SimplyPsychology

Memory

A-level Revision Notes AQA(A)

| Assessment Criteria |
|---|
| The multi-store model of memory: sensory register, short-term memory and long-term memory. Features of each store: coding, capacity and duration. |
| Types of long-term memory: episodic, semantic, procedural. |
| The working memory model: central executive, phonological loop, visuo-spatial sketchpad and episodic buffer. Features of the model: coding and capacity. |
| Explanations for forgetting: proactive and retroactive interference and retrieval failure due to absence of cues. |
| Factors affecting the accuracy of eyewitness testimony: misleading information, including leading questions and post-event discussion; anxiety. |
| Improving the accuracy of eyewitness testimony, including the use of the cognitive interview. |

The Multi-Store Model

(AO1)

The [multistore model](#) of memory was proposed by Atkinson and Shiffrin and is a structural model.

They proposed that memory consisted of three stores: sensory register, short-term memory (STM) and long-term memory (LTM).
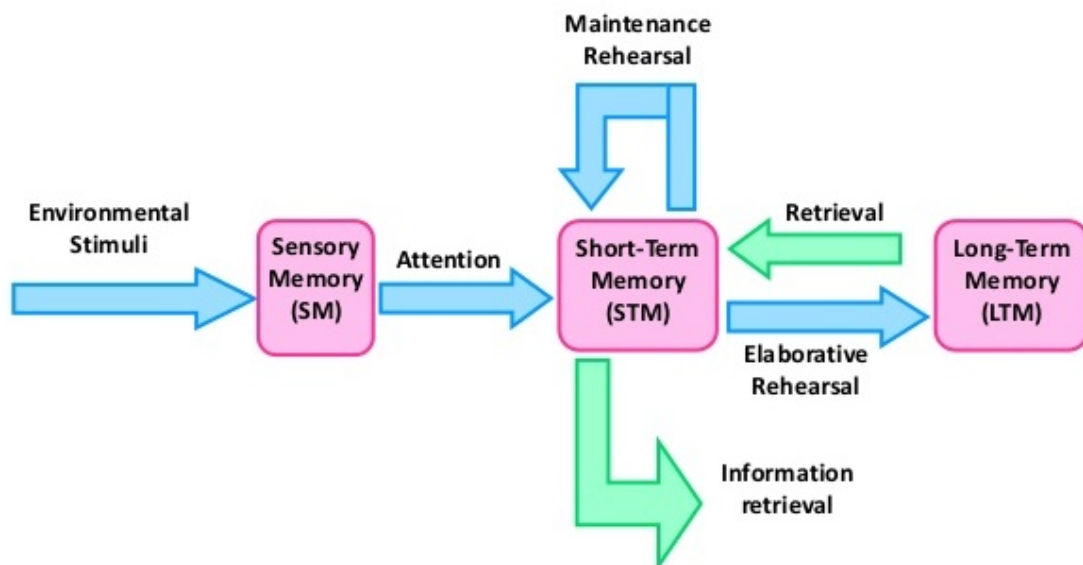
Information passes from store to store in a linear way. Both STM and LTM are unitary stores.

Sensory memory is the information you get from your sense, your eyes and ears. When attention is paid to something in the environment it is then converted to short-term memory.

If maintenance rehearsal (repetition) does not occur, then information is forgotten, and lost from short term memory through the processes of displacement or decay.

Each store has its own characteristics:

- **Encoding** is the way information is changed so that it can be stored in the memory. There are three main ways in which information can be encoded (changed): 1. visual (picture), 2. acoustic (sound), 3. semantic (meaning).

- **Capacity** concerns how much information can be stored.

- **Duration** refers to the period of time information can last in the memory stores.

	Sensory Registry	**Short-Term Memory**	**Long-Term Memory**
Duration	¼ to ½ second	0-18 seconds	Unlimited
Capacity	All sensory experience (v. larger capacity)	7 +/- 2 items	Unlimited
Encoding	Sense specific (e.g. different stores for each sense)	Mainly acoustic	Mainly semantic (but can be visual and acoustic)

AO2 Scenario Exam Question

The multi-store model of memory has been criticised in many ways. The following example illustrates a possible criticism.

Some students read through their revision notes lots of times before an examination, but still find it difficult to remember the information. However, the same students can remember the information in a celebrity magazine, even though they read it only once.

Explain why this can be used as a criticism of the multi-store model of memory.

(4 marks)

Answer Provided by PsychLogic Revision Notes

"The MSM states that depth of memory trace in LTM is simply a result of the amount of rehearsal that takes place.

The MSM can be criticised for failing to account for how different types of material can result in different depth memory traces even though they've both been rehearsed for a similar amount of time.

For example, people may recall information they are interested in (e.g. information in celebrity magazines) more than material they are not interested in (e.g. revision notes) despite the fact that they have both been rehearsed for a similar amount of time."

(AO3)

One strength of the multistore model is that is gives us a good understanding of the structure and process of the STM. This is good because this allows researchers to expand on this model.

This means researchers can do experiments to improve on this model and make it more valid and they can prove what the stores actually do.

Later models distinguished between maintenance rehearsal in which material is repeated in 'rote' fashion to maintain it in STM and help with transfer to LTM. Elaborative rehearsal links the information with existing material or elaborates it in some other way, again as an aid to longer term storage.

It has now become apparent that both short-term and long-term memory are more complicated than previously thought. For example, the Working Model of Memory proposed by Baddeley and Hitch (1974) showed that short term memory is more than just one simple unitary store and comprises different components (e.g. central executive, Visuospatial etc.).

The model suggests rehearsal helps to transfer information into LTM but this is not essential. Why are we able to recall information which we did not rehearse (e.g. swimming) yet unable to recall information which we have rehearsed (e.g. reading your notes while revising).

Therefore, the role of rehearsal as a means of transferring from STM to LTM is much less important than Atkinson and Shiffrin (1968) claimed in their model.

Research Study for both STM and LTM (AO1/AO3)

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Exam Tip

Provided by PsychLogic Revision Notes

Research studies can either be knowledge or evaluation:

- If you refer to the procedures and findings of a study, this shows knowledge and understanding (AO1).

- If you comment on what the studies shows, and what it supports and challenges about the theory in question, this shows evaluation (AO3).

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Glanzer and Cunitz showed that when participants are presented with a list of words, they tend to remember the first few and last few words and are more likely to forget those in the middle of the list, i.e. the serial position effect.

This supports the existence of separate LTM and STM stores because they observed a primacy and recency effect.

Words early on in the list were put into long term memory (primacy effect) because the person has time to rehearse the

word, and words from the end went into short term memory (recency effect).
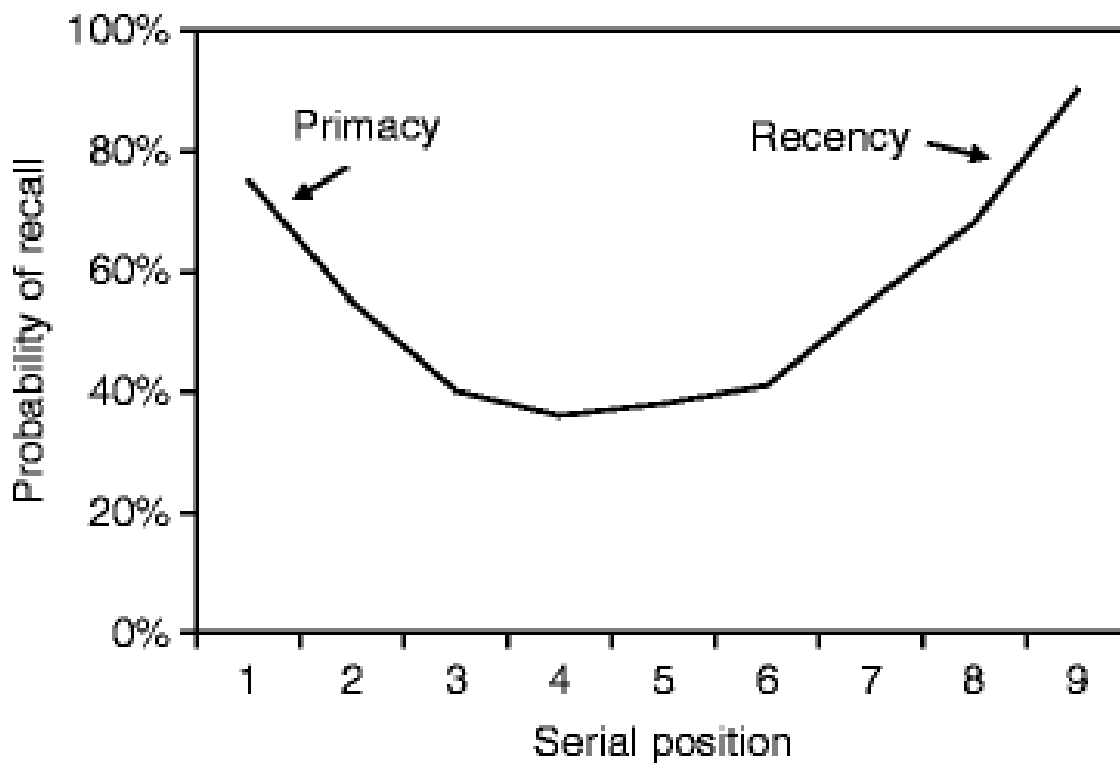
Other compelling evidence to support this distinction between STM and LTM is the case of KF (Shallice & Warrington, 1970) who had been in a motorcycle crash where he had sustained brain damage. His LTM seemed to be unaffected but he was only able to recall the last bit of information he had heard in his STM.

Types of Long-Term Memory

(AO1)

One of the earliest and most influential distinctions of [long term memory](#) was proposed by Tulving (1972). He proposed a distinction between episodic, semantic and procedural memory.

Procedural Memory

Procedural memory is a part of the long-term memory is responsible for knowing how to do things, i.e. memory of motor skills. It does not involve conscious (i.e. it's unconscious - automatic) thought and is not declarative.

For example, procedural memory would involve knowledge of how to ride a bicycle.

Semantic Memory

Semantic memory is a part of the long-term memory responsible for storing information about the world. This includes knowledge about the meaning of words, as well as general knowledge.

For example, London is the capital of England. It involves conscious thought and is declarative.

Episodic Memory

Episodic memory is a part of the long-term memory responsible for storing information about events (i.e. episodes) that we have experienced in our lives.

It involves conscious thought and is declarative. An example would be a memory of our 1st day at school.

Cohen and Squire (1980) drew a distinction between

declarative knowledge and procedural knowledge.

Procedural knowledge involves "knowing how" to do things. It included skills, such as "knowing how" to playing the piano, ride a bike; tie your shoes and other motor skills. It does not involve conscious thought (i.e. it's unconscious - automatic). For example, we brush our teeth with little or no awareness of the skills involved.

Whereas, declarative knowledge involves "knowing that", for example London is the capital of England, zebras are animals, your mum's birthday etc. Recalling information from declarative memory involves some degree of conscious effort – information is consciously brought to mind and "declared".

The knowledge that we hold in **semantic and episodic memories focuses** on "knowing that" something is the case

(i.e. declarative). For example, we might have a semantic memory for knowing that Paris is the capital of France, and we might have an episodic memory for knowing that we caught the bus to college today.

(AO3)

Evidence for the distinction between declarative and procedural memory has come from research on patients with amnesia. Typically, amnesic patients have great difficulty in retaining episodic and semantic information following the onset of amnesia.

Their memory for events and knowledge acquired before the onset of the condition tends to remain intact, but they can't store new episodic or semantic memories. In other words, it appears that their ability to retain declarative information is impaired.

However, their procedural memory appears to be largely unaffected. They can recall skills they have already learned (e.g. riding a bike) and acquire new skills (e.g. learning to drive).

Working Memory Model

(AO1)

The working memory model (Baddeley and Hitch, 1974) replaced the idea of a unitary STM. It suggests a system involving active processing and short-term storage of information.

Key features include the central executive, the phonological loop, and the visuospatial sketchpad.
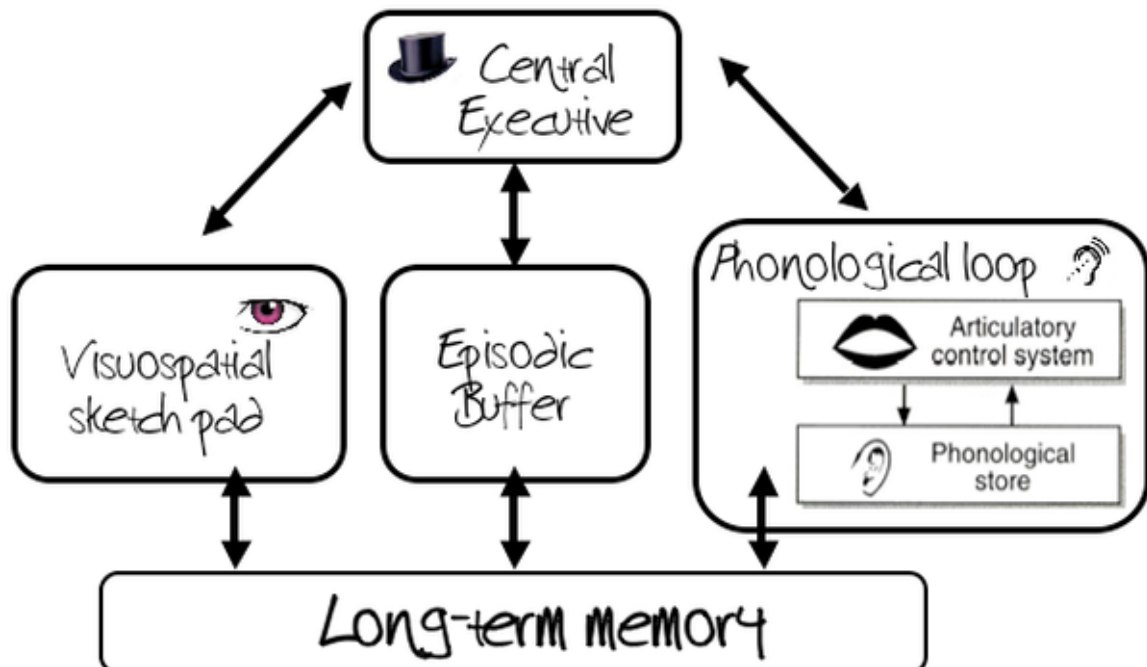
The Central Executive

The **central executive** has a supervisory function and acts as a filter, determining which information is attended to.

It can process information in all sensory forms, directs information to other slave systems and collects responses.

It has limited a limited capacity and deals with only one piece of information at a time.

The Phonological Loop

One of the slave systems is the **phonological loop** which is temporary storage system for holding auditory information in a speech-based form.

It has two parts: (1) the phonological store (inner ear), which stores words you hear; and (2) the articulatory process (inner voice), which allows maintenance rehearsal (repeating sounds or words to keep them in working memory while they are needed).

The phonological loop plays a key role in the development of reading.

The Visuospatial Sketchpad

The second slave system is the **Visuospatial sketchpad** (VSS). The VSS is a temporary memory system for holding visual and spatial information. It has two parts:

(1) the visual cache (which store visual data about form and colour), and (2) the inner scribe (which records the arrangement of objects in the visual field and rehearses and transfers information in the visual cache to the central executive).

The Episodic Buffer

The third slave system is the **episodic buffer** which acts as a 'backup' (temporary) store for information which communicates with both long term memory and the slave system components of working memory.

One of its important functions is to recall material from LTM and integrate it into STM when working memory requires it.

AO2 Scenario Exam Question

Bryan has been driving for five years. Whilst driving, Bryan can hold conversations or listen to music with little difficulty. Bob has had four driving lessons. Driving requires so much of Bob's concentration that, during lessons, he often misses what his driving instructor is telling him.

With reference to features of the working memory model, explain the different experiences of Bryan and Bob.

(4 marks)

Answer

Provided by PsychLogic Revision Notes

"Because Bryan has been driving for 5 years it is an 'automated' task for him, it makes fewer attentional demands on his central executive so he is free to perform other tasks (such as talking or listening to music) and thus is able to divide resources between his visuo-spatial sketch pad (driving) and phonological loop (talking and listening to music).

As Bob is inexperienced at driving this is not the case for him – his central executive requires all of his attentional capacity for driving and thus cannot divide resources effectively between components of working memory."

(AO3)

Working memory is supported by dual task studies. It is easier to do two tasks at the same time if they use different processing systems (verbal and visual) than if they use the same slave system.

For example, participants would find it hard to do two visual tasks at the same time because they would be competing for the same limited resources of the visuospatial sketchpad. However, a visual task and a verbal task would use different components and so could be performed with minimum errors.

The KF Case Study supports the Working Memory Model. KF suffered brain damage from a motorcycle accident that damaged his short-term memory. KF's impairment was mainly for verbal information - his memory for visual information was largely unaffected.

This shows that there are separate STM components for visual information (VSS) and verbal information (phonological loop). However, evidence from brain-damaged patients may not be reliable because it concerns unique cases with patients who have had traumatic experiences.

One limitation is the fact that little is known about how the central executive works. It is an important part of the model but its exact role is unclear.

Research Study for Working Memory (AO1/AO3)

> **Exam Tip**
>
> Provided by PsychLogic Revision Notes
>
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Baddeley and Hitch conducted an experiment in which participants were asked to perform two tasks at the same time (dual task technique). A digit span task which required them to repeat a list of numbers, and a verbal reasoning task which required them to answer true or false to various questions (e.g. B is followed by A?).

Results: As the number of digits increased in the digit span tasks, participants took longer to answer the reasoning questions, but not much longer - only fractions of a second. And, they didn't make any more errors in the verbal reasoning tasks as the number of digits increased.

Conclusion: The verbal reasoning task made use of the central executive and the digit span task made use of the phonological loop.

Explanations for Forgetting

Retrieval Failure (AO1)

Retrieval failure is where information is available in long-term memory but cannot be recalled because of the absence of appropriate cues.

When we store a new memory, we also store information about the situation, and these are known as retrieval cues. When we come into the same situation again, these retrieval cues can trigger the memory of the situation.

Types of cues that have been studied by psychologists include state, context and organisation:

State Retrieval Cues

Bodily cues inside of us, e.g. physical, emotional, mood, drunk etc. The basic idea behind state-dependent retrieval is that memory will be best when a person's physical or psychological state is similar at encoding and retrieval.

For example, if someone tells you a joke on Saturday night after a few drinks, you'll be more likely to remember it when you're in a similar state. Stone cold sober on Monday morning, you'll be more likely to forget the joke.

Context Retrieval Cues
External cues in the environment, e.g. smell, place etc.
Evidence indicates that retrieval is more likely when the context at encoding matches the context at retrieval.

Organisation Retrieval Cues
Recall is improved if the organisation gives a structure which provides triggers, e.g., categories.

According to retrieval-failure theory, forgetting occurs when information is available in LTM but is not accessible. Accessibility depends in large part on retrieval cues.

Forgetting is greatest when context and state are very different at encoding and retrieval. In this situation, retrieval cues are absent, and the likely result is cue-dependent forgetting.

(AO3)

People tend to remember material better when there is a match between their mood at learning and at retrieval. The effects are stronger when the participants are in a positive mood than a negative mood. They are also greater when people try to remember events having personal relevance.

Several experiments have indicated the importance of context-based (i.e. external) cues for retrieval. An interesting experiment conducted by Baddeley indicates the importance of context setting for retrieval.

Baddeley (1975) asked deep-sea divers to memorize a list of words. One group did this on the beach and the other group underwater. When they were asked to remember the words half of the beach learners remained on the beach, the rest had to recall underwater.

Half of the underwater group remained there and the others had to recall on the beach. The results show that those who had recalled in the same environment (i.e. context) which that had learned recalled 40% more words than those recalling in a different environment. This suggests that the retrieval of information is improved if it occurs in the context in which it was learned.

A study by Goodwin investigated the effect of alcohol on state-dependent (internal) retrieval. They found that when people encoded information when drunk, they were more likely to recall it in the same state.

For example, when they hid money and alcohol when drunk, they were unlikely to find them when sober. However, when they were drunk again, they often discovered the hiding place. Other studies found similar state-dependent effects when participants were given drugs such as marijuana.

The ecological validity of these experiments can be questioned, but their findings are supported by evidence from outside the laboratory.

Interference (AO1)

Interference is an explanation for forgetting from long term memory – two sets of information become confused.

Proactive Interference
Proactive interference (pro=forward) is where old learning prevents recall of more recent information. When what we already know interferes with what we are currently learning – where old memories disrupt new memories.

Retroactive Interference
Retroactive interference (retro=backward) is where new learning prevents recall of previously learned information. In other words, later learning interferes with earlier learning - where new memories disrupt old memories.

Proactive and retroactive Interference is thought to be more likely to occur where the memories are similar, for example: confusing old and new telephone numbers. Chandler (1989) stated that students who study similar subjects at the same time often experience interference. French and Spanish are similar types of material which makes interference more likely.

(AO3)

Semantic memory is more resistant to interference than other types of memory.

Postman (1960) provides evidence to support the interference theory of forgetting. A lab experiment was used, and participants were split into two groups. Both groups had to remember a list of paired words – e.g. cat - tree, jelly - moss, book - tractor. The experimental group also had to learn another list of words where the second paired word if different – e.g. cat – glass, jelly- time, book – revolver. The control group were not given the second list.

All participants were asked to recall the words on the first list. The recall of the control group was more accurate than that of the experimental group. This suggests that learning items in the second list interfered with participants' ability to recall the list. This is an example of retroactive interference.

Interference theory tells us little about the cognitive processes involved in forgetting.

Most research into the role of interference in forgetting has been carried out in a laboratory using lists of words, a situation which is likely to occur infrequently in everyday life (i.e. low ecological validity). As a result, it may not be possible to generalize from the findings. Baddeley states that the tasks given to participants are too close to each other and, in real life; these kinds of events are more spaced out.

Misleading Information

Loftus and Palmer (AO1)

Procedure

Forty-five American students formed an opportunity sample. This was a laboratory experiment with five conditions, only one of which was experienced by each participant (an independent measures design).

Participants were shown slides of a car accident involving a number of cars and asked to describe what had happened as if they were eyewitnesses. They were then asked specific questions, including the question "About how fast were the cars going when they (hit / smashed / collided / bumped /contacted) each other?"
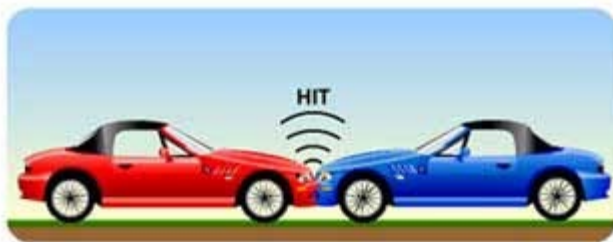
Loftus and Palmer (AO1)

Findings

The estimated speed was affected by the verb used. The verb implied information about the speed, which systematically affected the participants' memory of the accident.

Expt 1: Estimated Speed for Verb Used
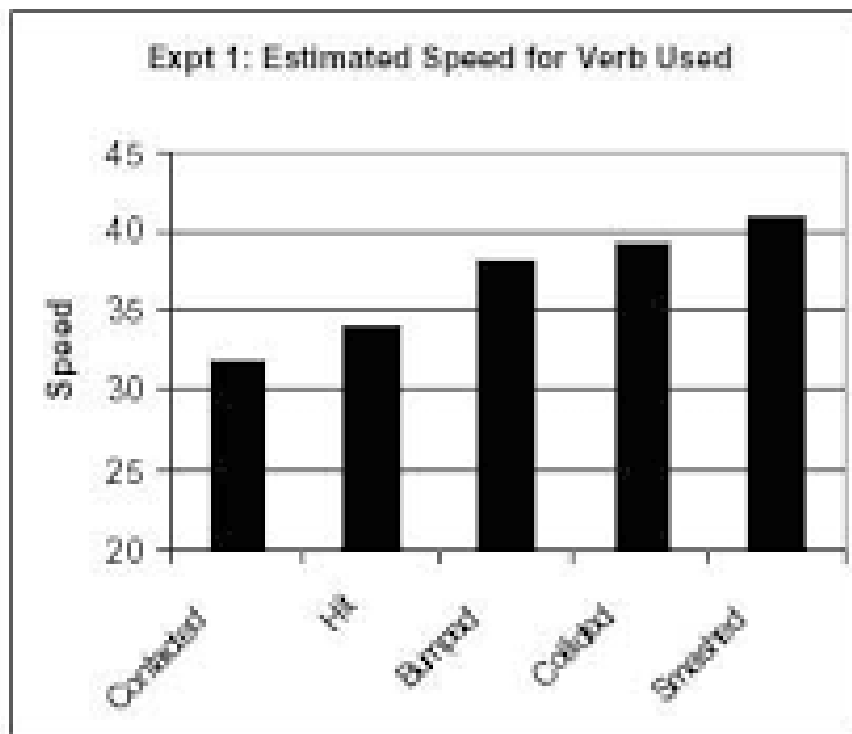
Participants who were asked the "smashed" question thought the cars were going faster than those who were asked the "hit" question. The participants in the "smashed" condition reported the highest speeds, followed by "collided", "bumped", "hit", and "contacted" in descending order.

(AO3)

The research lacks mundane realism, as the video clip does not have the same emotional impact as witnessing a real-life accident and so the research lacks ecological validity.

A further problem with the study was the use of students as participants. Students are not representative of the general population in a number of ways. Importantly they may be less experienced drivers and therefore less confident in their ability to estimate speeds. This may have influenced them to be more swayed by the verb in the question.

A strength of the study is it's easy to replicate (i.e. copy). This is because the method was a laboratory experiment which followed a standardised procedure.

Anxiety / Stress (AO1)

When we are in a state of anxiety, we tend to focus on whatever is making us feel anxious or fearful, and we exclude other information about the situation. If a weapon is used to threaten a victim, their attention is likely to focus on it. Consequently, their recall of other information is likely to be poor.

However, a study by **Yuille and Cutshall (1986)** contradicts the importance of stress in influencing eyewitness memory. 21 witnesses observed a shooting incident in Canada outside a gun shop in which 1 person was killed and a 2nd seriously wounded.

The incident took place on a major thoroughfare in mid-afternoon.

All the witnesses were interviewed by the investigating police, and 13 witnesses (aged 15-32 years) agreed to a research interview 4-5 months after the event. The witnesses were also asked to rate how stressed they had felt at the time of the incident, using a 7-point scale. The eyewitness accounts provided in both the police and research interviews were analysed and compared.

The **results** of the study showed the witnesses were highly accurate in their accounts, and there was little change in amount or accuracy of recall after 5 months. The study also showed that stress levels did not have an effect on memory, contrary to lab findings.

All participants showed high levels of accuracy, indicating that stress had little effect on accuracy. However, very high anxiety was linked to better accuracy. Participants who reported the highest levels of stress were most accurate (about 88% accurate compared to 75% for the less-stressed group).

(AO3)

One strength of this study is that it had high ecological validity compared with lab studies which tend to control variables and use student populations as research participants.

One weakness of this study was that there was an extraneous variable. The witnesses who experienced the highest levels of stress where actually closer to the event (the shooting) and this may have helped with the accuracy of their memory recall.

The Cognitive Interview

(AO1)

The cognitive interview involves several techniques:

Context Reinstatement

Trying to mentally recreate an image of the situation, including details of the environment, such as the weather conditions, and the individual's emotional state including their feelings at the time of the incident.

Recall from a Changed Perspective

Trying to mentally recreate the situation from different points of view e.g. describing what another witness present at the scene would have seen.

Recall in Reverse Order

The witness is asked to describe the scene in a different chronological order e.g. from the end to the beginning.

Report Everything
The interviewer encourages the witness to report all details about the event, even though these details may seem unimportant.

The Enhanced Cognitive Interview
The main additional features are: • Encourage the witness to relax and speak slowly.   • Offer comments to help clarify witness statements.   • Adapt questions to suit the understanding of individual witnesses.

(AO3)

One limitation is the cognitive interview is that it's time consuming to conduct and takes much longer than a standard police interview. It is also time consuming to train police officers to use this method. This means that it is unlikely that the 'proper' version of the cognitive interview is used.

Another limitation is that some elements of the cognitive interview may be more valuable than others. For example, research has shown that using a combination of 'report everything' and 'context reinstatement' produced better recall than any of the conditions individually.

A final criticism is that police personnel must be trained and this can be expensive and time consuming.

Geiselman (1985) set out to investigate the effectiveness of the cognitive interview. Participants viewed a film of a violent crime and, after 48 hours, were interviewed by a policeman using one of three methods: the cognitive interview; a standard interview used by the Los Angeles Police; or an interview using hypnosis.

The number of facts accurately recalled, and the number of errors made were recorded. The average number of correctly recalled facts for the cognitive interview was 41.2, for hypnosis it was 38.0 and for the standard interview it was 29.4.

A-Level Revision Notes AQA(A)
Social Influence
Attachment
Psychopathology
Approaches
Biopsychology
Issues and Debates

Legitimacy of the Authority Figure (AO3)

People tend to obey others if they recognise their authority as morally right and / or legally based (i.e. legitimate). The experimenter has legitimate authority as he has scientific status.

Situational Factors (AO3)

> The Milgram experiment was carried out many times whereby Milgram varied the basic procedure (changed the IV). By doing this Milgram could identify which **situational factors** affected obedience (the DV).
>
> Obedience was measured by how many participants shocked to the maximum 450 volts (65% in the original study).

Status of Location

Milgram's obedience experiment was conducted at Yale, a prestigious university in America. The high status of the university gave the study credibility and respect in the eyes of the participants, thus making them more likely to obey.

When Milgram moved his experiment to a set of run-down offices rather than the impressive Yale University obedience dropped to 47.5%.

This suggests that status of location effects obedience.

Authority Figure Wearing a Uniform

Milgram's experimenter (Mr. Williams) wore a laboratory coat (a symbol of scientific expertise) which gave him a high status.

But when the experimenter dressed in everyday clothes obedience was very low. The uniform of the authority figure can give them status.

Proximity of Authority Figure

People are more likely be obey an authority figure who is in close proximity (i.e. nearby). In Milgram's study the experimenter was in the same room as the participant (i.e. teacher).

If the authority figure is distant it is easier to resistant their orders. When the experimenter instructed and prompted the

teacher by telephone from another room, obedience fell to 20.5%.

Many participants cheated and missed out shocks or gave less voltage than ordered to by the experimenter.

Dispositional Explanation: Authoritarian Personality (AO1/AO3)

Adorno felt that personality (i.e. dispositional) factors rather than situational (i.e. environmental) factors could explain obedience.

He proposed that there was such a thing as an authoritarian personality, i.e. a person who favours an authoritarian social system, and admires obedience to authority figures.

One of the various characteristics of the authoritarian personality was that the individual is hostile to those who are of inferior status, but obedient of people with high status.

Adorno believed that this was because the individual in question was not able to express hostility towards their parents (for being strict and critical). Consequently, the person would then displace this aggression / hostility onto safer targets, namely those who are weaker, such as ethnic minorities.

Exam Tip

If you have an essay question on a dispositional explanation, describe the Authoritarian Personality theory and use the situational explanations (e.g. uniform) as criticism to the theory.

Resistance to Social Influence

> Independent behaviour is a term that psychologists use to describe behaviour that seems not be influenced by other people. This happens when a person resists the pressures to conform or obey.

Social Support (AO1/AO3)

In one of Asch's experimental variations he showed that the presence of a dissident (a confederate who did not conform) led to a decrease in the conformity levels in true participants.

This is thought to be because the presence of a dissident gave the true participant social support and made them feel more confident in their own decision and more confident in rejecting the majority position.

Social support also decreases obedience to authority. In a variation of Milgram' study two other participants (confederates) were also teachers but refused to obey. Confederate 1 stopped at 150 volts and confederate 2 stopped at 210 volts. The presence of others who are seen to disobey the authority figure reduced the level of obedience to 10%.

Locus of Control (AO1/AO3)

The term 'Locus of control' refers to how much control a person feels they have in their own behaviour. A person can either have an internal locus of control or an external locus of control.

People with a high internal locus of control perceive (see) themselves as having a great deal of personal control over their behaviour and are therefore more likely to take responsibility for the way they behave. For example, I did well on the exams because I revised extremely hard.

In contrast a person with a high external locus of control perceive their behaviours as being a result of external influences or luck – e.g. I did well on the test because it was easy.

Research has shown that people with an internal locus of control tend to be less conforming and less obedient (i.e. more independent).

Rotter proposes that people with internal locus of control are better at resisting social pressure to conform or obey, perhaps because they feel responsible for their actions.

Minority Influence

> Independent behaviour is a term that psychologists use to describe behaviour that seems not be influenced by other people. This happens when a person resists the pressures to conform or obey.

Consistency (A01/AO3)

Moscovici stated that being consistent and unchanging in a view is more likely to influence the majority than if a minority is inconsistent and chops and changes their mind.

A distinction can be made between two forms of consistency:

> (a) **Diachronic Consistency** – i.e. consistency over time – the majority sticks to its guns, doesn't modify its views.
> (b) **Synchronic Consistency** – i.e. consistency between its members – all members agree and back each other up.

Consistency may be important because:

> 1. Confronted with a consistent opposition, members of the majority will sit up, take notice, and rethink their position (i.e. the minority focuses attention on itself).
>
> 2. A consistent minority disrupts established norms and creates uncertainty, doubt and conflict.

Moscovici's Slide Study (AO1)

Procedure

Moscovici conducted an experiment in which female participants were shown 36 blue slides of different intensity and asked to report the colours. There were two confederates (the minority) and four participants (the majority).

In the first part of the experiment the two confederates answered green for each of the 36 slides. They were totally consistent in their responses.

In the second part of the experiment they answered green 24 times and blue 12 times. In this case they were inconsistent in their answers. A control group was also used consisting of participants only – no confederates.

Findings

When the confederates were consistent in their answers about 8% of participants said the slides were green. When the confederates answered inconsistently about 1% of participants Said the slides were green.

Commitment (Ao1/AO3)

When the majority is confronted with someone with self-confidence and dedication to take a popular stand and refuses to back own, they may assume that he or she has a point.

Flexibility (Ao1/AO3)

Some researchers have questioned whether consistency alone is enough for a minority to influence a majority. They argue that the key is how the majority interprets consistency. If the consistent minority are seen as inflexible, rigid, uncompromising and dogmatic, they will be unlikely to change the views of the majority. However, if they appear flexible and compromising, they are likely to be seen as less extreme, as more moderate, cooperative and reasonable. As a result, they will have a better chance of changing majority views.

Nemeth conducted an experiment using a mock (i.e. pretend) jury in which groups of three participants and one confederate had to decide on the amount of compensation to be given to the victim of a ski-lift accident. When the consistent minority (the confederate) argued for a very low amount and refused to change his position, he had no effect on the majority. However, when he compromised and moved some way towards the majority position, the majority also compromised and changed their view.

Social Change

> Social change occurs when a whole society adopts a new belief or behaviour which then becomes widely accepted as the 'norm'. Social influence processes involved in social change include minority influence, internal locus of control and disobedience to authority.

Social change is usually a result of minority influence. This is when a small group of people (the minority) manage to persuade the majority to adopt their point of view.

This also links to independent behaviour, because the minority resists pressures to conform and/or obey. Usually the minority have an internal locus of control.

Moscovici found that **consistency** is the most important factor in deciding whether the minority are influential or not. This means that the minority must be clear on what they are asking for and not change their minds, or disagree amongst themselves. This creates uncertainty amongst the majority.

It has been found that once the minority begin to persuade people round to their way of thinking, a **snowball effect** begins to happen. This means that more and more people adopt the

minority opinion, until gradually the minority becomes the majority. At this point, the people who have not changed their opinion are the minority, and they will often conform to the majority view as a result of group pressures.

The majority opinion then becomes law, and people have to obey this law. Once this happens, the minority opinion has become the dominant position in society, and people do often not even remember where the opinion originated from. This is a process known as **crypto amnesia**.

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