

OCR Psychology A-level

**Evaluation of Core
Studies 1**

Notes

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N.B. This document details the studies which have not been covered by the appropriate OCR notes or the fact sheets. The studies follow the same order as given by the OCR Core Studies 1 Booklet.

Part 1: Social Psychology - Zimbardo - Responses to People in Authority

+ **Real life applications** – This research changed the way US prisons are run e.g. young prisoners are no longer kept with adult prisoners to prevent the bad behaviour perpetuating. Beehive-style prisons, where all cells are under constant surveillance from a central monitoring unit, are also not used in modern times, due to such setups increasing the effects of institutionalisation and over exaggerating the differences in social roles between prisoners and guards.

+ **Debriefing** – participants were fully and completely debriefed about the aims and results of the study. This is particularly important when considering that the BPS ethical guidelines of deception and informed consent had been breached. Dealing with ethical issues in this way simply makes the study more ethically acceptable, but does not change the quality (in terms of validity and reliability) of the findings.

+ **The amount of ethical issues with the study** led to the formal recognition of ethical guidelines so that future studies were safer and less harmful to participants due to legally bound rules. This demonstrates the practical application of an increased understanding of the mechanisms of conformity and the variables which affect this.

— **Lacks ecological validity** - The study suffered from demand characteristics. For example, the participants knew that they were participating in a study and therefore may have changed their behaviour, either to please the experimenter (a type of demand characteristic) or in response to being observed (participant reactivity, which acts as a confounding variable). The participants also knew that the study was not real so they claimed that they simply acted according to the expectations associated with their role rather than genuinely adopting it. This was seen particularly with qualitative data gathered from an interview with one guard, who said that he based his performance from the stereotypical guard role portrayed in the film Cool Hand Luke, thus further reducing the validity of the findings

— **Lacks population validity** – The sample only consisted of American male students and so the findings cannot be generalised to other genders and cultures. For example, collectivist cultures, such as China or Japan, may be more conformist to their prescribed social roles because such cultures value the needs of the group over the needs of the individual. This suggests that such findings may be culture-bound!

— **Ethical issues:** Lack of fully informed consent due to the deception required to (theoretically) avoid demand characteristics and participant reactivity. However Zimbardo himself did not know what was going to happen, so could not inform the participants, meaning that there is possible justification for a breach of ethical guidelines.

Psychological harm – Participants were not protected from stress, anxiety, emotional distress and embarrassment e.g. one prisoner had to be released due to excess distress and uncontrollable screaming and crying. One prisoner was released on the first day due to showing signs of psychological disturbance, with a further two being released on the next day. This study would be deemed unacceptable according to modern ethical standards.

Part 2: Social Psychology - Bocchiaro - Responses to People in Authority

+ **The use of a lab experiment allowed strict control** to be maintained over extraneous and confounding variables, such as personality variables. This allowed a clear 'cause and effect' relationship to be reliably established between the two outcomes/variables.

— **There are ethical issues associated with this research:** participants may have felt guilty or even distressed that they were (hypothetically) encouraging others to engage in harmful activities. Such ethical issues do not detract from the utility or reliability/validity of the research, but simply means that a cost-benefit analysis is required to assess whether the ethical costs are balanced or more than the benefits of an improved knowledge within this subject area.

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— **The findings may be culture bound.** This is because all of the participants involved in the pilot study were from the same university (VU University in Amsterdam) and were part of an individualist culture, where the needs of the individual are considered to be more important than the needs of the group. This may have influenced the guilt and responsibility that each participant took for potentially endangering the wellbeing of other people through writing such positive instructions. Therefore, the results may have been different for collectivist cultures, such as China, where the needs of the group are greater than the needs of the individual.

+ **The pilot study was carried out in order to ensure that experimenter-authority behaviour was standardised.** This, again, controlled for the effects of confounding or extraneous variables, and ensured that the materials and procedure were tested and modifications made before the actual investigation had been carried out, thus increasing the validity of the experimental design.

Part 3: Cognitive Psychology - Loftus and Palmer - Memory

— **A key methodological criticism for studies of EWT is that they often use the same, young target to identify.** This, as argued by Anastasi and Rhodes, may be affected by own age bias, which describes the tendency to recall others from your own age group with a high degree of accuracy, with a lower accuracy rate for those from other age groups. This means that participants aged 55-78 years may be inaccurately represented as having a lower accuracy of EWT, due to the frequent use of young targets.

— **Demand characteristics may also reduce the reliability of the findings,** as argued by Zaragosa and McCloskey, who suggest that participants often want to be as helpful and attentive as possible. This means that, through the mechanism of social desirability bias and the 'Please-U' effect, when in doubt over their answer to a question, they are likely to give an answer which seems most beneficial or expected of the researcher, thus biasing the results and reducing the likelihood that the same results will be demonstrated again.

— **The artificial tasks and stimuli used by both Loftus and Palmer,** alongside Gabbert, reduces the ecological validity of the findings and the mundane realism of the methodology. For example, the film clips of the car crashes do not expose participants to the anxiety of experiencing a real-life car crash. This anxiety may either have a negative (Johnson and Scott) or positive (Yuille and Cutshall) effect on the accuracy of EWT, thus biasing the findings.

+ **There are real-life applications associated with an increased understanding of the effect of leading questions on the accuracy of EWT.** For example, such research may mean that police officers and juries are particularly careful when phrasing their questions towards the witnesses i.e. avoiding double-barrelled statements, double-negatives and emotive language. This increases the accuracy of EWT and so may also increase the reliance upon such testimonies in courts, which were previously seen as relatively unreliable due to the additional effects of anxiety.

Part 4: Cognitive Psychology - Grant et al - Memory

+ **An independent measures design uses different participants in each condition,** and so avoids the confounding problem of order effects. If a repeated measures design was used, then it could be likely that the participant would guess the true aim of the study and then act differently in order to please the experimenter i.e. the Please-U effect (a type of demand characteristic). Therefore, this improves the reliability of the conclusions drawn.

+ **The researchers randomly allocated participants to each condition.** This removes the confounding effect of individual participant variables, and increases the likelihood that the observed results are actually due to the independent variable (context-dependent learning changes) as opposed to other extraneous or confounding effects. This further improves the reliability of the conclusions drawn.

— **The researchers did not control for the possibility that some participants may already have been familiar with the content of the texts** and may have also had differing reading abilities, meaning that differences in reading times could be explained by these variables as opposed to the presence of the

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noise during reading. This reduces the internal validity of the findings, because the researchers may not have accurately measured what they were intending to measure originally.

+ **The researchers discussed important practical applications associated with an increased understanding of context-dependent learning.** For example, they advised students to study with minimal background noise because this most closely emulates what would occur within an actual exam situation, and thus the students would achieve higher accuracy of recall. Thus, there are significant impacts on education.

Part 4: Developmental Psychology - Bandura et al - External Influences on Children's Behaviour

— **Bandura's Bobo Doll experiment ignores the biological differences between boys and girls** = Social learning theory suggests that we learn from experience, and so ignores other biological or psychological factors, thus adopting environmental determinism. However, Bandura ignored the finding that "boys, in relation to girls, exhibited significantly more imitative aggression, more aggressive gun play, and more nonimitative aggressive behaviour". This may be explained due to boys having higher levels of the hormone testosterone, which has been linked to increased aggressiveness. Therefore, this suggests that SLT may not be a complete explanation for gender differences in behaviour, due to not accounting for the biological and hormonal differences between the sexes.

— **Demand characteristics in Bandura's Bobo Doll experiment** = Bandura's study may lack internal validity, due to not entirely investigating the effect of aggressive role models because the Bobo doll is specifically designed to be hit. The study may also lack mundane realism because it may not represent or measure how children would be aggressive in day-to-day situations, perhaps towards objects or people that are not meant to be struck. Therefore, participants may have deliberately acted more aggressively towards the doll in order to please the experimenter (the 'Please-U effect'). This reduces the generalisability of the findings.

+ **Acknowledges the role of human cognition** = Human cognitive and decision-making processes may be considered as more complex than that of animals. SLT and Bandura's research has the advantage, over behaviourism, that it recognises the role of mediational processes as the conscious and cognitive insight that humans have into their behaviour. Therefore, SLT may be a better explanation of human behaviour, compared to behaviourism.

+ **Bandura also demonstrated the idea of reciprocal determinism**, where we operate on the environment but the environment also operates on us. This is a more 'middle-ground' interactionist approach compared to hard determinism and so offers a more realistic explanation of human behaviour, thus increasing the utility of such research.

Part 5: Developmental Psychology - Chaney et al - External Influences on Children's Behaviour

+ The study was conducted in the participants' own homes. This removes the confounding variable of participant reactivity (where participants are aware that they're being observed in artificial settings) and increases the likelihood of authentic/genuine behaviour being displayed (because participants are not in artificial laboratory settings). This therefore will increase the validity of the findings.

— The findings may have been affected/biased through social desirability bias due to the use of self-report measures. This is because the children had to report to the researchers over the phone, and so may have felt guilty if they had not used the Funhaler as prescribed, and therefore lied to produce more valuable and helpful information for the researcher. This consequently reduces the validity of the conclusions drawn.

+ There are real-life applications associated with an increased understanding of the utility of the Funhaler, particularly for national health services. For example, the idea that compliance with asthma medication increased by 30% with the use of the Funhaler may mean that the NHS and

¹ Bandura, Ross and Ross, Imitation of Film-Mediated Aggressive Model, *Journal of Abnormal and Social Psychology*, 1963, 66(1), 3-11.

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parents should choose this apparatus over the usual inhaler. The increased usage of the inhaler means that the patient's asthma is likely to improve, so they will need fewer hospital/doctor visits and less future treatment, thus saving the individuals time and money.

— The researchers did not control for the confounding variable of the severity of each child's asthma. This means that any differences in adherence may have been more associated with the initial severity of asthma and their consequent discomfort, rather than the mechanisms suggested by the Funhaler. The additional problem of a small sample size (32 children) further reduces the extent to which the findings can be generalised to the whole population of asthma sufferers.

Part 6: Biological Psychology - Sperry - Regions of The Brain

— **Lack of control with the sample selection** = The epileptic patients had been taking anti-epilepsy medications for extended and different periods of time, which may have affected their ability to recognise objects and match words, due to causing cerebral neuronal changes. Secondly, although all patients had undergone a commissurotomy, there may have been differences in the exact procedures e.g. differing extent of the lesioning of the corpus callosum. This would have affected the degree to which the two hemispheres could relay information between themselves. Therefore, these two confounding variables had not been controlled, meaning that the lateralised functions may be examples of unreliable causal conclusions.

+ **Clearly demonstrated lateralisation of function** = Split-brain research was pivotal in establishing the differences in functions between the two hemispheres, and so opposing the holistic theory of brain function. The left hemisphere was demonstrated as being dominant for language tasks, due to containing language centres, whereas the right hemisphere was demonstrated as being dominant for visuo-spatial tasks. Therefore, this suggests that the left hemisphere is the analyser, whereas the right hemisphere is the synthesiser, and so there are marked differences between the two.

+ **Contribution to discussions about lateralisation theories** = Such evidence strongly supported the idea of a 'dual mind' where the two hemispheres represent two sides of the mind. Pucetti (1980) criticised Sperry and Gazzaniga's work by pointing out that "visual stimuli impinging on the left half of each eye's retina do not go to the right, but to the left cerebral hemisphere (and vice versa), since the retina is concave and each half retina receives light from the contralateral side of the body". Therefore, it is clear that split-brain research has sparked much debate about the physiological and theoretical basis of brain function and human abilities.

— **The differences in function may not be so clear-cut** = With evidence making the drastic distinctions that the left hemisphere is responsible for language (analyser) whilst the right is responsible for visual-spatial tasks (synthesiser), this has given the public the false impression that the two hemispheres are 'opposite' in function and that they can receive such labels. However, as suggested by Pucetti (1980), there have been cases of split-brain patients who are left-handed but produce and comprehend speech in the right hemisphere, which opposes the predictions made by lateralisation theory. Therefore, it is important not to jump to conclusions and to appreciate that, through recruitment of homologous areas on the opposite side of the brain, each hemisphere is not restricted to specific functions.

Part 7: Biological Psychology - Casey et al - Regions of The Brain

+ **The sample size was large** (562 four year old students) which produced a significant amount of data. This increases the reliability and confidence of the conclusions drawn because it decreases the likelihood that the observed results were due to chance, rather than gratification networks in the brain.

+ **The researchers used a standardised methodology** e.g. each face appearing for 500ms and then a 1-second interval occurred. This reduces the effects of researcher bias and investigator effects

² Pucetti, R. (1980). On Saving Our Concept of a Person. *Philosophy*, 55(213), 403-407. Retrieved from <http://www.jstor.org/stable/3750822>

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because the researchers have no influence over the course of the study of the research methods used. The use of pre-programmed computers further ensured the standardisation throughout.

- + fMRI was used to measure the brain activity of the patients - this is a highly objective and reliable measurement technique, with high temporal validity. This ensures that the behaviours of the participants, whilst carrying out a task, can be objectively matched up with the neuronal activity and inferences drawn between whether such activities are related.
- + The researchers excluded one participant who displayed abnormal neuronal activity, as measured using the fMRI scanner. Therefore, this further increases the reliability of the conclusions drawn because anomalous results have been removed and so will not affect the average reaction time and accuracy.