

AQA Psychology A-level

Option 3: Aggression

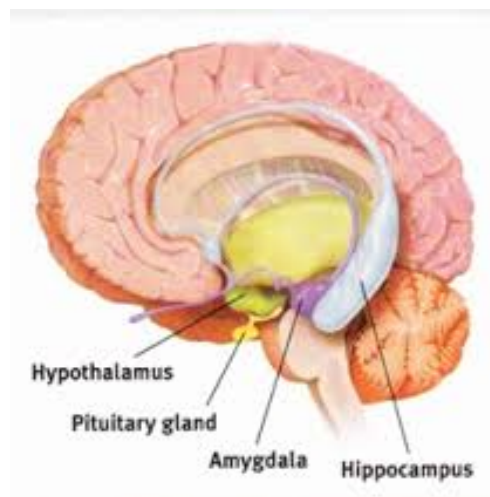
Notes

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Part 1 – Neural and Hormonal Mechanisms in

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- The limbic system is associated with the regulation of emotions and emotional behaviour. It is comprised of the formix, cingulate gyrus, thalamus, hippocampus, hypothalamus and amygdala (Maclean, 1952).
- The amygdala is thought to be particularly important in regulating emotional behaviour, as demonstrated by Gospic et al (2011) in her study of the Ultimatum game. The researchers found that when participants rejected an unfair monetary reward (which can be seen as a social provocation), there was a sudden increase in amygdala activity, as measured using an fMRI. These 'spikes' were less drastic when benzodiazepines were used, suggesting there is a strong link between the action of the autonomic nervous system (amygdala activity) and aggression.
- Serotonin is an inhibitory neurotransmitter (reduces the action potential in the postsynaptic membrane) and is associated with the regulation of impulsive behaviour when present at normal concentrations in the orbitofrontal cortex (Denson et al, 2012).
- Due to the link between serotonin and the regulation of emotional/impulsive behaviour, it has also been proposed (by Virkkunen et al, 1994) that serotonin is involved in controlling sleeping patterns, due to being found in lower levels in non-violent offenders.



– **There may be an over-reliance on the limbic system as an explanation for aggressive behaviour.** For example, the orbitofrontal cortex (OFC) may also play a significant role, due to its link with the action of serotonin, as shown above. Therefore, as suggested by Gospic et al, it may be more effective to focus on the neural connections between the OFC and the limbic system, as opposed to looking at the two in isolation.

+ **However, there is evidence supporting the negative correlation between increasing serotonin levels and decreasing levels of aggression.** For example, Berman et al found that participants who were given the serotonin agonist 'paroxetine', they behaved less aggressively compared to a control group whilst playing a video game, delivering fewer and less intense shocks!

- Testosterone is an androgen (male sex hormone) present in significantly larger concentrations in men, compared to women, and is responsible for the production of male facial characteristics and reproductive organs, being secreted from the pineal gland. There may be a link between decreased testosterone levels and decreased levels of aggressive behaviour, a positive correlation demonstrated by castration studies.
- Dolan et al (2001) provided further support for this link by showing that violent prisoners in maximum security prisons displayed higher levels of testosterone than their non-violent counterparts.

– **Carre and Mehta (2011) suggest that, through their dual-hormone hypothesis, testosterone does not work alone in determining aggression,** but rather has an antagonistic relationship with the stress hormone cortisol, where increased levels of aggression are associated with increased testosterone levels but only when cortisol is low. Therefore, this implies that different hormones have different predictive values for aggression and are part of a system when developing aggressive behaviour.

Part 2 – Genetic Factors in Aggression:

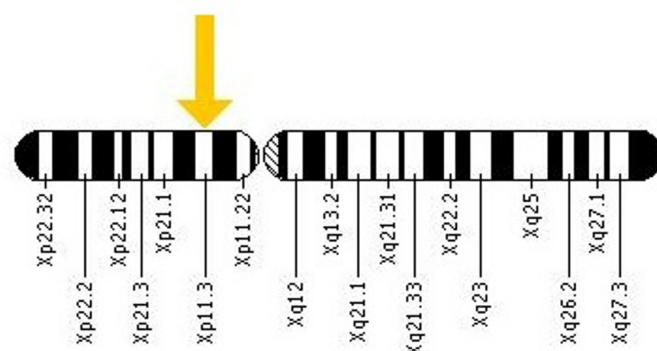
- Twin studies are particularly important in determining the genetic/biological basis of a behaviour, due to the fact that MZ twins are genetically identical, whilst DZ twins share 50% of genes with each other. Evidence from this comes from Coccaro et al (1997), who found concordance rates of 50% for MZ twins and 19% for DZ twins in terms of physical acts of aggression. This strongly suggests a genetic basis for aggression.
- The differences between MZ and DZ twins in terms of rates of aggression was further supported by Rhee and Waldman (2002) who came to the conclusion that, based on their meta-analysis of

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adoptees suffering from aggressive behaviour and APD (antisocial personality disorder) that a further 41% variance in rates of aggressive behaviour can be accounted for by candidate genes.

- An example of a key candidate gene would be the MAOA gene, which codes for the MAOA enzyme that breaks down serotonin within the synaptic cleft after neurotransmission e.g. leading to increased levels of the metabolite 5-HIAA. Brunner et al provided evidence for the link between decreased MAOA levels and aggression through studying a large Dutch family who were all actively engaged in aggressive behaviour (e.g. rape) and who all had unusually low MAOA levels. This would mean that as less serotonin is broken down within the synaptic cleft, there is a higher rate of serotonin binding to complementary receptors on the postsynaptic membrane, leading to an increased rate of stimulation of the postsynaptic membrane.
- However, Frazzetto et al (2007) suggests that it may be more beneficial to take an interactionist approach. The researchers found that low MAOA levels only resulted in increased aggression when accompanied by traumatic childhood events which had occurred within the first 15 years of life. This supports the interactionist, diathesis-stress model where the diathesis (biological vulnerability) is the genetic mutation of the MAOA gene and the stressor (environmental stressor) is childhood abuse, showing how genes and the environment interact with each other.

— However, a major problem with the use of the diathesis-stress model is the difficulty in distinguishing between the effects of nature (MAOA genetic mutations) and nurture (childhood trauma), as well as determining which has a larger influence. For example, McDermott et al (2009) found that provocation in a money-lending game was key to triggering aggressive behaviour in individuals with low MAOA activity levels, whereas previously they displayed the same levels of aggression as the healthy, neurotypical control group. This suggests that although the interactionist approach may be a better explanation for aggression compared to biological determinism, there is still a lack of clarity over the role of the stressor.



+ There is evidence supporting a positive correlation between increasing MAOA activity levels and increasing levels of prosocial behaviour, as demonstrated by Mertins et al (2011) who found that participants with high MAOA activity levels behaved more compassionately in a money-lending game, often with fewer provocations or refusals of offers. Therefore, this suggests that the link between MAOA and aggression is valid because correlations in both directions (increasing and decreasing MAOA levels) are supported by research evidence.

+ There is also evidence supporting the strong link between MAOA activity levels and concentrations of serotonin, which has been based upon animal studies where researchers are able to 'switch off' or prevent the expression of the gene coding for the MAOA enzyme, thus allowing the researchers to study its effects in isolation. For example, Godar et al (2014) found that when the MAOA gene was switched off in mice, these mice were 'hyperaggressive', potentially due to the increased stimulation of postsynaptic neurons due to an increased concentration of serotonin in the synaptic cleft. Therefore, alongside additional evidence that the serotonin agonist 'fluoxetine' reverses this effect, increases the validity of the MAOA-aggression link.

Part 3 – The Ethological Explanation of Aggression:

- Ethological explanations draw links between animal and human behaviour, on the basis of studying animals in their natural habitats. From the ethological perspective, aggression is adaptive because of two reasons. Firstly, aggression increases the chance of survival of a species - through appeasement following an aggressive confrontation, the 'loser' will seek out new territory, increasing the scope of the resources of the species and so increasing their chances of survival. Secondly, aggression acts as a method of increasing one's social status within a hierarchy, as demonstrated by Pettit et al (1988) who found that young children use aggressive tactics in playgrounds to assert their authority, lead the others and have their way.

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- Since not all acts of aggression leads to death, ritualistic behaviours (a series of behaviours conducted in the same, set order) are important. After an aggressive confrontation, the 'loser' (through an act of appeasement) will make themselves vulnerable to the victor (e.g. wolves displaying their neck) as a sign of accepting defeat. This is adaptive in the sense that it ensures no further aggressive behaviour between the two, thus increasing the likelihood of survival of the species.
- The physiological process of an innate-releasing mechanism (IRM) is activated by a release signal, causing a cascade of the same series of behaviours, described as a fixed action pattern (FAP). These can be characterised as being, according to Lea: being responsive to a releaser, ballistic, single-purpose, unaffected by learning, universal and stereotyped.
- It is important to note that a releaser which activates the IRM will always lead to the FAP, with no further signals needed. This is an innate response and cannot be unlearned, as demonstrated by Tinbergen (1951) who found that male sticklebacks will respond aggressively to model red spots (a releaser which triggers the IRM), regardless of whether the model resembles a stickleback or not.
- + **There is evidence to suggest that ritualistic aggression may not be displayed by all species and in all situations.** For example, Goodall's (2010) observation of chimpanzees in the Gombe Stream National Park found that rival communities slaughtered each other in a systematic fashion, despite appeasement and ritualistic signals being displayed by the victims. This supports the idea that once a releaser has triggered the IRM, this will always lead to a FAP, and so the releaser is a stronger predictor of aggressive behaviour than appeasement.

— **However, a more accurate description of FAPs may be 'modal' rather than 'fixed', as suggested by Hunt (1973).** The researcher provided evidence that the duration of each behaviour within each FAP may vary between individuals as well as the specific other animal towards which it is targeted. Hence, environmental and social factors may have significant influences on the course of the FAP, resulting in lower validity of the universal nature of FAPs as part of an explanation for aggression.

- + **There is also evidence supporting the biological, innate basis of IRM and FAP systems. For example, researchers have pointed to Bremner's work (1993) on the link between the MAOA activity and levels of aggression, as evidence for the heritability of IRM and FAP systems.** This is due to aggressive behaviour being triggered by increased levels of testosterone which must have been preceded by exposure to a releaser or signal, which had triggered the IRM. Therefore, the role of the limbic system and the IRM can be considered as valid explanations of aggression.

Part 4 – Evolutionary Explanations of Human Aggression:

- Sexual jealousy is stronger in males (compared to females) due paternity uncertainty, which may lead to cuckoldry i.e. a male raising a son which is not his own. This is an evolutionary disadvantage, due to the male wasting his resources which he could have otherwise used on raising his own children. Therefore, anti-cuckoldry behaviours, in the form of male retentive strategies, are adaptive because they reduce the risk of cuckoldry.
- Wilson and Daly (1996) suggested that there are two types of male retention strategies - direct guarding (e.g. insisting on knowing where your partner is and who she is with) and negative inducements (e.g. threats of suicide to avoid infidelity).
- Therefore, there is a clear link between male retention strategies and aggression, the latter of which is usually used to implement such strategies. This idea is supported by Shackelford et al (2005) who found that when 107 couples, who'd been married for less than a year, individually completed the Male Retention Inventory (husbands) and the Spouse Influence Report (wives), there was a positive correlation between increasing scores on these two measures, which translated to being an important predictor of the use of aggression in such married relationships. This was further supported by Wilson et al (1995), who found that male retention strategies left 53% of respondents fearing for their lives.
- Bullying may not be the product of poor social skills or dysfunctional upbringing as previously thought, but may have an evolutionary advantage. For example, in evolutionary terms, men who bullied other men through reinforcing a power imbalance, were more likely to have their pick of resources and to mate with more females (due to the influence of fewer competing males), and increasing the likelihood of their genes being passed onto as many offspring as possible. Female bullying is more likely to occur within relationships to ensure fidelity (e.g. through threats

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or monitoring), as opposed to aiming to acquire new relationships (which is the male perspective). Therefore, the aggressive act of bullying may be considered as adaptive, as suggested by Volk et al (2012).

+ **Evolutionary theories are useful because they can provide an explanation for gender differences in aggression.** For example, Campbell (1999) suggested that females are more likely to engage in acts of verbal, as opposed to physical, aggression as this ensures that their own survival, as well as the survival of their offspring, is not endangered. Such tactics also prevents females from being involved in life-threatening physical confrontations with their partners, and so further increases their chance of survival through the use of non-aggressive methods of resolving conflicts (Bess and Shackelford). This utility increases the validity of the evolutionary explanation of aggression.

— **There are methodological issues associated with the use of evolutionary theories to explain current examples of aggression.** For example, predominantly such studies are correlational, meaning that there is only a correlation between aggression and the use of male retention strategies. This means that the research may suffer from the ‘third factor problem’, where there may be a third contributory factor which has not been studied. These studies may also jump to make causal conclusions, when really correlations can never demonstrate a ‘cause and effect’ relationship.

+ **However, there is research supporting the link between sexual jealousy and aggression.** The main example of this would be Shackelford’s 2005 study which found that male retention strategies are a method of expressing sexual jealousy, which leads to aggressive behaviour both towards females and other partners. This increases the reliability of evolutionary theories as a method of explaining aggression, due to this supporting evidence.

Part 5 – Social Psychological Explanations of Aggression: Frustration-Aggression

Hypothesis:

- Dollard (1939) suggested that frustration always leads to aggression, which is always the product of frustration (a converse argument). The researchers suggested that frustration was a psychological drive, similar to the biological drive of hunger or thirst, which when satisfied results in drive reduction and a ‘balance’ has been restored to that individual.
- However, it may not always be possible to achieve such task-reduction because the consequence of doing so may be too dangerous, the source of frustration may not be present at the time and this cause could also be abstract. Thus, the aggression stemming from frustration is displaced onto another weaker and immediately-available target in order to achieve drive reduction.
- This concept was tested by Geen et al (1968), who studied male university students under 3 conditions, carrying out the task to complete a task. Those who were insulted by confederates whilst doing so administered the strongest shocks, whereas those who simply found the puzzle impossible delivered the weakest shocks out of the experimental group, followed by the lowest levels being displayed by the non-frustrated control group. This supports Dollard’s original idea that frustration is displaced onto other targets when aggression cannot immediately be reduced through drive reduction.
- Berkowitz (1989) did not take the same cathartic view as Dollard, as he believed that frustration only ‘readied’ a person to become aggressive, and that certain aggressive cues/environmental triggers were needed to initiate this reaction. He conducted a study which found that the presence of two guns influenced participants to administer electric shocks 1.4V higher to confederates who’d previously given participants electric shocks, compared to the control condition of having no guns. This supports Berkowitz’s original idea that frustration need not necessarily lead to aggression, but only in the presence of certain stimuli.

— **Research, such as that conducted by Dill and Anderson (1995), suggests that all types of frustration are not universal in leading to aggression,** but rather that some types are more important than others. For example, unjustified aggression (such as a confederate rushing through an origami presentation because their girlfriend is waiting for them) has been proven to elicit more aggressive behaviour than justified aggression (such as a confederate rushing through an origami presentation because their boss told them to do so). Therefore, it is important to make the

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distinction between these different types of aggression and how they contribute to its development.

- + **Berkowitz's Negative Affect Theory** may be a more comprehensive explanation of aggression, as opposed to the original 'readiness' approach. Berkowitz suggested that aggression is only one of several stimuli which can trigger aggression, and so aggression is not always the consequence of frustration but just negative feelings in general e.g. pain and jealousy. Conversely, this also means that such stimuli can lead to unpleasant consequences other than aggression e.g. an individual feeling depressed and in despair upon losing their partner. This is a positive because it means that current theories are accommodating new approaches to explaining all types of aggression.
- + **There is a real-life application arising from Berkowitz's emphasis of the role of environmental cues, and this role is in the gun-debate.** Some argue that guns should not be readily given to individuals and carried in public in plain sight, because these guns may act as stimuli for aggressive behaviour. This is particularly the case when considering the results of Berkowitz's original 1989 study!

Part 6 – Social Psychology Explanations of Aggression: Social Learning Theory (SLT):

- Bandura suggested that learning is a social process, and occurs through the observation and imitation of specific behaviours displayed by identified role models. Learning can occur both directly, through classical and operant conditioning, and also indirectly, through vicarious reinforcement.
- Reinforcement increases the likelihood that an observed behaviour, such as aggressive acts, will be repeated whilst punishment decreases this likelihood.
- Vicarious reinforcement occurs when we see a role model being rewarded for displaying certain types of behaviour. The observer is then likely to imitate this modeled behaviour as they are motivated in achieving the same reward. Self-efficacy can be used to assess the likelihood that carrying out this behaviour will result in this reward/desire consequence. An example may be a parent rewarding their son for acting protectively over their toys.
- Role models are likely to have desirable characteristics (e.g. wealth or popularity), be the same sex as the observer and have high social status. Children choose role models through the process of identification.
- There are 4 mediational (cognitive) processes which facilitate this learning, and mediate between stimulus and response. They are attention, retention, motor reproduction and motivation. Thus, this also demonstrates that the learning and reproduction of behaviour does not need to occur at the same time.
- Bandura's Bobo doll experiment (1961) demonstrated that children observe and imitate behaviours displayed by same-sex role models. For example, when the adult was seen by the children as beating the Bobo doll with a mallet and being verbally abusive towards it, the children imitated such aggressive behaviours themselves. Children who'd observed a neutral or non-aggressive role model also copied such neutral and non-aggressive behaviours. This supports social learning theory as an explanation for aggression.

— **A major weakness of Bandura's Bobo doll experiment and social learning theory as an explanation for aggression is that it does not take into account biological factors** contributing to the fact that, regardless of the models, boys always behaved more aggressively than girls. This may be due to boys having higher levels of testosterone compared to girls - this androgen has been associated with higher levels of aggression, as demonstrated by Virkkunen et al (1994). Therefore, this suggests that SLT is an incomplete explanation of aggression.



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— A second methodological criticism of Bandura's Bobo doll experiment is its low mundane realism and the results potentially being skewed by demand characteristics (a type of social desirability bias). For example, since the purpose of the Bobo doll is to hit it and act aggressively towards it, the children may have done so because they believed that this was the expected behaviour. Therefore, the influence of modeling, imitation and mediational processes may be very slight in this case of the development of aggression. Therefore, SLT may be a limited explanation for only some examples of aggression.

+ A practical application of a comprehensive understanding of the role of SLT in the development of aggression is the improvement of treatments for aggression in young children and adolescents. This is based on the idea of reciprocal inhibition, where individuals play an active role in their learning through the use of (cognitive) mediational processes. Thus, each individual operates on their environment, which in turn operates on them through the principle of reciprocal determinism. Therefore, this is useful in that it shows we have an influence over our learning, and so such learning of aggressive acts can be altered through the increasing use of compassionate and non-violent role models, particularly in the media.

Part 7 – Social Psychological Explanations of Aggression: De-Individuation:

- Le Bon (1895) suggested that de-individuation is characteristic of crowd or 'group' behaviour, where we feel no personal responsibility for our actions (diminished) because this responsibility is shared among the group. Likewise, we do not fear retaliation for such actions because we are just one anonymous face in a large crowd. This prevents our behaviour from being restricted by social norms.
 - Zimbardo suggested that when we enter a group setting or crowd, our behaviour becomes anti-normative and disinhibited, as opposed to restrained by social norms. This means that laws and social norms no longer apply to our behaviour, as we cannot be judged by others through being anonymous, nor will we face up to the consequences of our behaviour, as supported by Dixon and Mahendran (2012).
 - It is the consequences of anonymity, as opposed to the anonymity itself, that allows us to develop either private self-awareness (we become less aware of our own beliefs and opinions because the larger group is more important) or public self-awareness (the anonymity means that we will not face retribution or judgements from others).
 - Dodd (1985) provided evidence to support the idea that anonymity allows us to act beyond social norms and laws, through the mechanism of de-individuation and changing levels of self-awareness. He found that, if given free-reign over any events and remaining anonymous whilst doing so, 36% of 226 psychology undergraduates would behave in an antisocial manner, whilst only 9% would act righteously e.g. helping the poor.
- + There are practical applications associated with an improved understanding of de-individuation, particularly in the media, as suggested by Douglas and McGarty (2001). These researchers found that, within studies of chatroom activities, the most violent and aggressive messages were sent by those who concealed their identities. This supports the idea that de-individuation may lead to a diminished feeling of one's own responsibility for their actions, resulting in increased disinhibition and aggression.

— However, de-individuation may place too much emphasis on group dynamics affecting the group as a whole, rather than changes that an individual can make to decrease their feelings of self-awareness, such as through the use of a uniform. Johnson and Downing (1979) found that participants who were dressed in a KKK uniform were significantly more aggressive and delivered higher-intensity electric shocks to confederates, compared to those dressed as nurses. This suggests that the social roles associated with uniforms are emphasised, and not lost, within a group setting.

— Le Bon and Dodd may have overemphasised the importance of de-individuation and diminished responsibility as an explanation for aggression, as suggested by Spears and Lea (1992). Their Social Identity model of De-Individuation Effects suggests that a shift of focus/attention from oneself as an individuation, to one's part as part of a larger anonymous group causes conformity to the established norms of behaviour within the group, which may be prosocial or antisocial. Therefore, thus suggests that de-individuation is only a partial explanation

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for aggression, and that an individual's private and public self-awareness are far more important processes.

Part 8 – Institutional Aggression in the Context of Prisons:

- Irwin and Cressey (1962) proposed a dispositional explanation for aggression in the form of the 'importation model'. This model suggests that aggression is caused by individual differences between offenders, rather than the prison context. This is because, as suggested by Thomas and McManimon (2005), prison offenders will behave in the same way within prison as in the 'real-world' due to their dispositions e.g. drug abuse, childhood trauma, economic poverty etc. These characteristics will pre-dispose them to use aggression to navigate their way around the prison social hierarchy, and not be challenged for doing so because aggression is part of the 'prison subculture'.
- Evidence for these concepts was provided by DeLisi et al (2011) who found that certain dispositional traits, such as childhood trauma and irritability, coincided with an increased risk of violent behaviour and suicides, in a group of 813 juvenile offenders when compared to a control group. Therefore, this suggests that dispositional traits, as opposed to the prison environment, may be a more important predictor of aggression.
- The opposite of a dispositional explanation would be the situational model deprivation model, as suggested by Clemmer (1958). He suggests that prison-associated factors can reliably determine aggressive behaviour. The lack of material goods (e.g. TV time), as well as the opportunity to fulfill psychological needs (e.g. heterosexual intimacy) increases the competition for such resources and causes disputes, which are often only resolved through violence.
- Support is given for this idea by Steiner (2009) who, in his meta-analysis of 512 prisons in the US, found that 'prison-level' factors could be used as indicators for the likelihood of aggressive behaviour e.g. the presence of female officers and Hispanic inmates. This further supports situational explanations for aggression within prisons.

— A weakness of the importation model is a failure to consider situational factors which contribute to the quality of the prison, and therefore the associated prison factors, as proposed by Dilulio (1991). He suggests that the 'administrative control model' (ACM) is a more valid and accurate explanation of aggressive behaviour within prisons, because it emphasises the consequences of poor prison management. These can include irregular implementation of rules and officers maintaining psychological distances with the inmates. Such factors may create 'triggers' for aggression which increases the influence of dispositional factors.

+ However, there is evidence supporting the situational deprivation model of aggression. For example Cunningham et al (2010) found that several of Clemmer's identified situational factors were involved in 35 homicides within Texas prisons, such as disputes over relationships and authority. Therefore, this suggests that such factors are an important determinant of increasing the likelihood of aggressive behaviour.

+ A more valid and reliable explanation of offending aggression may be in the form of adopting an interactionist approach, particularly because situational and dispositional explanations are on opposite ends of the nature versus nurture debate, as suggested by Dobbs and Waid. The stress and unfamiliarity of prison life is likely to increase the influence of dispositional factors in the development of aggressive behaviour, but one does not necessarily need to cause the other.

Part 9 – Media Influences on Aggression: The Effects of Computer Games:

- Craig and Anderson (2002) demonstrated that playing a violent computer game (Mortal Kombat) for just 10 minutes resulted in higher levels of aggression compared to playing non-violent games (PGA Tournament Golf), as assessed using the TCRTT. The researchers found that participants in the violent group delivered sounds 1.37 decibels greater than the non-violent group.
- DeLisi et al (2013) demonstrated a strong positive correlation between an increasing number of characteristics of aggressive behaviours (shown in the 227 juvenile offenders studied) and an increasing time playing violent video games, thus reaching the conclusion that aggression should be treated as an epidemical health concern.
- Robertson et al (2013) arrived at a similar conclusion by showing that the time spent engaging in computer games which featured aggressive acts was highly predictive of future aggressive

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behaviour in adulthood, as measured by criminal convictions and the development of antisocial personality disorder.

- Anderson et al (2010) has provided evidence that the effects of watching playing violent/ aggressive computer games are not exclusive to gender and culture. A meta-analysis of 136 studies further supported the strong positive correlation between increased exposure to aggressive media and an increased likelihood of observers displaying aggressive behaviours themselves. This was found to be irrespective of gender or cultures types (i.e. collectivist or individualist).

— The main methodological criticism of meta-analyses would be the file drawer problem and publication bias, which suggests that publishers favour studies which show statistical significance, as opposed to non-significant results which do not show any differences between experimental conditions. However, this publication bias means that only studies finding significant results will be included in meta-analyses, resulting in an inaccurate and misrepresentation of research into the effects of aggressive computer games. This therefore reduces the universality of the causal conclusions reached.

— A second problem concerning the methodology of such research is assuming that the only difference between violent and non-violent video games is the level of violence displayed, as suggested by Przybylski (2014). Video games which include complex dimensions and numerous keys, such as Marathon 2, are often more engaging and require more of the user's attention compared to 'simpler' games. This creates systematic errors in that the more complex games may result in the development of a more influential cognitive script, resulting in more disinhibition and desensitisation, and consequently higher levels of violence. Thus, such a simplistic distinction made between games does not make for reliable conclusions.

— Experimental studies investigating the effects of violent video games on behaviour often suffer from low mundane realism. This is due to the artificial tasks and highly controlled conditions of a laboratory experiment. For example, as there is no risk of retaliation in such an environment, participants may behave more aggressively than they usually would, resulting again in a systematic error. The assessment methods of aggression are unlikely to be accurate, such as the TCRTT used by Craig and Anderson, due to their artificial nature, thus reducing the ecological validity of the findings.

Part 10 – Media Influences on Aggression: Desensitisation, Disinhibition, and Cognitive Priming:

- Desensitisation is the consequence of repeated exposure to violent or aggressive acts, particularly in the media. This causes individuals to be less empathic towards victims and increasingly accept aggression as the 'social norm', with reduced physiological responses from the sympathetic nervous system. This idea was supported by Funk et al (2004), who was concerned about the increasingly common trend in the media to minimise the consequences of aggression.
- The process of habituation and an increasing tolerance towards aggression was demonstrated by Weisz and Earls (1995), who found that men who had watched the film Straw Dogs (which includes a graphic and distressing rape scene) were more accepting of rape myths and less likely to find the defendant guilty when watching a rape trial re-enactment.
- Disinhibition describes the process whereby our restraints towards violence and aggression are lowered, through direct or indirect learning during the process of social learning. The media is a particularly important influence due to rewarding



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aggressive behaviour and minimising its negative consequences. This results in new social norms and attitudes towards aggression being developed.

- Huesmann (1998) suggests that 'cognitive priming' describes the idea that, through exposure to a repeated number of aggressive acts being rewarded/vicariously reinforced (SLT), we develop a mental framework to make predictions about how aggression will 'play out' in the real world. The subsequent changes in memory means that we are automatically cognitively primed to anticipate the consequences of aggression.
 - This was demonstrated by Greitemeyer (2006), who found that male participants who'd listened to aggressive songs featuring derogatory comments about women, behaved more aggressively towards a female confederate, compared to those who'd heard gender-neutral lyrics. This suggests that the media may cognitively prime audiences to develop an increasing tolerance and disinhibition towards violence.
- + **There is evidence supporting the idea of desensitisation and the role it plays in transforming social norms about aggression.** For example, Krahe (2011) demonstrated that individuals who have a history of regularly viewing aggressive acts on TV, experienced more positive arousal and less anxious arousal when watching examples of aggressive media in a laboratory experiment, compared to those without such regular viewing. This suggests that desensitisation may be a precursor of disinhibition, overriding the innate reaction towards aggression of increased activity in the autonomic sympathetic division, which usually produces unpleasant symptoms such as increased heart rate and nervous laughter.
- + **An improved understanding of cognitive priming may increase the effectiveness of treatments tackling the increasing rates of disinhibition towards aggression,** as provoked by the media. For example, Bushman and Anderson (200) suggested that regularly watching violent media reinforces the cognitive scripts within the brain, as well as causing permanent changes within our memory of such events where we sympathise less with the victims and minimise the event's emotional significance. By challenging these cognitive hostile attribution biases and minimalisation, we are more likely to combat these changing social norms towards aggression.
- **Cartoon violence is a useful example of how neither social learning theory, nor disinhibition and desensitisation can form complete explanations of how children learn violence.** For example, most children understand that it is not possible to punch someone so that their eyes burst out of their sockets. Instead, as Krahe suggested, children observe that these aggressive acts are not punished, and therefore prepare their own cognitive scripts, through the process of cognitive priming, about what is socially acceptable behaviour.