

Application of psychology to everyday life.

This refers to the extent to which we can explain **everyday behaviours** using the results of the Core Studies. What practical applications might each study have?

For each of the following studies try to identify one practical application:

- ◆ Loftus and Palmer (eyewitnesses)
- ◆ Baron-Cohen, Leslie and Frith (autism)
- ◆ Hodges and Tizard (social relationships)
- ◆ Bandura, Ross and Ross (imitation of aggression)
- ◆ Raine, Buchsbaum and LaCasse (murderers' brains)
- ◆ Rosenhan (sane in insane places)

When psychologists try to make their research apply to real life they may experience several problems. This issue is a crucial one and many of the points listed below will also apply to other themes:

- ◆ Laboratory studies tend to lack ecological validity as they are often conducted in artificial surroundings (not the participants' natural environment)
- ◆ Participants in laboratory studies generally know that they are taking part in psychological research and this will affect their behaviour (demand characteristics)
- ◆ There may be experimenter bias
- ◆ Laboratory research is often reductionist (reducing the behaviour being studied to a single variable) and in real life there are complex interactions between variables
- ◆ Field studies tend to have higher ecological validity although they are very difficult to replicate and it is harder to control variables. This makes it difficult to draw clear conclusions.
- ◆ Observational research is usually high in ecological validity (unless you are observing in artificial or controlled conditions) but because you do not control variables in naturalistic observation it is almost impossible to draw 'cause and effect' conclusions.
- ◆ Questioning people or using psychometric tests have problems of social desirability bias - people may not tell the truth or may respond in the way that they think they should. This can make research very difficult to apply to real life.
- ◆ The samples being studied can affect the application to real life. Unrepresentative samples would mean that it would be difficult to generalise from the results.
- ◆ Case studies cannot usually be generalised beyond the participant being studied.
- ◆ Research needs to be interpreted in terms of the context (social, political, cultural, historical) in which was conducted.
- ◆ Research conducted 30 or 40 years ago may no longer be applicable to life today.
- ◆ Research conducted in one social or cultural context should only be applied to that context and not to everyone.
- ◆ Finally, any weaknesses in the research methodology can also affect the application of that research to real life.

Determinism.

This is the argument that our behaviour is **determined** by factors outside of our control. Behaviour may be determined by **biological factors** such as genes or hormones or by **situational factors** such as the reinforcements that we receive from others. The opposite argument is the **free will** argument which states that individuals are free to choose how to behave. Most psychological research is deterministic as it is trying to identify the factors or variables that determine behaviour.

For each of the following studies, explain which factors are being suggested as the determinants of behaviour:

- ◆ Deregowski (perception)
- ◆ Bandura, Ross and Ross (imitation of aggression)
- ◆ Schachter and Singer (emotions)
- ◆ Raine, Buchsbaum and LaCasse (murderers' brains)
- ◆ Milgram (obedience)
- ◆ Gould (intelligence testing)

When psychologists conduct research, they are almost always attempting to identify the factors that determine behaviour but there are problems associated with this. These problems include:

- ◆ It is difficult to isolate one variable to study. In highly controlled laboratory research, it may appear as if only one independent variable is being manipulated and everything else is being kept constant but you also need to consider the knowledge and experience that the participants bring to the experimental situation (individual differences) and the many variables that may not have been controlled.
- ◆ The determinants of behaviour may be different in situations where the participants know that they are being studied i.e. they may be responding to cues which do not exist in the 'real world'.
- ◆ Behaviour is unlikely to be determined by just one factor anyway.
- ◆ There may be ethical issues raised by attempts to manipulate some variables.

Design a study to investigate what determines whether or not someone will be aggressive. What problems might you have in conducting such a study?
What problems might you have in interpreting the results of such a study?
Would your study allow you to draw a conclusion about the determinants of aggressive behaviour?

Ecological Validity

If a piece of research is high in ecological validity it is easy to relate to real life. For example, an experiment conducted in very **realistic conditions** would be said to be high in ecological validity and an experiment conducted in very artificial conditions would be said to be low in ecological validity

Rate the following studies for their ecological validity using the following scale
1= very low ecological validity (not like real life at all)
10= very high ecological validity (very like real life)

- ◆ Loftus and Palmer (eyewitnesses)
- ◆ Haney, Banks and Zimbardo (prison simulation)
- ◆ Milgram (obedience)
- ◆ Piliavin, Rodin and Piliavin (subway samaritans)
- ◆ Tajfel (minimal groups)
- ◆ Bandura, Ross and Ross (imitation of aggression)
- ◆ Rosenhan (sane in insane places)
- ◆ Samuel and Bryant (conservation)

Problems in attempting to conduct ecologically valid research include:

- ◆ The more control you have over the experimental situation, the less ecologically valid the situation is likely to be.
- ◆ The more ecologically valid the situation is, the less likely you are to have control over the variables and this makes it very difficult to draw conclusions.
- ◆ What do we mean by 'realistic conditions'? One participant may experience an experimental situation as if it were real and yet another participant may not.
- ◆ This issue has obvious overlaps with the issue of 'application to real life'. It could be argued that the more ecological validity a piece of research has, the easier it is to apply to real life. Re-read the list of problems given under 'application to everyday life' and decide which ones could also apply here.

Things to think about!

- ◆ Choose two of the studies listed above and outline how you could make them more ecologically valid.
- ◆ Which two Core Studies do think have the lowest ecological validity and why?
- ◆ Which two Core Studies do you think have the highest ecological validity and why?

Ethics

The British Psychological Society issues **Ethical Guidelines** for those engaged in psychological research. These guidelines are basically a set of rules outlining what is **acceptable** and what is not acceptable in research. For example, participants in psychological research should give their informed consent before the research starts, should not be deceived or distressed in any way and should have the right to withdraw from the research made clear to them. The Ethical Guidelines are outlined in more detail on page ?

Rate the following studies on their adherence to Ethical Guidelines

1 = not ethical at all

10 = very ethical

- ◆ Gardner and Gardner (Project Washoe)
- ◆ Milgram (obedience)
- ◆ Haney, Banks and Zimbardo (prison simulation)
- ◆ Piliavin, Rodin and Piliavin (subway samaritans)
- ◆ Schachter and Singer (emotions)
- ◆ Bandura, Ross and Ross (imitation of aggression)
- ◆ Baron-Cohen, Leslie and Frith (autism)
- ◆ Samuel and Bryant (conservation)
- ◆ Rosenhan (sane in insane places)

Psychologists should always attempt to make their research adhere to the Ethical Guidelines. There are several problems associated with this:

- ◆ It is not always possible to anticipate how people might respond to experimental situations. For example Milgram asked a variety of people to guess what percentage of people would obey in his experiments. Most people thought that significantly less than 1% of people would obey and that most people would simply refuse to take part. If we always conducted research in which we were sure about how people might behave, it could be argued that there would be very little point conducting it!
- ◆ It could be argued that some of the most interesting research (and possibly the most useful) involves looking at anti-social behaviours and negative experiences. Not being allowed to put people into situations in which they might become distressed, for example, would put limits the boundaries of psychological research.
- ◆ It is possible that research that adheres fully to ethical guidelines may (not always) suffer from other problems such as having low ecological validity or high demand characteristics. This might make it difficult to apply to real life or may reduce its usefulness.

Things to think about!

- ◆ Choose two Core Studies which you consider had major ethical problems.
- ◆ What were the research questions in these studies?
- ◆ How could you investigate the same research question without breaking ethical guidelines?
- ◆ How successful do you think your suggested investigations would be?

Psychologists should also consider the **ethical implications** of their research. This means thinking about the use to which the results from the study might be put. This overlaps with the theme of '**social control**' which is considered later in this section. What ethical implications do the following studies raise?

- ◆ Raine, Buchsbaum and LaCasse (murderers' brains)
- ◆ Gould (intelligence testing)
- ◆ Hodges and Tizard (social relationships)

Ethnocentric Bias

This is defined as the tendency to interpret human behaviour from the viewpoint of our **own ethnic, social or other group**. This can lead to serious problems of 'scientific racism'. The term ethnocentrism is also used to refer to the tendency to **favour** our own group over others.

What do the following studies tell us about ethnocentrism?

- ◆ Tajfel (minimal groups)
- ◆ Deregowski (perception)
- ◆ Gould (intelligence testing)
- ◆ Hrabá and Grant (doll choice)

Could there be anything ethnocentric about the following studies? Consider the culture in which the research was conducted. Are the results culture-specific or do they tell us something about 'cultural universals' (i.e. would you expect the same findings in all cultures)?

- ◆ Milgram (obedience)
- ◆ Haney, Banks and Zimbardo (prison simulation)
- ◆ Hodges and Tizard (social relationships)

Psychologists should always avoid ethnocentric bias in their studies although this is not as simple as it might sound. Some of the problems here might include:

- ◆ All research is conducted in a particular social and cultural context. The results should not be interpreted as applying to all people in all cultures.
- ◆ Cross-cultural research is difficult to conduct as researchers bring their own cultural norms and values to the situations that they are studying. It is very difficult for researchers to 'suspend' these and simply record objectively what is going on.
- ◆ It is also very expensive and time consuming for researchers from one culture to conduct research in another culture so it doesn't happen very often. This means that we have 'western psychology' although we may wrongly believe that what we read in psychological textbooks refers to the whole world.

Things to do!

Choose any Core Study and re-read it, thinking about the cultural context in which it was conducted and the cultural background of the researchers that conducted it.

How do you think these factors might have affected the results or conclusions drawn from the studies?

Would it be worth replicating the study in a different cultural context?

What problems might be encountered in doing this?

Individual and Situational Explanations.

This refers to the explanations of behaviour offered by the studies. An **individual** explanation would be '**something about the person**' (they fell over because they are clumsy) and a **situational** explanation would be '**something about the situation**' (they fell over because the floor was slippery). Some research suggests individual explanations of behaviour and some suggests situational explanations.

Which explanation is offered by the following studies?

Milgram (obedience)
Haney, Banks and Zimbardo (prison simulation)
Schachter and Singer (emotions)
Sperry (split brains)
Baron-Cohen, Leslie and Frith (autism)
Raine (murderers' brains)

The problems researchers might face in attempting to decide whether behaviour is situational or individual might include:

- ◆ the fact that many behaviours will be determined by both situational and individual factors.
- ◆ It is not possible to isolate one factor to study. Even in highly controlled experimental research there are numerous individual factors that cannot be controlled for.
- ◆ Some of the research that might answer these questions would be unethical i.e. there are many interesting variables that cannot be experimentally manipulated.
- ◆ People are not always aware of the factors that determine their own behaviour and so even self report research may not give you clear answers.

Nature and Nurture.

This debate is a very important debate in Psychology and concerns the relative influences of inheritance and experience. Nature refers to the inherited or genetic make up of a person and nurture refers to all other influences from the moment of conception. Some of the Core Studies suggest the influence of inheritance and others suggest the influence of experience. As with many of these debates, some research suggests an **interaction between the two**.

Which of the following studies offer a 'nature' explanation of the behaviour they are investigating?

Which of the following studies offer a 'nurture' explanation of the behaviour they are studying?

Are some 'a bit of both'?

Baron-Cohen et al (autism)
Gardner and Gardner (Project Washoe)
Tajfel (minimal groups)
Raine, Buchsbaum and LaCasse (murderers' brains)
Hraba and Grant (doll choice)
Thigpen and Cleckley (multiple personality)

The problems that psychologists have in trying to identify the relative importance and nature and nurture in determining behaviour include:

- ◆ The type of research that might need to be conducted is often impossible for ethical or practical reasons.
- ◆ It is impossible to isolate a human being from all 'nurture' influences and so controlled experiments are difficult to conduct.
- ◆ Environment can affect biology and this can complicate the picture.
- ◆ Demonstrating a relationship such as the one that has been found between IQ scores of parents and their children are difficult to interpret. If the children have been brought up by their biological parents it is impossible to know if the relationship is down to nature or nurture.
- ◆ Much of the research is case study or has very small samples and therefore it is difficult to generalise from this.
- ◆ Sometimes, this kind of research can have ethical implications, especially when it is suggested that variables such as intelligence are innate.

Things to do!

Design a study to test whether aggression is innate or learnt.

What ethical issues would you face in conducting your research?

What problems might you experience in interpreting the results of your research?

Do you think that your research would be useful?

Psychometrics

Psychometric tests measure 'mental' characteristics. These include intelligence and personality and also aptitudes for certain jobs and tendencies towards anti-social behaviours

Explain how psychometric testing was used in the following studies:

Hodges and Tizard (social relationships)
Haney, Banks and Zimbardo (prison simulation)
Gould (intelligence testing)
Thigpen and Cleckley (multiple personality)

Psychometric tests have strengths and weaknesses. These include:

Strengths:

they allow comparisons to be drawn
they may allow predictions to be made about people's future behaviour / performance
they are relatively easy and cheap to conduct
they may be more objective than one person's subjective interpretation of an individual's characteristics
they are useful for a range of professionals, including therapists and employers.

Weaknesses:

they may not always be reliable (not give consistent scores)
they may not always be valid (not measure what they claim to measure)
they may be biased in favour of a particular group
if the conditions under which people are tested vary, the tests are not fair
people may be able to improve by revision or practice (see reliability)
test performance may be affected by motivation
people may be able to manipulate the results, by giving socially desirable answers for example.

When psychologists use psychometric tests in their research, they should be aware of the strengths and weaknesses that are described above. In addition they should consider the following:

- ◆ Results should not be used to label people. This can lead to a 'self fulfilling prophecy'.
- ◆ A poor result on a test, for example an intelligence test may be due to a number of factors totally unrelated to the person's intelligence
- ◆ Abilities may change over time and it may be wrong to assume that results are stable.
- ◆ Results may not predict behaviour because people give different responses on tests than 'in real life' or the test may lack validity.
- ◆ They are measuring only one aspect of a person and there are many other factors that should be taken into account.

Things to do!

Design a test to measure helping behaviour / helpfulness.

What problems do you think your test might have?

How ecologically valid do you think this way of researching helpfulness would be?

Qualitative and Quantitative Measures

Quantitative measures are numbers. Much research records behaviour in quantitative ways, for example by counting the number of aggressive acts, or by asking people to rate their own behaviours or feelings on numerical scales. Qualitative measures do not use numbers and rely more on descriptions and interpretations of behaviour. Some research simply describes the behaviour of some individuals and an alternative to a numerical rating scale would be a more open-ended question where people simply describe how they feel.

Which of the following studies use quantitative measures?

Which of the following studies use qualitative measures?

Which use both?

Loftus and Palmer (eyewitnesses)
Baron-Cohen, Leslie and Frith (autism)
Deregowski (perception)
Gardener and Gardener (Project Washoe)
Bandura, Ross and Ross (imitation of aggression)
Freud (little Hans)
Hodges and Tizard (social relationships)
Schachter and Singer (emotion)
Dement and Kleitman (dreaming)
Rosenhan (sane in insane places)
Gould (intelligence)
Thigpen and Cleckley (multiple personality)

Strengths of quantitative measures are:

easy to collect

easy to analyse (can use statistical tests)

may be reliable measures (more consistency / agreement between observers for example)

Weaknesses of quantitative measures are:

they lack detail

they don't give us the full picture (for example, they might tell us the proportion of people who obeyed but not why they obeyed).

they do not allow people to give detailed responses

may 'force' people into categories (for example by using closed rather than open questions)

Strengths of qualitative measures are:

very rich and detailed data

can help answer questions about why people do things rather than just how many of them do something

Weaknesses of qualitative measures are:

difficult to analyse

more open to interpretation

takes longer to collect

Things to do!

Choose one study that used entirely quantitative measures and suggest what qualitative data might also have been collected.

What effect do you think this would have on the results and conclusions of the study?

Choose one study that used entirely qualitative measures and suggest what quantitative data might also have been collected.

What effect do you think this would have on the results and conclusions of the study?

Reductionism

This is the way in which psychologists often explain complex psychological phenomena by reducing it to a much simpler level, often focussing on a single factor. Most research is reductionist to an extent, as most experimental studies choose to examine the influence of single factors on complex behaviours.

What was the behaviour being studied 'reduced to' in the following studies?

Bandura, Ross and Ross (imitation of aggression)
Loftus and Palmer (eye witness testimony)
Tajfel (minimal groups)
Raine, Buchsbaum and LaCasse (murderers' brains)
Dement and Kleitman (dreaming)

The problems associated with reductionist explanations include:

they make complex behaviours seem very simplistic
some of the 'higher level' explanations (social rather than physiological for example) may be more interesting and more useful.

The strengths of reductionism are:

reductionism makes concepts easier to test
it is scientific and tends to use the scientific method of controlled laboratory experiments which are replicable

Things to do!

Choose one of the studies listed above and suggest how another level of explanation might interpret and explain the same behaviour.
What problems might there be in testing the alternative explanation?
Which level of explanation do you feel is the most useful.

Choose one of the following studies

Bandura, Ross and Ross (imitation of aggression)
Baron-Cohen, Leslie and Frith (autism)

Suggest how the behaviour being investigated in this study might be reduced to a simpler level of explanation.
How could this be tested?
What problems might there be in testing this explanation and/or in interpreting the results of this investigation?

Reinforcement

A reinforcer is something that increases the likelihood of a behaviour occurring again. This may be in the form of a pleasant consequence such as praise or may be the avoidance of unpleasant experiences. This concept comes from learning theories in psychology and many behaviours can be explained as the result of learning.

There are two main approaches to learning theory.

1. Classical conditioning. If you dislike the sound of the dentist's drill, this might be because you have **associated** this sound with the unpleasant experiences of the dentist. The sound and the unpleasant experience have become paired in your mind. This is a classical conditioning explanation of behaviour.
2. Operant conditioning. An operant conditioning explanation uses the concepts of the **consequences of behaviour**. If something we do has a negative consequence (something unpleasant) we will avoid that experience again. So if we eat something and we are sick, we won't want to eat that food again. If we do something and it has a positive consequence (something pleasant) we will want to do that again. Any behaviour which is rewarded will tend to occur again. If an infant makes a noise a bit like 'mama' they are likely to be rewarded for this and this means that they will produce this sound again. Shaping procedures will encourage the infant to make the sound more and more accurately.

How could you use the concept of reinforcement to explain the results of the following studies?

Milgram (obedience)
Gardner and Gardner (Project Washoe)
Freud (little Hans)
Rosenhan (sane in insane places)

Learning theory explanations have strengths and weaknesses. These include:

Strengths of learning theory explanations:

Research tends to be very scientific and controlled, making cause and effect conclusions easy to draw.

There have been many practical applications of learning theories, including treatments for phobias.

Learning theory provides a strong account of the influence of nurture and environment in determining behaviour.

Weaknesses of learning theory explanations:

They tend to be reductionist.

They tend to ignore innate (biological influences).

Cognitive psychology argues that learning theory ignores the role of cognitive processes in learning.

Some of the applications of learning theory have been highly unethical.

Things to do!

Design a technique for treating someone who had a phobia about travelling by train.

How might you use reinforcement to treat them?

How successful do you think that this technique might be?

Reliability

Another word for reliability is **consistency**. If a measure is reliable it will give you consistent results. For example, a reliable psychometric test will give you the same (or similar) results if you test the same person on more than one occasion and a reliable observation schedule will mean that two or more observers will record the same results when observing the same behaviours.

How reliable do you think the following measures are:

The measurement of intelligence in the tests reviewed by Gould

The psychometric measures used to test Eve White and Eve Black in the case study by Thigpen and Cleckley

The measurement of brain activity by PET scans in the study by Raine, Buchsbaum and LaCasse

The observation of imitative aggression in the study by Bandura, Ross and Ross

When you assess the reliability of a measure, you should consider the following:

- ◆ Would you get the same results again with a similar group of participants?
- ◆ Were there any problems or biases in the way that the tests were administered?
- ◆ Were standardised procedures / instructions used?
- ◆ Was there any test of inter-rater reliability (for observational measures)
- ◆ Are there any problems interpreting the results of the test or measure?

Things to do:

Choose one of the measures listed above and suggest how it could be made more reliable.

Explain how you might test the reliability of the following measures:

1. An observation schedule for aggressive behaviour
2. an intelligence test
3. a technique for studying 'theory of mind'

Validity

Does a measure actually measure what it claims to be measuring? Does a test of intelligence really measure intelligence or some other factor?

How valid do you think the following measures are:

The measurement of intelligence in the tests reviewed by Gould

The measurement of discriminatory behaviour in the minimal groups study by Tajfel

The measurement of theory of mind in the study conducted by Baron-Cohen, Leslie and Frith.

The measurements of emotion (self report and observation) in the study by Schachter and Singer

Freud's evidence for the Oedipus Complex

When assessing the validity of a measure, you should consider the following:

- ◆ Does the test appear to be measuring what it claims to be measuring? (face validity)
- ◆ Could the test have been measuring anything else?
- ◆ Could participants have been responding to demand characteristics?
- ◆ How ecologically valid was the research?

Things to do!

Choose one of the measures listed above and suggest how the validity of this measure could be improved.

Explain how the validity of the following measures could be assessed:

1. a test for measuring racial self-identification
2. an intelligence test
3. a test designed to screen for depressive tendencies

Social Control This concept refers to the attempt to use the results of psychological research to influence the behaviour of people. Some of the Core Studies have results which have been or could be applied in this way.

Suggest how the results of the following studies could be used to influence people or to control their behaviour:

Milgram (obedience)
Rosenhan (sane in insane places)
Raine, Buchsbaum and LaCasse (murderers' brains)
Gould (intelligence testing)
Thigpen and Cleckley (multiple personality)

When we talk about control, we could be talking about a whole range of different things, ranging from attempts to get you to buy something by applying psychological theories and concepts such as reinforcement to the design of adverts, through to the control of undesirable behaviours through the application of the eugenicist argument. Some of the issues here include:

What behaviours should be controlled, how, and by whom?
Who should have the power to control our lives?
Is it possible to have this sort of control (this overlaps with the issue of determinism)
What methods should be used to control people's behaviour?
Who 'owns' a piece of research? Once it has been published anyone can use the results for their own ends and these might be very different from the researcher's original intention.
Should research be published if there is a possibility that it could be applied in undesirable ways?

(see section on ethics and ethical implications)

Usefulness of psychological research. This refers to the extent to which psychological research can be used to improve something. This has obvious overlaps with 'applications of psychological research' and it is worth considering the uses to which the findings from each Core Study might be put.

This is the last one! This time rate all 20 Core Studies for their usefulness!

1= totally useless!

10= very useful indeed!

Loftus & Palmer (eye witness testimony)

Deregowski (perception)

Baron-Cohen et al(autism)

Gardner & Gardner (Project Washoe)

Samuel & Bryant (conservation)

Bandura, Ross & Ross (Imitation of aggression)

Hodges & Tizard (social relationships)

Freud (Little Hans)

Schachter & Singer (emotion)

Dement & Kleitman (dreaming)

Sperry (split- brains)

Raine, Buchsbaum & LaCasse (murderers brains)

Milgram (obedience)

Haney, Banks & Zimbardo (prison simulation)

Piliavin & Piliavin (Subway Samaritans)

Tajfel (minimal groups)

Gould (intelligence testing)

Hraba & Grant (doll choice)

Rosenhan (sane in insane places)

Thigpen & Cleckley (multiple personality)

Things to do!

Using all the previous material in this section, make your own list of the problems that psychologists face when trying to conduct useful research. You should be able to list at least six problems!

