Cognitive Area

This area of psychology has developed rapidly over the last century and concerns the investigation of our internal mental processes such as memory, thinking and reasoning that precedes observable behaviour. Researchers use experimental methods to infer thoughts by recording individual's behaviour in cognitive tasks such as memory recall. Further to this, the area considers the mind as mechanical and suggests that we process information like a computer and behaviour is therefore highly predictable.

1. Principles and Concepts:

1. Internal mental processes such as memory, thinking, reasoning, problem-solving and language, are important features influencing human behaviour
2. Mind as mechanistic, suggesting that we process information like a computer and behaviour is therefore highly predictable
3. Input → Process → Output
4. Therapies attempt to address faulty thinking

2. Research to Illustrate the Area:

Loftus and Palmer (eyewitness testimony) - Shows that the brain is like a computer, as we see something, which is the input, we are asked about it where we have to recover the memory, which is the process, them the output was the speed people thought they were travelling.

Grant (dependent memory) - Shows that if information is recalled in a similar context to where it was encountered, memory can be enhanced, showing that internal mental processes and memory depend on where they were recalled, and can be enhanced if they are in similar situations.

Moray (auditory attention) - Shows what kind of information can break the attention barrier and that hearing one's name is able to break the attention barrier because you pay more attention, showing the inattentional input can cause an output of now paying attention after hearing your name.

Simons and Chabris (visual attention) - Looks at visual attention and sees how we may not recall information that we paid attention to but also how we may not notice something, even if it is clear, because we are not expecting it, therefore we are less likely to notice it if it is unexpected.

Baron Cohen (autism in adults) - Shows how our behaviour can be influenced by theory of mind. Having a theory of mind enables a person to appreciate that other people have thoughts and beliefs that are different from their own, which may not develop properly in an individual who has Autism or Asperger's Syndrome.

Hancock (language in psychopaths) - Shows how language can differ when a person has a different way of thinking. Our mind is like a computer but there can be faults which means that someone may have a faulty thinking pattern, making them a psychopath.

Kohlberg (moral development) - It shows how moral thinking can evolve as people age and shows there is cognitive development that occurs when people grow up, meaning they have better input, process, output stages as they grow up.

Lee (evaluation of lying and truth telling) - Proved how moral thinking does not change with culture, showing that all humans have similar internal mental processes and how everyone processes information like a computer, showing that everyone is able to 'change' the truth, potentially caused by a 'faulty' thinking process.

Some of the individual differences area studies are actually cognitive by definition.

3. Strengths and Weaknesses of the Area:

Strengths	Weaknesses
- Scientific approach - Useful - Cause and effect - High control - Practical applications - Valid results - Testable theories	- Reductionist - Low ecological validity - Ethical issues - Difficult to measure objectivity - Cannot be directly measured - Ignores other factors - Does not consider gender/culture

One strength of the cognitive area is that it establishes cause and effect and therefore is scientific. Loftus and Palmer's research into the interaction between language and memory through eyewitness testimony demonstrated that the way something is asked will enormously influence the answer given and how it can help form a memory, even if it didn't happen. This is a strength because we can see how eyewitness testimony's can be influenced by language, so this could be useful in courts, where evidence relies heavily on eyewitness testimony, and can see how they should word their questions in order not to have an effect on their memory.

Another strength of the cognitive area is that it has practical applications and therefore is very useful. Grant et al's research into cue-dependent memory and environmental triggers demonstrated that there are context-dependency effects for newly learned material. This is a strength because it can help people revise for exams as it shows that they have better memory of something if they are in the same/similar room and if they are in the same environment (silent or background noise). This can further help students to do well in exams as they know the best and worse places for them to revise.

One weakness of the cognitive area is that it is very reductionist as it suggests that the human mind is very similar to that of a computer and follows the same input, process, output model. It fails to consider the biological processes in causing behaviour. Lee et al's study investigated children's moral judgement about lying and truth-telling and his findings suggested that moral development is different in different cultures as a result of socio-cultural norms, and also changes with age which could show the development in the understanding of moral decisions. This is a weakness because this limits how people can judge different situations and they may make unmoral decisions and provide the excuse that it is how their brain is wired.

Another weakness of the cognitive area is that it has low ecological validity due to the use of highly controlled methodology. Baron Cohen's study saw that adults with autism or Asperger's Syndrome possess an impaired theory of mind but is independent of general intelligence so affects everyone differently. Because this had to be highly controlled, it took place in a lab, which gives it low ecological validity. This is a weakness because it creates an artificial environment due to the control of extraneous variables. This means that the results aren't reliable because participants don't just look at the eye area so the results could be inaccurate.

4. Applications of the Area

Depression (Beck's Cognitive theory)

Cognitive Interview

Eyewitness Testimony (Loftus and Palmer)

Cognitive Behavioural Therapy (strategy for stress)

Education

SAMPLE QUESTIONS

(a) Outline the defining principles and concepts of the cognitive area. **[4]**

(b) Describe **one** application of the principles and concepts of the cognitive area. **[4]**

(c) Compare the cognitive area and the psychodynamic perspective in terms of strengths and weaknesses. **[8]**

(d) Describe how research supporting the psychodynamic perspective can be seen as socially sensitive. **[4]**

(e)* Discuss the reductionism/holism debate in psychology. Use examples from appropriate research to support your answer. **[15]**