



Oxford Cambridge and RSA

Thursday 26 May 2022 – Afternoon

AS Level Psychology

H167/02 Psychological themes through core studies

Time allowed: 1 hour 30 minutes

No extra materials are needed.



Please write clearly in black ink. **Do not write in the barcodes.**

Centre number

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Candidate number

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First name(s) StemUp Model Solution

Last name _____

INSTRUCTIONS

- Use black ink.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions.

INFORMATION

- The total mark for this paper is **75**.
- The marks for each question are shown in brackets [].
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **12** pages.

ADVICE

- Read each question carefully before you start your answer.

SECTION A – Core studies

Answer **all** the questions.

- 1 (a) Describe **one** of the groups that made up the sample used in Baron-Cohen et al.'s (1997) study into the theory of mind.

One group was 16 adults with high-functioning autism or Asperger Syndrome (4 HFA, 12 AS), 13 male and 3 female, all of normal intelligence, recruited through an advert in the National Autistic Society magazine and from clinical sources.

[2]

- (b) Describe the background to Freud's (1909) study of Little Hans.

Freud believed that sexuality is not confined to adults but is present from birth, and that children pass through psychosexual stages (oral, anal, phallic, latency and genital) in which different parts of the body are especially sensitive. In the phallic stage (3 to 5 years) boys experience the Oedipus complex, desiring their mother and fearing their father. Hans's father, a supporter of Freud's ideas, wrote to Freud about his son's phobia of horses, and Freud used the case to support his theory of infantile sexuality, the Oedipus complex, the origin of phobias and the value of psychoanalysis.

[4]

- 2 (a) Give **one** of the materials used in Bocchiaro et al.'s (2012) study into obedience and whistleblowing.

The mailbox in which the research committee forms were posted.

[1]

- (b) Outline the procedure used in Milgram's (1963) study into obedience.

The study took place in a laboratory at Yale University. Through a fixed lottery the participant was always given the role of 'teacher' and saw the 'learner' (a confederate, Mr Wallace) strapped into a chair with electrodes attached; the teacher was given a sample 45-volt shock so the set-up seemed genuine. From an adjacent room the teacher ran a paired-word memory test and had to give a shock of increasing intensity for every wrong answer, using a generator with 30 switches from 15 to 450 volts. The learner's taped responses were predetermined; at 300 volts he pounded on the wall and then fell silent. If the teacher hesitated, the experimenter gave standardised prods such as 'Please continue'. The study ended when the teacher refused or reached 450 volts, and participants were then debriefed.

[5]

- 3 Describe **one** difference between Loftus and Palmer's (1974) study of eye witness memory and Grant et al.'s (1998) study of contextual cues in memory.

One difference is the type of stimulus material used. Loftus and Palmer used visual stimuli that participants watched, whereas Grant et al. used written material that participants read. In Loftus and Palmer's study participants watched short film clips of car accidents and then answered a questionnaire containing a leading question about how fast the cars were going when they 'smashed' or 'hit' each other. In Grant et al.'s study participants read a two-page article on psychoimmunology, either in silence or with background noise through headphones, and were then tested on it with short-answer and multiple-choice questions.

[4]

- 4 Outline **one** way in which Chaney et al.'s (2004) study into Funhalers could be criticised for its lack of validity.

Chaney et al.'s study lacks population validity because the sample of 32 asthmatic children aged 1.5 to 6 years all came from Australia, so the finding that the Funhaler improved adherence may not generalise to older children or to children in other cultures. [2]

- 5 (a) Explain how Casey et al.'s (2011) study into delay of gratification relates to the theme of 'regions of the brain'.

Casey et al.'s study relates to regions of the brain because it assumes different areas of the brain carry out different psychological functions (localisation), so differences in behaviour such as the ability to delay gratification are centred on particular brain regions. In Experiment 2 they used fMRI to scan the brains of high and low delayers while they completed a 'hot' go/no-go task using emotional faces. They found the right inferior frontal gyrus was involved in withholding a response to a no-go face, and that the ventral striatum was recruited significantly more by low delayers than high delayers when resisting happy faces. [4]

- (b) Explain **one** way in which the procedure of Sperry's (1968) study into split brains increased the reliability of the research.

Sperry used a standardised procedure: every patient sat in front of the same screen with one eye covered, gazed at a fixed point, and had images projected to one visual field for one tenth of a second or less using a tachistoscope. Because exactly the same controlled method was used with every participant, the procedure can be repeated to check whether the same results (such as only naming objects shown to the right visual field) are found again, which is what makes the research reliable. [3]

SECTION B – Areas, perspectives and debates

Answer **all** the questions.

- 6 (a) Outline **two** defining principles or concepts of the biological area.

1. Brain structure and neurochemistry influence behaviour: the biological area assumes that everything psychological is first biological, so thoughts, feelings and behaviour are caused by physical processes such as activity in particular regions of the brain and the action of neurotransmitters and hormones.

2. Behaviour is influenced by genes and evolution: each individual inherits their own genetic make-up, and genes have evolved over millions of years to adapt our physiology, and therefore our behaviour, to the environment, which produces universalities in behaviour because people share a common biology. [4]

- (b) Briefly explain how Sperry's (1968) study of split brains can be related to the biological area.

The biological area assumes the mind resides in the brain, so all behaviour has a physical cause. Sperry studied patients whose corpus callosum had been severed, which stopped information passing between the left and right hemispheres. When an image was flashed to the right visual field (left hemisphere) patients could name it in speech, but when it was flashed to the left visual field (right hemisphere) they could not, showing that speech is localised in the left hemisphere and that brain structure determines behaviour. [3]

- (c) Briefly outline **one** way that research in the biological area can be seen as socially sensitive. Support your answer with evidence from an appropriate core study.

Socially sensitive research has findings that could have negative consequences for participants or the group they represent, for example by stigmatising them. Biological research can suggest behaviour is innate and out of people's control: Casey et al. found low delayers showed greater ventral striatum activity when resisting rewards, which could lead to people with this brain response being labelled as biologically prone to poor self-control and treated differently by schools or employers. [3]

- (d) Outline what is meant by the nature versus nurture debate and state how this can be related to the biological area.

The nature versus nurture debate considers whether behaviour is innate, a product of our genetic make-up and biological maturation (nature), or whether it is learned from environmental experiences such as upbringing, culture and reinforcement (nurture). The biological area sits firmly on the nature side of the debate because it believes behaviour is caused by biological factors such as brain structure, genes and hormones that we are born with and have little control over.... [3]

- (e)* Discuss the idea that psychology is a science. Use evidence from core studies placed in the biological area and **one other** area or perspective from psychology to support your answer.

A science tests hypotheses using controlled, objective and replicable methods, usually experiments, to establish cause and effect and produce general laws. The biological area is the strongest case for psychology being a science. The brain is physical and observable, so it can be measured objectively with scanning technology rather than interpretation; Maguire et al. used MRI to measure the hippocampi of taxi drivers and Casey et al. used fMRI to measure activity in the inferior frontal gyrus. Sperry used a highly standardised tachistoscope procedure (images shown for a tenth of a second, one eye covered) that could be replicated, and Blakemore and Cooper manipulated the kittens' environment in a controlled experiment to show that early visual experience causes changes in neuron orientation. These meet the criteria of objectivity, control, reliability and cause and effect. However, even biological psychology is not fully scientific. Sperry's 11 patients and Maguire's 16 drivers were small, unusual samples, so general laws are hard to establish, and Maguire's quasi-experiment cannot prove that driving caused the hippocampal change. Reducing complex behaviour to brain regions may also miss the real causes. The psychodynamic perspective shows the clearest problems. Freud studied Little Hans through a single case study, with information passed on by a father who already supported Freud's ideas, and interpreted his dreams and fantasies as evidence of the Oedipus complex. The unconscious cannot be observed or measured, the interpretations were subjective and the theory cannot be falsified, so the findings are neither replicable nor generalisable. The social area sits between the two. Milgram ran a standardised laboratory procedure with set prods and an objective measure (maximum voltage), so it was replicable, but 65% obedience in an artificial task is open to interpretation and demand characteristics, showing that human behaviour is affected by free will and context in a way that chemicals are not. In conclusion, psychology can be a science when, as in the biological area, it studies observable processes with controlled, objective methods, but the mind, individual uniqueness and free will mean not all areas can achieve this, so psychology is best seen as a developing science rather than a fully established one.

[12]

SECTION C – Practical applications

Answer **all** the questions.

Why are women less interested in politics than men?

Research has repeatedly found that men tend to show more interest in politics than women, but now a new study suggests that the gender gap begins before young people are even old enough to vote. The analysis of data from the British Household Panel Survey revealed that among 15-year-olds, there is a 20-point gap between the percentages of each sex who expressed political engagement, and that grows to 30 points by the age of 25.

Why does the gap exist, whatever the age group?

The most obvious explanation is skewed gender representation. The principle of “you can’t be what you can’t see” is well established in social sciences. Seeing people who look like ourselves in certain roles or careers makes us more likely to picture ourselves in those positions.

Another explanation may be women’s tendency to underestimate their intelligence and abilities. A number of self-report studies have shown that:

- women tend to say that they are less knowledgeable about politics than men
- when voters are quizzed on political issues however, women give almost as many correct responses as men
- when quizzed, women are much more likely to answer “don’t know”.

This suggests that women’s lack of confidence means they are less likely to say they are interested in politics.

A 2017 study at the London School of Economics indicated that there is a significant correlation between gender inequality and women’s interest in politics, with women least likely to be interested in politics in countries that rank low on the European gender equality index. Meanwhile, the highest-ranking countries – Sweden, Finland, Denmark and the Netherlands – had some of the smallest gender gaps in political interest.

Adapted from an online article from ‘The Week’.

- 7 (a) Outline **one** defining principle or concept of the developmental area and briefly explain how it relates to the article.

One principle of the developmental area is that early experiences affect later development. This relates to the article because the gender gap in political interest is already 20 points among 15-year-olds, before young people are even old enough to vote, suggesting early experiences such as not seeing women in political roles shape later behaviour, with the gap growing to 30 points by age 25. [3]

- (b) One psychological issue raised in this article is the validity of research using self-report.

With reference to the article, explain **one** strength and **one** weakness of using self-report for this type of research.

One strength of self-report is that it gives researchers direct access to people's thoughts and feelings. Interest in politics is an internal attitude that cannot be observed, so asking people to rate their own engagement is the only way to measure it, and data can be gathered from a very large number of people. This is how the British Household Panel Survey could compare the percentages of each sex expressing political engagement at 15 and 25.

One weakness is that self-report is open to social desirability bias. Participants may give the answers they think are socially acceptable rather than the truth, which lowers the validity of the data. In the article, women may feel it is less acceptable for them to express an interest in politics, so they say they are less knowledgeable and answer 'don't know' when quizzed, even though they actually give almost as many correct responses as men. [6]

- (c) Using your knowledge of psychology, suggest **two** ways in which females could be encouraged to become more involved in politics.

1. Use observational learning and modelling, as shown by Bandura et al. Girls learn by watching and imitating role models, especially same-sex models they identify with, which fits the article's point that 'you can't be what you can't see'. Schools and the media should make female politicians highly visible: female MPs and councillors could visit schools to run assemblies and mock elections, political campaigns could be fronted by popular women, and news programmes could give equal airtime to women. Seeing women rewarded with status and respect for political roles (vicarious reinforcement) would make girls more likely to picture themselves in those positions and copy the behaviour.

2. Use positive reinforcement, as in Chaney et al.'s Funhaler study where rewarding the behaviour increased it. Schools could reward girls for getting involved in politics, for example with certificates, house points or prizes for joining the school council, debating club or youth parliament, and praise their contributions in class discussions. Because the behaviour is immediately followed by a pleasant consequence it is more likely to be repeated, so girls would build confidence in their political knowledge and continue to take part as adults.

[8]

- (d)* Evaluate the suggestions you have made in part (c) with reference to issues and debates you have studied in psychology.

Both suggestions assume political interest is a product of nurture, learned through observing models or being reinforced. If the gap is partly due to nature, for example if males are naturally more drawn to competitive activities, then role models and rewards would only reduce rather than remove the gap, so the suggestions may be less useful than they appear.

The suggestions are also environmentally deterministic. They assume girls' attitudes can be changed by outside factors such as a visiting MP or a certificate, yet people have free will; a girl who is simply not interested may watch a female role model and still choose not to engage, and rewards for joining the school council may only work while the reward is given, so the behaviour may not continue into adulthood.

The reinforcement suggestion is reductionist, as it reduces a complex social attitude to simple rewards and ignores the wider causes the article mentions, such as gender inequality in a country. A more holistic approach combining modelling, rewards and changes to social norms would probably be needed.

Finally, there are issues of social sensitivity and ethnocentrism. Targeting girls with special rewards could stereotype them as needing extra help and be seen as unfair to boys, and both strategies are based on Western democracies, so they may not work in countries low on the gender equality index where women are actively excluded from politics.

[8]

END OF QUESTION PAPER

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