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| (Connectionism) 2) | 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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| Neo-behaviorism     | 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 |
|                     | 1950 - 1960 | 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 |
|                     |         | 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