

**DIFFERENCES BETWEEN CLASSICAL AND OPERANT CONDITIONING**

<b>Paradigm</b>	<b>Classical</b> CS (CR) US-----→UR	<b>Operant</b> S <sub>D</sub> -----R-→S <sub>r</sub> +
<i>Procedural Differences</i>		
Where is association?	Before response	After response
What causes response?	Evoked by CS or US	Learner emits response
Who controls outcome?	Experimenter or environment	Learner
Type of contingency	Between CS and US	Between response and reinforcer
Timing	Crucial, short intervals better (optimum= ½ to 2 sec)	Short delays better but not essential
Nature of signal	CS brief, sudden, one per CR	S <sub>D</sub> longer, may be present for several responses
Correlation of signal and response before learning	CS – CR r= 0	S <sub>D</sub> = R r > 0 (baseline)
Deprivation	Not necessary	Necessary; longer deprivation makes reinforcers more effective
Measurement	Strength or latency	Rate or latency
<i>Systematic Differences</i>		

Type of response	Reflex or emotions	Actions or movements
Body parts	Glands, smooth muscles (viscera)	Skeletal (striped) muscles
Nervous system parts	Autonomic (cranial nerves), involuntary	Somatic (spinal nerves), voluntary