



## LEVELS OF PROCESSING FRAMEWORK

Craik and Lockhart (1972)

**Craik and Lockhart** (1972) put forward the **levels of processing** framework for memory because of problems which they found with the multi-store model. They suggested that memory was actually dependent upon the level of processing of the information, rather than being in different stores with different features.

Their framework suggests that information is more readily transferred to the long-term memory if it is *considered*, *understood* and related to past memories to gain **meaning** (than if it is merely *repeated*). The degree of consideration of information was given the term **depth of processing**, where the deeper the information is processed, the longer the **memory trace** would last.

Craik and Lockhart gave three examples of levels which verbal information can be processed:

- **structural** – this is **shallow** processing, looking at what the words only *look* like
- **phonetic** - processing the *sound* of the word
- **semantic** – this is **deep** processing, considering the *meaning* of the word

### MODIFICATIONS TO THE FRAMEWORK

Many researchers became interested in exactly what produced *deep processing*:

- **elaboration**: Craik and Tulving (1975) found complex semantic processing produced better recall  
e.g. “The great bird swooped down and carried off the struggling \_\_\_” produced better recall than “She cooked the \_\_\_”
- **distinctiveness**: Eysenck and Eysenck (1980) found that words processed phonetically even were better remembered when they were distinctive or unusual
- **effort**: Tyler et al. (1979) found there was better recall with difficult anagrams than simple anagrams  
e.g. “ORTODC” had better recall than “DOCTRO”

The table below shows a summary of the framework:

Feature	Explanation
Memory trace	Comes with depth of processing or degree of elaboration: no depth of processing means no memory trace
Deeper analysis	Leaves a more persistent memory trace
Rehearsal in primary memory	Holds information but leaves no memory trace
When attention is diverted	Information is lost at a rate that depends on the level of analysis

### EVALUATION OF THE FRAMEWORK

Strengths:

- ✓ There is evidence for the framework, such as Craik and Tulving (see 2.5 Craik and Tulving (1975))
- ✓ It links research into memory with research into perception and selective attention; it focuses on information processing and the whole process; this means it is a stronger explanation than the multi-store model, because more studies can be explained by it

Weaknesses:

- ✗ Depth of processing also tends to mean more time spent processing; it might be that it is the **length of time** spent processing which affects the memory trace, not the *depth of processing*
- ✗ There may be more effort involved in “deeper” processing and the greater effort might account for the better recall; the term “deep” is not well defined by Craik and Lockhart, it could be time spent processing, effort involved or using past experiences and adding meaning