



## Second Memory Model

### Depth of Processing

Psychology 390

Psychology of Learning

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### Many Theorists

- Craik and Lockhart
- Craik and Tulving
- Others

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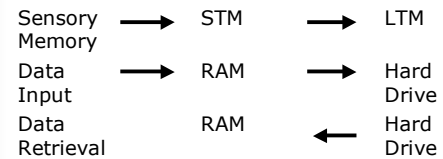
### Different Approach

- Relies on a computer model of memory.
- In many ways is similar to stage theory.
- Major difference is the way researchers view the storage process.
- Believe it is a more active process.

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### Uses a Computer Analogy



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### Memories are Processed

- Not held in storage by some brain structure.
- Craik and Lockhart contend it is not the storage capacity of STM, but the amount of information that can be processed at one time.
- Is a processing limitation.
- Similar to RAM limitations

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### How Information Enters the System

- Depth of Processing looks at
- Shallow vs. Deep processing

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### Shallow Processing

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- You encode the superficial characteristics of a stimulus (e.g., sound).
- Doesn't require lots of work.

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### Deep Processing

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- Refers to determining the meaning of the sound.

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### Important Components

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- Organization
- Chunking information
- Mnemonics
- Imagery in general

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### Schemas

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- Helps the processing of meaning
- Generally, the more knowledge you have about an object, the easier it becomes to recall.
- Why? You develop a framework to recall the information.

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### Schemas

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- Schema's help to enhance memory
- e.g., Identify the following
  - Animal
  - Walks on legs
  - Lives outside
  - Eats grass, apples, etc
- What is it?

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### Many Possibilities

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### Narrow the Possibilities

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- Says “Moo”
- We know it is a cow.
- Says “Baa”
- We know it is a sheep.

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### Narrow the Possibilities

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The more associations you have, the better the recall.

All aspects of schemas represent deeper processing.

The more associations we make, the deeper the processing.

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### Narrow the Possibilities

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Reason you perform better on overlearning tasks and other tasks is the processing and schema's you develop are deeper.

Generally, organization is related to deeper processing.

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### Narrow the Possibilities

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- So, Schema's refer to a general cognitive structure into which data and events can be entered.

But are broad and not many specifics.

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### Scripts

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- Are related to schema's.
- They describe a characteristic of a behavior in a particular setting.
  - e.g., Restaurant
  - Being seated
  - Scanning the menu
  - Ordering food
  - Eating
  - Paying

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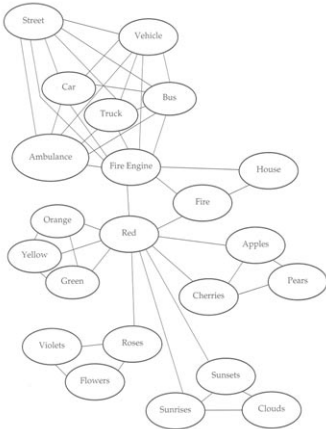
### Spreading Activation

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- Is currently the best.
- Developed by Collins and Loftus
  - Words and concepts are linked through a complex system of relationships.
  - Words and concepts are called nodes
    - Associations between nodes are indicated by lines or arrows
  - The shorter the line, the stronger the association or link, and the stronger the activation.

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## Spreading Activation



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