A2 Psychology

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These online resources are intended to provide you with additional information relevant to the topics covered in the *Edexcel A2 Psychology* textbook published by Philip Allan Updates (ISBN 978-0-340-96684-6). The material consists of topics and studies from the Edexcel A2 specification that are not discussed in detail in the textbook.

For specific content guidance on each unit, as well as questions and answers and examiner comments, see our Student Unit Guides for A2 psychology. For more information and to order copies online, visit [www.philipallan.co.uk](http://www.philipallan.co.uk), or contact Bookpoint on 01235 827720.

*Edexcel A2 Psychology Unit 3: Criminological and Child Psychology* 978-0-340-94879-8
*Edexcel A2 Psychology Unit 3: Health and Sport Psychology* 978-0-340-94878-1
*Edexcel A2 Psychology Unit 4: How Psychology Works* 978-0-340-94923-8
A biological explanation for criminal or antisocial behaviour

Eysenck’s personality theory, which is a biological theory, is explained in Chapter 4. This theory puts forward the idea that people are introvert or extrovert, neurotic or psychotic. It may be that people with psychopathic tendencies engage in criminal behaviour; such people are said to manipulate, to deceive and to have no social conscience. Psychopaths are also said to have low anxiety levels, which may mean that they are less restrained in their behaviour. Extroverts may seek excitement, which might mean that they are more likely to engage in criminal behaviour to satisfy their need for arousal.

Table 1.1 Evaluation of the biological explanation for criminal behaviour

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studies of twins reared together and reared apart have shown that genetics do link with personality. For example, Pederson et al. (1988) found that around 41% of individual differences in extroversion are linked with genetic factors and 31% for neuroticism.</td>
<td>Biological theories of personality are hard to prove because behaviour comprises aspects of nature and aspects of nurture and it is very hard to separate them for study. For example, studies of twins reared apart are said to be flawed because the families they are reared in can be part of the same overall family so there are still perhaps genetic factors involved. In addition, MZ twins may be treated more alike than DZ twins.</td>
</tr>
<tr>
<td>Some extroverts may have less arousal than introverts according to Gale (1983), which supports Eysenck’s ideas (but this was not true for all extroverts).</td>
<td>Biological factors, other than personality, that are associated with criminal behaviour have been found. For example, Klinteberg (1996) looks at biological processes and criminality and also considered the effects of personality. Of course, personality and biological processes could be linked.</td>
</tr>
</tbody>
</table>

Two ways of treating offenders

1 Social skills training

Social skills training is a way of treating offenders. It focuses on helping someone to interact with others and to form and maintain relationships. Social skills are specific strategies that are used to help someone become socially competent. The focus tends to be on social interaction skills such as starting a conversation, responding to the conversation of others and maintaining suitable eye contact. Social skills training involves a cognitive problem-solving approach and links with cognitive psychology because there is a focus on thinking about interactions with people. However, there is also a strong behaviour modification element, where useful behaviour (in terms of interacting with others) is encouraged. This aspect of social skills training links with the learning approach. As the training is about interacting with others, there is also a link to the social approach.

Training involves learning the right social skill for an appropriate situation. The first stage involves the important development of sensitivity and awareness of problem areas. A list of alternative ways of behaving is then drawn up; here it is important to work with the individual.
and elicit their help. Then problems are considered and solutions chosen from the list as a means to an end. A step-by-step procedure is planned and consequential thinking (where consequences of actions are considered) is introduced. A final stage could involve working backwards to see how a current event dealt with in new ways would have been dealt with in the past to see how the new solution is better and produces better results. Within these stages positive reinforcement can be used to encourage the new behaviour.

Table 1.2 Evaluation of social skills training

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Lim et al. (2007) carried out a pilot study of the use of social skills training in Singapore and found some evidence of its success.</td>
<td>▪ It is hard to find evidence that social skills training works because other factors such as attention from the group and from the trainer might be responsible for any improvement in social interactions.</td>
</tr>
<tr>
<td>▪ Verduyn et al. (1990) carried out a study using an intervention and a control and found that social skills training in schools with children with behavioural problems did have a positive effect on their behaviour.</td>
<td>▪ The studies that have been done tend to be in schools using social skills training with children with behavioural problems and though such problems link with criminal behaviour, the same findings might not be true for adult offenders.</td>
</tr>
</tbody>
</table>

2 Punishment

Punishment is another way of treating offenders and links with learning theory. Positive reinforcement is given for required behaviour while behaviour that is not desirable is punished. Refer to your AS work on learning theory for a more in-depth explanation. There is discussion about how far the experience of prison successfully punishes a crime: the Ministry of Justice published a paper that discusses the success of prisons in managing behaviour, and claims that citizens of a society must be protected from crime and criminals by imprisonment (see ‘Punishment and reform — our approach to managing offenders: a summary’ December 2008 at www.justice.gov.uk/publications/docs/punishment-reform.pdf).

Table 1.3 Evaluation of punishment as a way of modifying behaviour

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ The Ministry of Justice (2008) claims that between 2000 and 2006, the percentage of youths and adults re-offending fell by 18.7% (youth crime) and 22.9% (adult crime). It is suggested that imprisonment as punishment for crimes is, therefore, successful.</td>
<td>▪ Punishment can be seen as aggression and is modelled by prison officers, for example. According to social learning theory, modelled behaviour is imitated and likely to be repeated, so punishment might not be successful in reducing aggressive behaviour.</td>
</tr>
<tr>
<td>▪ Punishment is balanced with other treatment programmes such as social skills training and anger management, as well as token economy programmes, which use principles of positive reinforcement. Therefore, in conjunction with other programmes, punishment (whether a form of punishment within a prison, such as removal of privileges, or in the form of prison itself) can be seen as successful.</td>
<td>▪ Ethically it has to be decided who has the power to punish; there might be problems in allowing punishment of offenders because some might find such treatment morally unacceptable.</td>
</tr>
</tbody>
</table>
Key issues

The use of offender profiling

Offender profiling is carried out by forensic psychologists when helping the police to draw up a picture of what a criminal might be like. This profile, or ‘picture’, can involve a suggested age, place of residence, type of character, whether the criminal is married or a loner and so on. Offender profiling tends to be employed in attempts to solve serial crimes where a pattern can be discerned. It often takes more than a few offences for a profiler to work out information that the police can use. A well-known profiler is David Canter. He worked on the case known as the ‘railway rapist/killer’ (John Duffy) and it is worth looking up that case and Canter’s work.

The first instance of offender profiling (although it was not called that at the time) probably took place in the 1880s. A man called Thomas Bond tried to draw up a profile of Jack the Ripper. In New York in 1934, Walter Langer drew up a profile of Hitler. In the USA the FBI uses investigative analysis to look at a crime and form an idea of what a criminal would be like. Then, using profiles of previous criminal personalities and behaviour, it looks at what this evidence can add to the profile of the perpetrator. In the UK we do not hold databases of past criminals and crimes in the same way as the FBI, and although in practice experience is built up, here it is more a case of looking at a particular crime or set of crimes to draw out ideas of what the criminal might be like.

There are four stages to drawing up an offender profile:

- **Stage 1** The main assumption is that behaviour reflects someone’s personality, so evidence of the personality involved in the planning and execution of a crime is sought. This stage investigates the antecedent — what plan was in place.
- **Stage 2** The method of the crime is investigated.
- **Stage 3** The method used to dispose of the body (if it is a murder, and it often is) is considered.
- **Stage 4** Events that happened after the crime are investigated.

Richard Jewell was investigated as the suspect in the Olympic Park bombing in Atlanta (1996). Look this case up to understand what happens when profiling goes wrong (the criminal was Eric Rudolph). The focus on Jewell was a ‘false positive’ (a wrong arrest); a ‘false negative’ is when a suspect who is in fact guilty is cleared.

Are criminals born or made?

When you studied reasons for criminal or antisocial behaviour as part of the Content section you may have looked at one explanation from the social approach, the role of the self-fulfilling prophecy and labelling. You will have studied the idea that if someone is treated as if they will act in a certain way, then they will start to act that way and will fulfil expectations. As part of being treated in that way they are labelled. For example, if someone is labelled as untrustworthy because they are seen that way (perhaps because their family is seen that way) then they will be treated as if they cannot be trusted. They will, according to the self-fulfilling prophecy, then see themselves as untrustworthy and start behaving accordingly, perhaps turning to crime or antisocial behaviour. They are thus ‘made into a criminal’.

You will also have learned about social learning theory and how people copy others, particularly role models. If someone has a father who behaves in an antisocial way, for example, then they might start to behave in the same way. Learning theories, such as social learning theory, suggest that behaviour derives from environmental influences such as role models. So two theories that you have may have studied both suggest that criminal or antisocial behaviour is environmentally given and that criminals are made.

Earlier in these resources Eysenck’s personality theory is briefly outlined and it is explained in more detail in Chapter 4. This theory suggests that criminal behaviour is at least in part genetic and that personality is ‘given’. Extroverts may seek arousal and so carry out criminal or antisocial
behaviour because it is felt to be exciting. Psychopaths may engage in criminal behaviour because they lack a social conscience and so do not focus on such behaviour being wrong. Such a biological personality theory suggests that criminals are born and not made. There is not much evidence for the existence of an actual gene for criminality, though there is some evidence for a gene for stealing. In general it is thought that criminals are made more than born, although there is some evidence for biological differences between criminals and non-criminals. For example, PET scanning has shown that there are brain differences from non-criminal brains in those charged with murder, as shown by Raine et al.’s study.

**Study hints**

Note that here the word *antisocial* refers to behaviour that is not approved of by society and not to someone who is not sociable as in shuns friends.

Offender profiling links with explanations for criminality as it looks for patterns of behaviour and considers both biological and environmental issues that might link to the criminal. It is therefore relevant to the content of your course and can be used for an article analysis.

**Practical**

**An example article analysis for criminological psychology**

You need to find two articles and analyse them, drawing in concepts, theories and research that you have studied in criminological psychology. As an example, two articles on eyewitness testimony are analysed in the Getting Started booklet that goes with the Edexcel specification. The full text of this booklet is on the CD-ROM that comes with the specification. It is also on the Edexcel website.

You could look at offender profiling in the same way. You could, for instance, find the report of an interview with Greg Cooper, Chief of Police and retired FBI, who talks about profiling (*The Forensic Examiner*, June 2007). Or there is an account of the ten biggest myths about serial killers on the internet (search for the Pat Brown Criminal Profiling Agency). There are many other articles you might consider on this subject; back issues of the *Guardian* newspaper are worth researching, for example.

A summary of two articles follows. You should, however, track down the original article and summarise it for yourself.

**Summary of ‘The ten biggest myths about serial killers’**

Serial killers have often been stereotyped as wanting to hurt their mother, whom they hate. They are often seen as ‘the nice boy next door’ and that they tend to lead a quiet life. The article asks whether this is a true representation of a serial killer.

**Serial killers are either weird-looking or really good-looking.**

In reality they are often fairly average-looking.

**They live with their mothers.**

Some do but others live with a girlfriend or another female relative. However, often they live in a rented room by themselves.

**They play games with the police.**

This can be dangerous and lead to them getting caught. Most just kill and then go back to their normal lives.
Serial killers are male.
Many of them are but there are also female serial killers who tend to focus more on victims that they know and/or kill children, often involving their boyfriends as well.

They abduct their victims cleverly.
In fact, they just come across someone, perhaps jogging or walking home, and kill them.

They kill every month, or often.
In fact, there can be years between killings.

A serial killer only stops when he (or she) gets caught.
In fact, they may run out of steam or just stop killing. Often they are never caught and the crime is never solved.

Serial killers keep souvenirs and clippings.
Many of them just kill and go home, although it is true that some do keep clippings and souvenirs, which is made use of in media representations.

They use brilliant strategies.
In fact, they are usually of only average intelligence.

The tenth myth dealt with in the article is that most serial killers are caught through brilliant police investigation, whereas in practice most killers are caught through carelessness.

Summary of ‘The Jigsaw Man’ (Morris 2000)
This article, of 20 November 2000 in the Guardian, is available on the internet at www.guardian.co.uk/g2/story/0,3604,404994,00.

Paul Britton has helped police with regard to murders over the last 20 years. In one particular case, however, he was involved in controversy. The article is about the resulting British Psychological Society hearing into the issue.

The case was the killing of Rachel Nickell. A ‘honeytrap’ was used to try to trick the suspect into an admission of guilt. The criticism levelled at Britton was that he offered support and advice to the police with regard to the honeytrap and that this was not accepted practice.

It is not such common practice nowadays for police to bring in one expert (they are more likely to use mathematical systems and computer programs) but experts are still used in modern policing. Offender profiling began in the 1940s, when Langer was asked to draw up a profile of Hitler. Other profiles followed. The film Silence of the Lambs involves criminal profiling, as do the plots of detective novels, so the media reflect the trend to look for a system or pattern that could pick up links between unsolved major crimes. David Canter is well known in Britain for offender profiling; he emphasises the problem of the profiler’s subjectivity.

Britton drew up an offender profile in the case of Rachel Nickell, and suspect Colin Stagg came under investigation. The police could not get enough evidence and Britton was asked to design a covert operation to test whether the suspect would implicate himself. The case was thrown out of court; the judge said the police had shown excessive zeal and Stagg was acquitted.

In 1997, Britton published a book about his work as an offender profiler, called The Jigsaw Man. Critics said that he put himself forward as ‘an expert’. The general view is that the British Psychological Society needs to protect the title ‘psychologist’ by ensuring ethical practice. David Canter thinks that a single psychologist should not be involved in helping and advising the police but that a scientific approach should be used rather than the intuition of an expert. Software is being designed to help police sift through information and spot patterns more easily.

Robert Napper pleaded guilty to the murder of Rachel Nickell in 2008. In 2002, the BPS case against Paul Britton was thrown out, partly because it had taken so long to put together.
Relating the two articles to the theory

Draw up some points of similarity and difference between the material in the two articles:

- One article talks about offender profiling itself and the other considers the sort of information a profiler might look at, such as whether the offender is a loner or lives with a family.
- Both articles consider cases involving killing as the main focus for a profiler.
- David Canter suggests a more scientific approach than an individual subjectively putting a profile together: the ‘ten myths’ article also suggests that there are stereotypes that might influence others. Both articles suggest that there is some lack of science in the process.
- Both articles mention films. The article about Britton mentions *Silence of the Lambs* and the other article notes that certain stereotypical ideas, such as the criminal keeping souvenirs, make for good media material.
- The ‘ten myths’ article mentions the specialist area of female killing but the Britton article focuses on a more traditional view (according to the myths article) of a male killer of a female victim chosen randomly.
- The whole idea of writing about myths underlines the unreliability of offender profiling; the other article, about Britton, also looks at this issue. For example, there is mention that Britton uses his status as an expert to make himself important, as shown by the title of his 1997 book *The Jigsaw Man*.
- The second article mentions David Canter and his view that a single profiler can offer too subjective a judgement, but it was Canter who made offender profiling famous in the UK through his personal profile of the ‘railway killer’. Presumably, he later developed profiling to the point where he saw a scientific approach as being preferable.
Studies in detail

Belsky and Rovine (1988)

‘Non-maternal care in the first year of life and the security of infant parent attachment’

Background

The focus of this study was on non-maternal care under the age of 1 year and attachment behaviours such as resistance, avoidance, proximity seeking and contact maintaining of infants. This research built on the work of other studies that have found daycare experiences in the first year of life to be associated with insecurity in the mother-child relationship. Some studies have found avoidance behaviour in infants who were in non-maternal care in the first year of life. Others have not. Some findings showed that boys under 12 months old whose mothers worked full-time demonstrated more insecurity in their infant-father relationships than boys whose mothers gave full-time care. Other studies showed that not all infants who experience non-maternal care have their parent-child relationships affected; there were differences between participants, and some who experienced non-maternal care before the age of 1 year old did not show insecure relationships. Moderating factors include family stress, the mother’s psychological attributes and the ‘emotional responsibility’ of the mother (which means issues such as acceptance of motherhood). The infant’s characteristics were also found to affect their experiences; for example, gender and temperament (boys may be more susceptible to any negative consequences if they experience non-maternal care in the first year, and boys may be temperamentally more difficult). Other factors that may influence how non-maternal care in the first year affects a child included how the mother viewed the childcare arrangements and how much she wanted to work.

The type of non-maternal care was examined by this study, which looked at infant and family development. It was not a study of daycare as such.

Aim

To look at infants in their first year to see the effect of non-maternal care experiences using the strange situation procedure to categorise infants into three attachment types. The focus was on the father and the mother.

Procedure

Participants were drawn from the Pennsylvania Infant and Family Development Project; 90 male and 59 female healthy first-born infants formed the sample. There were 149 participants (and their families) in total. The families were ‘maritally intact’ (involved married couples) and working or middle class. Introductory letters were sent by the research project and then phone call follow-up was made to recruit the families and to explain that the study was longitudinal. In all, 55% of the eligible families agreed to take part.

There were two main ways of collecting the data.

Method 1

Interviews were carried out when the baby was 3, 9 and 12 months old to find out about the parents’ employment and childcare arrangements. The researchers also recorded time spent in non-maternal care. Then four groups were set up comprising infants who spent 35 hours or more a week in daycare, 20-35 hours a week, 10-20 hours a week or less than 5 hours a week (this
last group was the ‘mother care’ group). All in the first three groups had started non-maternal care before the age of 9 months old.

Table 2.1 Belsky and Rovine (1988): time spent by infants in non-maternal care

<table>
<thead>
<tr>
<th>Time spent in non-maternal care</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 infants were in full-time non-maternal care (35 hours or more per week)</td>
</tr>
<tr>
<td>20 infants were in high part-time non-maternal care (20-35 hours per week)</td>
</tr>
<tr>
<td>24 infants were in low part-time non-maternal care (10-20 hours per week)</td>
</tr>
<tr>
<td>67 infants were in the mother care group and had 5 hours or less of non-maternal care per week</td>
</tr>
</tbody>
</table>

With regard to the type of daycare used, 36 infants had non-relative daycare outside the house and 17 had non-relative daycare within the house. Nine families had fathers as the principal provider of non-maternal care, 11 families used other relatives and 9 infants were in daycare centres.

**Method 2**

The strange situation observation procedure was used. Infants were observed in the strange situation at 12 months with their mothers \( n = 149 \) and at 13 months with their fathers \( n = 130 \). Videos were made and coded by people blind to the care group status. The groups used for coding were Ainsworth’s: \( B \) = secure, \( A \) = insecure avoidant and \( C \) = insecure resistant. Raters with 90% inter-rater reliability were used.

**Results**

The hypothesis looked at the incidence of insecure attachment to mother and to father depending on non-maternal care experience. The focus was on the mother and the father. Other analyses were also carried out. There were differences in prenatal family income, for example. In the full-time care group wives had the highest status jobs and the husbands had the lowest education levels — and the couples earned the most. In the mother-care group husbands had the highest levels of education and wives the lowest status occupations. Such differences did not link to attachment type.

Table 2.2 Security of infant-mother attachment depending on care group*

<table>
<thead>
<tr>
<th>Attachment type</th>
<th>Full-time (35 hrs+)</th>
<th>High part-time (20-35 hrs)</th>
<th>Low part-time (10-20 hrs)</th>
<th>Mother care (less than 5 hrs)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>20</td>
<td>13</td>
<td>19</td>
<td>50</td>
<td>102</td>
</tr>
<tr>
<td>Insecure avoidant</td>
<td>10</td>
<td>3</td>
<td>2</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>Insecure resistant</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>20</td>
<td>24</td>
<td>67</td>
<td>149</td>
</tr>
</tbody>
</table>

* The scoring used Ainsworth’s strange situation test and scores are the numbers of infants in that category.

An analysis of type of care (full-time, high part-time, low part-time, mother care) and attachment security (secure and insecure) and child gender was carried out. The result was \( \chi^2 = 7.84, p \leq .05 \), when looking at care group and attachment security. More full-time care infants were classified as insecure (47%) than those with little or no daycare altogether (25%). Those with low part-time care showed 21% insecure attachments (and 35% for high part-time care).
Table 2.3 Percentages of insecurely attached children

Analysis of those with more or less than 20 hours of non-maternal care per week gave a significant difference in security and insecurity. Infants who experienced 20 or more hours of non-maternal care a week scored significantly higher on the avoidance rating than those experiencing less than 20 hours a week.

Boys in full-time daycare (50% of them) were more likely to be insecurely attached to their fathers than the other boys. Girls in the mother-care group were more insecure in father attachment than girls experiencing 10 or more hours of care. But this finding needs replicating according to the researchers.

It was found that 59% of boys spending less than 20 hours in daycare were securely attached to both parents, 7% were insecurely attached to both parents, 29% of boys with extensive daycare experience were insecurely attached to both parents and 38% were securely attached.

Table 2.4 Attachment type for boys with regard to their non-maternal care experience

Mothers of insecure infants showed less interpersonal sensibility and empathy, and said their marriages were less positive than desired. They also said that their infants were more fussy/difficult 9 months before the strange situation test, and gave a more career-motivated reason for working.

Conclusions

- Infants in extensive care are more likely to be insecurely attached to mothers.
- Sons in full-time care are more likely to be insecurely attached to fathers.

More than 50% of infants in full-time daycare were not insecurely attached. It is important to ask what factors link to insecure attachments and non-maternal care besides non-maternal care itself. Factors might include mothers’ feelings about their marriage and work, as well as their sensibility and the temperament of the child.

The overall conclusion was that extensive non-maternal care in the first year of life is associated with insecure patterns of attachment.
Table 2.5 Evaluation of Belsky and Rovine (1988)

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>The families were enrolled on the study before the infant’s birth so the sample was chosen before some daycare choices had been made. This means the sample was less selective than in studies focusing on families who have already made their daycare choice.</td>
<td>The study was of US families and infants and, although findings from Chicago back up the findings, the researchers point out that generalising to all cultures, with different norms and maybe different patterns of attachment, might not be suitable.</td>
</tr>
<tr>
<td>Other studies (e.g. Barglow et al., 1987 in Chicago) found similar results regarding 20 or more hours of daycare being linked to insecure attachment patterns. So there is support from other studies.</td>
<td>Data are relatively valid because they are measures of hours spent in non-maternal care categories. However, the strange situation test may not be a valid measure of attachment patterns as it could be said only to capture one particular issue — stranger fear.</td>
</tr>
</tbody>
</table>

Key issue

Daycare and its effects on child development

The subject of daycare is discussed as part of the content of Chapter 2 on child psychology. There you will have considered at least one study suggesting that daycare is advantageous for a child and one suggesting that daycare has negative effects on the child. A study of daycare is also explained in Chapter 6 in a review of the observational research method. You therefore have a lot of information on which to draw, both to outline the key issue of the effects of daycare and to relate concepts, theories and studies to explain the issue. The issue is whether daycare is good for a child or not; there is evidence that it is good for certain children for a certain length of time and in certain circumstances. In other circumstances it may not be good for a child.

How the negative effects of deprivation could be alleviated

You will have studied Bowlby’s ideas about maternal deprivation. You may also have looked at his study of 44 juvenile thieves. Daycare can perhaps be called deprivation in some circumstances because a child is deprived of its main caregiver. You should therefore draw on all the information available to you when you consider the issue of how the negative effects of deprivation can be alleviated. Ideas include providing the right level of staffing in a daycare centre, introducing the child to its alternative care before the event, and having the correct amount of stimulation.

Practical

Preparing a content analysis

A content analysis on daycare is given in the Getting Started booklet that goes with the Edexcel specification. The full text of the Getting Started booklet is on the CD-ROM that comes with the specification and is also on the Edexcel website in the Teacher Support Material.

A newspaper is analysed to identify references to daycare and themes are then generated from the items that are relevant. You can do a content analysis on another key issue in child psychology, such as developmental issues like ADHD. Use the model of the daycare content analysis to carry out your own idea.
Content

Alcohol

Mode of action

As with other drugs, alcohol affects the function of neurotransmitters and neurones. Serotonin, gamma-aminobutyric acid (GABA) and dopamine are specifically affected. Neurotransmitters either send messages/impulses on or stop them. GABA is an inhibitor in adults while dopamine can stimulate or inhibit an impulse, depending on where in the brain the neurones are situated. Serotonin can influence mood states, thinking patterns and emotions. Some effects of alcohol can be attributed to one particular neurotransmitter; other effects are a result of neurotransmitters affecting one another. The intake of just one alcoholic drink causes an increase in concentration of serotonin in the individual’s urine and blood; the serotonin triggers the dopamine reward system, which is why alcohol consumption is a pleasurable activity. Alcohol can increase levels of GABA, resulting in inhibition of some behaviours and cognitions. Alcohol depresses neural activity and slows down brain activity, which means that someone who is depressed can feel better in the short term because the negative feelings of depression are relieved.

Effects

The effects of alcohol on the nervous system include anxiety, slower breathing and heartbeat, and impaired judgement. Older adults find alcohol more difficult to process, which is to do with the lower amount of water present in the mature body. After drinking large amounts of alcohol, it is likely that someone will have a hangover and/or feel sick. The headache that can accompany a hangover is often due to dehydration.

Alcohol causes liver disease, which is rising in the UK especially among young people. It has been linked to oral cancer: it breaks down into acetaldehyde, which has been identified in cells in the lining of the mouth of heavy drinkers, where it reacts with proteins to form rigid bonds. The immune system recognises these as foreign and this can lead to an inflammatory response, resulting in cancerous cells. Alcohol can also lead to infertility in males and females. If a pregnant woman drinks alcohol, it can pass through the placenta and cause foetal alcohol spectrum disorders, leading to disabilities in the infant.

Psychological symptoms include feelings of hopelessness and anxiety, as well as hallucinations and psychotic disorders. Social effects can include stress and disruption in family life.

Long-term effects include damage related to the frontal lobes of the brain; this includes slow processing of information and difficulties in learning new information. The premature ageing hypothesis suggests that alcoholics have increased brain tissue loss compared with non-alcoholics.

Tolerance

Tolerance is the term used to refer to how the body adapts to the taking of a drug; over time the drug has less of a desired effect and so more of the drug has to be taken to get the effect that a smaller dose previously gave. A person drinking alcohol, for example, can find that although a few drinks had a strong effect when they first started drinking, they no longer do so. To recreate
that initial strong effect, more than a few drinks are now needed. This process of increasing drug-taking to achieve the same effect leads to physical dependence.

**Physical dependence**

As with other drugs, physical dependence on alcohol is reached when the body’s tolerance of the drug is such that physical withdrawal symptoms are experienced if the drug is not taken. With alcohol (usually), the more a person drinks, the more they are likely to become physically dependent on it and the worse the withdrawal symptoms are likely to be.

**Psychological dependence**

Psychological dependence is not the same as physical dependence. Psychological dependence is a compulsive need for the drug for psychological reasons. For example, being unable to have an alcoholic drink might cause anxiety and stress, resulting in alcohol being sought to alleviate these symptoms.

The state of addiction involves both physical and psychological dependence.

**Withdrawal**

Withdrawal symptoms can be quite mild, for instance shaking, sweating, nausea, headaches and increased blood pressure, or they can be more severe, such as visual hallucinations (DTS). DTS involve confusion, disorientation, and disturbances of heart function. The severity of withdrawal symptoms depends on the severity of the addiction. The discomfort of the withdrawal symptoms can be great enough for the person not to want to fight their craving.

**Treatment**

Taking vitamins such as thiamine can help to reduce cravings for alcohol when used alongside a proper diet. This treatment can work for those who are mildly dependent. For those who are strongly addicted, a doctor can prescribe medication that acts as a substitute for alcohol (such as valium), reducing the dose gradually until the person is not taking any drug at all.

**Cocaine, ecstasy and marijuana**

You need to know about the mode of action, effects, tolerance, physical dependence, psychological dependence and withdrawal for heroin and one other drug. The textbook discusses nicotine (smoking) and information on alcohol is given above. If you would like to learn about cocaine, ecstasy or marijuana instead, then note that you need to do so in the same detail as for heroin.

**Aversion therapy for smoking or alcohol abuse**

Aversion therapy follows classical conditioning principles. You will have covered how aversion therapy works when studying the learning approach in the AS part of your course. The use of aversion therapy to help to overcome alcohol addiction is explained there. The idea is to replace a desire for alcohol with an aversion to it by pairing the experience of drinking alcohol with something unpleasant like a nausea response. The same process could be used to overcome addiction to smoking.

In Unit 4 you are asked to consider how classical conditioning is used as a form of social control but you could also use the idea of treatment with aversion therapy as an example of social control. Remember that you will have to know how to describe aversion therapy as a treatment for alcohol abuse or smoking and to evaluate it as well. For example, you could evaluate by suggesting that it is a form of social control.
**Chapter 3**

**The AA approach**

Alcoholics Anonymous (AA) is a worldwide organisation for men and women who want to give up, or who have given up, drinking alcohol. Members work together to help one another to give up, and attend AA meetings regularly for mutual support. The purpose of the meetings is to encourage and support members in their desire to stay sober and to help others give up. A 12-step programme is used, include admitting that others can help, examining past errors, making amends for these errors (such as by helping others), learning to live a new life with a new moral code, and helping others who suffer from addiction.

*Table 3.1 Evaluation of the AA approach*

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Studies have shown that the AA approach is successful in assisting people to stop drinking alcohol. For example, Moos et al. (2006) published a 16-year follow-up study that shows the AA approach is successful.</td>
<td>■ Morgenstern et al. (1997) found that the AA approach is not as successful as other studies have suggested.</td>
</tr>
<tr>
<td>■ About 80% of those who stay sober for 5 years remain active in AA for another year, so there is some evidence of success, although attrition (people leaving) is high. It seems that the AA approach suits some people but not everyone.</td>
<td>■ Testing the AA approach for effectiveness is difficult because the sample is self-selecting, consisting of people who have chosen that approach.</td>
</tr>
<tr>
<td>■ A 1989 report using data from surveys suggested that nearly one-third of people who attend AA meetings for the first time leave the programme after 1 month, and by the end of the third month over half have left — this is a high rate of attrition.</td>
<td></td>
</tr>
</tbody>
</table>

**Practical**

**An example article analysis for health psychology**

You can find articles on drug abuse in any media, including discussion of how drug abuse occurs and/or how it is treated; either of these approaches, for instance, could form your issue of relevance. Find two such articles and summarise them. Then write about how the approaches and points in the summaries are explained by, or help to explain, concepts, theories and studies that you have looked at in this application.

The following two studies are mentioned in the course and you will need to prepare one of them if you are choosing to look at either ecstasy or marijuana use instead of alcohol, nicotine or heroin.

■ Wareing et al. (2000) — ecstasy
■ Brook et al. (1999) — marijuana

Morgan and Grube (1991) is also mentioned in the course as a second study on nicotine; you would not need to choose it if you have studied Ennett et al. (1994), which is explained in the textbook.

If you choose to study cocaine, you need to find another study. Blättler et al. (2002) looks at heroin addicts who are also addicted to cocaine, so you could use this study if you explain clearly what it is about.
Content

The effect of attribution on individual differences in sporting performance

The term attribution refers to how someone apportions blame for success or failure — or for the outcome of any situation. There are two types of attribution:

- internal attribution, which is dispositional (the person sees their own disposition as the cause of certain types of behaviour)
- external attribution, which is situational (the person blames something in the situation that causes behaviour)

Attribution theory has been used to explain how people perceive their own sporting performance. Their attributions (for example, whether they see their performance as down to their own personality or down to the situation) can influence how satisfied they are with their own performance and how much they expect success in the future. These attributions can also affect how they view training (e.g. Martin and Gill, 1991).

Weiner (1985) suggests that there are three dimensions to the attribution of reasons for success and failure:

- controllable/uncontrollable factors
- internal/external factors
- stable/unstable factors

Studies have looked at these factors to see how they link to sporting performance.

Past success is one feature that affects attributions. Successful athletes are more likely than unsuccessful athletes to focus on stable and controllable factors such as effort and ability. They are more likely, therefore, to regard dispositional features, such as how hard they work for success as being a cause of that success.

Gender differences also affect attributions with regard to sporting performance. Males usually look at stable ability and controllable effort when attributing reasons for success. Females are more likely to show a self-defeating attribution pattern, considering factors such as uncontrollable luck or social support when looking at success, and lack of ability when looking at failure.
Table 4.1 Evaluation of the attribution theory in sporting performance

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews and questionnaires that ask about sporting performance can be used to gather both qualitative and quantitative data, and are therefore likely to offer in-depth detail about reasons for success and failure. In this way validity is likely to be quite good, especially if studies reinforce one another.</td>
<td>Many past studies that show gender differences in attributions for sporting performance focus on children at college or younger athletes who have limited experience. The children/younger athletes often did not choose the sport that was being studied. So gender differences might only apply in these circumstances and care must be taken with regard to generalisation.</td>
</tr>
<tr>
<td>A lot of data on dispositional and situational attributions are gathered in areas other than sporting performance, so the theory is well evidenced.</td>
<td>Survey data reflect what people say about their reasons and attitudes, which may not be reliable; they may say what they think they should say, due to demand characteristics and social desirability.</td>
</tr>
<tr>
<td></td>
<td>Data tend to be correlational and it is hard to discover cause and effect conclusions using correlational data.</td>
</tr>
</tbody>
</table>

Theories to explain arousal, anxiety and/or the audience effect

Catastrophe theory and optimal level of arousal theory

The inverted U hypothesis suggests that level of performance increases with increasing arousal but then declines beyond the optimum level of arousal.

One criticism of this theory is that it does not fit evidence from sportspeople. It has been suggested (e.g. Hardy, 1990) that the relationship between arousal and performance is not symmetrical — that performance does not decline in a regular manner after rising steadily. Hardy and Fazey (1987) developed the idea of catastrophe theory. They put forward the idea that, when a performer passes the optimum level of arousal (goes past the highest point of the inverted U curve), then his/her performance falls dramatically rather than gradually.

It seems that physical arousal and cognitive anxiety interact to influence performance and affect when the drop in a particular performance takes place. As both physical arousal and cognitive anxiety rise, performance rises, as the inverted U hypothesis suggests. But at some level of cognitive anxiety, performance suddenly drops. Levels of performance cannot be recovered until both cognitive anxiety and physical arousal are back to baseline level.
Table 4.2 Evaluation of catastrophe theory and level of arousal theory

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy and Parfitt (1991) looked at cognitive anxiety and physical arousal and their effects on performance. They found that performance under high cognitive anxiety did change depending on whether there was physical arousal or not, which supports the theory that performance, cognitive anxiety and physical arousal are inter-related. This goes against the inverted U hypothesis, which looks only at physical arousal and performance. And when there was high anxiety and high arousal, performance fell dramatically, which supports the catastrophe theory.</td>
<td></td>
</tr>
<tr>
<td>Factors that affect performance are complex, as catastrophe theory shows, and it is more complex than just looking at physical arousal. Separating physical arousal, cognitive anxiety and other such factors is not easy, even using different measures, so any theory that looks at separate factors is unlikely to uncover the whole picture. This might mean there is a lack of validity.</td>
<td></td>
</tr>
<tr>
<td>Edwards et al. (2002) used content analysis of interviews about performance of elite athletes and found evidence for catastrophe theory. They found the sudden drop as predicted by the catastrophe theory and then a continued slower decline, which the theory also predicts.</td>
<td></td>
</tr>
</tbody>
</table>

Attribution retraining as a way of improving sporting performance

Research by Edwards and Hardy (1996) consistently showed that cognitive anxiety can have a facilitative effect upon performance. Their research suggested:

- that cognitive anxiety symptoms were perceived to be more facilitative and less debilitative in athletes producing good performances than in those producing poor performances
- that self-confidence is an important predictor of performance that is at least partially independent of cognitive anxiety

Studies linking to attribution (such as stable or unstable attributions) are often not about cause and effect conclusions (because correlational data are used). However, attribution retraining does rest on the theory that attribution can affect sporting performance. The idea is to focus on attributions to see if they lead to thoughts about failure and personal reasons for not succeeding. If this is the case, then changing attributions can improve performance.

For example, Dweck (1975) carried out a study that looked at 12 fifth-grade students who thought that they failed to perform in a particular area (maths) through lack of ability. Some of them were allowed to succeed each time and others were exposed to failure for 20% of the time — which the experimenter said was due to lack of effort. This was a study about success in maths rather than in sporting performance. Those who failed sometimes were encouraged to see their failure as the result of lack of effort not lack of ability. It was found that, when failure was regarded as the consequence of unstable causes (lack of effort rather than lack of ability, which would be a stable feature), then there was improvement in performance. Those who always succeeded did not improve in their performance, as they did not change their attributions. Thus attribution retraining was said to work. Attribution retraining had an impact on performance after failure.

Other studies then followed and found improvement after failure and following the use of attribution retraining not only in cognitive performance but also in social performance and sporting performance.
Table 4.3 Evaluation of attribution retraining studies

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are studies to back up the idea that suggesting unstable attributions for failure rather than stable ones like 'lack of ability' leads to improved performance after failure. Other studies have found the same results to Dweck (1975) but in different areas (cognitive, social and sporting e.g. Craske, 1985) so the findings seem reliable.</td>
<td>Gender, locus of control and self-esteem have also been found to be important in performance after failure as well as changed attributions, so there are complex factors at work when considering reasons for failure and ways to improve performance.</td>
</tr>
<tr>
<td>Dweck's (1975) study involved additional reinforcement for those who had some failure as they had more feedback. Those who had experienced success only had feedback about their success, not about their failure as well. So it might be that schedules of reinforcement have contributed to the improved performance, not attribution retraining.</td>
<td></td>
</tr>
</tbody>
</table>

Studies in detail


Craft et al. (2003) is explained as an example of a correlation in Chapter 4 on sport psychology and is also described and evaluated again in Chapter 6, which looks at issues and debates.

Aims

This is a study looking at cognitive anxiety, somatic anxiety and self-confidence and how these three factors relate to one another. The study had three aims:

1. to assess the ability of each CSAI-2 subscale to predict athletic performance (remember that CSAI is the Competitive State Anxiety Inventory)
2. to assess whether (and in what way) the three subscales (cognitive anxiety, somatic anxiety and self-confidence) are interdependent
3. to see the effect of type of sport, skill type, athlete's skill level and time of CSAI-2 administration

Hypotheses

For aim 1:

1. cognitive anxiety gives a negative performance
2. somatic anxiety has no relationship with performance
3. self-confidence and performance have a positive relationship

For aim 2:

1. cognitive and somatic anxiety will have a positive relationship with each other
2. cognitive anxiety will have a negative relationship with self-confidence
3. somatic anxiety will have a negative relationship with self-confidence

Procedure

The study used many other studies, all of which used the CSAI, which measures the effect of state anxiety on athletic performance.

Martens et al. (1990) developed the CSAI-2. There are 27 items that measure three subscales — cognitive anxiety, state anxiety and self-confidence.

Athletes are asked to rate 'how you feel right now' for nine items under each subscale using a four-point Likert-type scale from 'not at all' to 'very much so'. Each of the items gives a score.
Chapter 4

For example:

<table>
<thead>
<tr>
<th>Cognitive anxiety:</th>
<th>Not at all</th>
<th>Very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I am concerned about this competition</td>
<td>□ □ □ □</td>
<td>□ □ □ □</td>
</tr>
<tr>
<td>2 I am concerned about choking under pressure</td>
<td>□ □ □ □</td>
<td>□ □ □ □</td>
</tr>
<tr>
<td>3 ...</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Somatic anxiety:</th>
<th>Not at all</th>
<th>Very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I feel nervous</td>
<td>□ □ □ □</td>
<td>□ □ □ □</td>
</tr>
<tr>
<td>2 I feel tense in my stomach</td>
<td>□ □ □ □</td>
<td>□ □ □ □</td>
</tr>
<tr>
<td>3 ...</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Self-confidence:</th>
<th>Not at all</th>
<th>Very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I feel at ease</td>
<td>□ □ □ □</td>
<td>□ □ □ □</td>
</tr>
<tr>
<td>2 I am confident I can meet the challenge</td>
<td>□ □ □ □</td>
<td>□ □ □ □</td>
</tr>
<tr>
<td>3 ...</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Over 40 studies have used CSAI-2 to look at sporting performance and Craft et al. (2003) carried out a *meta-analysis* of these studies.

**Examples of the studies used**

- Burton (1988) used CSAI-2 on a group of elite athletes. Burton asked two samples of elite swimmers to complete the questionnaire just before competition. Their performance times were recorded and compared with their anxiety levels as measured by the questionnaire. Cognitive anxiety was found to be more strongly related to performance than somatic anxiety. Somatic anxiety gave the inverted U that was expected. Increasing cognitive anxiety reduced performance, while increasing self-confidence improved performance.

- Gould et al. (1987) did not find a relationship between cognitive anxiety and performance. Volunteer pistol shooters' performances were based on an average from five rounds. No relationship was found between cognitive anxiety and performance. And there was a surprising negative relationship in that the greater the shooter’s self-confidence, the lower the result achieved in his or her performance.

**Study hints**

Edwards and Hardy (1996) worked in the field of attribution theory with regard to sporting performance and used the CSAI-2. They found that cognitive and somatic anxiety are related and that cognitive anxiety can affect performance differently depending on physiological state. Their findings link with attribution theory, so these two areas can be linked together.

Use Burton (1988) to support the inverted U hypothesis with regard to physical arousal/somatic anxiety.

**Main procedure**

All English language studies available up to October 1999 that used CSAI-2 to look at anxiety and sporting performance were included. Issues around the three subscales were looked at, as were the data gathered.
Twenty-nine studies were included, as they investigated a relationship between state anxiety and athletic performance (and used the CSAI-2). All gave correlational data.

**Results**

In general it was found that:
- Cognitive anxiety — performance relationship was not significant
- Somatic anxiety — performance relationship was not significant
- Self-confidence — performance relationship showed some significance but not strongly so
- Cognitive anxiety related to somatic anxiety \((r = 0.52)\)
- Cognitive anxiety related to self-confidence \((r = -0.47)\)
- Somatic anxiety related to self-confidence \((r = -0.54)\)

**Moderator variables**

1. **Type of sport**
   - *For team sports only* — self-confidence and performance showed a relationship.
   - *For individual sports* — all three subscales showed a relationship.

2. **Type of athlete**
   - *Elite athletes* — experienced somatic anxiety and self-confidence and both showed a relationship.
   - *European club athletes* — all three subscales showed a relationship.
   - *College athletes* — only cognitive and somatic anxiety showed a relationship.
   - *College PE students* — only self-confidence showed a relationship.

**Results of the administration of CSAI-2**

- 15 minutes to performance or less — all subscales showed a relationship.
- 16–30 minutes to performance — only self-confidence showed a relationship.
- 1–4 hours before performance — self-confidence and somatic anxiety showed a relationship.

**Conclusion**

1. No negative linear relationship between cognitive anxiety and performance was found; and with moderator variables, cognitive anxiety, if related to performance, was related positively not negatively (improved performance).
2. Data to an extent showed that self-confidence does link to performance and it is a positive relationship \((r = 0.25)\).
3. Cognitive anxiety, somatic anxiety and self-confidence seem to be interlinked.
4. Self-confidence may affect or be affected by cognitive and somatic anxiety.

*Table 4.4 Evaluation of Craft et al. (2003)*

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-confidence may affect or be affected by cognitive and somatic anxiety. This links with Bandura’s ideas about self-efficacy (1997).</td>
<td>Perhaps CSAI-2 did not measure the two types of anxiety successfully or maybe cognitive anxiety is not a good predictor of performance. It is hard to show that a questionnaire asking for ratings is valid, since the data may not represent the subscale suggested.</td>
</tr>
</tbody>
</table>

For a full evaluation of the strengths and weakness of Craft et al., see the textbook, page 163.
Cottrell (1968)

‘Performance in the presence of other human beings: mere presence, audience and affiliation effects’

Background

This study looks at the effect on behaviour of the presence of individuals or a group.

- The audience effect involves the presence of spectators.
- The co-action effect involves the presence of co-workers working independently but at the same time as the participant.
- The mere presence of others involves the presence of others who are not involved in the study as such, i.e. they are not attending to what is going on, nor trying to influence what is going on.

Sometimes the audience is evaluating the performance, and the effect of this role is also something that studies look at. The term social facilitation is used when the presence of others improves someone’s performance and the term social inhibition is used when the presence of others impairs performance.

Zajonc (e.g. 1966) suggested that the presence of others increases a person’s general biological drive level and improves a dominant response. Dominant response refers to habit — someone good at the task has a correct dominant response, for example.

When the person’s dominant response is correct there is social facilitation (the presence of others improves performance). When the person’s dominant response is incorrect, then there is social inhibition (the presence of others impairs performance).

Study 1

Aim

To look at the effect of an audience to see whether there is social facilitation or social inhibition.

Procedure

The participants were male undergraduates fulfilling a course requirement. There were 33 participants in each of four experimental conditions. This was a laboratory experiment.

Study hint

Use Cottrell’s study as an example of a laboratory study when you look at Unit 4 and the issues and debates section, which asks you to know one study for each of nine research methods, including the laboratory experiment.

Each participant had five trials on a practice list of noun pairs, followed by a 2-minute rest period. Each participant worked on one of two lists, either alone or with two other male students (the audience). The audience were said to be students who were interested in watching the experiment (so participants had an explanation for the audience). The audience sat close to the participant and watched quietly and attentively. The experimenter was hidden behind a screen for all the conditions. The participant carried on until 30 trials had been carried out or there were two consecutively correct trials. The lists were presented on a memory drum at a steady rate.

There were two tasks:

1. non-competitive task — paired adjectives were presented having high connections within the pairs and low connections between pairs, e.g. adept-skilful and barren-fruitless.
2. competitive task — paired adjectives were presented having few strong connections within pair associations and many associations between different pairs, e.g. barren-fruitless and arid-grouchy.
Participants took part in four conditions:
- Audience and non-competitive
- Audience and competitive
- No audience and non-competitive
- No audience and competitive

All participants did a practice list and had good recall. The researcher then divided them up into slow, medium and fast learners on the basis of the speed with which they did the five trials. The competitive task, where the word associations are unusual, is supposed to represent a non-dominant response whereas in the non-competitive task, the word associations are familiar and therefore represent a dominant response.

**Results**
- Audience improved recall on non-competitive task (dominant response).
- Audience impaired recall on competitive task (non-dominant response).

**Conclusion**
The presence of an audience tended to improve non-competitive recall and impair competitive recall. But this was only for individuals who were not particularly good at paired associate learning. So perhaps the audience does not increase motivation for proficient individuals.

**Study 2**

**Aims**
To see what effect the audience had and what the effects were of having people there without a role. This was about the mere presence of others.

**Procedure**
Forty-five male undergraduates took part. The first task was to read ten nonsense words on the pretext of learning a foreign language and they did this various numbers of times. Five frequencies (number of times) were used as the training phase to establish different abilities. Participants were shown 160 words one at a time and had to pronounce them by reading them, guessing where they were not sure of pronunciation; 120 words were not clear.

Each participant was in one of three conditions:
1. alone condition
2. audience condition (two male students watching)
3. mere presence condition (other — supposed — participants were asked just to wait in the room and wore blindfolds)

**Results**
- The greater the habit strength, the better the average number of responses when the audience of two males watched. (Habit strength refers to how well learned the response is — that is, the level of dominance of the response.) This was less so when the participants were alone or there were people just in the room (mere presence of others). In all conditions participants did better with habit strength, but the most improvement with habit strength occurred with spectators. The audience therefore enhanced the dominant response but not the less dominant response.
- The mere presence of others had more or less the same effect as the ‘alone’ condition.

**Conclusion**
It is not the presence of people that affects performance but their role and whether they are observers or not (an audience is made up of observers). Perhaps the anticipation of good or bad performance affects actual performance, where performers feel this sort of anticipation from an audience.
Table 4.5 Evaluation of Cottrell (1968)

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Other studies show that the co-action effect works when there is competition and an element of being observed (e.g. Dashiell, 1970), so there is support for Cottrell's findings.</td>
<td>■ Schacter found that the mere presence of others had a calming effect and so performance improved, which goes against Cottrell's findings.</td>
</tr>
<tr>
<td>■ Laboratory studies like Cottrell's are replicable because of careful planning and controls and so can be tested for reliability.</td>
<td>■ Laboratory experiments take complex social behaviour, such as performing in front of others and operationalise variables, so it is possible that what is being measured is not valid.</td>
</tr>
</tbody>
</table>

**Practical**

**An example of content analysis**

You have been referred (in the Practical section on Chapter 2 Child Psychology above) to the example of a content analysis in the *Getting Started* booklet that goes with the Edexcel specification.

You should also use this example to carry out a content analysis in sport psychology. Find references to sporting performance, perhaps in one or two newspapers, and analyse them for common themes. You should then carry out tallying to find out how many examples of these common themes are referred to. Example themes could be:

- gender in sport
- winning
- coaching
- explaining motivation
Features and symptoms of anorexia nervosa

Anorexia nervosa is an eating disorder, as is bulimia nervosa. It is a mental health condition because problems with eating seem to be related to psychological issues, including anxiety about weight.

Anorexia nervosa is a problem with eating and sufferers maintain their weight at as low a level as possible by controlling what they eat. They starve themselves because they think they are fat or have a strong fear of being fat — they want to be thin. Sufferers become extremely thin and their weight dangerously low, but they continue to want to lose weight. They are obsessed with food and checking calories. Sometimes they vomit to get rid of food: the cycle of binge eating and vomiting characterises bulimia nervosa.

Anorexia means ‘loss of appetite’. However, people with anorexia do not really lose their appetite in the way that people with certain illnesses such as cancer do — they just choose not to eat.

Anorexia is more common in developed countries than in developing countries and is more common in females than in males. It tends to start in the mid-teens. Among teenagers and young adults, about 1 in 250 females have anorexia and 1 in 2000 males. It is a serious condition and can be life threatening if not treated.

DSM-IV criteria for diagnosing anorexia include:
- The body weight must be less than 85% of what would be expected.
- There is an intense fear of being overweight despite being underweight.
- Focus on weight is distorted, either through minimising the dangers of being thin or exaggerating the importance of weight on self-esteem.
- In females, menstruation has been absent for 3 months or more.

Two explanations of anorexia nervosa

There are two biological explanations for anorexia, which take different approaches. One is a biochemical explanation and the other is a genetic one.

Biochemistry explanation

Eating disorders like anorexia may be linked with chemical imbalances in the brain. For example, low levels of neurotransmitters like serotonin and noradrenaline are found in those who are very ill with anorexia. Serotonin is associated with suppression of appetite. Anorexia is also linked with high levels of cortisol, which is a hormone related to stress.
Table 5.1 Evaluation of the biochemistry explanation for anorexia

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>This sort of explanation can be tested using animal studies. For example, the information that serotonin is involved in the action of appetite comes from animal studies. Scientific information is objective.</td>
<td>Findings from animal studies may not relate well to humans, as there are differences in functioning, including the use of problem-solving.</td>
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<td>The biological explanation is strengthened by the fact that different findings (such as serotonin being linked with appetite, and low levels of serotonin being found in those with anorexia) support one another.</td>
<td>It is not clear whether neurotransmitter differences in sufferers from anorexia cause the condition or are a result of it.</td>
</tr>
</tbody>
</table>

Genetics explanation

As eating disorders run in families, it is likely that there is a genetic explanation. Twin studies have shown a higher concordance for anorexia in identical (MZ) twins than in non-identical (DZ) twins and this too suggests a genetic link. Anorexia is more common in white people, which might be taken as evidence for a genetic link although there is no actual evidence. It may be that there is a genetic link that makes someone likely to develop an eating disorder, rather than a gene for the disorder itself.

Table 5.2 Evaluation of the genetic explanation for anorexia

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>Holland et al. (1998) found that concordance rates for anorexia in MZ twins were higher than in DZ twins — 50% in MZ twins compared with 7% in DZ twins. This is evidence for a genetic link because MZ twins are identical and share 100% of their genes, whereas DZ twins share 50% of their genes, just like other siblings.</td>
<td>Identical twins are not identical in developing anorexia (there is only a 50% concordance), so there must be an element of environmental influence as well.</td>
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<tr>
<td>A study in Fiji (Fearn, 1999) suggests that eating disorders in young women in Fiji after the introduction of television in 1995 has risen. This is evidence that eating disorders are learnt rather than inherited.</td>
<td></td>
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</tbody>
</table>

Psychodynamic explanation

The psychodynamic approach offers three slightly different explanations. One is that by being anorexic, a young girl is holding off puberty and not moving into adulthood. This is one way of stopping development, which might be an ego choice. Another psychodynamic explanation is that anorexia represents a fear of moving into sexual relationships and represents a way of staying physically child-like. A third explanation is that anorexia comes from enmeshed family relationships and is a reaction to malfunctioning families.
Table 5.3 Evaluation of the psychodynamic explanations

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>Menstruation is inhibited by anorexia and therefore an explanation for this symptom suits the features of the illness.</td>
<td>As with the psychodynamic approach itself, a problem is that concepts such as sexual desires and a desire not to become an adult are unconscious processes and are not measurable. So there can be little scientific evidence offered for the explanations.</td>
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<tr>
<td>The approach focuses on the whole situation and gathers in-depth data from individuals such as those with anorexia — so there is validity in the data that another approach using experiments might not give.</td>
<td>It cannot account for anorexia in males or for anorexia that starts in adulthood.</td>
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</table>

Two treatments for anorexia nervosa

Medical treatment

Medical treatment involves visits to hospital, where specialist help can be offered to encourage someone to put on weight if they are dangerously thin and ultimately to prevent starvation. Some patients can be treated as outpatients, but getting back to a normal weight is not easy and some people have to be treated against their will. Those in this position enter hospital as inpatients and a treatment plan is put into place. The treatment plan can include education regarding nutrition where a dietician helps the patient to learn about healthy eating and proper nutrition.

Table 5.4 Evaluation of medical treatment for anorexia nervosa

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>Outpatient programmes can allow the person to continue with their daily schedules, allowing them to continue to function relatively normally. These patients are not institutionalised by a prolonged stay in hospital.</td>
<td>It is widely thought (for example by the American Psychiatric Association, which has published guidelines) that good treatment requires many different treatment options ranging from education about nutrition to therapy to help improve negative thinking. This suggests that an effective medical intervention is a multidisciplinary one, which can be hard to set up and monitor.</td>
</tr>
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</table>

Psychotherapy

Anorexia can be treated by means of counselling, which allows patients to identify negative thoughts and feelings about weight. They can explore their view of self and see what thoughts are behind the maladaptive views of their weight. Emotions can be addressed, as can issues with stress.

Cognitive therapy can be used so that unhealthy thoughts are recognised and coping strategies identified.

Behaviour therapy can be used to reward healthy eating and reinforce good practices with regard to eating.

Psychotherapy by itself may not be enough as a treatment. Someone suffering from anorexia may need to be in hospital to get help to raise their weight to safe standards before psychotherapy can start. Someone with severe anorexia may not see themselves as having a problem and so may not be willing to work with a therapist in the collaborative way that many therapies require.
Other mental disorders

Besides unipolar depression (which is explained in the textbook) and anorexia nervosa (which is explained above), other mental disorders can be used as your choice, together with schizophrenia (which is compulsory). These disorders are:

- phobias
- bipolar disorder
- obsessive compulsive disorder (OCD)
- bulimia nervosa

You need to know the features and symptoms, two explanations and two treatments for any disorder you choose to study.

Choosing relevant studies

You have to study Rosenhan (1973) (sane in insane places). In addition to this study, you also have to be familiar with two other studies, one for each of the mental disorders you have studied.

One study, therefore, has to be about schizophrenia and Goldstein’s (1988) study (gender differences in the course of schizophrenia) is explained in the textbook. Lewine et al.'s 1990 study (sexual dimorphism in brain morphology and schizophrenia) is another suggestion and so is Gottesman and Shields' 1966 study of twins, which you may have studied as part of the biological approach for the AS part of the course.

For your other possible choices, Brown et al. (1986) was explained in the textbook as a study of unipolar depression. Mumford and Whitehouse (1988) studied the increased prevalence of bulimia among Asian schoolgirls. If you choose to study anorexia nervosa, you will need to find a relevant study. Hudson et al. (1983) looked at both anorexia nervosa and bulimia nervosa and considered links with family history. The work of Dr K. Halmi involves research into eating disorders, with a study currently in progress starting from 2007. Her work looks at genetic factors and she is also involved in the implementation of treatments.

If you choose to study phobias you should find relevant studies in this area (e.g. a Mineka study).

Studies in detail

Bradshaw (1998)

This study looks at the cognitive-behavioural treatment of schizophrenia.

Aim

To look at how CBT was used to treat a woman with schizophrenia, including its effectiveness. This is the study of an attempt to use psychotherapy to treat schizophrenia where drug treatment had previously been preferred — there has been little evaluation of the use of CBT for schizophrenia.

Background

The study was of a 26-year-old white female participant educated to the first year of college. She came from an upper-middle-class family and was the third of five children. She was a good student, shy but with several friends. During her first year at college, she began to experience auditory hallucinations and delusions. She withdrew from people and acted in a bizarre manner. Subsequently she was hospitalised many times. There was no history of psychiatric illness in the family.

The patient was diagnosed with undifferentiated type schizophrenia. The global assessment of her functioning — which is one of the DSM axes — when she left hospital was 30 (out of a maximum 100).
She was taking thorazine. Her psychiatrist referred her for psychotherapy to help her cope with community living and managing the illness. She experienced auditory persecutory hallucinations and delusions and thoughts such as ‘I am no good’. She was anxious about interactions with others, withdrawn and socially isolated. Her self-care was limited.

**Measures of the effectiveness of CBT**

The measures used included four approaches to assess the severity of her symptoms:

1. Psychosocial functioning was measured by a role-functioning scale. Role functioning was measured by looking at work, social, family and independent living subscales.
2. Attainment of treatment goals was measured by a goal-attainment scale looking at how she was functioning.
3. Hospitalisations were measured by the number of times in hospital.
4. Development of a therapeutic relationship was also measured. Sessions lasted from 15 minutes to 1 hour and the therapist and client often went for a walk together.

**First stage — development of rapport**

It was found that rapport took about 3 months to develop and came about through genuineness, respect and empathy — the core conditions for relationship development. Self-disclosure was used to promote discussion of difficulties and to help to build a rapport.

**Second stage — understanding CBT**

Helping the client to understand CBT and to establish treatment goals took about 2 months and involved educating the client about schizophrenia and how it might be treated. The fact that schizophrenia can involve a biological vulnerability to stress was emphasised to the client and focus was placed on improving ways of coping with stress. The ABC model was used to teach the cognitive view of treatment, understanding an activating event (A) and its emotional consequences (C). The therapist also looked with the client at her thinking or behaviour (B) that could have led to those emotional consequences.

**Treatment**

The first phase of treatment lasted about a year and focused on managing stress and anxiety. If her parents, with whom she lived, asked her to do anything, her hallucinations increased and so did the delusions. She would cope with the stress by withdrawing to her room. A weekly activity schedule helped her to cope with loss of daily structure after leaving hospital. She was asked to record what she did during the day, so that she and the therapist could review her daily life and put in different strategies as necessary.

Behavioural activities were worked out between the client and the therapist — small tasks to start with and increasing level of activity. Stress management was addressed by using techniques such as meditation.

The participant started to recognise the signs of stress and to learn coping strategies. This first year of treatment was followed by 16 months of building more cognitive strategies to cope with stressful situations. The focus was on dealing with social situations, with the impact of schizophrenia on her self and on dealing with fears of relapse.

Finally, there was an ending phase, which lasted about 3 months, during which thoughts about the end of the treatment were focused on and plans to maintain the treatment without the therapist were developed. For example, cue cards were written out with strategies summarised and the client reviewed these each day.

**Case analysis**

Follow-up data showed that there was improvement in psychosocial functioning, achievement of goals, reduction of symptoms and reduction in number of hospitalisations. This improvement lasted up to 6 months and the same was found again 1 year afterwards.
example, at the conclusion of the study there were few symptoms and the participant reported little distress.

After 1 year, global assessment of functioning was stable at 27 out of 100. Symptomatology was reduced to very few symptoms. She showed only slight impairment and reported little distress. Thoughts and feelings were measured as within normal limits and her interpersonal interactions were relatively unimpaired.

At the conclusion of the study the client’s GPI score of 1 indicated only slight impairment. There were few symptoms present and she reported little distress. Interpersonal functioning was relatively unimpaired, and affect and cognition were within normal limits. A goal attainment score (GAS) was calculated and a score of 50 represents what she should achieve. Before treatment the score was 19.85 and afterwards it was 80.15, which shows that treatment goals had been attained. Treatment goals included improving living skills, developing social support systems and living independently. For the length of the study there were no psychiatric rehospitalisations, whereas before she had been hospitalised frequently before treatment.

Conclusions

There were considerable improvements in functioning in four measures after a 3-year course of CBT. It was therefore concluded that CBT can be successful in the treatment of schizophrenia: in controlling negative automatic thoughts and in changing behaviour in response to stressful situations.

In their summary of how effective CBT is for schizophrenia, Bradshaw and Roseborough (2004) suggested that 86% of the clients studied improved with regard to their psychosocial functioning and 82% had reduced severity of psychiatric symptoms. All 22 clients achieved more than was expected with regard to goals of the treatment. The findings supported the claim that CBT is effective with regard to schizophrenia.

Table 5.5 Evaluation of the success of CBT in treating schizophrenia

<table>
<thead>
<tr>
<th>Strengths</th>
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<tr>
<td>Four different measures were taken at the start of the study and repeated at the end. Then there were two follow-up stages where the four measures were taken again. So the ‘before and after’ approach gives strong evidence for effectiveness, as does the fact that four different measures were taken and improvements occurred for all four.</td>
<td>The study would need to be replicated. It is one study of one unique participant, so it is not possible to generalise and say that CBT would work with other cases of schizophrenia. There are different types of schizophrenia, so perhaps CBT is effective for this particular type but not other types.</td>
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</table>

Key issue

The way mental illness is portrayed in the media

Negative media coverage of mental health issues has increased mental health problems according to a Mind (2000) report. Coverage is also said to be unbalanced. The report is called ‘Counting the Cost’ and draws conclusions from a survey of 515 people with mental health problems (all living in England). Those who contributed to the survey had mental disorders such as depression, schizophrenia, personality disorder and OCD.
In general, respondents said that media coverage did have a direct impact on their lives and that they thought family and friends had been influenced by media coverage, leading to the social stigma associated with mental health problems.

The Media Forum on Mental Health has been set up to address imbalance and negative media coverage. The survey found that 73% of respondents felt that media coverage over the last 3 years had been unfair, very negative or unbalanced, and 50% felt that this media coverage had affected their own mental health. In addition, 24% had experienced hostility from neighbours and those around, because of media coverage. It was felt that radio news programmes were the fairest, with newspapers less fair with regard to reporting news. Articles in magazines were thought to be the most fair.