
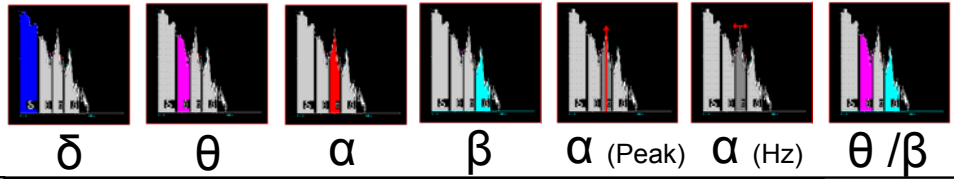































# Cognitive Correlates of EEG

Negative Relationship  Positive Relationship

EO = Eyes Open EEG Task  
EC = Eyes Closed EEG Task



	$\delta$	$\theta$	$\alpha$	$\beta$	$\alpha$ (Peak)	$\alpha$ (Hz)	$\theta / \beta$
 <b>Motor Tapping</b>							
 <b>Choice Reaction Time</b>							
 <b>Time Estimation</b>							
 <b>Span of Visual Memory</b>							
 <b>Spot the Real Word</b>							
 <b>Digit Span</b>							
 <b>Memory Recall</b>							
 <b>Verbal Interference</b>							
 <b>Word Generation</b>							
 <b>Visual Working Memory</b>							
 <b>Switching of Attention</b>							
 <b>Go No-Go</b>							
 <b>Executive Maze</b>							

# Cognitive Correlates of Heart Rate Variability


Increase in variability associated with a decrease in performance



Increase in variability associated with better performance

## Resting HR Variability

## Task HR Variability

 <b>Motor Tapping</b>		
 <b>Choice Reaction Time</b>		
 <b>Time Estimation</b>		
 <b>Span of Visual Memory</b>		
 <b>Spot the Real Word</b>		
 <b>Digit Span</b>		
 <b>Memory Recall</b>		
 <b>Verbal Interference</b>		
 <b>Word Generation</b>		
 <b>Visual Working Memory</b>		
 <b>Switching of Attention</b>		
 <b>Go No-Go</b>		
 <b>Executive Maze</b>		

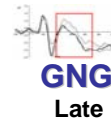
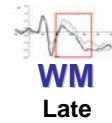
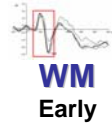
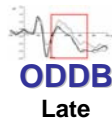
# Cognitive Correlates of ERPs

Decrease in amplitude/latency associated with better performance




Increase in amp/lat associated with better performance

WM = Working Memory ERP  
 ODDB = Oddball ERP  
 GNG = Go No-Go ERP  
 A = Amplitude, L = Latency  
 B = Background, T = Target  
 G = 'Go', N = 'No-Go'



<b>Motor Tapping</b>	N1 BT A	N2 P3 T L		N2 B L		N2 G L
<b>Choice Reaction Time</b>	N2 T L		N1 B A	P3 T A	N1 G A	N2 G A
<b>Time Estimation</b>					P2 G A	N2 G A
<b>Span of Visual Memory</b>					P2 N A	
<b>Spot the Real Word</b>		N2 T A				P3 G A
<b>Digit Span</b>		P3 T A	P2 B A			P3 G A
<b>Memory Recall</b>					N1 G A	P3 G A
<b>Verbal Interference</b>		P3 T A	N1 T A	N2 B A	P2 G A	P3 G A
<b>Word Generation</b>	P2 T L	N2 T L				
<b>Visual Working Memory</b>	N1 TB A	P3 T A		P3 P3 TB A L T		N2 P3 B L A TB
<b>Switching of Attention</b>		P3 T A	N1 T A	N2 B A	N1 G A	N2 G L
<b>Go No-Go</b>			N1 B L	P3 T A		P3 P3 T A L B
<b>Executive Maze</b>	N1 B L		N1 B A	N2 BT A	P2 BT A	N2 TB A

# Cognitive Correlates of MRI

Negative Relationship  Positive Relationship

Total



grey

Cortical



Cingulate



Frontal



Occipital

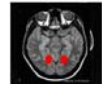


Temporal

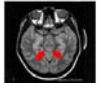


Parietal





























































Sub-Cortical



Hippocampus



Amygdala

	Total	Cingulate	Frontal	Occipital	Temporal	Parietal	Hippocampus	Amygdala
 <b>Motor Tapping</b>								
 <b>Choice Reaction Time</b>								
 <b>Time Estimation</b>								
 <b>Span of Visual Memory</b>								
 <b>Spot the Real Word</b>								
 <b>Digit Span</b>								
 <b>Memory Recall</b>								
 <b>Verbal Interference</b>								
 <b>Word Generation</b>								
 <b>Visual Working Memory</b>								
 <b>Switching of Attention</b>								
 <b>Go No-Go</b>								
 <b>Executive Maze</b>	