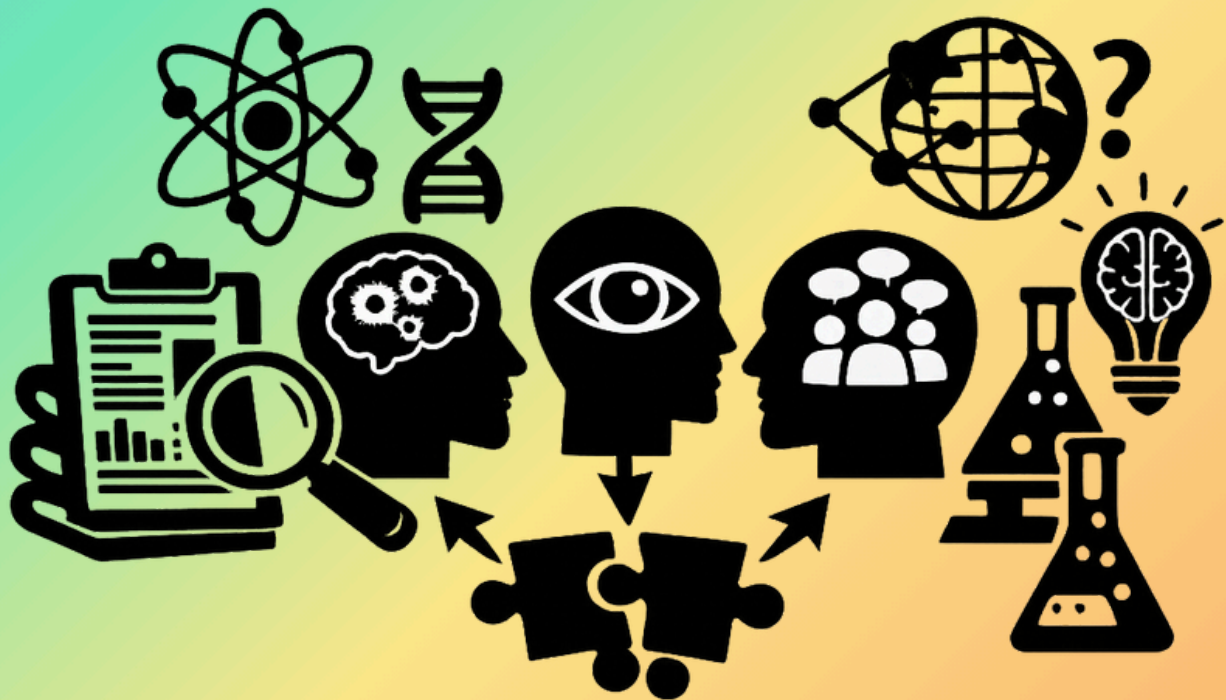


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For IB HL Psychology
First Assessment 2027



Paper 2 Essay Pack

Ten Questions and Model Answers for
Practice for Section 2(B)

Question 1

Discuss the following study with reference to **two or more** of the following concepts: bias, measurement, causality, and/or responsibility. (15 marks)

Researchers investigated whether mental distraction makes people more vulnerable to a specific logical error known as the conjunction fallacy. To test this, they used the famous "Linda problem": participants are told that Linda is 31, single, outspoken, and very bright, having studied philosophy and been deeply concerned with issues of discrimination and social justice. They are then asked which is more probable: (A) Linda is a bank teller, or (B) Linda is a bank teller and is active in the feminist movement. Rationally, option A must be more likely because a single broad category is always more probable than the same category combined with a specific detail. However, choosing option B - the tempting, stereotypical narrative - constitutes the conjunction fallacy.

Eighty university students were randomly divided into two groups. The experimental group memorised a seven-digit number while completing the task (high cognitive load), whereas the control group memorised a two-digit number (low load). All participants answered the Linda problem and four structurally similar logic puzzles. Researchers measured the total number of conjunction fallacies committed out of five. The high-load group committed significantly more fallacies ($M = 3.4$) than the low-load group ($M = 1.8$), $p < .001$. The researchers concluded that occupying the brain's analytical resources forces people to rely on intuitive but flawed mental shortcuts, directly causing a measurable increase in reasoning errors.

Model Answer

Human reasoning is influenced by both analytical thinking; and mental shortcuts known as heuristics. The **conjunction fallacy** occurs when individuals judge a specific combination of events as more probable than a single broader event, even though this violates the rules of probability. In psychology, **bias** refers to systematic errors that distort judgement or decision-making, **measurement** concerns how psychological variables are operationalised and assessed, and **causality** refers to whether one variable directly produces changes in another. This essay will discuss the study in relation to bias, measurement, and causality. It will argue that the study provides strong evidence that cognitive load increases biased reasoning, but some limitations in measurement limit the extent to which the findings can be generalised to real-world decision-making.

The concept of **bias is key** to the study because the conjunction fallacy itself is a cognitive bias. Participants were presented with a description of Linda as socially conscious, outspoken, and concerned with discrimination. These characteristics closely match **common stereotypes associated with feminism**. As a result, many participants judged "Linda is a bank teller and active in the feminist movement" to be more likely than simply "Linda is a bank teller." This shows the **representativeness heuristic**, where people judge probability based on how closely a description matches a prototype instead of applying logical reasoning. The significantly higher number of conjunction fallacies in the high cognitive load group suggests that mental distraction increased the use of this bias. When participants were required to memorise a seven-digit number, they were less able to engage in careful reasoning and instead used intuitive judgements. The study therefore gives strong evidence that cognitive bias becomes more influential when cognitive resources are limited.

However, **bias may also be present in the design** of the task itself. The Linda problem was deliberately designed to encourage stereotypical thinking. The description strongly suggests feminist characteristics while giving little information consistent with being a bank teller. Furthermore, **university students may be especially familiar with social justice concepts**, making the stereotype more prominent for this sample. Thus, participants' errors may reflect characteristics of the scenario more than a tendency to commit conjunction fallacies in everyday situations.

The study also raises important issues regarding **measurement**. A major **strength** is that the **dependent variable was clearly operationalised** as the number of conjunction fallacies committed across five logic problems. This quantitative measure helps researchers to compare groups objectively. The **use of multiple problems** rather than a single question also increases reliability because performance is measured across several puzzles. In addition, the researchers reported a **statistically significant difference** between groups ($p < .001$), presenting strong evidence that the observed effect was unlikely to have occurred by chance.

Nevertheless, there are limitations to the measurement. The number of conjunction fallacies **may not give a complete measure of participants' overall reasoning processes**. Some participants may have misunderstood the wording of the while others may have interpreted the task as asking which option seemed more plausible rather than mathematically more likely. As a result, the measure **may lack construct validity**. Furthermore, the study measured performance using artificial logic puzzles completed in a **controlled setting**. Real-world reasoning usually involves emotional, social, and contextual factors. Therefore, performance on the puzzles may not accurately reflect how individuals make decisions outside the laboratory.

The study gives particularly strong evidence regarding **causality**. The researchers manipulated the independent variable, cognitive load. **Participants were randomly assigned** to either memorise a seven-digit number or a two-digit number while completing the reasoning tasks. Random allocation helps control participant variables such as intelligence, motivation, and prior reasoning ability because these characteristics should be distributed evenly between groups. This **increases internal validity** and allows greater confidence that differences in conjunction fallacies resulted from the cognitive load rather than pre-existing differences. Furthermore, the **significant difference between the groups** directly supports this conclusion. The experimental group committed an average of 3.4 fallacies compared with 1.8 in the control group, indicating a strong effect.

Despite this, causality cannot be established with complete certainty. The study assumes that **memorising a seven-digit number** specifically reduced analytical **thinking, but it may also have increased stress, frustration, or anxiety**. These factors could independently influence reasoning performance. Therefore, it is unclear whether the observed effect resulted only from cognitive load. Additionally, the **sample** consisted entirely of university students, who **may have relatively high levels of cognitive ability and familiarity with academic problem-solving**. This limits the extent to which the causal relationship can be generalised to other populations.

In conclusion, the study provides strong evidence for causality because cognitive load was directly manipulated and participants were randomly assigned to conditions. It also benefits from objective measurement of reasoning errors. However, the artificial nature of the tasks and potential issues with construct validity reduce confidence that the findings fully represent real-world reasoning. Future research could improve understanding by using more diverse samples and examining whether similar effects occur in realistic decision-making situations involving important personal, financial, or social judgements.

Question 2

Discuss the following study with reference to **two or more** of the following concepts: bias, measurement, perspective, and/or responsibility. (15 marks)

A research team conducted a six-month investigation in a rural primary school in Bhutan to explore how cultural values shape children's learning practices. The school served 120 children aged 7–12 and followed the national curriculum, but the researchers were interested in informal learning behaviours outside formal lessons. Two researchers were embedded in the school, observing during breaks, group work, and community activities. They recorded detailed field notes, conducted informal conversational interviews with students and teachers, and collected samples of collaborative student work.

Thematic analysis of the field notes revealed three dominant practices. First, learning was overwhelmingly collective, with older children spontaneously mentoring younger peers without teacher direction. Second, oral storytelling was frequently used by children to explain concepts to one another, often weaving in local folk tales. Third, error-making was rarely framed as individual failure; instead, mistakes were treated as shared responsibility, with peers gently guiding corrections. The researchers concluded that these practices reflect deeply embedded Bhutanese cultural values of interdependence, oral tradition, and communal harmony, demonstrating that cultural context fundamentally shapes not just what children learn, but how the process of learning itself is socially organised and experienced.

The model answer for Question 2 and a set of 8 more questions and model answers are available upon purchase of this pack.
This is a sample preview only

About the Author

With **over 12 years of international teaching experience**, **JYOTIKA VARMANI** has guided students across the world to achieve **7s in IBDP Psychology**, A*s in Cambridge, AQA, Edexcel and OCR A-Levels Psychology, 5s in AP Psychology and top grades in GCSE and IGCSE Psychology. Her students study across the UK, UAE, India, Australia, New Zealand, Europe and the US.

Known for **highly exam-focused teaching**, detailed essay training and markscheme-based preparation, she specializes in simplifying difficult psychological concepts into clear, structured answers that match exactly what examiners expect in IBDP Psychology. Her excellent mentorship encourages both SL and HL students to pursue their **EEs in Psychology** as their preferred subject of choice.

Jyotika is the Psychology Teacher at **Modern College Mauritius** and Subject Expert for at **Podar International School, Mumbai**. Her psychology resources, notes and videos are used internationally by students, teachers and schools, with millions of readers across educational platforms and psychology websites.

These notes are designed not just to help students study Psychology, but to help them write high-scoring answers confidently in the IBDP examination.

Reach out to Jyotika Varmani for scheduling psychology classes, assignment consultation and related services-



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