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# *A-Level*

# *Psychology*

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## **Y11 Psychology Summer Homework**

**Head of Psychology: Mrs A Valji**

**Your name:** \_\_\_\_\_

# Welcome to A Level Psychology Introduction

## Expectations

- Bring folder and all notes every lesson
- Bring all equipment, such as pens, highlighters, rulers and a calculator
- 100% attendance and punctuality
- 5 hours a week extra study outside of class time for Psychology. Your lessons are merely a support to guide you through Psychology A Level, the hard work has to come outside of class too, to ensure for success.

## What is Psychology?

Psychology is the scientific study of human and animal behaviour. Psychologists are always trying to discover why people do the things they do, whether those things are normal or abnormal. Psychologists are also interested in differences between various groups such as males & females, cultural & subcultural (e.g. Scottish & English) groups, and so on. Sometimes we have to look at animal behaviour in order to get a better understanding of our own behaviour and to answer questions like 'how do we learn?'

From a personal perspective, you should find the fundamental questions of the psychologist interesting:

- Why do I behave like this?
- Why do I feel like this?
- Why do I think like this?

In year 12 you will study a range of topics including social influence, memory, psychopathology, attachment, research methods, biopsychology and approaches. The following activities are designed to get you ready for the Psychology A-Level course. **You'll want to come fully prepared when starting this course so that it gives you the best start to your future!**

## Why this work?

Before starting the course it is really useful to have some broad contextual knowledge of the areas that psychologists consider interesting and worthy of investigating. Do remember that this is a brand new subject so if things seem a bit different and harder to begin with that is normal! You will be taught this information when you do your psychology A levels. This booklet will also help you to understand and develop the skills you will need. To prepare you for your first lesson, please ensure you have a lever arch folder and file dividers ready to organise your notes.

## Where should I complete it?

Please complete any notes **directly into this document** where you can.

## How long will it take?

This set of work should take you around **10-12 hours in total**, please do not feel you need to spend longer than this but if you get interested it is also fine to read more around the topic/unit. **Bring all evidenced work to your first psychology lesson.**

Good luck and get in touch if you need support.

***Mrs Valji***  
***Head of Psychology***

## THE SCIENTIFIC METHOD

*Science is best defined as a careful, disciplined, logical search for knowledge about any and all aspects of the universe, obtained by examination of the best available evidence and always subject to correction and improvement upon discovery of better evidence. What's left is magic. And it doesn't work* -James Randi

Aristotle, the Greek philosopher, stated that men and women have a different number of teeth (but didn't bother to check). He provided long arguments as to why this was the way things ought to be. This method is unreliable: argument alone cannot determine whether a statement is correct; such statements must be *scientifically tested*.

Scientific testing involves systematic objective methods such as careful observation and experimentation. The results of this approach are universal in the sense that they can be reproduced by any sceptic. It is from these ideas that the *scientific method* was developed. Most of science is based on this procedure for studying nature (or human behaviour in the case of psychology).

The scientific method starts with a *theory* – like Aristotle's tooth theory above – and from this some aspect of the theory can be tested. This requires a statement, derived from the theory, which may be proved true or false, for instance '*men have more teeth than women*'. This is a *hypothesis* which can then be tested against available data, for example the average number of teeth that men and women have.

If the researcher finds support for their hypothesis then the theory becomes stronger and another aspect of it may be tested; or the same aspect may be tested under different circumstances. If the hypothesis is not supported by the evidence then the theory must be revised or abandoned altogether; perhaps, men and women have the *same* number of teeth, so the end result is that this new theory replaces the old one.

- 1. In your opinion, do you think psychology is a science – explain your answer based on the article above.**
- 2. Why does science have to objective?**
- 3. Why is it important for scientists to collect data?**
- 4. Why is psychology important in the world we live in today/why is psychology so popular in the world we live in today?**

# THE HAWTHORNE EFFECT

## A FORM OF DEMAND CHARACTERISTICS

The Hawthorne effect is a term referring to the tendency of some people to work harder and perform better when they are participants in an experiment. Individuals may change their behaviour due to the attention they are receiving from researchers rather than because of any manipulation of independent variables.

The effect was first described in the 1950s by researcher Henry A. Landsberger during his analysis of experiments conducted during the 1920s and 1930s at the Hawthorne works electric company. The electric company had commissioned research to determine if there was a relationship between productivity and work environment.

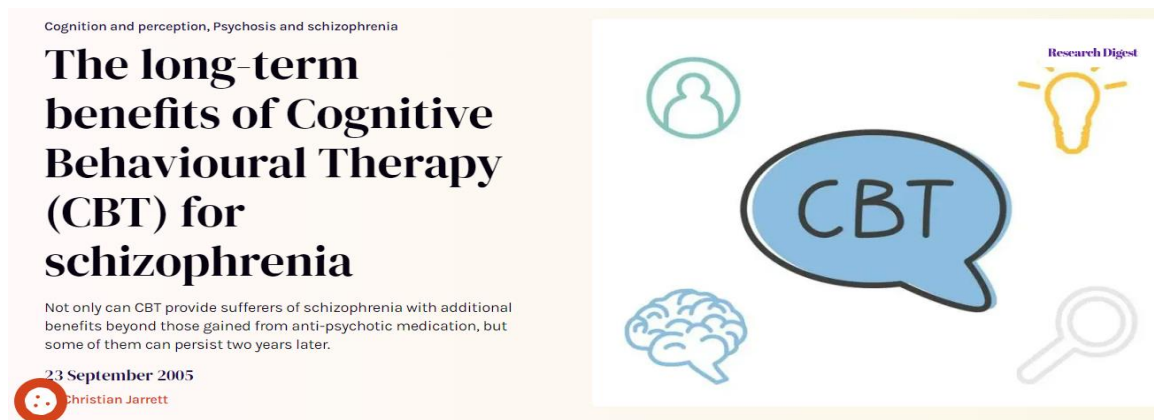
The focus of the original studies was to determine if increasing or decreasing the amount of light that workers received would have an effect on worker productivity. Employee productivity seemed to increase due to the changes, but then decreased after the experiment was over. Researchers suggested that productivity increased due to attention from the research team and not because of changes to the experimental variables. Landsberger defined the Hawthorne effect as a short-term improvement in performance caused by observing workers.

**1. What is demand characteristics/ the Hawthorne effect?**

**2. How can demand characteristics negatively impact scientific research in psychology?**

**3. Summarise the findings of Landsberger's study in <50 words**

Read the article below and answer the questions.



Furthermore, the extra expense of providing cognitive behavioural therapy to these patients is offset by money saved from the patients spending less time in hospital.

**Mike Startup** (University of Newcastle, Australia) and colleagues at the University of Wales, UK, recruited 90 patients with schizophrenia spectrum disorder who had been admitted to hospital suffering from an acute episode of psychosis.

Forty-three of them were given treatment-as-usual, which included anti-psychotic medication and nursing care. Forty-seven of them were additionally given up to 25 90-minute sessions of CBT provided by one of three clinical psychologists.

A previous study found that a year after their hospital admission, those patients given CBT on top of treatment-as-usual had fewer positive symptoms (hallucinations and delusions), fewer negative symptoms (for example apathy and lack of emotion) and better social functioning.

Now Startup's team have managed to test 73 per cent of the original sample two years after their hospital admission, and they've found that the CBT group still enjoy fewer negative symptoms and better social functioning than the treatment-as-usual group. Moreover, they estimated that the extra cost of providing CBT (average of £769 per patient over the two years) was compensated by savings gained by the CBT patients tending to spend less time in hospital (estimated £2704 average saving per patient).

The researchers concluded that:

**“CBT FOR PATIENTS WITH SCHIZOPHRENIA WHO HAVE BEEN ADMITTED TO HOSPITAL AS A RESULT OF AN ACUTE PSYCHOTIC EPISODE IS LIKELY TO BE NO MORE EXPENSIVE THAN ROUTINE CARE, BUT SHOULD SECURE FOR THOSE PATIENTS ADVANTAGES IN TERMS OF NEGATIVE SYMPTOMS AND SOCIAL FUNCTIONING WHICH PERSIST FOR AT LEAST TWO YEARS.”**

## References

Startup, M., Jackson, M.C., Evans, K.E. & Bendix, S. (2005). [North Wales randomised controlled trial of cognitive behaviour therapy for acute schizophrenia spectrum disorders: two-year follow-up and economic evaluation](#). Psychological Medicine, 35, 1307-1316.

- 1. Explain the benefits of CBT for patients with Schizophrenia**
  
  
  
  
  
  
  
  
  
  
- 2. Outline Startup et al's. study.**
  
  
  
  
  
  
  
  
  
  
- 3. How many participants did they recruit?**
  
  
  
  
  
  
  
  
  
  
- 4. What have previous studies found?**
  
  
  
  
  
  
  
  
  
  
- 5. Discuss CBT in treating schizophrenia.**

### *‘Three Identical Strangers’*

**Watch this trailer:** <https://www.youtube.com/watch?v=c-OF0OaK3o0>

**Answer the following questions regarding the documentary:**

1. Define the **nature vs nurture** debate
2. Using the nature vs nurture debate explain how can it be applied to the story of the triplets.
3. Twins are often used in psychological research to determine whether we are born a particular way (due to our genes) or whether our behaviour is caused by our environmental experiences.  
  
Identify any of the triplets' behaviour that was due to their genetics (nature) and any of their behaviour that was due to their environments (nurture).
4. All three were adopted through the Louise Wise Services Adoption Agency. Describe the circumstances of their adoption and what ethical implications there are from this.

## TOP 10 UNETHICAL STUDIES IN PSYCHOLOGY

Read through the article that lists the top 10 unethical studies in psychology. Link: <https://listverse.com/2008/09/07/top-10-unethical-psychological-experiments/>

There should be a couple on there that you recognise – especially if you have independently read up on psychology before.

- 1. Consider why these studies are so unethical. What are the human/animal costs of conducting these studies?**
- 2. Can you imagine versions of these studies that would make them more reasonable/justifiable/legitimate?**
- 3. What changes/modifications would need to be made?**

## Variables

An independent variable (IV) is a variable that is manipulated by a researcher to investigate whether it consequently brings change in another variable. This other variable, which is measured and predicted to be dependent upon the IV, is therefore named the dependent variable (DV).

For example, in an experiment examining the effect of fatigue on short term memory, there are two groups 'fatigued' and 'non-fatigued'. The fatigued group run for 10 minutes without stopping prior to being tested. Both groups are given a list of words to recall immediately after reading the list.

The independent variable in this example would be fatigued/non-fatigued as it has been manipulated by the experimenter.

The dependent variable would be the number of words recalled off the list because that is how the participants' performance is measured.

IVs and DVs only occur in experiments, as a cause and effect is predicted between the two (i.e. that changes in the IV will directly lead to changes in the DV).

IVs and DVs do not feature in correlation studies, as correlation studies look for a relationship between co-variables, cause and effect is therefore not established as the variables are predicted to change in response to each other.

For the following hypotheses, give the independent variable and the dependent variable. Be precise!

1.

### REMEMBER:

*The independent variable is the variable that the experimenter **manipulates**.*

*The dependent variable is the one which the experimenter **measures**.*

*It may also help to remember that the hypothesis states that the dependent variable depends on the value of the independent variable.*

There is a difference in the speed with which people react to visual and auditory stimuli.

2. Drug A affects memory.
3. Bulls charge more often when presented with a red rag than when presented with a blue rag.
4. First children learn to speak earlier than second and subsequent children.
5. Men drive faster than women.

**EXTENSION Which of the hypotheses above are directional and which are non-directional.**

## Computers hinder children's learning

A teacher in a small secondary school noticed that some students used a computer for homework quite a lot. She had a feeling that they tended to get better results too. She wondered whether use of computers did improve school achievement. She chose to interview a small number of students (30) and told them she was interested in what they did after school and whether they would like to join in the study. She tried to ensure that she had a few naughty ones as well as the more co-operative ones so that the sample was fair.

Amongst the questions she asked was one about whether they had a computer and how long they spent on it each day. She also asked whether they used it for homework or not. Finally she looked up last year's exam grades for each pupil and made some statistical comparisons. Much to her surprise she found that the longer that students spent on computers, the worse their grades were! At first she was disappointed – her idea had been proved wrong. Then she started to think about the repercussions. So research into computers and learning was flawed! All these schools that spent thousands of pounds on state-of-the-art computer suites were wasting their money! 'Back to Basics' – her new theory would be very popular in some areas and sure to be published. She could hardly wait to surprise the Head with what she had been doing in her spare time.

**Your task: There are a number of problems with this piece of research – try to identify key problems with this project and suggest how they could be dealt with. An example has been provided for you below. This activity is designed to assess how much you know about scientific investigation.**

| Problem                                     | How it could have been dealt with                                                                                          |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| e.g. Extraneous variables not accounted for | the teacher didn't ask what the computer is being used for! Nor did she get corroborative evidence, e.g. from the parents. |
|                                             |                                                                                                                            |
|                                             |                                                                                                                            |
|                                             |                                                                                                                            |
|                                             |                                                                                                                            |

## Designing Research

Now that you've had a bit of an introduction to what psychology is all about and the all-important research focus of psychology, I want you to design your own research you will conduct on the issue given to you below.

You do not HAVE to conduct the study (although you could if you wanted), but you do have to DESIGN the research.

**Your research question is as follows: “Is there a relationship between how much time someone spends outside and happiness levels?”**

Make sure to include the following information:

- Why is this area of interest to psychologists?
- What use could the findings be?
- How would you go about researching it? Be detailed.
- Who might you choose to study?
- Why would they be a good sample?
- What do you expect to find (or if you actually DO the study, what DID you find)?

Write up your answer below:

This image shows a full page of white paper with horizontal dashed lines, typical of primary-ruled notebook paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## MEASURES OF CENTRAL TENDENCY AND DISPERSION

1. Felix wants to find a clown to entertain some children at their Christmas party. He finds two local clowns and looks at their online ratings, each scored out of 10. The top two clowns are Krusty and Bozo. The table shows their ratings and the spread of the scores.

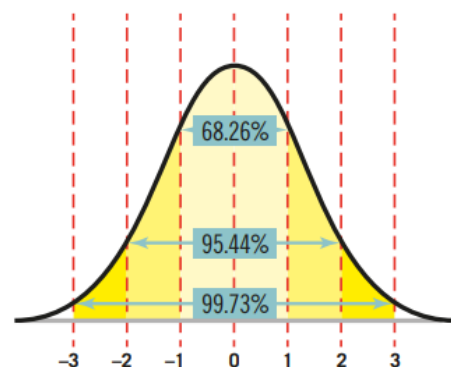
|        | Mean | Range | Standard deviation |
|--------|------|-------|--------------------|
| Krusty | 5.6  | 9     | 5.9                |
| Bozo   | 5.5  | 3     | 2.3                |

**Which clown should Felix choose?**

- a) The mean score for each clown is very similar but the range and standard deviation differ widely. What does this tell us about the ratings for Krusty as compared to the ratings for Bozo? Give as much information as you can. (3 marks)
  - b) If you wanted to be confident that the clown would not hugely disappoint, which one would you choose and why? (2 marks)
  - c) If you had to select one of these clowns for a national competition for the funniest clown, which would it be and why? (2 marks)
2. a. What is the advantage of using the range rather than the standard deviation? (1 mark)  
b. What is the advantage of using standard deviation rather than range? (1 mark)
  3. Matthew carries out a study of conformity using a questionnaire that gives scores between 0 and 20. He finds that the mean score is 7, the mode is 10 and the median is 8. If he draws a distribution curve, will the data have a normal distribution, a positive skew or a negative skew? Give a reason for your answer. (2 marks)
  4. Using the graph on the right, answer the following questions: In the total population of the

UK the arithmetic mean of IQ scores is 100 and the standard deviation is 15.

- a) What approximate percentage of the UK population have IQ scores between 100 and 115? (2 marks)
- b) Between which two scores do approximately 95% of the population of the UK fall? (2 marks)
- c) What approximate percentage of the UK have scores above 115? (2 marks)



5. An arithmetic test is given to 200 children. The test has been standardised and scores are normally distributed. The mean of the test is 50 and the standard deviation is 6.
  - a) Approximately how many children will score between 44 and 56 on this test? (1 mark)
  - b) Approximately how many children will score above 56? (1 mark)
  - c) What is likely to be the median score for the 200 children? (1 mark)

### Harlow: implications for robot nannies

In Japan and South Korea robots are being designed to carry out childcare. Sharkey and Sharkey (2010) have examined the implications of this growing practice in terms of the effects on children's attachments. Currently robot nannies are generally used for very short-term care with parents in easy reach, but Sharkey and Sharkey raise concerns about what might happen to children's development if children are largely raised by inanimate objects rather than human carers. A customer review from the *Hello Kitty Robot* website reads as follows:



'Since we have invited *Hello Kitty* (Kiki, as my son calls her), life has been so much easier for everyone. My daughter is no longer the built-in babysitter for my son. *Hello Kitty* does all the work. I always set Kiki to parent mode, and she does a great job. My two-year-old is already learning words in Japanese, German, and French.'



At the moment we have no research data about the impact on children's development of being brought up by inanimate objects. Perhaps the nearest situation we have to this is Harlow's studies in which monkeys had basic care provided by wire mothers. Harlow found that monkeys raised without attachments to adults of their species became highly dysfunctional adults.

### Questions

What do Harlow's findings suggest about what might happen if children are brought up by robots?

What does this tell us about the practical value of Harlow's research?

### Reference

Sharkey, N.E. and Sharkey, A.J.C. (2010) Robot nannies get a wheel in the door: a response to the commentaries. *Interaction Studies*, 11(2), 302–313.

## Romanian orphans adopted in Canada

Gunnar *et al.* (2001) investigated levels of cortisol in 18 children aged 6–12 years who had been adopted following at least eight months in a Romanian orphanage (late adoption). Cortisol is produced in response to stress so ongoing high levels of cortisol would suggest that the children are still very stressed and anxious and have not moved on from their early stressful experiences. Cortisol levels in late-adopted children were found to be significantly higher than levels in 14 children adopted in their first four months and a control group of 15 Canadian-born children. In the late adoption group cortisol levels correlated positively with the time spent in the Romanian orphanage. No difference in cortisol levels was found between the early adoption group and the control group.



### Questions

1. State the aim of this study.
2. It was not possible to randomly allocate children to early and late adoption conditions. Explain why this might be a limitation of this study.
3. What would you conclude about the effects of early adoption from an institution based on these results?
4. What would you conclude about the effects of late adoption from an institution based on these results?
5. Compare the results of this study to those from Rutter's ERA study.

### Reference

Gunnar, M.R., Morison, S.J., Chisholm, K. and Schuder, M. (2001) Salivary cortisol levels in children adopted from Romanian orphanages. *Development and Psychopathology*, 3, 611-628.

| A-Level topic / unit / paper: <b>Memory AQA 7182/1 Paper 1</b> |                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>TASKS</b>                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Something to read</b>                                       | <b>BPS Digest Article Links:</b> <ol style="list-style-type: none"> <li>1. <a href="https://www.bps.org.uk/research-digest/false-memories-have-upside">https://www.bps.org.uk/research-digest/false-memories-have-upside</a></li> <li>2. <a href="https://www.bps.org.uk/research-digest/what-use-are-flashbulb-memories">https://www.bps.org.uk/research-digest/what-use-are-flashbulb-memories</a></li> </ol> | <ol style="list-style-type: none"> <li>1) Read the two articles from start to finish</li> <li>2) Write a list of 3 interesting things you've discovered about memory from each of the articles</li> <li>3) Summarise the studies mentioned in each of the articles in 3 bullet points</li> </ol>                                                                                              |
| <b>Something to watch</b>                                      | <b>TED talk on 'How reliable is your memory?' by the famous cognitive psychologist Elizabeth Loftus (key psychologist for you're a-Level)</b><br><br><a href="https://www.youtube.com/watch?v=PB2Oegl6wvI">https://www.youtube.com/watch?v=PB2Oegl6wvI</a>                                                                                                                                                      | <ol style="list-style-type: none"> <li>1) Watch the TED talk on false memories. Summarise the <b>findings</b> and <b>conclusion</b> for the following studies in relation to <b>false memories</b>:             <ol style="list-style-type: none"> <li>a) Steve Titus</li> <li>b) The Car Crash Study</li> <li>c) Misinformation</li> <li>d) Ethical Dilemmas</li> </ol> </li> </ol>          |
| <b>Something to listen to</b>                                  | <b>BPS Research Digest by PsychCrunch podcast Episode 29: Why do people share false information — and what can we do about it?:</b><br><a href="https://www.bps.org.uk/research-digest/episode-29-why-do-people-share-false-information-and-what-can-we-do-about-it">https://www.bps.org.uk/research-digest/episode-29-why-do-people-share-false-information-and-what-can-we-do-about-it</a>                    | <ol style="list-style-type: none"> <li>1) Listen to the 20 mins podcast</li> <li>2) Summarise and provide relevant examples of learning from the following areas:             <ol style="list-style-type: none"> <li>a) False Information</li> <li>b) Educational Level</li> <li>c) Who's at risk and how?</li> <li>d) Practical ways to counteract false information?</li> </ol> </li> </ol> |

**Please complete these tasks on the following pages!**

### Something to read: Articles about Memory

- 1) Read the two articles from start to finish
- 2) Write a list of 3 interesting things you've discovered about memory from each of the articles
- 3) Summarise the studies mentioned in each of the articles in 3 bullet points

**Article 1** <https://www.bps.org.uk/research-digest/false-memories-have-upside>

|                                                          |
|----------------------------------------------------------|
| <b>3 Interesting things I've discovered about memory</b> |
|                                                          |
|                                                          |
|                                                          |

Summary of the studies in this article

04 March 2015

By **Christian Jarrett**

### 3 Interesting things I've discovered about memory

## 17 | Page

**Something to watch:** TED talk on ‘How reliable is your memory?’ by cognitive psychologist Elizabeth Loftus <https://www.youtube.com/watch?v=PB2Oegl6wvI>

Watch the TED talk on false memories. Summarise the **findings** and **conclusion** for the following studies in relation to **false memories**:

- a) Steve Titus
- b) The Car Crash Study
- c) Misinformation
- d) Ethical Dilemmas

**Summary of the findings and conclusions of following studies:**

Steve Titus

The Car Crash Study

Misinformation

Ethical Dilemmas

**Something to listen to:** BPS Research Digest by PsychCrunch podcast Episode 29: Why do people share false information — and what can we do about it? <https://www.bps.org.uk/research-digest/episode-29-why-do-people-share-false-information-and-what-can-we-do-about-it>

In this episode, our presenters Ginny Smith and Jon Sutton explore the psychology of misinformation. They hear about the factors that make people more or less likely to share misinformation, discuss strategies to correct false information, and learn how to talk to someone who is promoting conspiracy theories.

Listen to the podcast. Then summarise and provide relevant examples of learning from the following areas:

**Summary and examples of following areas:**

False Information

Educational Level

Who's at risk and how?

Practical ways to counteract false information?

| A-Level topic / unit /paper: Social Influence AQA 7182/1 Paper 1 |                                                                                                                                                                                                                                                                                     | TASKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Something to read                                                | <p>Simply Psychology Article Link:</p> <p><a href="https://www.simplypsychology.org/milgram.html">https://www.simplypsychology.org/milgram.html</a></p>                                                                                                                             | <ol style="list-style-type: none"> <li>1) Write a list of 3 interesting things you've discovered about this article</li> <li>2) Summarise <b>Milgram's</b> study of obedience in 5 bullet points</li> <li>3) Summarise why the following two headings relate to obedience and the real world in 5 bullet points providing historical examples from the article:               <ol style="list-style-type: none"> <li>a) <b>Milgram's agency theory</b></li> <li>b) <b>Ethical issues</b></li> </ol> </li> </ol> <p>You may wish to listen to the audio clips from his 1963 study found towards the end of the article.</p> |
| Something to watch                                               | <p>How Obedient Are We? Social Experiment</p> <p><a href="https://www.youtube.com/watch?v=4jcleVvgchs">https://www.youtube.com/watch?v=4jcleVvgchs</a></p>                                                                                                                          | <ol style="list-style-type: none"> <li>1. Summarise the findings and conclusions of this experiment in less than 200 words</li> <li>2. Describe how you would replicate a study to test obedience in society amongst the general population.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                    |
| Something to listen to                                           | <p>BPS Research Digest by PsychCrunch podcast episode 28: Why songs get stuck in our heads</p> <p><a href="https://www.bps.org.uk/research-digest/episode-28-why-songs-get-stuck-our-heads">https://www.bps.org.uk/research-digest/episode-28-why-songs-get-stuck-our-heads</a></p> | <ul style="list-style-type: none"> <li>• Why does this happen and what are earworms?</li> <li>• What is memory association?</li> <li>• What factors influence earworms?</li> <li>• What are the benefits of earworms?</li> <li>• Summarise 1 study on earworms including the findings</li> <li>• How can you stop earworms?</li> </ul>                                                                                                                                                                                                                                                                                     |

**Please complete these tasks on the following pages!**

### Something to Read

Read the following article from start to finish - Simply Psychology Article

Link: <https://www.simplypsychology.org/milgram.html>



- 1) Write a list of 3 interesting things you've discovered about this article
  
  
  
  
  
  
  
  
  
  
- 2) Summarise **Milgram's** study of obedience in 5 bullet points
  
  
  
  
  
  
  
  
  
  
- 3) Summarise why the following two headings relate to obedience and the real world in 5 bullet points providing historical examples from the article:
  1. **Milgram's agency theory**
  2. **Ethical issues**

You may wish to listen to the audio clips from his 1963 study found towards the end of the article

### Something to watch: How Obedient Are We? Social Experiment

<https://www.youtube.com/watch?v=4jcleVvgchs>



- 1) Summarise the findings and conclusions of this experiment in less than 200 words
- 2) Describe how you would replicate a study to test obedience in society amongst the general population.

**Something to listen to:**

BPS Research Digest by PsychCrunch podcast episode 28: Why songs get stuck in our heads:

<https://www.bps.org.uk/research-digest/episode-28-why-songs-get-stuck-our-heads>

In this episode, our presenter Ginny Smith explores the psychology of earworms. Ginny hears about the possible evolutionary reasons for why we experience the phenomenon, learns what earworms can teach us about memory — and finds out how to get rid of them.

Listen to the podcast. Then summarise and provide relevant examples of learning from the following areas:

**Summary and examples of following areas:**

Why does this happen and what are earworms?

What is memory association?

What factors influence earworms?

What are the benefits of earworms?

Summarise 1 study on earworms including the findings

How can you stop earworms?

# THE FOUNDATION OF A-LEVEL PSYCHOLOGY

## APPROACHES IN PSYCHOLOGY

### Researching Psychological Approaches

We look at six key approaches to understanding human behaviour.

**Psychodynamic, Humanistic, Behaviourism, Social Learning Theory, Cognitive and Biological.**

Research each of the four approaches and create:

- a) A brief summary (1 paragraph) of the key principles for the following approaches: Psychodynamic, Cognitive, Humanistic and the Social Learning theory. The biological approach and behaviourism are below (please read)
- b) A brief outline of at least one key research study associated with the approach (1 paragraph)

### Apply the approaches to a celebrity or character

Choose one celebrity or a fictional character with interesting behaviours.

Under the headings: **Psychodynamic, Humanistic, Behaviourism, Social Learning Theory, Cognitive and Biopsychology**, explain their behaviour.

Create a poster with this information and a brief profile of your person. For example, you could choose character like the Joker from Batman and suggest his behaviour is due to negative thought patterns (cognitive) or repressed trauma from when he was a child (psychodynamic).

We would like you to read and make notes on the following text. This activity is design to enhance your note-taking skills. Use page 19 and 20 to write up your notes.

## The Biological Approach: The Basics

What assumptions do biopsychologists make?

Psychologists from the biological approach assume that behaviour and experiences are caused by activity in the **nervous system** of the body. The things that people think and feel, say and do are caused, one way or another, by electrochemical events occurring within and between the **neurones** that make up their nervous system, particular those in the **brain**. Many biopsychologists also agree that because the development of the brain is determined (at least partly) by the **genes** a person inherits, that behaviour may be influenced by genetic factors. Furthermore, because the genes we inherit are the result of **evolution**, many biopsychologists think that behavioural and psychological characteristics may have evolutionary explanations.

How do biopsychologists explain human behaviour?

Biological psychologists explain behaviour by trying to relate it to the functioning of the brain and nervous system. The brain can be subdivided into many different areas and structures and biopsychological explanations often focus on which **brain areas** are responsible for which types of thinking or behaviour and how they connect with other functions and brain areas. For example, biopsychologists believe that language in humans is governed by two areas of the cerebral cortex, **Broca's area**, which controls the production of speech and **Wernicke's area**, which controls the comprehension of speech. These 'speech centres' are connected to a variety of other brain areas including those involved in thinking and in auditory working memory.

Other biopsychologists focus more on the role of **genetic influences** in particular types of behaviour. For example, it is widely believed by biopsychologists that **schizophrenia**, a psychological disorder involving a range of symptoms including hallucinations, delusions and disorganized thinking and speech, is at least partly the result of inheriting a faulty gene or genes. These genes are thought to influence the development of the nervous system, making it vulnerable to malfunctioning in certain ways that produce the symptoms of the disorder.

Biopsychologists believe that **chemical processes** in the brain can be an important influence on behaviour. The brain relies on a large number of chemicals (called **neurotransmitters** and hormones) to send signals between neurones. Too much or too little of any of these chemicals can result in over- or under-activity in various parts of the brain, which results in changes to thinking, feeling and behaviour. For example, some researchers have shown how behaviour can be affected by altered levels of **sex hormones**. Increased **testosterone** leads to increased risk-taking, whereas increased **oxytocin** leads to increased nurturing and **social responsiveness**.

How do biopsychologists study human behaviour?

The role of biological processes in behaviour can be studied in many different ways, but researchers favour methods that are **quantitative, objective** and well controlled because these are most likely to produce valid **scientific** evidence. Researchers who are interested in genetic influences may use **twin, family history** and **adoption studies**. All of these involve comparing people with different degrees of genetic relatedness to see how similar they are in relation to a particular trait or behaviour. Studies of schizophrenia patients and their families, for example, have shown that the more closely a person is

related to a schizophrenia patient, the greater their own risk of developing the disorder, which supports a role for genes in the disorder.

Various types of **brain scanning** technology including **PET** and **MRI** can be used to study the structure and functioning of the brain. The nervous system can also be studied by manipulating the brain **surgically**. This might be done with animals, as biopsychologists view the human nervous system as having a lot in common with those of other mammals. Alternately, researchers might investigate the effects of brain injury, or brain surgery in people who need to have an operation in order to remove a tumour or an epileptic focus.

One example of such an approach is the studies by **Wilder Penfield** in the 1950s. Penfield electrically stimulated different parts of the **cerebral cortex** in patients he was operating on. He found that, under some circumstances, they would start having unusual experiences or vivid memories of past events. This gave researchers insight into how the brain stores memories.

### Evaluation of the biological approach

The methods used by the biological approach give its studies a high degree of **reliability**, validity and scientific credibility, which is enhanced by its focus on **objectively observable** phenomena rather than subjective experiences. Whilst most people regard this as a strength some would suggest that biopsychologists neglect an important aspect of being a person: their experiences. Another objection to the biological approach would be its use of **animal models** as a basis for understanding human behaviour: given that each animal's nervous system reflects its unique evolutionary niche and history, it might not be possible to draw clear conclusions about human behaviour from studies of other animals.

A further objection to the biological approach could be that it tends to focus on genetic and biological influences on behaviour to the exclusion of social and **cultural influences**. Social psychologists would suggest that it is difficult to explain what people do without reference to their relationships with other people, and many psychologists would suggest that culture, particularly in the forms of social learning and **language**, has a critical impact on thinking and behaviour that the biological approach tends to neglect.

However, it cannot be denied that the biological approach has contributed an enormous amount to our understanding of the fundamental processes of behaviour. It has also fed into many other areas including medicine and surgery. Biological psychologists have provided explanations for a range of **psychological disorders** including depression and schizophrenia, and the **drug therapies** they have helped to develop have allowed many people to live normal lives that previously would not have been able to.

### The biological approach and key debates

Biopsychologists are generally **deterministic** in their outlook (although Daniel Dennett, a philosopher who is heavily influenced by biopsychology, suggests that people have a sort of free will). As might be expected, they tend to favour the **nature** side of the nature-nurture debate. Because they take a very scientific approach to studying people their approach is **nomological** – they are most interested in the features that people have in common and in understanding the fundamental laws of human behaviour. Their scientific approach also inclines them to explain human behaviour in a **reductionist** manner, by breaking complex processes down into more fundamental biological ones.

## The Behaviourist Approach: The Basics

What assumptions do behaviourists make?

Behaviourists regard all behaviour as a **response** to a **stimulus**. They assume that what we do is determined by the **environment** we are in, which provides stimuli to which we respond, and the environments we have been in in the past, which caused us to learn to respond to stimuli in particular ways. Behaviourists are unique amongst psychologists in believing that it is unnecessary to speculate about **internal mental processes** when explaining behaviour: it is enough to know which stimuli elicit which responses. Behaviourists also believe that people are born with only a handful of innate reflexes (stimulus-response units that do not need to be learned) and that all of a person's complex behaviours are the result of **learning** through interaction with the environment. They also assume that the processes of learning are common to all species and so humans learn in the same way as other animals.

How do behaviourists explain human behaviour?

Behaviourists explain behaviour in terms of (1) the stimuli that elicit it and (2) the events that caused the person to learn to respond to the stimulus that way. Behaviourists use two processes to explain how people learn: classical conditioning and operant conditioning. In **classical conditioning**, people learn to **associate** two stimuli when they occur together, such that the response originally elicited by one stimulus is transferred to another. The person learns to produce an existing response to a new stimulus. For example, Watson & Rayner (1920) conditioned a young boy ('**Little Albert**') to respond with anxiety to the stimulus of a white rat. They achieved this by pairing the rat with a loud noise that already made Albert anxious. The anxiety response was transferred to the rat because it was presented together with the noise. The response also **generalized** to other stimuli that resembled the rat, including a rabbit and a fur coat. Over time, conditioned responses like this gradually diminish in a process called **extinction**. In **operant conditioning**, people learn to perform new behaviours through the **consequences** of the things they do. If a behaviour they produce is followed by a **reinforcement** then the likelihood of that behaviour being repeated increases in future (the behaviour is **strengthened**). A consequence can be reinforcing in two ways: either the person gets something good (**positive reinforcement**) or they avoid something bad (**negative reinforcement**). Conversely, if a behaviour is followed by a **punishment** then the likelihood of that behaviour being repeated in future decreases (the behaviour is **weakened**). Whereas classical conditioning only allows the person to produce existing responses to new stimuli, operant conditioning allows them to learn new responses.

How do behaviourists study human behaviour?

Much behaviourist research involves studying learning in animals under laboratory conditions, using experimental methods. **Animals** are used because behaviourists assume they learn in the same way as people but are more convenient to study. **Laboratory** settings are favoured because they allow researchers to **control** very precisely the conditions under which learning occurs (e.g. the nature and availability of reinforcement and punishment). **Experimental** methods are used because they allow inferences to be drawn about **cause and effect** relationships between the variables studied. Behaviourists also study human learning in the laboratory (as in the study of Little Albert) but more often behaviourist research using humans is centred on attempts deliberately to change behaviour in a real-world setting (e.g. the behaviour of children in a school or psychiatric patients in a hospital). As with the laboratory research, an attempt is made to control the conditions that influence learning, some of which are deliberately manipulated in order to assess their effect on a particular set of target behaviours.

An example of this type of research is **Allyon and Azrin's (1968)** study of the effect of a **token economy** on psychiatric patients. They were attempting to overcome the passivity and other behavioural problems often displayed by patients in psychiatric hospitals. They drew up a list of behaviours they wanted to promote (e.g. making beds, eating meals) and arranged for patients to be given a token every time they carried out a target behaviour. The token could be exchanged for positive reinforcers such as cigarettes or chocolate. Allyon and Azrin found that positive reinforcement led to a significant increase in the number of target behaviours the patients produced.

#### Evaluation of the behaviourist approach

The main strengths of the behaviourist approach come from the methods it uses. The insistence on objectivity, control over variables and precise measurement means that the studies carried out by behaviourists tend to be very **reliable**, and the behaviourists can be credited with introducing the **scientific method** into psychology. The drawback of these methods, however, is that behaviour may be studied under very **artificial** conditions than do not reflect real-world contexts very well (although this criticism clearly does not apply to all behaviourist studies). The widespread use of animals is a source of criticism. Whilst conditioning can be observed in most species, there are **genetic influences** on what different species can and cannot learn which reflect their different evolutionary histories (e.g. rats can be conditioned to respond to tastes but not smells). This means that generalizations between species must be made with more caution than many behaviourists apply.

A more fundamental criticism of behaviourism is that it ignores the influences of **mental processes** on learning. In behaviourist theory people can only learn as a result of their own experiences. However, experience and many studies (e.g. by social learning theorists like Bandura) show that people are quite capable of **observing** and learning from the behaviour and experiences of others. Furthermore, studies of a wide range of human behaviours (principally language learning and use) have shown that classical and operant conditioning cannot adequately explain how people are able to **solve problems** without the lengthy period of trial and error that behaviourism would say is necessary. These findings imply that mental processes must play a part in explaining much human behaviour. Nonetheless, behaviourism has supplied **practical solutions** to many human problems. Operant conditioning has proven an effective way of modifying behaviour amongst people who may be difficult to teach in other ways (e.g. autistic children) and many people with problems like phobia have benefitted significantly from **behaviour therapies** including systematic desensitization.

#### The behaviourist approach and key debates

The behaviourist approach is **deterministic**: people's behaviour is assumed to be entirely controlled by their environment and their prior learning, so they do not play any part in choosing their own actions. The approach takes the **nurture** side of the nature-nurture debate, believing that apart from a few innate reflexes and the capacity for learning, all complex behaviour is learned from the environment. Their insistence that all learning can be accounted for in terms of law-governed processes like classical and operant conditioning, reflects a **nomological** approach to studying human behaviour (although behaviourists never ignore individual differences, since every person's history of learning is unique). The behaviourists' view that all behaviour, no matter how complex, can be broken down into the fundamental processes of conditioning makes it a highly **reductionist** approach to psychology.

## Key Assumptions

# The Biological Approach

## Methods of Study

## Key Explanations

**Brain Structures:**

**Genetics:**

**Chemical Processes:**

## Key Terminology

Nervous System:

Brain:

Genes:

Evolution:

Broca's Area:

Wernicke's Area:

Neurotransmitters:

Hormones:

## Evaluation

# The Behaviourist Approach

## Key Assumptions

## Methods of Study

## Key Terminology

Learning:

Classical Conditioning:

Association:

Generalised:

Extinction:

Operant Conditioning:

Positive Reinforcement:

Negative Reinforcement:

## Key Explanations

**Classical Conditioning:**

**Operant Conditioning:**

## Evaluation