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A2
LEVEL

Psychology

the student's
textbook



Nigel Holt and Rob Lewis



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WHAT IS PSYCHOLOGY?

If you are reading this book for interest you may be interested to find out that psychology is one of the broadest and newest of the sciences. It is extremely popular, both in school and college and at university. Psychology is best described as 'the science of mind and behaviour'. If you are reading this book as part of your studies towards an A2 qualification then you should already know what psychology is! This is because you will have taken the preceding AS course in psychology and so have some idea, we hope, of what to expect.

WHO IS THIS BOOK FOR?

First and foremost, this book is for students. We know teachers and those interested in psychology from other professions read books like this, but this book is designed carefully with students in mind. Specifically, it has been written for students preparing for the A2 component of their psychology A level, following specification A with the AQA examining board.

WHY HAVE WE WRITTEN THIS BOOK?

This is not a book with the bare minimum of information. We know from experience that textbooks are often written with teachers in mind, and frequently contain messages intended for teachers rather than students. Textbook authors know that teachers help students understand difficult material in the classroom and so are often guilty of not explaining things as carefully and as thoroughly as they might. We have taken an approach which we hope will encourage students to *read*, and allow students to access often hard to understand things. We are teachers ourselves and know how vital a good teacher is to education. However, we also wanted to help student understanding by providing a textbook which thoroughly covers the specification and which was accessible outside the classroom. Everything required to get a top grade in the AQA/A2 exams is included in this book.

AS AND A2 PSYCHOLOGY

Those reading this book as part of their A2 learning will already have sat the AS component of the A level. It is very important to point out that just because the AS knowledge has already been used successfully in the AS level, you must not discard what you have learned. The AS level provides a foundation for A2 study, and a great deal of what you have learned at AS is revisited at A2. It is not

a sign of weakness to have to return to AS notes to remind oneself of what has gone before. Most notably the information covered in Research Methods at AS is required knowledge at A2 and we recommend that all students spend a little while looking back to that part of their AS course to refresh their memories.

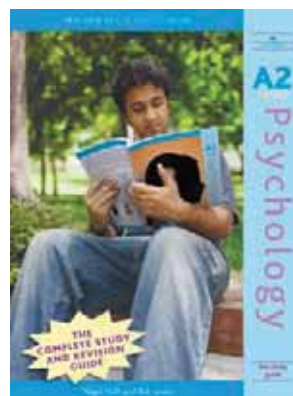
RESEARCH

Psychology is a science, and progresses through careful research. Research is central to the development of psychological understanding. A sound knowledge of how research should be designed and carried out is extremely important. The topic was introduced at AS, and we build on it here at A2. Students are required not only to *know* information they must be able to *apply* their knowledge and examiners will be looking for this skill when allocating marks. Our advice is that those intent on being the best students of psychology should build themselves a solid foundation in research methods. Once this is in place the additional information becomes a great deal easier to understand and evaluate.

FURTHER HELP

We are confident that everything needed to complete the exam successfully is included in this book. However, we know that exams are not just about knowledge. Exam technique is more than just squeezing knowledge onto the exam answer booklet. It's also about knowing how much to include of what sort of thing to give the best chance of maximum marks. Because of this we have written a comprehensive study guide that accompanies the book where exam preparation and practice take centre stage.

The study guide includes more tips on how to do well, summaries of essential information, example questions and answers, and a thorough glossary of important terms.

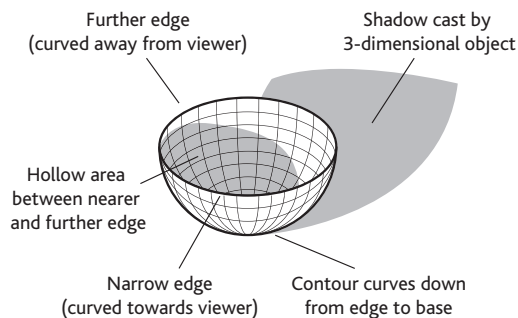


USEFUL FEATURES

All textbooks include features intended to develop interest or improve learning in some way. In this book we have kept features like this to a minimum because we know that they often fail in their intentions – they end up cluttering the page, they frequently contain vague or irrelevant instructions and ideas, and often distract from sustained concentration and reading. Where we have used features and boxes we have done so either because the information they contain extends information we've described elsewhere or is additional important guidance.

DIAGRAMS

Diagrams are used to help visualise an idea of a concept. We know from experience that diagrams are only helpful if the idea can be simplified and so we have used them carefully and only where appropriate. If you are fortunate to have a diagram to learn, then do so – diagrams can help you to remember things and can earn you marks in an exam.



ASK AN EXAMINER

An expert perspective is always useful. In A2 psychology the experts are the examiners and so we have included 'Ask An Examiner' boxes to guide learning and help focus the reader on important information wherever appropriate.



"These are general criticisms of evolutionary psychology, so you can use them to get evaluative marks in any answer you give to questions in this section. Be selective and use them wisely and they will earn you extra marks."

BOXES

Occasionally we have included boxes which give more detail of particular studies or ideas. You can

read the main text without referring to the boxes, but if you want a bit more detail the box might contain information useful to you.

A PSYCHODYNAMIC ACCOUNT OF SLEEPWALKING

Abrams (1964) describe the case of a 42-year-old woman arrested for shoplifting from a large department store whilst sleepwalking. Her behaviour was completely at odds with her morality and character – she was described as an energetic, active member of the religious community. As a result of this experience she became depressed and anxious, afraid to leave her home. Initially, she showed no understanding of her behaviour, but after several sessions of therapy, recalled that she had been a sleepwalker all her life, and when younger had often had her leg tied to the bed at night to stop her wandering off.

The therapist interpreted the subject's shoplifting behaviour as being a result of extreme pressures and personal difficulties. Shortly before the shoplifting incident she had been very distressed at the news of a relative's serious illness. According to Abrams, the sleepwalking was basically a 'cry for help', the stealing being a reflection of her need to take control of her life. After several more sessions of therapy, the patient came to accept the interpretation, and her symptoms of depression and anxiety disappeared.

ISSUES AND DEBATES

A level students are required to show an understanding of various issues and debates. In this book we have devised a simple code for identifying where each issue is touched upon in the text so students can see quickly where the relevant information is on the page.



Remember though that these are only *suggestions* – there are plenty of other places where issues and debates can be applied, so don't be afraid of thinking for yourself when looking to see how you can address issues and debates.

THE A2 EXAMINATIONS

A much more detailed description of the examination, including lots of tips and advice on avoiding the pitfalls, is available in the study guide accompanying this book. A short description of the A2 examinations is given here however to help you use this book more effectively.

In order to gain a full A level students must first complete AS and then A2, each worth 50% of the full qualification. Following AS level (where Unit 1 and Unit 2 are covered), students follow the A2 course, covering Unit 3 and Unit 4.

In Unit 3, three topics are chosen from a list of eight: Biological rhythms, Perception, Relationships, Aggression, Eating behaviour, Gender, Intel-

ligence and learning, Cognition and development. The questions require essay-style answers.

Unit 4 is a little more complicated. It is divided into three sections. In the first section you choose **one** disorder to study from four (schizophrenia, depression, anxiety – phobia, or anxiety – OCD). Exam questions require an essay-style answer. In the second section, **one** Psychology in Action topic is selected from three (Media psychology, The psychology of addictive behaviour, or Anomalous psychology). Parted questions are used in the exam (e.g. (a), (b), (c)...). The final section is a compulsory one covering Psychological Research and Scientific Method. The exam question is structured, i.e. several questions based on a scenario.

Quality of Written Communication

Marks are awarded for Quality of Written Communication (QWC) in both Units 3 and 4. In order to gain the maximum marks reserved for QWC candidates must:

- » ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear
- » select and use a form and style of writing appropriate to purpose and to complex subject matter
- » organise information clearly and coherently, using specialist vocabulary when appropriate.

In Unit 3, QWC marks are awarded for each answer. In Unit 4, QWC marks are awarded only for the essay-style question on Psychopathology.

HOW SCIENCE WORKS

You are expected to demonstrate an understanding of how scientists investigate psychological phenomena, and marks are allocated for this knowledge. Very few How Science Works marks are available in Unit 3, and it is easiest to get them by effective use and evaluation of research studies

and, where relevant, commentary on the methods used by psychologists. Many more marks are available for this in Unit 4, where there is a compulsory question on research methods. You must also be prepared to demonstrate your knowledge of How Science Works in both your Psychopathology and Psychology in Action answers, however.

ISSUES AND DEBATES

In Unit 3, students are required to have a knowledge of 'issues and debates' in psychology and how they relate to each topic being studied. These issues and debates represent a more general understanding of psychology, above and beyond any analysis and commentary relevant to the topic. Not all issues and debates are relevant to all topics, but you are expected to show understanding of them in exam answers where they are applicable.

STRETCH AND CHALLENGE

This A2 specification incorporates something called *Stretch and Challenge*. This is an initiative meant to provide the most able students with the opportunity to demonstrate their knowledge and skills. Stretch and Challenge does not influence grades A to E – these are awarded by exam boards in the usual way. However, those students who achieve 90% of the available A2 marks (and 80% of the marks overall, including the AS marks), will be seen to have responded to Stretch and Challenge and will therefore be awarded an A* grade. Students wishing to achieve an A* must have a sound and thorough understanding of the content of psychology at this level. They must write clearly and coherently, demonstrate an understanding of how science works, and incorporate issues and debates effectively. Everything you need for Stretch and Challenge is included in this book, and we

	Unit 3	Unit 4
Paper value	25% of total A level marks	25% of total A level marks
Exam length	1 hour 30 minutes	2 hours
Exam format	Three essay-style questions	Three sections: Psychopathology (one essay-style question) Psychology in Action (one parted question) Research Methods (one compulsory structured question)
Quality of written communication (QWC)	Assessed in each essay question	Assessed in the psychopathology essay

Summary of the A2 examinations.

believe that using this book will give you the best possible chance of achieving this A* grade.

IMPORTANT RESOURCES

Additional help is available in various places online. We know that students (and indeed teachers) often use bulletin boards on the internet to discuss problems they may have and seek assistance with their peers and this is fine in some ways as it provides a feeling of social support for the often lonely process of learning and revising information. However, we urge caution. A quick glance over many of these online bulletin boards reveals that incorrect and misleading information is extremely common. You should use these and other online resources with great care in the knowledge that you do so at your own risk. You will not go wrong with relying on the information in this book and the study guide.

www.aqa.org.uk

This is the homepage of The Assessment and Qualifications Alliance (AQA). It is they who write the specification and organize the examination, and it is they who employ examiners to mark the completed papers. At this site you will find the

Specification A for Psychology GCE. The site also includes some helpful points on how the examination is marked, and other resources like past papers. Remember, if it's not in the specification you will not be tested on it. Similarly, if it is in the specification it is very possible that it may be included in the examination.

www.askanexaminer.com

Ask An Examiner includes information and links related to the exam. There is also a facility whereby questions can be asked of experienced examiners who will provide you with a personal answer.

www.bps.org.uk

The British Psychological Society (BPS) is the professional body for psychologists working in the UK. Their website provides a huge amount of information on all areas of psychology for those interested in taking psychology further, such as information on psychology as a career, university courses, and links to other websites. Also on the site is useful information on how psychologists are expected to behave professionally in terms of ethical guidelines and concerns. These are central to good research practice and are part of the research methods component of this course.

CONTRIBUTORS

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Andrea Ackland works as a Psychology Lecturer at Coleg Gwent. She is an experienced teacher and examiner, and has a background in applied psychology research.

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Perception

IAN WALKER

You are expected in the examination to show both the skills of knowledge and understanding and the skills of analysis and evaluation in relation to the topic Perception.

Where opportunities for their effective use arise, you will need to demonstrate an appreciation of issues and debates. These include the nature/nurture debate, ethical issues in research, free-will/determinism, reductionism, gender and culture bias, and the use of animals in research.

You will also need to demonstrate an understanding of How Science Works. You can do this through the effective use of studies in your answer (as description or evaluation) or where appropriate by evaluating methodology and findings.

WHAT YOU NEED TO KNOW

THEORIES OF PERCEPTUAL ORGANISATION

- Gibson's bottom-up/direct theory of perception and Gregory's top-down/indirect theory of perception

DEVELOPMENT OF PERCEPTION

- The development of perceptual abilities, e.g. depth/distance, visual constancies, face processing
- Infant and cross-cultural studies of the development of perceptual abilities
- The nature-nurture debate in relation to explanations of perceptual development

FACE RECOGNITION AND VISUAL AGNOSIAS

- Bruce and Young's theory of face recognition, including case studies and explanations of prosopagnosia

The world is a very busy place with many things happening around us all the time. In order for us to interact safely and effectively with the things and people in the world we must have an idea of what is happening. You know what is going on around you because you *perceive* it. Perception is a way of making sense of sensory information, to get knowledge about what is happening in the environment through the senses. That is not to say perception is the only way you can learn things about the world – you can also learn things by reasoning, or working them out for yourself, for example – but perception is a very important way for both humans and non-human animals to get information about their surroundings.

Perceiving things is not the same as sensing them. You sense things using vision, hearing, touch and your other senses, but this is just the first step in perceiving. Think about the picture shown below. As long as you look at it, the image entering your eyes stays the same – in other words, the information you are *sensing* stays the same. But what you actually *perceive* does not: one moment you might perceive a duck and the next moment you might perceive a rabbit. So perception is not the same thing as seeing, or hearing, or touching. Rather, when we perceive the world we take information from our senses and actively use it to build an understanding of what is happening around us.



THEORIES OF PERCEPTUAL ORGANISATION

Place your hand on top of this page and think about what you can see. The chances are you perceive your hand on top of a page. There's nothing surprising about that. Or is there? You perceive what you do because the light that bounces off the page and your hand into your eyes doesn't keep the hand and the page separate. Instead, the light

entering your eyes has the page and the hand all mixed together. In fact, what goes into your eyes is a constant confusion of lines, curves, coloured areas etc. Your perceptual system, however, is able to tell which bits of the scene are the page and which bits are your hand. This is a skill known as *figure-ground separation* – the ability to separate objects from their backgrounds.

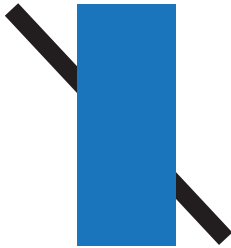
PERCEPTUAL ORGANISATION

The ability to separate objects from their backgrounds – as well as from one another – is an extremely important aspect of perception. Have a look at the picture of the busy street scene. Here, even though there is just a big messy mixture of lines, curves and colours, you can separate out all the objects – you see them as individual cars, people and buildings, even though this isn't what your eyes started with. We need this ability to separate the world into distinct objects because it is objects we deal with day-to-day: if you are hungry you want to find a sandwich, which is an object; if you are being chased by a tiger you need to be able to run away from it, and this means being able to tell which parts of the world around you are a tiger and which are not. This ability to separate objects from their backgrounds and from one another seems effortless to us, but it is proving incredibly difficult to make computers do it, showing just how complex the task really is.



This ability to take messy, mixed-up signals from your senses and separate them into individual objects is called *perceptual organisation*. We experience the world around us as being filled with people and objects. Perceptual organisation is the way our minds separate out these people and objects from one another, even though they arrive at our sense organs all mixed together.

There is a nice example of perceptual organisation in the diagram below. What arrives at your eyes is simply a set of lines, but you probably don't perceive the picture that way. Rather, your perceptual system organises the lines into objects. Do you perceive the picture as a line going behind a rectangle? Most people do, thanks to the way information from the senses is organised into objects.



"You will need to be able to describe and evaluate each of two theories of perceptual organisation. One is a top-down theory (Gregory's theory) and the other is a bottom-up theory (Gibson). Using examples from perception illustrating aspects of each theory is a good way of getting descriptive marks."

BOTTOM-UP AND TOP-DOWN PROCESSING

Although we clearly organise our perceptions, separating the world around us into lots of separate 'objects', not everybody agrees about how we do this. There have been two main approaches to understanding the way perception happens. Some researchers have said our minds perceive the world around us by interpreting sensations. This is known as *bottom-up processing*, because it sees us starting at the bottom, with information from our senses, and working up to a finished perception. Bottom-up perception progresses in two stages: first we get information from the senses; then after we have got the information, we interpret it to work out what is going on around us. The two stages are separate, and always happen in the same order.

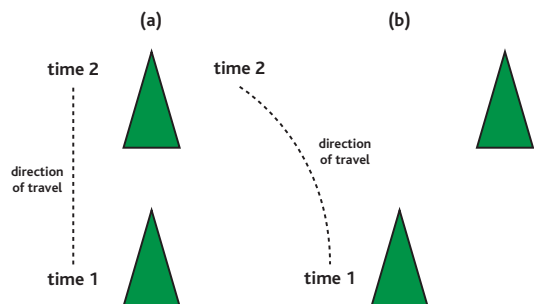
Other researchers have rejected the idea that perception happens in stages like this. They say that when we perceive the world we use information that we already have, to help us. This is known as

top-down processing, as information already stored in your memory is being used to interpret sensations. For example, because you know what dogs look like, this stored knowledge helps you perceive a dog each time you see one. Top-down processing helps you make sense of the busy world in which you live because you use this stored information. People who feel that top-down processing is important say that our perceptions are affected by our existing beliefs and expectations. This means that if we expect to perceive something in the environment, we are more likely to find it than if we do not expect to do so.

GIBSON'S BOTTOM-UP/DIRECT THEORY OF PERCEPTION

The American psychologist James Gibson argued that there is enough information to make sense of our surroundings simply by using whatever arrives at our senses. Gibson said that sensations provide us with all the clues we need to make sense of what we are seeing. He developed his theory when working with pilots who, he noticed, used visual clues from outside their plane to decipher the world.

The scene a pilot saw from the cockpit contained, according to Gibson, all the information they needed to understand the plane's speed, whether it was turning, whether it was accelerating or slowing down and so on. For example, if a pilot looks down to the ground and sees a tree in a certain place, and a second later the tree is perceived to have moved a certain amount, then Gibson said that the mind should be able to work out how fast the plane is moving and also in which direction it is travelling.



(a) At 'time 1' a pilot looking out of the window would see the tree below and to the right. At 'time 2', a second or two later, the tree is in the same place, telling the pilot he has flown in a straight line

(b) At 'time 1' a pilot looking out of the window would see the tree below and to the right. At 'time 2', a second or two later, the tree is much further away below, on the right and slightly behind, telling the pilot he has flown forwards and to the left

provoked to violence, by either other people or circumstances.

AGGRESSION AS AN ADAPTIVE RESPONSE



"It is very clear what is needed in this section. The term 'adaptive response' is very specifically related to evolutionary theory, so make sure that you restrict your answers to this if a question comes up in the exam on evolutionary explanations of aggression, or explanations of group display."

EVOLUTIONARY EXPLANATIONS OF HUMAN AGGRESSION

From an evolutionary perspective, the fact that human aggression exists must mean that it has survival value. On the face of it this seems contradictory, as often aggression involves risk of harm or possibly even death. Regardless of the risks involved, research suggests that humans have aggressed against one another for a very long time. Prehistoric remains show signs of physical aggression between early humans. Skulls and ribs have been discovered with evidence of wounds inflicted by man-made weapons designed to cut and stab (Vandermeersch and Leveque, 2002). Traditional hunter-gatherer societies do not have possessions to fight over but are still involved in status conflicts and altercations over access to mates. High levels of violence have been noted in the !Kung San of the Kalahari desert who have murder rates four times higher than those recorded in the United States (Lee, 1979).

The high incidence of aggressive behaviour across cultures and through time has led evolutionary psychologists to conclude that the adaptive and functional benefits of aggressive behaviour must outweigh the possible costs (Buss and Duntley, 2006). From an evolutionary perspective humans are most likely to survive if they have access to resources (food, water and territory); if they can defend their resources and protect their families; and if they can attract or gain access to mates. Aggressive behaviour seems to have evolved to

support the human race in achieving all of these primary goals.



"The specification explicitly requires you to talk about human aggression. Only discuss animal aggression if it can be made clearly relevant to humans."

Not all aggressive behaviour involves direct physical contact. Aggression amongst humans can be indirect (consisting of gossiping, spreading rumours and ostracising people from a group) and can therefore pose little threat to the perpetrator. Even amongst animals aggression is not indiscriminate and fighting generally ceases or diminishes at the end of the mating season. This indicates that access to females is a greater motivating factor in aggression than acquisition or defending of resources such as food. Aggression therefore does have an adaptive value. Aggressive displays that ward off potential rivals also enhance status and therefore attract females. In turn this provides greater opportunities for mating and the birth of more offspring to continue the genes of the successful male. Evolutionary psychologists have concluded that aggression is tactically calculated to help increase the chances of reproduction and survival in both humans and animals. The fight or flight response has an adaptive function and both animals and humans will not stand and fight if outnumbered. They will flee to survive – self preservation being the all important motivating factor.

Aggression in males

Acquisition of status is a primary motivator in male aggression. The motivation to gain high status is driven by both natural selection and sexual selection. High status males have access to resources necessary for survival and females necessary for breeding and producing offspring. In the days when humans lived as hunter-gatherers fitness in males was directly related to success as a hunter and warrior. Good hunters accrued resources and skilled fighters could ward off rival males. These successful males were attractive to females as they were seen as good providers and protectors. To a female who needs to be sure that her mate will be able to guarantee the survival of her and her children the good hunter is an attractive prospect. His desirability in the eyes of the female also serves to enhance the status of the male and ensure his reproductive success. Men in many cultures use aggression as a means of ascending hierarchies

and achieving status. Higher status men receive more attention and are more desirable as mates (Li and Kenrick, 2006). It can therefore be costly to male fitness not to engage in conflict. High status men will monopolise more than their fair share of females, leaving low status men at risk of not producing any offspring. Low status males may then indulge in high risk strategies to compete for status and to enhance their chances of reproducing. We can therefore predict that individuals most likely to commit aggressive acts are low status males with few resources and no mate. This prediction is supported by Daly and Wilson (1985). Their review of conflicts that resulted in murder in Detroit throughout 1972 revealed that the motive behind most of these conflicts was status. The victims and the offenders were most likely to be unemployed and unmarried young men – i.e. low status and without a mate. These young men had more to gain through the potential success of a risky act of extreme aggression than a high status male. It is also interesting to note that most victims and offenders knew each other and therefore had an understanding of the status of their rival. Those of equal status were more likely to resort to aggression in a bid to rise above their opponent in their local community hierarchy.

Sexual jealousy and infidelity in males

Daly and Wilson (1985) also noted that in 58 of the 214 cases of murder studied, sexual jealousy was the underlying factor. This involved two men contesting a female partner. The attempt by males to constrain female sexuality by the threat or use of aggression appears to be cross-culturally universal (Daly and Wilson, 1982). This suggests that the use of aggression for this purpose is an adaptive trait that has evolved in males to give them greater confidence of paternity and serve as a warning to potential rival suitors. As females have evolved to carry the offspring during gestation, a woman can always be 100% confident of her genetic relationship to the child. Males, however, can never be 100% sure of their paternity and have therefore evolved behaviour to try to improve their level of certainty. The male is reluctant to expend energy and resources in raising the offspring of another male. In some species (e.g. in lions) young sired by other males are systematically killed (Bertram, 1975).



"You could be asked specifically about infidelity and jealousy, so make sure you learn and don't gloss over this."

Sexual jealousy has therefore evolved to help a man protect his lineage and ensure that the investment he is making in offspring is to his benefit. The concept of male sexual jealousy can be witnessed throughout history with legal systems often supporting the male as the injured party against an adulteress. Historically and cross-culturally sexual intercourse between a woman and a man outside of her marriage is an offence. The husband is portrayed as the victim, entitled to revenge, damages and divorce. Henry VIII executed his second wife, Anne Boleyn, for alleged crimes of incest and adultery. The king expected his brides to be unsullied virgins yet it was acceptable for him to have mistresses and father illegitimate children.

Male aggression against females is designed to deter the female from indulging in behaviour that is not in the interests of the male. This may include adultery and bearing another man's child. Data compiled by Bellis and Baker (1990) suggests that 7% to 14% of children are not fathered by the mother's husband or partner. In a sample of 80 murders where the victim and murderer were married or living together, the victims were 44 husbands and 36 wives, and 29% of these conflicts were deemed to have arisen as a result of sexual jealousy (Daly and Wilson, 1982). The statistics are interesting as they show more husbands murdered by their wives. Evidence from these cases, however, points to the fact that the conflict was instigated by the husband and that the wife killed him in self-defence. This is supported by the convictions: there were fifteen husbands convicted for murder compared with five wives, from the sample studied. Care must be exercised when using this data as evidence to support the prevalence of sexual jealousy in murder cases as psychologists are reliant upon testimonies gathered by police at the time of the crime. Although sexual jealousy may be the prime motive, alcohol and drug abuse, along with low socio-economic status, all correlate highly with abuse of a spouse.

More reliable data may be gathered directly from the victims themselves. Of 44 battered wives living in a women's hostel in Ontario, Canada, 55% cited jealousy as the reason for their husband's aggressive behaviour (Miller, 1980). Actual infidelity

on the part of the woman was the reason for the assault in eleven of the cases but the beatings were often motivated by suspicion or fear of adultery. Husbands sometimes objected to their wives going out with friends and in extreme cases they were not even allowed out to go shopping without their husbands. In Western cultures this extreme behaviour may be termed 'morbid' jealousy, with the person showing this level of jealousy deemed to be in need of treatment. In some cultures, however, female confinement is the norm. In Greece the worst form of disgrace experienced by a husband is brought upon him by an adulterous wife. A husband who tolerates this behaviour is seen as unmanly and weak.

Experimental evidence also supports the evolutionary prediction of male aggression in response to threat from a rival suitor. Young (1978) asked students to describe their likely reactions to a jealousy-inducing situation shown in a film. Men predicted that they would respond angrily and become drunk and threaten their rival. Women on the other hand anticipated their reaction to be crying, pretending not to care or trying hard to increase their own attractiveness in order to regain the attention of the male.

Aggression in females

The experimental evidence above highlights the difference in levels of aggression shown by men and women. Females are generally viewed as less aggressive. Evolutionary theory explains lower levels of female aggression by considering the impact that aggressive behaviour may have on the female. In any situation, aggression is a high risk strategy. For males the risk may be outweighed by the possible gains of resources, status and access to fertile females. However, for females the costs of aggressive behaviour exceed the benefits. Lower levels of aggression in the female reflect an adaptive behaviour motivated by the importance of her survival. The mother's presence is more critical to the survival of offspring than the father's (Campbell, 2002). Among the Ache of Paraguay children are five times more likely to die if the mother dies, but only three times more likely on the death of the father. If the mother dies before the child reaches the age of 1, the mortality rate for the infant is 100% (Hill and Hurtado, 1996). Even in Western cultures the mother is more likely to gain custody of children in a marriage breakdown and is the parent primarily responsible for raising the offspring. If a woman wants her children to survive she must be concerned with her own survival.



"Aggression is not restricted to males! Don't forget to also discuss female aggression, as it shows a good rounded understanding of the issue."

Evidence for the female's concern for her own survival can be seen in studies of fear and phobic reactions in women. The things that women are frightened of correspond to specific dangers faced by humans during the time of evolutionary adaptation when humans lived as hunter-gatherers (Marks and Nesse, 1997). Phobias concerning animals – particularly dogs, snakes and insects – are far more common in women, as are fear of injury, blood and medical procedures. Agoraphobia is more prevalent amongst women, reflecting a time when open spaces would have meant vulnerability to attack by predators and would have threatened survival. Women also perceive more danger when assessing a situation compared with assessment of the same situation by men. A meta-analysis of 127 laboratory studies found that women saw aggressors as being in greater danger as a result of displaying because, in so doing, they were possibly inciting aggression in an opponent (Bettencourt and Miller, 1996).

A woman has nothing to gain by exhibiting aggressive behaviour. High status, dominant aggressive females are not preferred as mates so this kind of behaviour has no adaptive value for the woman. The woman's main aim is to secure a valuable male who can support both her and her offspring. To this end she may be in competition with other females to secure the best mates but she is more concerned with her own mortality. This has led to the development of low risk and indirect strategies in disputes and conflict. Women are more likely to use gossiping, name calling and ostracising, aimed at decreasing the attractiveness of the competing female – tactics which reduce the risk of physical injury. Meta analyses have shown that sex differences in aggression exist for both direct physical aggression and indirect, verbal and psychological aggression. Men exhibit more physical aggression than women from the age of 2 (Simon and Baxter, 1989) but females exceed males in the use of indirect aggression (Archer, 2004).

Recent research – both under laboratory conditions and using self-report techniques in naturalistic settings – confirms sex differences in types of aggression (Griskevicius et al, 2009). A survey of

INFLUENCES ON MORAL REASONING

According to Rest and Narvaez (1991) our moral decision making, and whether we choose to behave in certain ways, is not only to do with the level of moral reasoning we are in. They identify three important factors that influence how people will respond to moral issues.

1. Moral sensitivity

A person can only make a moral decision about something if they think that there is a moral issue at stake. It doesn't really matter what level of moral development a person is in if they can't identify a situation as requiring a moral decision.

2. Moral motivation

If we are not motivated to act morally then we are not likely to do so. Where something makes the moral conflict higher (perhaps when there is a cost to our acting morally) moral motivation begins to influence our moral decisions more. For instance, if we see that a situation requires us to make a moral decision, but the costs of the decision are too high (perhaps it may be dangerous or expensive in another way to intervene in a situation), then we are less likely to act morally.

3. Moral strength

Carrying through a moral decision, and sticking to what we think is right, can require a degree of strength and certainty in ourselves.

validity. If the decisions made by participants do not relate to real life then a theory based on those decisions is valid only for artificial dilemmas, not real life situations.

5. Miller et al (1990) found evidence that questions the universal applicability of Eisenberg's theory. In their research they found that Hindu children and adults in India felt a moral obligation to help people who needed help, be they strangers, friends or family, whether their need for help is serious or mild. American children, on the other hand, felt that the decision to help someone when the need was mild was a choice rather than a moral obligation. This is a cross-cultural difference and suggests that Eisenberg's theory is not necessarily universally applicable.
6. It is not always possible to predict how a person will respond from the level of moral or prosocial reasoning they are in, as Eisenberg might suggest. Rest and Narvaez (1991) say that whether someone behaves morally depends on a number of factors, including moral sensitivity, moral motivation and moral strength.



"Sometimes the same, or a similar evaluation point is relevant for two different theories. The work of Rest and Narvaez is an example. It can be used as an evaluation of Kohlberg's or Eisenberg's theory. Both identify levels of moral development, and so both can be evaluated similarly on that point."

DEVELOPMENT OF SOCIAL COGNITION

According to Allport (1985) social cognition is an approach to social psychology which attempts "to understand and explain how the thoughts, feelings, and behaviour of individuals are influenced by the actual, imagined, or implied presence of others". Social cognition, then, is concerned with the knowledge that individuals acquire about themselves and others and how this influences thinking and behaviour. A crucial difference between social cognition and non-social cognition (such as more traditional cognitive research into memory, thinking and language) is that social cognition focusing on how we think about the social world around us. In other words, social cognition is to do with *social* thinking. Social thinking, and therefore behaviour, according to this approach is not determined by simple learned responses and reinforcements, but is a reflection of internal mental representations of the world. Two people can experience exactly the same event (i.e. they have the same cognitions) yet perceive the event completely differently. This tells us that people interpret objective reality in subjective ways and, according to the social cognitive approach, these interpretations are influenced by social experience and knowledge.

DEVELOPMENT OF THE CHILD'S SENSE OF SELF

Over the time that you have known your best friend you have formed ideas and impressions about them. You have an idea of what they like to do, what they like to eat, their favourite kinds of films and music. You have formed an impression of their personality and this gives you an idea of how they might behave in different situations. In exactly the same way, we form an impression of ourselves. A sense of self includes ideas and beliefs about who we are as individuals (this is referred to as our *self-concept*), and about our self-worth (referred to as *self-esteem*). Our understanding of the self is linked to the particular role we are playing at any one time. Markus and Whurf (1987) point out that we have many different views of the self, depending on what role we are playing. We all have multiple roles in society, for example as students, sons, daughters and perhaps even mothers or fathers.

The self-concept then can be thought of as everything that you know about yourself. This includes the knowledge of your own opinions, desires, ambitions, feelings, ideas and attitudes to others and to things. We are not born with this understanding however: it develops over time. Indeed, it could be considered something that is part of our life-span development since we never really stop learning about ourselves. Since the self is an expression of our individuality, the development of the self can be considered a process of individuation.

SELF-CONCEPT AND SELF-AWARENESS

One very important developmental task for an infant in the first couple of years of life is to learn that they are separate and distinct from other objects and people in their environment. By the age of 2 the child begins to understand who they are and about their place in the world. They have learned that things and people around us can influence us, just as we ourselves are capable of influencing the world. A child is showing evidence of becoming 'self-aware'. The development of self-awareness has been investigated by Lewis and Brooks-Gunn (1978). They found that infants were able to recognise themselves in a mirror by the time they were 2 years old, which for them was evidence of self-awareness. Their findings were supported by more recent research from Bullock and Lutkenhaus (1990) who concluded that

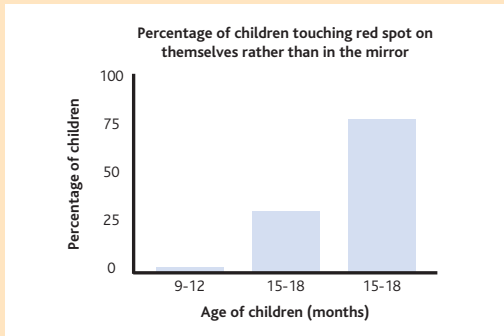
children could recognise their own photographs by about 21 months to 2 years of age.

In further research, Lewis and Brooks-Gunn (1979) found that children's awareness of their own face as a reflection depended on whether movement cues were present that depended on their own movements. In other words, what was required for children to identify the spot on their own nose was if the child recognised that the mirror image moved at the same time that they did. They filmed children and showed them the films of themselves at a later date. They found that more children recognised their own images from the moving films than from a still photograph. The researchers say that real self-recognition truly shows itself when a child can recognise themselves from a still, unmoving image. This is supported by Bullock and Lutkenhaus (1990) who measured self-awareness as a child's ability to recognise themselves from a photograph. They suggest that self-awareness begins to develop at about 15 months but is developed in about 75% of children aged between 21 and 24 months.

Research of this kind has led to the suggestion that self-recognition is linked to developing cognitions about the face. Neilson et al (2006), however, showed that this is not the case. They found that toddlers seated in high chairs who had a mark surreptitiously placed on a leg would search for the mark on themselves when given the opportunity to view the mark in a mirror. Clearly, the development of self recognition involves recognising other parts of the body too.

Povinelli et al (1996) suggest that a mirror test does not provide evidence of the complete development of a sense of self. They showed children a video of themselves being surreptitiously marked on their head by a researcher three minutes earlier. Although children typically pass the mirror test at 2 years of age, only children around 4 years responded to the video by reaching for the mark on their head. Povinelli et al explain this by suggesting that success on a mirror task indicates recognition of a *present* self, whilst success on the video task represents a developmental change to a more sophisticated *temporally extended* sense of self. Suddendorf et al (2006) point out however that the performance of older children in the video condition was still quite poor, with only 62% of 30–42-month-old children passing the test. This indicates that there is something inherently difficult for children in self-recognition tasks involving video feedback. The researchers identify a

THE RED SPOT TEST AND SELF-AWARENESS



Lewis and Brooks-Gunn (1978) designed a technique which they believed demonstrated the development of self-awareness, which basically involved placing infants between 9 and 24 months of age in front of a mirror and observing their behaviour.

Stage 1: The baby is simply placed in front of the mirror and their behaviour is noted. This behaviour depends on the age of the child, but generally, very young children between 9 and 12 months will look at their own reflection. They may try and touch it in some way, or pull faces at it.

Stage 2: The researcher pretends to wipe the baby's face with a cloth, but instead puts a small red rouge dot on their nose. On removing the cloth the researchers again observe how the infant behaves in front of the mirror. If the baby tries to touch the spot on their own nose rather than the nose in the mirror then the child is showing self-awareness.

The results indicate that between 9 and 12 months, infants display no real ability to identify the spot on their own nose from the reflection. This shows that they do not understand that the reflection is them. By 21 to 24 months most children touch their own nose once they see the reflected red spot. This suggests that their concept of self-awareness has developed.

number of features of video presentation that may be producing the greater difficulty that children have with tasks in this medium. For example, video images tend to be smaller. Videos and mirror images also differ in symmetry – for example, when the right arm is moved a video image shows the opposite arm moving, while a mirror shows the corresponding arm.

Suddendorf et al (2006) went on to test 24-month-old, 30-month-old and 36-month-old children using a traditional mirror test and using a live video feed of the child's face which mimicked a mirror image (i.e. the image was equal-size and of the correct orientation). In order to control for any effects of TV familiarity (children by this age will have interacted with TVs and have expectations of such an experience – e.g. TV does not provide immediate here-and-now feedback), video was back-projected onto a screen. They found that the youngest children had more difficulty completing the video task. Older children, however, managed the task well every time. It is possible that this difference was due to the fact that, unlike a mirror task, eye contact is not possible to the same degree and quality in a video task. To investigate the possibility that eye contact in a mirror image is the crucial factor underlying self-recognition, they

repeated the study but this time with a red mark on the leg rather than the nose. Images and reflections of the children's legs were presented to them and the researchers found that again the children found the video version harder than the mirror version. Whatever was causing the poorer performance was something much more subtle than video image size and symmetry. These findings also contradict the claims of other researchers who suggest that children are able to recognise themselves in mirrors and video feedback equally by 24 months of age (e.g. Miyazaki and Hiraki, 2006).

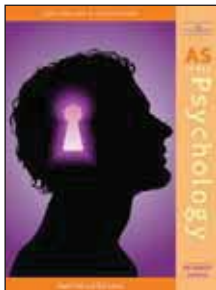
Suddendorf et al suggest that their findings may be further examples of a 'video deficit'. A growing body of evidence suggests that toddlers perform more poorly on a range of tasks when material is presented via video. This phenomenon has yet to be fully explained, though it has been suggested it is due to younger children being more sensitive to the subtle social cues missing in video. As a child grows older these cues become less important and 'video deficit' disappears. Findings of research by Demir and Skouteris (2008) raise the possibility that Miyazaki and Hiraki may be right in their assertion. They gave self-recognition tests to children aged 24 to 30 months and found that, as with Suddendorf et al, whilst the children

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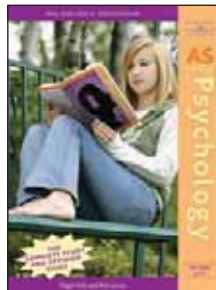
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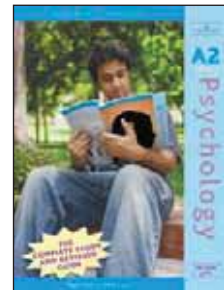
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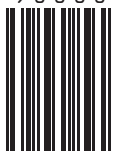
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