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| (Connectionism) | 1880 - 1900 | **Connectionism** (Thorndike) | - learning is incremental strengthening of the S-R association
- **S-R associations** are strengthened through repetition
- outcome of a S-R event can strengthen or weaken the connection
- potential to learn leads to frustration if not satisfied |
| Behaviorism | 1900 - 1910 | **Classical conditioning** (Pavlov) | - learning is a **visible change** in one's behavior
- learning is manifested in a **natural reflex** reaction on an associated environmental stimulus
- emotional response can also be learned or conditioned |
| | 1920 - 1930 | **Contiguity theory** (Guthrie) | - behavior is formed by a **series of movements** which are learned through S-R associations
- a close **temporal relationship** between S and R is necessary for learning to occur
- learning occurs on **first experienced instance** of the stimulus
- reinforcements (reward or punishment) do not influence the strength of this connection |
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|                       | 1930 - 1940    | Sign learning (Tolman)                      | - suggests studying behavior on the molar level (whole, purposeful, goal-directed behaviors)  
|                       |                |                                             | - learning is acquisition of knowledge through meaningful behavior, not mechanical moves  
|                       |                |                                             | - rewards or punishments can only be used as motivators for performance, not learning  
|                       |                |                                             | - animals are not simple mechanisms, but intelligent organisms capable of cognitive processes  
| Neo-behaviorism       |                | Drive reduction theory (Hull)               | - mathematical formulas attempting to explain behavior and the likelihood of its appearance  
|                       |                |                                             | - drive (a stimulus in form of a biological need) results in behavior in order to satisfy it  
|                       |                |                                             | - reinforced S-R learning through the reduction of a biological drive  
|                       |                |                                             | - cognitive factors need to be taken into account when explaining human learning  
|                       | 1950 - 1960    | Operant conditioning (Skinner)              | - reinforced learning of new behaviors, not just shaping reflexes  
|                       |                |                                             | - different reinforcement intervals have different effect  
|                       |                |                                             | - complex behaviors are learned through more simple ones  
|                       |                | Stimulus sampling theory (Estes)            | - a statistical learning theory; set of formulas and axioms  
|                       |                |                                             | - S-R association is learned in a single trial; learning results in accumulated S-R associations  
|                       |                |                                             | - reinforcement has to do with the performance, not with learning  
|                       |                |                                             | - later included memory as a factor in his theory  

1) Approximate decade in which the theory was introduced  
2) Connectionism is not considered a learning paradigm, but is mentioned due to its influence on behaviorist ideas  
3) Stimulus-Response

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