

ASPIA
2 March 2019
Burwood NSW (Sydney, Australia)

How and why people with Asperger syndrome think differently: Executive functions and the Asperger sense of time

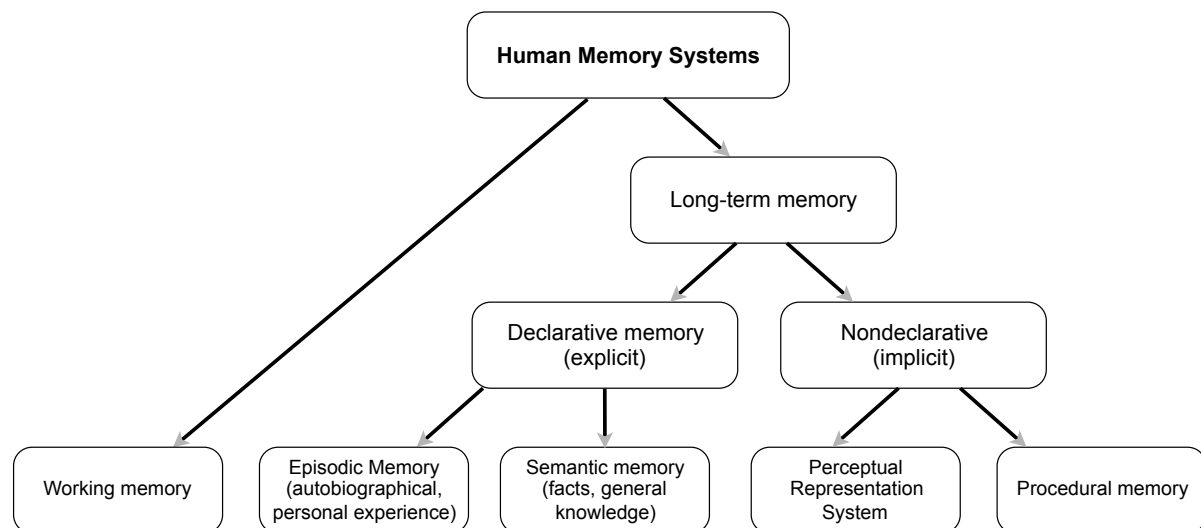
Dr Nola Norris *PhD*
Web: www.nelt.com.au
Email: nola@nelt.com.au

1

Theories of autism

- ◆ Theory of mind
- ◆ Weak central coherence
- ◆ **Executive function**
- ◆ Amygdala theory
- ◆ Enhanced perceptual functioning

2



5 Major Systems of Human Memory and Learning

Schacter & Tulving (1994)

3

Episodic memory <i>weaker</i>	Semantic memory <i>relied upon for explicit thinking</i>	Perceptual memory	Procedural memory
Personal experience	↔ Facts, general knowledge	Raw sensory input	Repetition
Theory of mind, Executive function	One thing at a time, contextless	Being in the moment	Encoded routines
Central coherence	↔ Focus on detail at expense of bigger picture	Enhanced perception	Automaticity
Abstract reasoning	↔ Concrete, literal, <i>black-&-white thinking</i>	Holistic	(lay terms) muscle, tactile or kinaesthetic memory
Cognitive flexibility	↔ Train-tracks thinking rigid, fixed thinking,	Sensory	© 2017 Norris
Relational memory	↔ Single-item memory	Experiential	
Simultaneous processing	Rote memory, recall of discrete data and facts	Sense of familiarity	
Temporality: Subjective time judgements	↔ Time measurement: clocks, calendars	Sensory sensitivities	
Prospective memory			
Source memory: context (location, time, affect)			
Mental time travel	↔ Linear, serial, 'documentary style' first-hand memories		
Self-referential processing	↔ Externally oriented thinking		
Subjective sense of self	Formulaic thinking, i.e., $a + b = c$		
autonoetic consciousness	noetic consciousness	anoetic consciousness	

4

Executive Functions

- Self-organisation
- Planning, sequencing
- Working memory
- Inhibition, impulse control, self-regulation
- Self-reflection
- Decision-making
- Time management
- Prioritising
- Understanding complex or abstract concepts
- Abstract thinking
- Flexibility & adaptability
- Control of attention
- Generalising learning
- Relational thinking 'connecting the dots'
- Theory of mind

5

Time

- Aspies appear to have no sense of time passing
- Retrospective memory
- Prospective memory
- Changes over time
- Changing one's mind
- Growth
- Development
- Understanding
- The 'whiteboard effect' - thinking stuck in time

6