Postman's Paired-word Experiment
http://www.simplypsychology.org/forgetting.html

Interference Theory
If you had asked psychologists during the 1930s, 1940s, or 1950s what caused forgetting you would probably have received the answer "**Interference**".

It was assumed that memory can be disrupted or interfered with by what we have previously learned or by what we will learn in the future. This idea suggests that information in long term memory may become confused or combined with other information during encoding thus distorting or disrupting memories.

Interference theory states that forgetting occurs because memories interfere with and disrupt one another, in other words forgetting occurs because of interference from other memories (Baddeley, 1999). There are two ways in which interference can cause forgetting:

1. **Proactive interference** (pro=forward) occurs when you cannot learn a new task because of an old task that had been learnt. When what we already know interferes with what we are currently learning – where old memories disrupt new memories.

2. **Retroactive interference** (retro=backward) occurs when you forget a previously learnt task due to the learning of a new task. 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.

Previous learning can sometimes interfere with new learning (e.g. difficulties we have with foreign currency when travelling abroad). Also new learning can sometimes cause confusion with previous learning. (Starting French may affect our memory of previously learned Spanish vocabulary).

In the short term memory interference can occur in the form of distractions so that we don't get the chance to process the information properly in the first place. (e.g. someone using a loud drill just outside the door of the classroom.)

Key study: Postman (1960)
Aim: To investigate how retroactive interference affects learning. In other words, to investigate whether information you have recently received interferes with the ability to recall something you learned earlier.

Method: A lab experiment was used. 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.

Results: The recall of the control group was more accurate than that of the experimental group.

Conclusion: This suggests that learning items in the second list interfered with participants' ability to recall the list. This is an example of retroactive interference.

Evaluation
Although proactive and retroactive interference are reliable and robust effects, there are a number of problems with interference theory as an explanation of forgetting.
First, interference theory tells us little about the cognitive processes involved in forgetting. Secondly, the majority of 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 fairly infrequently in everyday life (i.e. low ecological validity). As a result, it may not be possible to generalize from the findings.
Baddeley (1990) states that the tasks given to subjects are too close to each other and, in real life; these kinds of events are more spaced out. Nevertheless, recent research has attempted to address this by investigating 'real-life' events and has provided support for interference theory. However, there is no doubt that interference plays a role in forgetting, but how much forgetting can be attributed to interference remains unclear (Anderson, 2000).