

## Salvation: By Grace or By Works

### IX. Repetition Enlarges a Trace into a Path of Least Resistance Summary

Every learning experience plus every review, every repetition, and every application, causes the memory trace to enlarge. This enlargement involves the following changes in the neural structure of the brain:

- a. Axonal and dendritic branches elongate;
- b. existing synapses becomes more excited;
- c. new synapses are created;
- d. existing connections are rearranged while new ones come together; and
- e. the electrochemical signal is intensified.

### Conclusion

As each repetition in learning occurs, alterations are made in the memory trace causing it to become more and more efficient. The more you study the subject, the better you understand it, the easier it is to recall, and the more it becomes a part of your lifestyle.

As an example, we constructed a memory trace for the doctrine of salvation and eternal security using John 3:16 as the initial input. We enlarged it by subsequently adding information from Ephesians 2:8, Ephesians 2:9, Romans 8:1, Galatians 4:6, Galatians 4:7, and 1 Peter 1:3, 1 Peter 1:4, 1 Peter 1:5.

We concluded that the believer at this point was doctrinally invincible on the subject of his salvation and eternal security and noted 2 Corinthians 3:3 and Psalm 119:105.

### X. Memories are Made of This Summary

There are several different classifications of memories: episodic: specific events; semantic: meaning; declarative: content; iconic: visual short-term; and procedural: motor skills. These classifications of knowledge are retained in the brain briefly in short-term memory, or permanently in long-term memory.

No matter which classification of learning is involved, if long-term memory results, then a permanent change occurs in the neurons of the brain, most emphatically at their synapses.

When you learn, four measurable changes occur in the neurons and their synapses creating a memory trace:

- a. **Morphological:** Modifications to the structure of neurons and their synaptic connections may be observed under an electron microscope.
- b. **Dynamic:** Changes in blood flow and oxygen uptake by the neurons during the processes of learning or of recall can be measured.
- c. **Biochemical:** Processes which lead to the morphological changes can be measured in body chemistry, specifically the synthesis of new proteins which are then inserted into the synapses by means of complex intercellular signals.
- d. **Physiological:** Changed electrical properties of the neurons can be measured.

**Conclusion**

Learning causes the brain to expand its capacity for thought by initiating permanent change in the tissue of the brain. This change results in the creation of memory.