

**Cerebral Hemisphere Lateralization:
Relative Specializations in Humans for
Cognitive Modes/Processing Styles, Tasks, and Stimuli**
(A Work in Progress – 3/19/06 – Jay Gould)

LEFT HEMISPHERE SUPERIORITIES	RIGHT HEMISPHERE SUPERIORITIES
Logical/Propositional/Concrete	Emotional/Intuitive/Imaginative/Creative
Analytic	Synthetic & Connecting Disparate Concepts
Sequential/Serial (perceptual and motor)	Holistic/Gestalt/Parallel & also Lateral Thinking
Discrete temporal analysis	Form perception
High freq. visuospatial & auditory information	Low freq. visuospatial & auditory information
Local information	Global information
Detail oriented (e.g., the trees)	General, overall, big-picture oriented (the forest)
Foreground	Background,
Working Memory's Phonological Loop	Working Memory's Visuospatial Sketchpad
Language (overall), esp. speech production	Spatial relationships (overall), attention, melody
Language: decoding of literal meaning	Language: using context for meaning
Language: grammar/syntax & (to less extent) lexicon/semantics	Language: metaphor, humor, emotion, & prosody
Spatial relations: categorical	Spatial relations: coordinate
"What" visual pathway processing (primarily)	"How" visual pathway processing (primarily)
Categories/prototypes of objects & events	Exemplars/specific objects & events
Skeletal motor	Visceral motor
Structured tasks	Open-ended tasks
Approach behaviors	Withdrawal behaviors
Emotions: positive, mania; engaging	Emotions: Negative, depression; inactivity
Facial expression, when voluntary	Facial perception, especially when unfamiliar
Encoding information (most forms)	Retrieving information (most forms)
Over-learned material (typically)	Novel material (typically))
Conservative/Conformist: Maintains a stable, internally consistent belief system/schema, preserving the <i>status quo</i> and integrity/stability of the "self"; can use <i>Freudian ego-defense mechanisms</i> of self-delusion involving, e.g., distortion, denial, repression, and/or confabulation; maintains ongoing behavior and prevents indecisiveness/vacillation	Liberal/Revolutionary: Plays " <i>devil's advocate</i> ," looking for global inconsistencies, questioning the status quo, and then generating <i>paradigm shifts</i> (complete revisions of the entire model) when anomalous information reaches a certain threshold; interrupts behavior and produces an <i>orienting response</i> (Ramachandran, 1998, pp. 134-136 [for left & right Col.])
<i>Interpreter</i> : Produces a <i>synthesized internal narrative seeking explanations</i> for internal and external events, i.e., causal explanations, through <i>inferences and elaboration</i> , in order to produce <i>appropriate behavioral responses</i> ; allows for the formation of <i>beliefs</i> : sometimes <i>confabulates</i> . (Gazzaniga, 2002, pp. 672-675),	Maintains <i>veridical record</i> of events
Generative Assembling Device (GAD) for complex sequencing (language, tool use, etc.)	
Autobiographical Memory, i.e., memory of self	
Self Concept: Sense of Self, i.e., an Inner "I"	<->Self Concept: Sense of Self, i.e., an Inner "I"

