



Oxford Cambridge and RSA

Wednesday 8 June 2022 – Morning

A Level Psychology

H567/02 Psychological themes through core studies

Time allowed: 2 hours



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 **105**.
- 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 **16** pages.

ADVICE

- Read each question carefully before you start your answer.

SECTION A – Core studies

Answer **all** the questions.

- 1 Outline the procedure used in Experiment 1 of Moray's (1959) study into auditory attention.

In Experiment 1 Moray used a repeated measures design. Each participant wore headphones and shadowed (repeated aloud) a prose passage played to one ear. At the same time a short list of simple words was played to the other ear, the rejected ear; it was faded in after shadowing had begun, was equal in intensity to the prose, and was repeated 35 times before being faded out as the prose ended. Participants were then asked to report everything they could recall from the rejected message, and about 30 seconds after shadowing ended they completed a recognition test containing words from the list, from the passage and new control words that had appeared in neither. [4]

- 2 (a) Briefly describe the sample used in Levine's (2001) study into helping behaviour.

Levine's sample consisted of members of the public aged over 16, both men and women, in large cities in 23 different countries across several continents (for example Rio de Janeiro, New York and Kuala Lumpur). People who were physically disabled, very old, children or carrying heavy packages were excluded as they could not be expected to help. [2]

- (b) Outline **one** way in which Levine's study may show sampling bias.

The sample was culturally biased because only one large city was used to represent each country, so people living in rural areas and small towns were not studied. This means the helping rates found may not represent the whole culture of countries like Brazil or India, lowering population validity. [2]

- 3 (a) Explain how Chaney et al.'s (2004) study into Funhalers relates to the theme of 'external influences on children's behaviour'.

The study shows that children's behaviour can be shaped by influences outside themselves, in this case positive reinforcement. The Funhaler had a spinning disc and whistle that acted as an incentive toy, rewarding the child each time they breathed in correctly. This external reward changed the children's behaviour: adherence to their asthma medication rose from 10% of parents reporting their child used the inhaler the previous day to 73%, so the device, not the children themselves, caused the change. [3]

- (b) Outline **one** strength and **one** weakness of the method used in Lee et al.'s (1997) study into lying and truth telling.

Lee et al. used a laboratory experiment with a quasi element (Chinese versus Canadian children of different ages). One strength is the high level of control, as all 120 children heard the same four standardised stories and rated the character on the same seven point chart with exactly the same wording, so extraneous variables such as how the story was told did not affect the ratings and cause and effect between culture and moral evaluation could be established. One weakness is low construct validity, because a complex concept like children's moral judgement of lying was reduced to a simple rating scale of smiley and sad faces, so the measure may not have fully captured what the children really thought about truth telling and lying. [4]

- (c) Explain **one** issue with validity that arose in Bandura et al.'s (1961) study into aggressive role models.

Bandura's study had a problem with population validity, which concerns how far the sample represents the wider population. All 72 children came from one nursery, the Stanford University Nursery School, and were aged only 37 to 69 months, so they were a narrow, largely middle class American sample. This means it is difficult to generalise the finding that children imitate an aggressive adult model to older children or to children from other cultures and backgrounds. [3]

- 4 (a) Outline **one** finding from Freud's (1909) study of Little Hans.

Freud found that Hans's phobia of horses, especially white horses with black around the mouth and blinkers, was really an unconscious fear of his father, whose dark moustache and glasses the horses resembled. Hans feared his father because he was in the Oedipus complex, desiring his mother and seeing his father as a rival. [2]

- (b) Explain how Baron-Cohen et al.'s (1997) study into the theory of mind relates to the area of individual differences.

The individual differences area studies how people differ from one another, often in terms of atypical behaviour, and tries to measure those differences. Baron-Cohen et al. compared adults with high functioning autism or Asperger syndrome with normal adults and adults with Tourette syndrome on theory of mind, the ability to infer another person's mental state. They developed a new measure, the Eyes Task, in which participants chose which of two words described the mental state in photographs of eyes. The autistic group scored significantly lower (mean 16.3 out of 25) than the normal (20.3) and Tourette (20.4) groups, so the study identified and measured how individuals with autism differ. [4]

- (c) Compare Gould's (1982) study with Hancock et al.'s (2011) study into measuring differences by suggesting **either** one difference **or** one similarity between them.

One difference is the type of data used. Hancock et al. collected primary data for themselves, whereas Gould reviewed secondary data gathered by somebody else. Hancock et al. interviewed 14 psychopathic and 38 non psychopathic murderers in Canadian prisons about their crimes and analysed the transcripts using Wmatrix and the DAL, so the data were generated for their own study. Gould, in contrast, did not test anyone himself but reviewed and criticised Yerkes' intelligence testing of 1.75 million army recruits in 1917, using the results and methods Yerkes had already published to show how the Army Alpha, Beta and individual tests were culturally biased and badly administered. [4]

- 5 (a) Outline **one** ethical issue raised by Sperry's (1968) study into regions of the brain.

One ethical issue is protection from harm or distress. Sperry's split brain patients had already suffered epilepsy and had their corpus callosum severed, and being tested on tasks they could not do, such as naming objects felt with the left hand, may have made them feel inadequate or distressed. [2]

- (b) Discuss to what extent Maguire et al.'s (2000) contemporary study in biological psychology changes our understanding of brain plasticity when compared to Blakemore and Cooper's study from 1970.

Both studies show that the brain is plastic and changes with environmental experience, so Maguire et al. confirm rather than overturn Blakemore and Cooper. However, Maguire et al. change our understanding by studying humans, 16 licensed London taxi drivers, instead of kittens, so plasticity can be applied directly to the population we are interested in rather than generalised from cats. They also used a real life experience, years of navigating London's streets, rather than the contrived striped cylinders the kittens were raised in, so the findings have far greater ecological validity and show plasticity in normal adult life. Finally, their MRI scans gave direct evidence that the posterior hippocampus was larger in taxi drivers and correlated with time spent driving, whereas Blakemore and Cooper could only infer plasticity from behaviour. To a large extent, then, our understanding is extended and made more secure, though the basic principle remains the same. [5]

Turn over for the next question

SECTION B – Areas, perspectives and debates

Answer **all** the questions.

- 6 (a) Explain how **one** core study from the social area can be related to the concept of holism.

Holism means explaining behaviour by looking at the whole person and the interaction of many factors rather than isolating one cause. Bocchiaro et al. can be related to holism because they investigated a range of situational and dispositional factors that might influence whistleblowing. The 149 students were asked by an authority figure to write a statement supporting an unethical sensory deprivation study, and could obey, disobey or blow the whistle by posting a form to the ethics committee. As well as this situational pressure, the researchers measured personality with the HEXACO PI R and a Social Value Orientation scale, and recorded religious faith. Because they considered the person's disposition and the situation together, rather than reducing behaviour to a single variable, the study is holistic, even though personality did not predict who became one of the 9.4% of whistleblowers. [5]

- (b) Explain how **one** core study from the social area can be related to the concept of reductionism.

Reductionism means breaking behaviour down to one simple factor or level of explanation. Milgram's study can be related to reductionism because it reduced the complex behaviour of obedience to a single situational cause, the presence of a legitimate authority figure. The 40 men were ordered by an experimenter in a grey lab coat to give shocks rising in 15 volt steps to 450 volts to a learner in another room, with prods such as 'the experiment requires that you continue'. Milgram concluded that the 65% who went to 450 volts entered an agentic state and handed responsibility to the authority. This is reductionist because it ignores other causes such as the participants' personality, upbringing or culture, and reduces a moral decision to a response to one variable, which makes the study simple to test but may oversimplify real life obedience. [5]

- (c) Describe **one** application of the social area.

One application of the social area is reducing blind obedience, for example in programmes that protect children and young people from grooming and radicalisation. Milgram showed that people will obey a legitimate looking authority figure even when it goes against their conscience, and that obedience is stronger when the authority is close and takes responsibility. Therefore schools teach young people to recognise when someone is exploiting authority or prestige, to question instructions that feel wrong and to remember they stay responsible for their actions, so they do not slip into an agentic state. Bocchiaro et al.'s finding that few people blow the whistle also means the programmes stress that reporting is safe and encouraged. [4]

- (d) Outline the procedure used in **one** core study and briefly explain how this relates to the social area.

Milgram recruited 40 men aged 20 to 50 from the New Haven area through a newspaper advert and paid them \$4.50. At Yale each participant met the experimenter, in a grey lab coat, and Mr Wallace, a confederate who was always the 'learner' after a rigged draw. The learner was strapped into a chair in the next room and the participant, as 'teacher', had a sample 45 volt shock before reading word pairs over an intercom. Every wrong answer required a shock on a generator with 30 switches from 15 to 450 volts, rising 15 volts each time. The learner's answers were scripted and at 300 volts he pounded the wall and then fell silent. If the teacher hesitated the experimenter gave four standardised prods, from 'please continue' to 'you have no other choice, you must go on'. The study ended at 450 volts or when the participant refused, and everyone was debriefed. This relates to the social area because it shows how behaviour is influenced by the presence of other people, here an authority figure, whose situational pressure led people to act against their conscience. [6]

- (e)* Compare the social area with the developmental area in relation to their strengths and weaknesses.

[15]

Both the social area and the developmental area try to explain behaviour, but the social area focuses on how the real or implied presence of other people affects us, while the developmental area looks at how behaviour changes across the lifespan. Each has strengths and weaknesses that can be compared.

One strength of the social area is that it can explain extreme behaviours in a scientific way. Milgram used a controlled procedure with a standardised shock generator and scripted prods to show that 65% of ordinary men would obey an authority to 450 volts, helping to explain atrocities such as the Holocaust. Similarly, the developmental area is scientific: Bandura used a matched pairs design and controlled observation to show children imitate aggressive models. Both areas are therefore strong because their experiments are replicable and establish cause and effect. However, a difference is that the social area tends to study adults in staged situations, whereas the developmental area studies change over time, for example Kohlberg following boys for 12 years, which gives it the extra strength of showing how behaviour develops rather than a snapshot.

Both areas are very useful. The social area explains helping, with Piliavin showing people help a cane victim more than a drunk one, and this can be applied to community programmes and reducing blind obedience. The developmental area shows how to support children, for instance Chaney's Funhaler improved medical adherence, and considers both nature and nurture, which the social area largely ignores because it concentrates on nurture through situational factors. A weakness shared by both areas is ethics. Social research often involves deception and distress: Milgram's participants sweated and trembled and could not give informed consent, and Piliavin's passengers never knew they were being studied. Developmental research is also ethically difficult because participants are often children, who cannot fully consent; Bandura deliberately frustrated children and may have taught them aggression. The difference is that in the social area the harm is mainly short term deception of adults, whereas in the developmental area children may be more vulnerable to long term effects.

Both areas can be criticised for being ethnocentric and deterministic. Milgram and Bocchiaro used only American or Dutch samples, and Bandura and Freud studied children from one culture. Both suggest behaviour is determined, either by the situation or by early experiences, which ignores free will and individual differences, although Levine's study of 23 cities is a social study that did address culture. A weakness more specific to the social area is lack of mundane realism, since shocking a stranger at Yale is not an everyday task, whereas developmental studies like Chaney used real tasks at home.

In conclusion, both areas are scientific, useful and share ethical and ethnocentric problems, but the social area is stronger at explaining extreme behaviour in the moment while the developmental area is stronger at showing how nature and nurture shape us over time.

Turn over for the next question

SECTION C – Practical applications

Answer **all** the questions.

What would you be without your memories? How important is your ability to remember the past and draw on it to inform your next move? I'll answer for you: It's right up there with breathing and eating. One would think that understanding how memory works would be a high priority for all people in all societies.

The reality, however, is that most people, regardless of intelligence or education, know little about memory. The first and most important lesson is that human memory is not reliable. Not even close. Do not forget this. The brain is not your personal record-keeper.

Our memory is constructive because the recollections of our past experiences are cobbled together from many bits of information. Think of it as though the brain tells you a story about a past event in your life.

A revealing study showed how far removed the public's beliefs about memory are from reality. Researchers asked people simple questions about memory and then compared their answers with those of experts in memory research. Here are some key findings:

When asked how far they agreed that human memory "works like a video camera, accurately recording the events we see and hear so that we can review and inspect them later", 63% of the public either strongly agreed or mostly agreed compared with 0% of the experts.

When asked how far they agreed that "the testimony of one confident witness should be enough evidence to convict a defendant of a crime", 37% of the public strongly agreed or mostly agreed compared with 0% of the experts. In fact, 93.8% of experts strongly disagreed with this.

Adapted from an online article on Psychology Today

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

One principle of the cognitive area is that psychologists study internal mental processes such as perception, attention and memory, which cannot be seen directly but can be inferred scientifically from behaviour. Memory is one of these processes because it happens inside the mind. This relates to the article because it is about how memory really works, explaining that memory is constructive and built from many bits of information rather than an accurate recording like a video camera. Researchers who have studied this internal process scientifically reach very different conclusions from the public, as 0% of experts agreed memory works like a video camera compared with 63% of the public. [4]

- (b) Describe the Loftus et al. (1974) study into memory and briefly explain how it relates to this article.

Loftus and Palmer aimed to show that leading questions can distort eyewitness memory of an event. In Experiment 1, 45 students watched seven short film clips of car accidents and answered a questionnaire. The critical question asked 'About how fast were the cars going when they hit each other?' and, in independent groups of nine, 'hit' was replaced with smashed, collided, bumped or contacted. Mean speed estimates rose from 31.8 mph for 'contacted' to 40.8 mph for 'smashed'. In Experiment 2, 150 students saw a one minute film of a crash; 50 were asked the 'smashed' question, 50 the 'hit' question and 50 were not asked about speed. A week later all were asked 'Did you see any broken glass?' although there was none. Sixteen of the 'smashed' group said yes compared with 7 of the 'hit' group and 6 controls. They concluded memory is reconstructive: information in the question after the event is integrated with the original memory and changes it. This relates to the article because it shows human memory is not reliable or like a video camera but constructive, cobbled together from the event and later information, which is why the experts disagreed that one confident witness should be enough to convict. [7]

- (c) (i) With reference to the article, explain **one** strength of using the self-report method in research.

One strength of self report is that it allows researchers to access people's thoughts, beliefs and opinions directly. These are internal and cannot be observed, so asking people is the only way to find out what they actually believe rather than inferring it from their behaviour. In the article the researchers wanted to know how far the public and experts agreed that memory works like a video camera, and asking them standardised questions produced clear percentages (63% versus 0%) that could be directly compared. [3]

- (ii) With reference to the article, explain **one** weakness of using the self-report method in research.

One weakness of self report is social desirability bias, where participants give the answer that makes them look good rather than their true view. In the article, the experts in memory research may have known that agreeing that memory works like a video camera would make them look unscientific, so they may have answered as experts are expected to, giving the 0% agreement. This means the gap between experts and the public may be exaggerated, lowering the validity of the comparison. [3]

- (d) Using your knowledge of psychology, suggest ways that teachers could be taught to improve their understanding of how their students' memory works.

One way is direct instruction from psychologists. A school could run an INSET training day where an educational psychologist teaches staff the key theories and research on memory, such as the multi store model and Loftus and Palmer's work on reconstructive memory and leading questions. Teachers would learn that students do not store lessons like a video camera, so they should avoid leading questions when checking understanding and revisit material regularly because memories are rebuilt each time they are retrieved. The psychologist would then show how to apply this, for example getting students to revise in the room where they will be tested, using Grant et al.'s finding that matching the study and test environment improves recall.

A second way is for teachers to be participants in memory experiments themselves. During the training the psychologist could replicate Loftus and Palmer by showing teachers a film and asking 'smashed' or 'hit' questions, then revealing how the wording changed their speed estimates, or run a Moray style shadowing task to show how little of an unattended message is remembered. Experiencing the unreliability of their own memory first hand makes the lesson vivid.

Finally, teachers could keep a memory diary for a term, recording when they or their students forgot work, then meet in groups led by the psychologist to link these experiences to the research and trial strategies such as spaced retrieval, reviewing which ones improved recall in their classes. [8]

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

One issue is the nature versus nurture debate. My suggestions assume that teachers' understanding of memory is nurtured and can be changed through instruction and experience, which is why teaching about the constructive nature of memory should change their beliefs. However, if some students' memory difficulties have a biological basis, a training day will not help teachers understand every child, so the suggestions may be limited.

The suggestions can also be evaluated on usefulness. Taking part in a Loftus and Palmer style demonstration is cheap, quick and powerful, and the memory diary links theory to teachers' real classrooms, so these should make a genuine difference in any school. On the other hand, a single INSET day may itself be forgotten, ironically because of the unreliability of memory the training describes, so it may need repeating to be useful.

There is a question of validity. Loftus and Palmer studied students in a laboratory watching film clips, which lacks ecological validity, so teachers might ask whether the findings generalise to remembering a chemistry lesson. The diary is more ecologically valid but relies on self report, which, as in the article, may suffer social desirability if teachers do not want to record forgetting.

Reductionism is relevant too: teaching one model of memory or a single experiment reduces a complex, holistic process to a few variables, and students differ individually, so the strategies may not suit every learner. Finally there are socially sensitive concerns, as experienced teachers may feel patronised or labelled as non experts, like the public in the article, so the psychologist must train collaboratively. Overall the suggestions are useful and evidence based, but work best when repeated, applied in context and sensitive to individual differences.

[10]

END OF QUESTION PAPER

[illegible]

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