



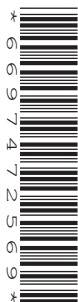
Oxford Cambridge and RSA

AS Level Psychology

H167/02 Psychological themes through core studies

Monday 22 May 2017 – Afternoon

Time allowed: 1 hour 30 minutes



No additional materials required for this Question Paper.



First name	StemUp Model Solution									
Last name										
Centre number						Candidate number				

INSTRUCTIONS

- Use black ink.
- Complete the boxes above with your name, centre number and candidate number.
- Answer **all** the questions.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the barcodes.

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 consists of **12** pages.

SECTION A – Core studies

Answer **all** the questions.

Voltage level	Number of subjects who shocked to that voltage level
15–300	40
450	26

Using the data from Milgram's study of obedience presented above:

- 1 (a) Outline **two** conclusions.

One conclusion is that the majority of ordinary people will obey the orders of an authority figure even when this means giving a potentially lethal electric shock to another person, because 26 out of the 40 participants (65%) continued all the way to the maximum 450 volt level.

A second conclusion is that 300 volts is the point at which some participants begin to be disobedient, because all 40 participants shocked up to 300 volts but 14 of them then refused to go on past this level, showing that resistance to authority only started to appear once the learner protested. [4]

From Bocchiaro et al.'s study into disobedience and whistleblowing:

- (b) Describe **one** way the study is ethical.

The study was ethical because participants had the right to withdraw: they were told they could stop at any time without penalty, both before and after being asked to write the statement, and they were fully debriefed afterwards and told why deception had been used. [2]

- (c) Describe **one** way the study is not ethical.

The study was not ethical because participants were deceived by the cover story about a sensory deprivation study, so they could not give informed consent, and those who obeyed and wrote the unethical statement may have felt distressed about their own behaviour afterwards. [2]

From Grant et al.'s study on context-dependent memory:

- 2 (a) Identify the type of data recorded in this study.

Quantitative (interval) data - scores on the recall tests. [1]

- (b) Suggest **one** strength of the data type recorded in this study.

A strength is that the recall scores are objective and easy to compare and analyse statistically, so Grant et al. could directly compare the matching and mismatching conditions (silent or noisy) to see whether recall was better when the study and test environments were the same. [2]

From Chaney et al.'s Funhaler study:

- 3 Outline **one** reason the Funhaler device made spacers more appealing to children.

The Funhaler was more appealing because it contained incentive toys, a spinner and a whistle, which only worked when the child breathed through the device correctly. This distracted the child from the drug delivery itself and made the boring task of using a spacer interactive and fun. [2]

From Casey et al.'s study on the neural correlates of delay of gratification:

- 4 (a) Describe the sample used in experiment 1.

Experiment 1 used 59 participants (23 males and 36 females) from the original 117 who agreed to take part in the longitudinal study. They were split into 32 high delayers (12 male, 20 female) and 27 low delayers (11 male, 16 female) based on their delay of gratification in childhood. [2]

Casey et al.'s study was a longitudinal study.

- (b) Suggest **one** strength of conducting this study longitudinally.

A strength is that Casey et al. could track how the same people's ability to delay gratification developed over time, testing them as 4 year olds, again in their 20s and then in their 30s, so they could show that low delayers as children still had poorer self-control forty years later. [2]

- 5 (a) Describe how Freud's study of Little Hans links to the individual differences area of psychology.

The individual differences area believes people differ in their behaviour and personal qualities, so no one can be treated as the average person, and it studies these differences, especially abnormal behaviour. Freud documented one boy's unique dreams, fantasies and experiences, such as the giraffe fantasy, to explain why Hans in particular developed a horse phobia. The study therefore links to the area because Freud was explaining why some individuals develop behaviour that is not normal or average. [3]

In Baron-Cohen et al.'s study on autism in adults three groups of participants were selected:

- (b) Describe how **one** of these groups was recruited.

The AS/HFA group (group 1) was recruited from a variety of clinical sources, as well as through an advertisement placed in the National Autistic Society magazine, so they were a volunteer sample of adults with a diagnosis of autism or Asperger Syndrome. [2]

- (c) To what extent can this group be considered a biased sample of participants?

To some extent the AS/HFA group is biased because it was a self-selected volunteer sample of only 16 people, 13 male and 3 female, so it is skewed towards males and people confident enough to answer an advert, meaning their Eyes Task scores may not represent all autistic adults. However, far more males than females are diagnosed with AS/HFA, so the gender imbalance reflects the population and the results about a theory of mind deficit are not necessarily biased. [3]

SECTION B – Areas, perspectives and debates

Answer **all** the questions.

- 6 (a) Outline **one** principle of the individual differences area in psychology.

One principle of the individual differences area is that individuals differ in their behaviour and personal qualities, so to understand human behaviour we need to study how people differ from each other, not just how they are the same, as no one can be considered the average person. [2]

- (b) Outline **one** way the individual differences area has been applied to explaining human behaviour. Justify your response with evidence from a relevant core study.

The individual differences area has been applied to explaining human behaviour by studying how certain people or groups differ from the norm, particularly in personality, intelligence and abnormality. By measuring these differences the area can establish what counts as abnormal or dysfunctional and explain the abilities or limitations of a particular group. For example, Baron-Cohen et al. assumed that adults with autism or Asperger Syndrome lack a theory of mind, so they compared AS/HFA adults with normal adults and adults with Tourette Syndrome on the Eyes Task. The AS/HFA group scored significantly lower (mean 16.3 out of 25 compared with 20.3 for normal adults), which shows how the area explains the social difficulties of autistic adults as a core theory of mind deficit that makes them different from other people. [5]

- (c) Describe how the social area provides a situational explanation of behaviour.

A situational explanation looks beyond the individual to their surroundings, such as the social context, the people present and social pressures, to explain why they behave as they do. The social area provides this because it investigates how our thoughts, feelings and behaviour are influenced by the actual or perceived presence of others. For example, Milgram showed that 65% of ordinary people gave 450 volt shocks because of the pressure of the experimenter's prods and the setting at Yale, not their personality. [3]

- (d) Describe how the biological area provides an individual explanation of behaviour.

An individual explanation centres on the single person and explains behaviour through factors unique to them rather than the situation. The biological area provides this because it assumes behaviour is caused by physiological factors such as genes, hormones, brain structure and neural activity, which differ from one person to another. For example, Maguire et al. found taxi drivers had larger posterior hippocampi than controls, so their navigation ability was explained by their individual brain structure. [3]

- (e)* Compare the social area with the biological area. Use examples from relevant core studies to support your answer.

One difference is that the biological area tends to be more reductionist than the social area. The biological area explains complex behaviour in terms of simple physical parts such as brain structure, which means it can ignore the social context. For example, Casey et al. reduced self-control to activity in the inferior frontal gyrus and ventral striatum shown on fMRI scans. In contrast the social area looks at the whole situation, as Piliavin et al. considered the victim's condition, the number of bystanders and the cost-reward model together to explain helping on the subway. This means the social area gives a more holistic and complete picture of behaviour, whereas the biological area gives an explanation that is more precise but may be oversimplified.

A second difference is that the biological area is often low in ecological validity whereas the social area is often high. Sperry's split-brain patients were flashed images for a tenth of a second to one visual field, which never happens in everyday life, whereas Piliavin et al. carried out a field experiment on a real New York subway train where passengers did not know they were being studied. This means the findings of the social area can better be generalised to real-life behaviour, while the biological area's controlled procedures may not reflect how people actually behave outside the laboratory.

A similarity is that both areas raise ethical issues, in particular the protection of participants from harm. Milgram's participants showed extreme stress, sweating, trembling and seizures, and in Blakemore and Cooper's study the kittens were raised in deprived environments and suffered permanent behavioural and physiological damage. This means that research in both areas has had to justify the costs to participants, human or animal, against the benefits of the knowledge gained.

A further similarity is that both areas favour scientific, controlled experimental methods that produce quantitative data. Milgram standardised the prods and recorded the voltage reached, while Maguire et al. used MRI scans to measure hippocampal volume objectively. This means both areas... [12]

SECTION C – Practical applications

Answer **all** the questions.

The Fun Theory

A Volkswagen initiative called “The Fun Theory” is setting out to prove that people’s behaviour can be changed for the better by making mundane activities fun. In a recent experiment, they set up musical piano steps on the staircase of a Stockholm subway station to see if more people would be more willing to choose the healthier option and take the stairs instead of the escalator. That day, 66% more people took the stairs than usual, suggesting that introducing a fun element to tasks is the best way to get people to make a change to their behaviour.

- 7 (a) Identify **one** psychological issue raised by the above article. Support your answer with evidence from the article.

One psychological issue raised is that introducing a fun element to a mundane task acts as an incentive, or positive reinforcement, that brings about a positive change in behaviour. This is supported by the article which states that when the stairs in the Stockholm subway station were turned into musical piano steps, 66% more people took the stairs than usual instead of the escalator, so the enjoyment of playing the piano rewarded and encouraged the healthier behaviour. [3]

- (b) Outline how Chaney et al.’s Funhaler study links to the above article. Support your answer with evidence from the article.

Chaney et al. gave children with asthma a Funhaler, a spacer device containing a spinner and a whistle that only worked when the child inhaled correctly, so the fun toys acted as positive reinforcement (operant conditioning) for using the device. This improved adherence: 38% more parents medicated their child the previous day and 60% more children took the recommended four or more cycles with the Funhaler than with the standard spacer. This links to the article because in both cases a boring health task was made fun, like the piano stairs that led to 66% more people taking the stairs, and the fun acted as a reinforcer that changed behaviour for the better. [4]

- (c) Using your knowledge of psychology, explain why introducing a fun element to tasks can lead to a change in behaviour. Justify your response making reference to the article.

According to operant conditioning, behaviour that is followed by a pleasant consequence is positively reinforced and is more likely to be repeated. Fun acts as a reward; the enjoyment of making music while climbing the piano steps is a pleasant consequence that reinforces choosing the stairs, which explains why 66% more people took the stairs than usual. Fun also raises mood and releases dopamine and serotonin, so people are intrinsically motivated to seek out the enjoyable option. Social learning theory adds that commuters saw others being rewarded by playing on the steps and imitated them, so the novel fun element spread the behaviour change across the station. [4]

Turn over for the next question

(d) Choose one of the following behaviours:

- People not recycling
- People regularly eating unhealthy foods
- Students not attending lessons
- People not keeping to the speed limit
- Bullying at school

Using your knowledge of psychology, suggest how you could encourage a positive change to your chosen behaviour.

I would choose people not recycling and encourage change using operant conditioning. First, I would make recycling fun, as in the article, by installing a Bottle Bank Arcade in the town centre and supermarket car parks: each time a bottle is posted into the correct hole, lights flash, a sound plays and the person scores points on a display, so the fun acts as positive reinforcement. Second, every household would get a recycling card scanned when their bin is collected; a correctly sorted bin earns points that can be swapped for council tax reductions or shop vouchers, and each month all households who recycled are entered into a prize draw. Third, using social learning theory, local footballers and popular students would be filmed using the arcade and recycling at home and shown on social media so people imitate these role models. Finally, contaminated bins would not be emptied, a mild punishment, with a leaflet explaining what to sort correctly. [6]

(e) Evaluate the suggestions you made in 7(d).

A strength of my suggestions is that they are supported by psychological evidence, so they are likely to be effective. The article shows the fun piano steps led to 66% more people taking the stairs, and Chaney et al. found the fun Funhaler led to 60% more children using the correct number of cycles, so making recycling into an arcade game should positively reinforce recycling in the same way. The points and prize draw also reinforce behaviour at home, not only when people pass the arcade, so the change should be maintained over time.

However, there are practical and funding difficulties. Installing arcade machines, scanners on bin lorries and a points system would be expensive for the council, and the machines could be vandalised or break down, which would remove the reinforcement. Monitoring whether every bin is sorted correctly is also time consuming, and people may dispute the points they were given.

Another weakness is that extrinsic rewards may only produce a short-term change. The novelty of the Bottle Bank Arcade will wear off, and if the vouchers stop people may stop recycling because they were never intrinsically motivated. In the article the 66% increase was measured on one day only, so there is no evidence that fun produces a lasting change.

There are also ethical concerns: refusing to empty contaminated bins punishes whole households, including elderly or disabled people who may struggle to sort waste, and scanning cards collects

[8]

END OF QUESTION PAPER

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

6(e) produce replicable and reliable findings, although the social area more often uses field experiments. In conclusion, the areas are similar in their scientific methods and ethical problems but differ in that the social area gives a situational, holistic explanation while the biological area gives an individual, reductionist one.

7(e) data about people's behaviour. Using role models is cheap and based on Bandura's findings on imitation, but it relies on the models being seen and admired, which may not work for everyone. Overall the suggestions are likely to work but need funding and must move people towards recycling for its own sake.

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