a product of environmental influences (e.g. family upbringing) than genetic influences (Plomin *et al.*, 1981).

The inheritance of criminal violence

Studies that have investigated the role of genetic factors in criminal behaviour often fail to distinguish between violent and non-violent crime, making it more difficult to untangle the role of genetic factors in specifically *aggressive* violence. These studies also often fail to distinguish between criminals who are *habitually* violent and those for whom their violent crime is a one-off (see research methods box above). The evidence for violent crime being inherited is also far from conclusive. A meta-analysis of studies in this area (Walters, 1992) found only a low to moderate correlation between heredity and crime, with better designed and more recently published studies providing less support for the gene-crime hypothesis than more poorly designed and earlier published studies. A more recent review of published studies of youth crime (Surgeon General's report on youth violence, 2001) concluded: 'The data do not suggest a strong role for heredity in violence'.

REAL-WORLD APPLICATION

Although studies of the biological basis of aggression interest nearly everyone, research findings are far too uncertain to be valuable in understanding the causal factors affecting those who engage in violent activities. Nevertheless, there have been suggestions that public policy should be informed by the results of this research. If people *are* predisposed towards aggressive behaviour or violent crime, then questions about the *treatment* of such behaviours inevitably arise. Some commentators advocate **genetic engineering** but others go much further. As long as violence remains at the forefront of public concern, ways of dealing with it that address the problem more directly (e.g. through 'chemical castration') remain an attractive option to many. Given the extremely tentative nature of conclusions that can be reached from this research and the far-reaching ethical consequences of labelling an individual as a threat to society on the basis of their genetic inheritance, an awareness of the limitations of these studies is extremely important.

THE VALUE OF ANIMAL RESEARCH

Studies of aggressive behaviour in non-human animals have an important role in helping us understand aggressive behaviour in humans. For example, rodents offer the advantage of experimental manipulation to test the effects of specific genes on aggressive behaviour. Manipulations may involve **selective breeding programmes** and 'knockout' techniques (where a single gene is eliminated from a group of experimental animals in order to study its effect). An example of such a study that has potential for an understanding of human aggression was by Young *et al.* (2002). These researchers claim to have identified a genetic mutation that causes violent behaviour in mice. This mutation, nicknamed 'fierce', has a range of effects on mice, including extremely violent behaviour towards other mice. A counterpart of this gene does exist in humans, although its precise function is not known.

CAN YOU...? No.4.5

...1 Outline (in 200–300 words) the role of genetic factors in human aggressive behaviour.

...2 Outline **two** studies that either support or challenge the role of genetic factors in human aggressive behaviour and comment on the conclusions we can draw from these studies.

...3 Identify **six** critical points, including **two** from the synoptic toolkit (see Introduction) and elaborate on them in 50 words. Remember that criticisms can be positive as well as negative.

...4 Use all this material to write a 600-word answer to the question: '*Discuss the role of genetic factors in human aggression.*' (9 marks + 16 marks)

EVOLUTIONARY EXPLANATIONS OF HUMAN AGGRESSION

Evolutionary psychologists argue that the different reproductive challenges faced by our ancestors led to a number of evolved sex differences, including sex differences in jealousy. Male sexual jealousy is a frequently cited cause of violence in interpersonal relationships. In many cultures, the murder of an adulterous wife or her lover is not only condoned but encouraged. Among the Nuer people of East Africa, for example, a man caught in adultery runs the risk of death at the hands of the woman's husband. As recently as 1974, in the US state of Texas, a man who killed his wife's lover 'while in the act', would remain unpunished. On this spread we examine evolutionary explanations for this phenomenon.

▲ Could violence towards women have adaptive value for some males?

INFIDELITY AND JEALOUSY

Daly and Wilson (1988) claim that men have evolved several different strategies to deter their female partners from committing adultery (i.e. infidelity). These range from vigilance to violence, but all are fuelled by male **jealousy**, an adaptation that evolved specifically to deal with the threat of **paternal uncertainty**.

Cuckoldry and sexual jealousy

Unlike women, men can never be entirely certain that they are the fathers of their children, as fertilisation is hidden from them, inside the woman. As a result, men are always at risk of **cuckoldry**, the reproductive cost that might be inflicted on a man as a result of his partner's infidelity. The consequence of cuckoldry is that the man might unwittingly invest his resources in offspring that are not his own. The adaptive functions of sexual jealousy, therefore, would have been to deter a mate from sexual infidelity, thereby minimising the risk of cuckoldry.

Mate retention and violence

Buss (1988) suggests that males have a number of strategies that have evolved specifically for the purpose of keeping a mate. These include 'direct guarding' of the female, and 'negative inducements' that would prevent her from straying. By restricting their partners' sexual autonomy (direct guarding), our male ancestors would have been able to deter rivals from gaining access to their mates. A modern example of direct guarding is 'vigilance', e.g. coming home unexpectedly to see what a female partner is up to. Wilson *et al.* (1995) found that women who agreed with questionnaire items such as 'he is jealous and doesn't want you to talk with other men', were twice as likely to have experienced serious violence from their partners, with 72% of these having required medical attention following an assault from their male partner. Men may also attempt to retain their partners by offering threats (i.e. negative inducements) for any infidelity. Because sexual jealousy is a primary cause of violence against women, those who are perceived by their partner to be threatening infidelity (e.g. by looking at another man), are more at risk of violence than those who are not. Studies of battered women, for example, have shown that in the majority of cases, women cite extreme jealousy on the part of their husbands or boyfriends as the key cause (Dobash and Dobash, 1984).

Uxorocide (wife-killing)

Men can guard against their partner's infidelity either by conferring benefits or by inflicting costs, including violence. As not all men possess resources that might be used to provide benefits, some men are especially prone to using violence, or the threat of violence (Shackelford *et al.*, 2000). According to Daly and Wilson (1988), death of the partner from physical violence may be an unintended outcome of an evolutionary adaptation that was designed for control rather than death (see the story of Pipat Lueprasitkul, on the right).

◄ In July 2002, a Thai court freed a man who admitted battering his wife to death in a jealous rage after discovering she had visited a former sweetheart.

Pipat Lueprasitkul, a former university lecturer, was given a two-year suspended prison sentence after the court took into account his background and the young age of his children. The court also considered that Pipat attacked his wife Wannee in a fit of jealousy, an explanation that outraged women's groups.

According to a World Health Organisation study, nearly half of all women in Thailand are subjected to physical or sexual violence at some point in their lives.

THE EVOLUTION OF HOMICIDE

Homicide represents the most extreme form of aggression, and statistics worldwide reveal that the majority of the killers *and* victims are men (Buss and Shackelford, 1997).

Lack of resources

In a study of homicides in Detroit, USA, 43% of the male victims and 41% of the male perpetrators were unemployed despite the fact that only 11% of the adult men in Detroit were unemployed that year (Wilson and Daly, 1985). Also, 73% of the male perpetrators and 69% of the male victims were unmarried. A lack of resources and an inability to attract long-term mates appears to lead to increased social competition and male-male homicides.

Loss of status

One of the key motives of male-male homicide appears to be the defence of status in the local peer group. Because human beings evolved in the context of small groups, a loss of status could have been catastrophic for survival and reproduction. Although maladaptive nowadays, these mechanisms continue to operate, triggered by events that would have triggered them in our ancestral past.

Sexual jealousy

This also appears to be a key motivator of same-sex aggression and homicide, with men predominantly the perpetrators and the victims. A summary of eight studies of same-sex killings involving 'love triangles' found that 92% were male-male homicides and only 8% were female-female homicides (Daly and Wilson, 1988).

MATE RETENTION AND VIOLENCE AGAINST WOMEN

Shackelford *et al.* (2005) used a survey method to test evolutionary psychology predictions concerning mate retention strategies. They used 461 men and 560 women in the US. All participants were in committed, heterosexual relationships. Male participants answered questions about their use of mate retention techniques, and were assessed on how often they performed each of 26 different types of violent act against their partners. Female participants answered questions concerning their partners' use of male retention techniques and the degree to which their partners used violence against them.

Men's use of two broad types of retention technique (intersexual negative inducements and direct guarding) was positively correlated with their violence scores. In addition, use of emotional manipulation (e.g. saying they would kill themselves if their partner left) as a specific tactic appeared to consistently predict men's violence against women. Results from female participants confirmed this trend, with reports of direct guarding and intersexual negative inducements being positively correlated with their experience of female-directed violence. In addition, women reported that those partners who frequently used specific mate retention tactics of vigilance and emotional manipulation were most likely to use violence against them. As with males, age relationship duration made no difference to the reported trends.

PROBLEMS WITH SURVEYS

In the Shackelford *et al.* study above, data was collected using a survey technique. **Surveys** are a form of self-report technique that have particular problems, especially when used in sensitive areas such as violence against a spouse. Answers may not be truthful because of the **social desirability** bias – a tendency to respond in a way that will be viewed favourably by others. This takes the form of over-reporting desirable behaviour and under-reporting undesirable behaviour.

COMMENTARY

Infidelity and jealousy

Research support – The predictions concerning mate retention techniques and female-directed violence have been tested in the Shackelford *et al.* study above. This study shows a clear relationship between sexual jealousy, mate-retention strategies by males, and violence towards women. Other research also supports this connection. Buss and Shackelford (1997) found that men who suspected that their wives might be unfaithful over the next year exacted greater punishment for a known or suspected infidelity than men who did not anticipate future infidelities. This finding is consistent with the claim in evolutionary psychology that mate retention strategies are evoked only when a particular adaptive problem is faced, in this case the belief that the wife's infidelity is likely.

Practical applications – An important implication of research such as Shackelford *et al.*'s is that particular tactics of mate retention used by males can be an early indicator of violence against the female partner. The findings from these studies can potentially be used to alert friends and family members to the danger signs, the specific acts that can lead to future violence in relationships. At this point, help can be sought or offered before the violence ever happens.

Uxorocide – Daly and Wilson's explanation of uxoricide (see left), which suggests that most cases are unintended consequences of spousal violence linked to sexual jealousy, is challenged by Shackelford *et al.* (2000), who analysed half a million homicides, selecting 13,670 where a man had killed his wife. A startling finding was that younger women had a much greater risk of uxoricide *regardless* of the age of their partner. The fact that men kill their wives when they are most reproductively valuable contradicts evolutionary logic that men should regard such women as 'prized property'. However, an alternative explanation, the '*evolved homicide module theory*' (Duntley and Buss, 2005) *can* explain these findings. A partner's infidelity carries a double loss for the male, particularly when the female is still of reproductive age. Not only does he lose a partner (decreasing his reproductive fitness), but another man gains a partner and increases his own fitness. By killing his wife, he at least prevents a competitor from gaining in the reproductive stakes.

The evolution of homicide

Because humans face being killed in many different circumstances (e.g. in status contests, by a jealous mate or sexual rival), it is likely that they would have evolved anti-homicide defences, such as being able to read the signs of homicidal intent, and killing in self-defence.

Anti-homicide defences and the costs of homicide – Once such mechanisms begin to evolve, homicide becomes a far more costly strategy to pursue (Duntley and Buss, 2004). Its success rate becomes lower, and attempting to kill becomes increasingly dangerous for the killer. Both of these consequences mean that homicide gives decreased fitness benefits to the killer. As a response, selection favours the development of deceptive strategies such as concealment of homicidal intent from victims to avoid activating their homicidal defences.

Limitations of the evolutionary perspective on homicide – An evolutionary perspective on aggression cannot explain why people react in such different ways when faced with the same adaptive problem. For example, Buss and Shackelford (1997) suggest that, currently, an evolutionary perspective cannot account for why three men confronted with a wife's infidelity will result in a beating in one case, a homicide in the second case, and getting drunk in the third case. Nor can an evolutionary perspective explain why some cultures (e.g. the Yanomamo of South America) seem to require male violence to attain status, whereas in other cultures (such as the !Kung San of the Kalahari) aggression leads to irreparable reputational damage (Buss and Shackelford, 1997).

GENDER BIAS

Most studies of infidelity have focused solely on men's mate retention and men's violence against women. However, women also engage in mate retention tactics and sometimes behave violently towards their partners. Research suggests that women initiate and carry out physical assaults on their partners as often as men do. For example, family conflict studies find approximately equal rates of assaults by women and men (Archer, 2000). It would be informative, therefore, to investigate whether women's mate retention is also linked to partner-directed violence.

CAN YOU...? No.4.6

...**1** Outline (in 200–300 words) evolutionary explanations of **two** forms of human aggressive behaviour (including jealousy/infidelity).

...**2** Outline **two** studies that either support or challenge evolutionary explanations of human aggressive behaviour and comment on the conclusions we can draw from these studies.

...**3** Identify **six** critical points, including **two** from the synoptic toolkit (see Introduction) and elaborate on them in 50 words.

...**4** Use all this material to write a 600-word answer to the question: 'Discuss evolutionary explanations of human aggression'. (9 marks + 16 marks)

GROUP DISPLAY AS AN ADAPTIVE RESPONSE

We have already seen how groups can increase aggressive behaviour through the process of deindividuation, but we now turn our attention to the relationship between group membership and *displays* of aggression. What is there about being in a group that makes people behave in such apparently bizarre ways?

▶ The US Census bureau estimates that 4,742 lynchings took place between 1882 and 1968. Many of the victims were accused of little more than 'insulting a white man' or 'seeking employment out of place'. Victims were hanged from trees, often tortured and mutilated before death, burned alive, castrated and dismembered. Not only were lynchings sanctioned by local communities, they were frequently advertised well in advance and tickets sold. People often dressed up for the occasion to enjoy the carnival atmosphere that surrounded these grizzly scenes, with some lynch mobs swelling to as many as 15,000 people (www.digitalhistory.uh.edu).

EXPLANATIONS OF GROUP DISPLAY

Lynch mobs

In the last decades of the nineteenth century, the lynching of black people in the Southern states of the USA became an institutionalised method used by whites to terrorise blacks and maintain white supremacy.

Social transitions and the need for conformity – Myrdal (1944) suggests that the fundamental cause of lynching in the US was fear of the Negro, which led white mobs to turn to 'lynch law' as a means of social control. Of the 4,742 documented lynchings, nearly three quarters of the victims were black. Patterson (1999) claims that lynch mobs were more active during this period because it was a time of major social transition (after the collapse of slavery), where the entire community felt at risk. When groups feel at risk, survival of the group becomes more important, and as Ridley (1997) points out, cooperative group defence and antagonism to outsiders go hand in hand.

The power-threat hypothesis – The racist myth of Negroes' uncontrollable desire to rape white women was frequently used in defence of the lynching practice, although homicides and assault were more frequently cited 'threats' to the majority group. The threat model of lynch mobs is based on Blalock's (1967) *power-threat hypothesis* which says that groups that pose a threat to the majority are more likely to be discriminated against and to be the subject of violent action. Lynching was an extreme form of discrimination, motivated by perceived racial threat.

Religious rituals

Not all aggressive behaviour is aimed at others, some is self-inflicted as part of an initiation rite or religious ritual. If human beings are rational creatures, why do we indulge in acts that can be painful or at the very least uncomfortable? Among Native Americans, Luiseño initiates were required to lie motionless while being bitten by hordes of ants, and among Shiite Muslims, self-flagellation is still practised as a way of celebrating the holy day of Ashura.

▲ A Pakistani Shiite Muslim performs ritual self-flagellation during a religious procession on the holy day of Ashura.

Costly signalling theory – Sosis (2004) believes that the inherent costs of religious rituals are the critical feature that contributes to the success of religion, and that natural selection would have favoured their development. By engaging in painful rituals such as self-flagellation, an individual signals commitment to a group and what it stands for. Consequently, religious behaviour can promote cooperation within the group. Zahavi and Zahavi (1997) suggest that the significant costs of such acts also serve as deterrents for anyone who does not believe in the teachings of a particular group but wants to take advantage of its benefits. The adaptive benefit of religious rituals is ultimately to promote and maintain religious cooperation within a group – a challenge that our ancestors faced throughout their evolutionary history.

Sports events and xenophobia

Wilson (1975) claims that **xenophobia** has been documented in '…virtually every group of animals displaying higher forms of social organisation'. Natural selection, it appears, has favoured those genes that caused human beings to be altruistic toward members of their own group but intolerant toward outsiders. Shaw and Wong (1989) argue that mechanisms that prompt suspicion towards strangers would have been favoured by natural selection. This would have enabled our ancestors to avoid attack, and so leave behind more offspring. MacDonald (1992) suggests that from an evolutionary perspective, it is **adaptive** to exaggerate negative stereotypes about outsiders, as the *over*perception of threat is less costly than its *under*perception.

Xenophobia on the terraces – Podaliri and Balestri (1998) illustrate this tendency in their analysis of the behaviour of Italian football crowds. From the end of the 1980s, xenophobic political organisations such as the Northern League in Italy had led to the growth of extreme right-wing movements characterised by racist chants and openly anti-Semitic banners. Nowhere was this more evident than in the *curve* (terraces) of football stadia in Northern Italy. Chants and banners among the *ultràs* (extremists) of clubs in this region were not only openly xenophobic, but additionally strengthened the cultural identity of the supporters because they stressed differences between Northern and Southern Italians. A common chant among the *ultràs* of Atalanta Bergamo (a Northern Italian club) was 'Bergamo is a nation, all the rest is South'.

CLUB OR COUNTRY?

Evans and Rowe (2002) analysed data relating to 40 football matches played in 1999/2000. All 40 games were played in continental Europe, and involved both English club sides and the English national side. Post-match reports and interviews with senior police and other officials suggested a much greater degree of disorder associated with games involving the *national* side than games involving *club* sides. This was primarily attributed to the influence of nationalism and xenophobia. A possible reason for these findings is that English club sides are more ethnically diverse than the national side, and so less likely to invoke xenophobic responses from foreign supporters.

REAL-WORLD APPLICATION

The power of xenophobia to invoke violence has motivated football clubs to take steps to minimise its influence. In Germany, in December 1992, all the teams in the *Bundersleague* played in shirts displaying the slogan, 'Mein Freund ist Auslander' ('My Friend is a Foreigner'). In Scotland, a century of sectarian bigotry has been addressed by the two Glasgow teams. Celtic have introduced the 'Bhoys against bigotry' campaign and Rangers have finally abandoned their long-standing tradition against the signing of Catholic players. In England, initiatives such as Sheffield United's 'Football Unites, Racism Divides' have attempted to forge stronger links with local ethnic communities. In an audit of clubs' policies of racism, Bradbury (2001) concluded that although progress has been made, much more needs to be done, including taking direct action against racist and xenophobic incidents.

COMMENTARY

Lynch mobs

Social transitions and the need for conformity – Boyd and Richerson (1990) provide evidence to support the power of social conformity in group displays of behaviour. They discovered that groups in which cooperation thrived were also those that flourished. This, therefore, provides an explanation of why, when a majority group is more at risk as a consequence of social change, individual self-interest would give way to 'groupishness'.

The power-threat hypothesis – Part of the difficulty of testing a threat model of the behaviour of lynch mobs is that the nature of social threat is vague and poorly defined. In a study of lynchings in Brazil, Clark (2006) concluded that the evidence contradicted the claim that the threat of 'dangerous classes' in society was a major causal factor in lynchings. In Sao Paulo, for example, the percentage of Afro-Brazilians in the community was *negatively* correlated with incidents of lynch-mob violence.

Religious rituals

Research support – Sosis and Bressler (2003) provide evidence to support the claim that the costs of religious commitment contribute to the longevity of religious groups. They found that religious groups tended to impose twice as many costly requirements on their members as did non-religious groups, and the number of costly requirements was positively correlated with the lifespan of the group. This shows us that those religions requiring the greatest displays of commitment (often involving painful rituals) produce the most committed members, and so last the longest.

Costs and benefits – The costly signalling theory predicts that religious rituals are costly to followers in order to deter religious imposters who might otherwise invade religious communities. However, when the pay-offs are high, imposters may still attempt to fake membership of the group. The expectation, therefore, is that the costs surrounding religious rituals should be related to the incentives of membership. This is precisely what was found by Chen (2003), in a study of the Indonesian financial crisis of the 1990s. As the crisis worsened, Muslim Indonesian families devoted a greater proportion of their dwindling financial resources to religious observance. Chen observes that in times of crisis, religious institutions provide social insurance, minimising risk by collectively supporting the most needy.

Sports events and xenophobia

Research support – Foldesi (1996) provides evidence to support the link between xenophobia and violent displays among Hungarian football crowds. He found that the racist conduct of a core of extremist supporters led to an increase of spectators' violence in general, and xenophobic outbursts in particular. Violent incidents based on racist or xenophobic attitudes were observed at all stadia, with gypsies, Jews and Russians the usual targets.

Football violence as a career – Marsh (1978) offers an alternative explanation of the aggressive displays of football crowds. He claims that much of what passes for violent behaviour is actually highly ordered and ritualised. Being a football hooligan, enables young males to achieve a sense of personal worth and identity in the eyes of their peers. Group displays of aggression, therefore, are not, according to Marsh, an indication of underlying xenophobic tendencies, but part of an alternative 'career structure' for working class males.

LYNCH MOBS AND DEINDIVIDUATION

Mullen (1986) carried out an archival analysis to determine whether the atrocities committed by lynch mobs could be accounted for in terms of self-attention processes. He coded 60 newspaper reports of lynching events for information regarding group composition and the level of atrocity (e.g. the occurrence or non-occurrence of hanging, shooting, dismembering of the victim etc.). It was found that, as the lynch mob grew in size, the lynchers became less self-attentive, or more deindividuated. This led to a breakdown in normal self-regulation processes, which in turn led to an increase in the level of atrocities committed against the victim.

AN EVOLUTIONARY APPROACH

An analysis of the adaptive advantages of religious ritual and commitment to religious practices helps us to understand the success of religion from a purely evolutionary perspective. However, there is also a dark side to this understanding. If the *intra*group solidarity that religion promotes is its significant adaptive advantage, then its disadvantage for a peaceful world must be its role in *inter*group conflict. As Sosis (2000) points out, one of the benefits of intragroup solidarity is the ability of unified groups to defend and compete against other groups. Roes and Raymond (2003) found that societies with stricter religious practices tend to have higher levels of intergroup conflict. They argued that societies only attained large size if they were bound together by a religiously inspired morality, reducing internal conflict and promoting group cooperation in the face of external enemies.

CAN YOU...? No.4.7

...1 Outline (in 200–300 words) explanations of two types of group display.

...1 Outline **three** critical points (including research evidence) for each explanation, including **two** topics from the synoptic toolkit (see Introduction) and elaborate on them in 50 words.

...1 Use all this material to write a 600-word answer to the question: '*Discuss two or more explanations of group display as an adaptive response*'. (9 marks + 16 marks)

CHAPTER SUMMARY

SOCIAL PSYCHOLOGICAL EXPLANATIONS OF AGGRESSION

SOCIAL LEARNING THEORY

OBSERVATION
- Learning takes place through the observation of models.
- Seeing others reinforced or punished acts as vicarious reinforcement.

MENTAL REPRESENTATION
- Individual forms mental representations of events.
- Also represent expectancies of possible rewards or punishments.

PRODUCTION OF BEHAVIOUR
- Aggression maintained through direct reinforcement.
- Likelihood of aggression increased if high self-efficacy for production.

BOBO DOLL STUDIES
- SLT demonstrated in young children observing aggressive adult model.
- Imitated model, but only if model was rewarded for their behaviour.

COMMENTARY
- Learning takes place regardless of outcome, but production linked only to reinforcement.
- SLT also applies to aggression in adults e.g. Phillips (1986) – homicide rates and boxing matches.
- Strength – can explain aggression in absence of direct reinforcement.
- Can also explain individual differences and context-dependent learning.

SYNOPTIC LINKS
- Cultural differences – absence of aggressive models among !Kung San.
- Problem of demand characteristics in Bobo doll study.

DEINDIVIDUATION

NATURE OF DEINDIVIDUATION
- Reduced self-evaluation; decreased concern about evaluation by others.
- Leads to an increase in antisocial behaviour.
- More likely when anonymous, in a large crowd or drunk.

PROCESS OF DEINDIVIDUATION
- Social norms usually inhibit antisocial behaviour.
- Inhibitions removed when deindividuated.
- Conditions that increase anonymity weaken barriers to antisocial behaviour.

RESEARCH ON DEINDIVIDUATION
- Anonymity – Zimbardo (1969) – longer shocks when anonymous.
- Faceless crowd – lynchings more savage when large crowds (Mullen, 1986); baiting crowd (Mann, 1981).

REDUCED PRIVATE SELF-AWARENESS.
- Reduced self-awareness more important than anonymity.
- In large crowds, less able to self-regulate behaviour.

COMMENTARY
- Local group norms – people respond to normative cues within the social context.
- Meta-analysis (Postmes and Spears, 1998) found insufficient support for many claims of deindividuation theory.
- Deindividuation may increase prosocial behaviour in some situations.

SYNOPTIC LINKS
- Gender difference – males more likely to become aggressive when deindividuated (Cannavale *et al.*, 1970).
- Cultural difference – cultures that change appearance more brutal in war (Watson, 1973).

INSTITUTIONAL AGGRESSION

WITHIN GROUPS
- Importation model – prisoners bring violent behaviours with them.
- Deprivation model – a reaction to stressful conditions of prison.
- Hazing – institutional bullying based on initiation into group.
- Product of situational forces and cultural notions of 'male' behaviour and toughness.

COMMENTARY
- Importation model – some support from studies of US prisons (Harer and Steffensmeier, 2006).
- Deprivation model – support from prison studies but not psychiatric institutions.
- Hazing – research support among inmates in prisons (McCorkle *et al.*, 1995).

BETWEEN GROUPS
- Staub (1999) – five stages in process of genocide.
- Dehumanisation – removal of moral restraints against killing other humans (e.g. Tutsi 'cockroaches').
- Obedience – Milgram believed situational pressures could coerce people into destructive obedience.

COMMENTARY
- Bystanders – non-intervention allows killing to continue.
- Dehumanisation – may explain violence against immigrants.
- Obedience – ignores other factors (e.g. anti-Semitism).

SYNOPTIC LINKS
- Dehumanisation is difficult to investigate empirically.

Ethical issues in studying people who have been subjected to dehumanising violence.

AGGRESSION AS AN ADAPTIVE RESPONSE

EVOLUTIONARY EXPLANATIONS

INFIDELITY AND JEALOUSY
- Men experience sexual jealousy because of the threat of cuckoldry.
- Sexual jealousy designed to deter a mate from infidelity.
- Males have evolved mate retention strategies (e.g. direct guarding and negative inducements).
- Wilson et al. (1995) – women who have experienced sexual jealousy also more likely to have experienced violence from partners.
- Uxoricide – wife killing may be unintended outcome of adaptation to control mate.

COMMENTARY
- Use of mate retention strategies and female-directed violence supported by research (Shacklford et al., 2005).
- Application – use of mate retention strategies is early indication of the need for intervention.
- Uxoricide – alternative explanation by Duntley and Buss (2005), killing wife prevents competitor gaining in reproductive stakes.

HOMICIDE
- Lack of resources and inability to attract mates leads to increased social competition and male-male homicides.
- Threat of loss of status is an adaptive reason for male-male homicide.
- Sexual jealousy also a cause of same-sex aggression and homicide.

COMMENTARY
- Homicide may become costly because of evolution of anti-homicide defences.
- Evolutionary perspective cannot explain why different people react differently in the same situation.

SYNOPTIC LINKS
- Limitations of survey data include problem of social desirability bias.
- Most research has focused on mate retention strateges by males even though mny assaults re by omn

BIOLOGICAL EXPLANATIONS OF AGGRESSION

NEURAL AND HORMONAL EXPLANATIONS

NEUROTRANSMITTERS

- Low levels of serotonin and high levels of dopamine associated with aggressive behaviour.
- Serotonin normally inhibits responses to emotional stimuli that might lead to aggressive response.
- Mann (1990) - dexfenfluramine depletes serotonin in brain, led to increased aggression in males but not in females.
- Amphetamines increase dopamine activity – also increase aggressive behaviour (Lavine, 1997).
- Antipsychotics reduce dopamine activity – also reduce aggressive behaviour (Buitelaar, 2003).

COMMENTARY

- Meta-analysis (Scerbo and Raine, 1993) found evidence for serotonin-aggression link, but not dopamine-aggression link.
- Animal studies suggest higher levels of serotonin associated with aggression and dominance.
- Research support from antidepressants that raise serotonin levels.
- Dopamine may be a consequence rather than a cause of aggression.

HORMONAL MECHANISMS

- Meta-analyses have established weak but positive correlation between testosterone and aggression (Archer, 1991; Book et al., 2001).
- Dabbs et al. (1987) – testosterone levels high among violent criminals.
- Challenge hypothesis – testosterone levels rise in response to social challenges.
- Cortisol – high levels inhibit testosterone and so inhibit aggression.

COMMENTARY

- Inconsistent evidence for testosterone-aggression link.
- Influence of testosterone linked to dominance rather than aggression (Mazur, 1985).
- Cortisol – link supported by study of boys with behavioural problems (McBurnett et al., 2000).

SYNOPTIC LINKS

- Reductionism – human social behaviour more complex therefore biological factors represent an incomplete picture.
- Gender bias – research tends to focus on males, but studies of females also show important role for testosterone.

GENETIC FACTORS

TWIN STUDIES

- MZ twins genetically identical, more similar levels of aggressive behaviour than DZ twins indicates genetic influence.
- Coccaro et al. (1997) – genetic factors account for 50% of variance in aggressive behaviour.

ADOPTION STUDIES

- Possible to disentangle genetic and environmental factors by comparing adopted children and biological parents.
- Hutchings and Mednick (1975) – children with criminal convictions had fathers with criminal convictions.

GENE FOR AGGRESSION

- Gene for MAOA associated with aggressive behaviour.
- MAOA regulates serotonin in brain, low levels of serotonin associated with aggression.
- Brunner et al. (1993) – violent men in Dutch family had abnormally low levels of MAOA.

GENETICS AND VIOLENT CRIME

- Inherited temperament or personality characteristics place some individuals at risk of committing violent crime.
- Brennan (1993) – genetic influences significant in property crime but not violent crime.

COMMENTARY

- Difficult to determine what is a product of genetic inheritance.
- More than one gene contributes, as do environmental factors, and there is an interaction between the two.
- Problems of measuring aggression (self-reports versus observation).
- Individual differences in aggression due to environmental rather than genetic influences.
- Studies of youth violence do not suggest a strong role for heredity.

SYNOPTIC LINKS

- Problems of sampling – violent criminals represent tiny minority of people involved in aggression.
- Some violent criminals are not generally 'aggressive'.
- Animal studies – allow experimental manipulation and selective breeding, e.g. 'fierce' mutation.
- Possibility of genetic engineering creates ethical issues.

EXPLANATIONS OF GROUP DISPLAY

LYNCH MOBS

- Lynchings due to 'fear of the negro' during periods of social transition.
- Power-threat hypothesis – groups that pose threat to majority more likely to be discriminated against.

COMMENTARY

- Boyd and Richerson (1990) – research support; groups in which cooperation thrived were those that flourished.
- Clark (2006) – evidence from lynchings in Brazil contradicts idea of 'dangerous classes'.

RELIGIOUS RITUALS

- Costly signalling theory – the costs associated with religious rituals signal commitment to a group.
- Zahavi (1997) – significant costs act as a deterrent for those who do not accept religion but seek advantages of group membership.

COMMENTARY

- Religions requiring the greatest displays of commitment last the longest (Sosis and Bressler, 2003).
- Costs of rituals should be related to incentives of group membership – supported by Chen (2003), religious institutions provide 'social insurance'.

SPORTS EVENTS

- Xenophobia – suspicion about strangers, adaptive as helps avoid attack.
- Demonstrated in xenophobic responses of Italian football crowds.
- Xenophobia more evident with national sides rather than club sides (clubs more ethnically diverse).

COMMENTARY

- Research support – Foldesi (1996) found link between xenophobic outbursts and crowd violence among Hungarian football crowds.
- Marsh (1978) – alternative explanation, football violence as a career.

SYNOPTIC LINKS

- Lynch mob behaviour can also be explained in terms of deindividuation.
- Evolutionary approach – increased intragroup solidarity may lead to increased intergroup conflict.

EXAM QUESTION WITH STUDENT ANSWER

QUESTION **Outline and evaluate two social psychological theories of aggression.** *(9 marks + 16 marks)*

STUDENT ANSWER

In this essay I will describe and evaluate the social learning explanation and deindividuation theory which both explain aggressiveness from a social psychological point of view. The opposite point of view is that people (and other animals) are aggressive because it is in their genes. This is the biological approach – together these two approaches are an example of the nature-nurture debate because according to the social psychological position aggression is learned (nurture) and the biological view suggests aggression is innate (nature). This debate is no longer a debate as such because it is recognised that nature and nurture interact rather than it being one or the other.

In a sense this can be seen in social learning theory. Bandura proposed that aggression is learned through direct and indirect reinforcement but he did acknowledge the role of biology which supplies the urge to aggress. What is learned is when and how to express this aggression. Bandura suggested that people learn about aggression by observing other people behaving aggressively. If such behaviour is rewarded (vicarious reinforcement) this increases the likelihood that such behaviour will be imitated. However if such imitation is not further reinforced then the behaviour is less likely to be repeated in the future. What is learned is an expectancy of future outcomes which is learned both indirectly and directly.

The second theory is deindividuation which refers to loss of individuality. In a crowd a person loses their sense of personal responsibility and therefore is more likely to behave in an antisocial or aggressive manner. Zimbardo suggests that deindividuation results from anonymity which can happen in a crowd or when a person is wearing a uniform.

Both theories have been supported by research studies. Bandura conducted a study with a Bobo doll and showed that children who observed a model behaving aggressively towards the life-sized doll were later more aggressive and imitated specific acts when they were allowed to play with toys including a Bobo doll. Furthermore, in a later study, Bandura and others showed that this only happened if the model was positively reinforced for their actions. If they were punished then the children did not imitate the behaviour. This shows that people may learn a behaviour but will only imitate it if they experience vicarious reinforcement. There have, however, been quite a few criticisms of this study. For one thing it is about children and may not explain adult behaviour because children are more impressionable. Another criticism has been that the children's behaviour towards the Bobo doll was the result of demand characteristics – the doll invited aggressive behaviour and one child even commented spontaneously that they should hit the doll.

Zimbardo (1969) demonstrated the effects of deindividuation in a study similar to Milgram's experiment and found that participants delivered more electric shocks if they were anonymous (no name tags, wearing a hood). However in another study by Johnson and Downing (1979) there were two sets of deindividuated participants – wearing gowns like the Ku Klux Klan or wearing nurses' uniforms. The participants wearing nurses uniforms actually gave fewer shocks than control participants which shows that deindividuation can lead to prosocial as well as antisocial effects. In fact it seems that deindividuation orients people towards group norms rather than simply increasing aggression.

In fact Prentice-Dunn et al. *(1982) have suggested that deindividuation is caused by reduced self-awareness, rather than by anonymity. When a person is aware of themselves they act according to personal moral standards. In a group situation people lose their self-awareness and respond to group norms, which may lead to antisocial behaviour.*

[594 words]

EXAMINER COMMENTS

The first sentence offers a general introduction to the essay, which is not strictly necessary. Such introductions rarely attract any marks as they do not demonstrate knowledge and understanding. The rest of the paragraph offers a useful commentary on the contrast with biological explanations and on the nature-nurture debate, evidence of **synopticity**.

The second paragraph begins with some extra commentary on the nature/nurture elements of social learning theory, attracting further **AO2** credit.

This paragraph contains a competent outline of social learning theory, making use of **psychological terminology** and also providing evidence of **organisation** and **structure**, which are both important criteria for **AO1** marks.

The second social psychological theory is outlined here. Note that words have not been wasted on introducing this second theory, for example saying, 'The second theory I will look at is deindividuation'. This outline is somewhat **basic** though sufficient in this situation where an outline only is required.

The next two paragraphs present research support plus various other critical points, demonstrating the **effective commentary**. In total, three studies have been selected and for each there is minimal description of the actual study. Some description is necessary but if there is too much then the material ceases to be commentary.

Most importantly the student has made it clear what the study demonstrated and thus has demonstrated **sound analysis**.

Further **AO2** credit is given to the criticisms of Bandura's study. Both critical points have reasonably **elaborated** so the student's understanding is clear.

The study by Johnson and Downing is used to provide critical commentary on the basic theory of deindividuation and this criticism is further developed in the final paragraph which contains a mixture of **AO1** (further description of the theory of deindividuation) and **AO2** (contrast with earlier explanation related to anonymity).

AO1 – **sound**, **accurate** and sufficiently **detailed** for an outline.

AO2/AO3 – **sound** analysis and line of argument, however **evidence of synopticity** is **not substantial** and used only '**reasonably effectively**'.