Different thinking and learning styles

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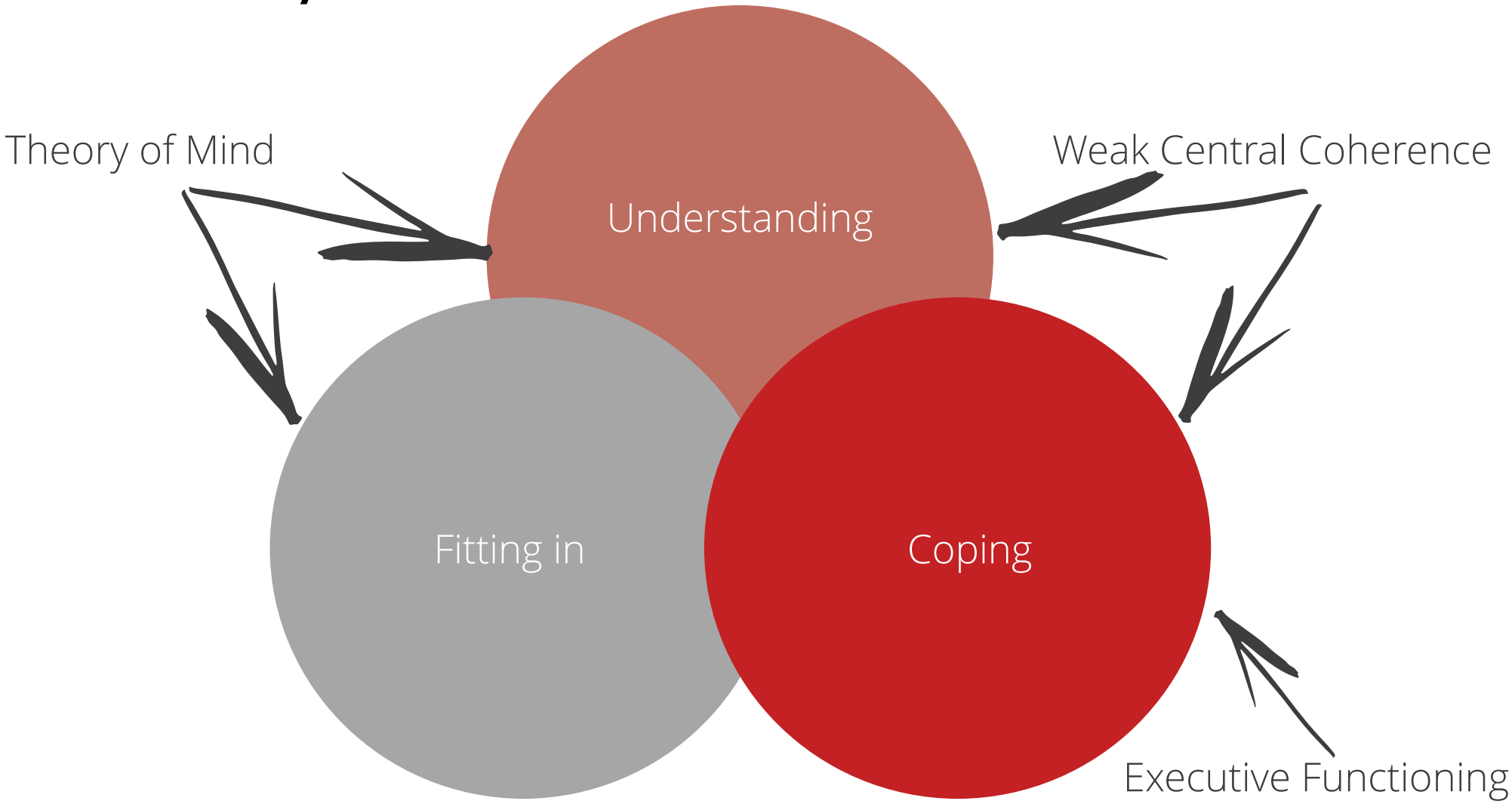
Thinking and learning styles (cognitive differences)



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Executive functioning – what is it?

Executive functions are the cognitive abilities that control and regulate most of what we do in day-to-day life.

Executive functions include the ability to initiate, organise, plan, set goals, solve problems, regulate emotions and monitor behaviour.

Activation

- Organising
- Prioritising
- Activating

Focus

- Sustaining attention
- Shifting focus

Effort

- Regulating alertness
- Sustaining effort
- Processing speed

Emotion

- Managing emotions

Memory

- Utilising working memory
- Accessing recall

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Video

What is Executive Functioning? – 10 min video from Ask an Autistic

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Executive Functioning – how to help

- Learn what your strongest and weakest areas of Executive Functioning are
- Write to-do lists
- Create and use routines
- Take a notebook and pen to meetings and write important information down
- Divide tasks into smaller parts – set 'mini' goals for tasks
- Use Outlook, phone reminders, Post-it notes
- Have an uncluttered workspace
- Accept Outlook meeting requests and check your Outlook calendar daily
- Get plenty of sleep, drink lots of water and make healthy food choices

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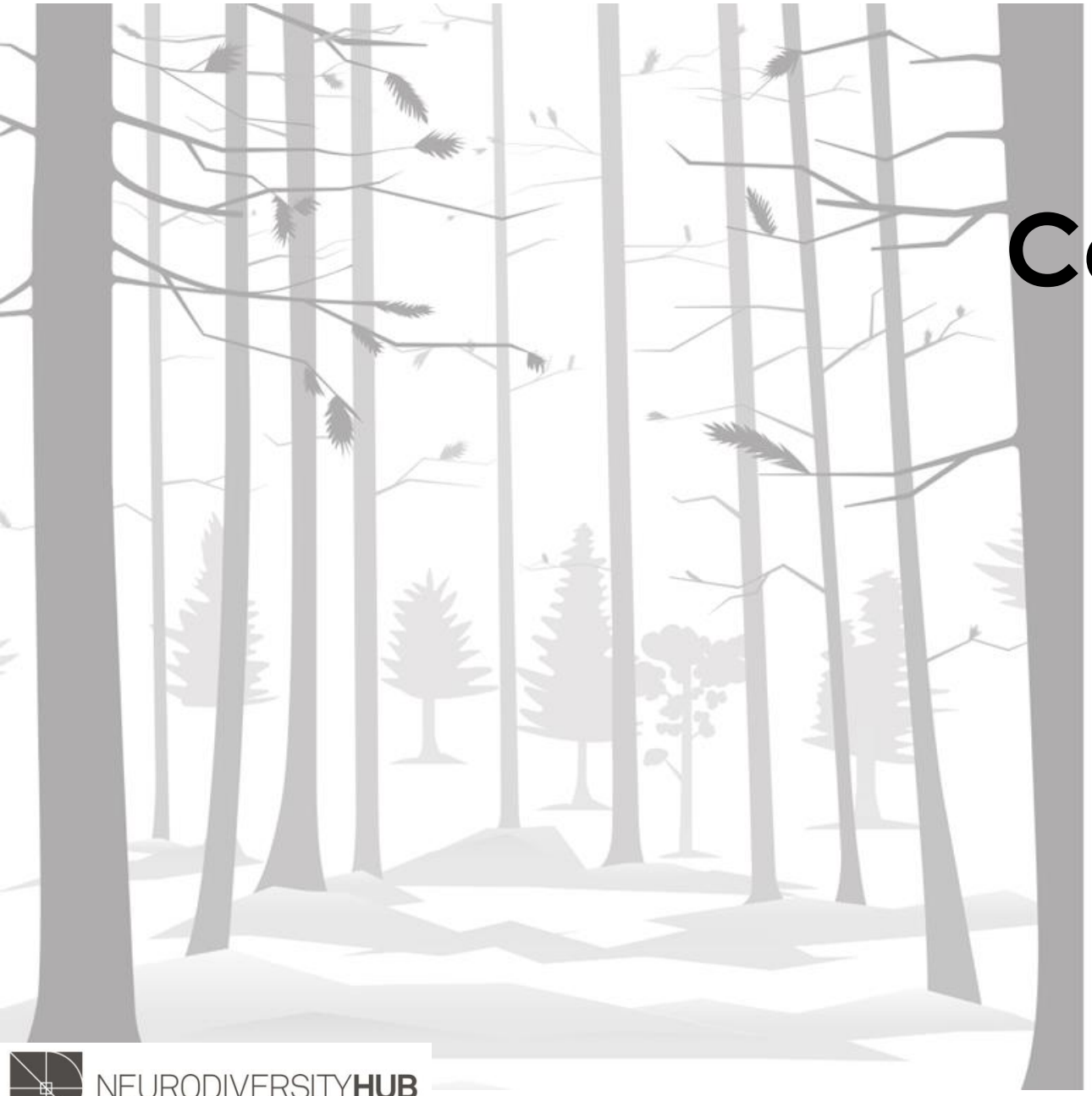
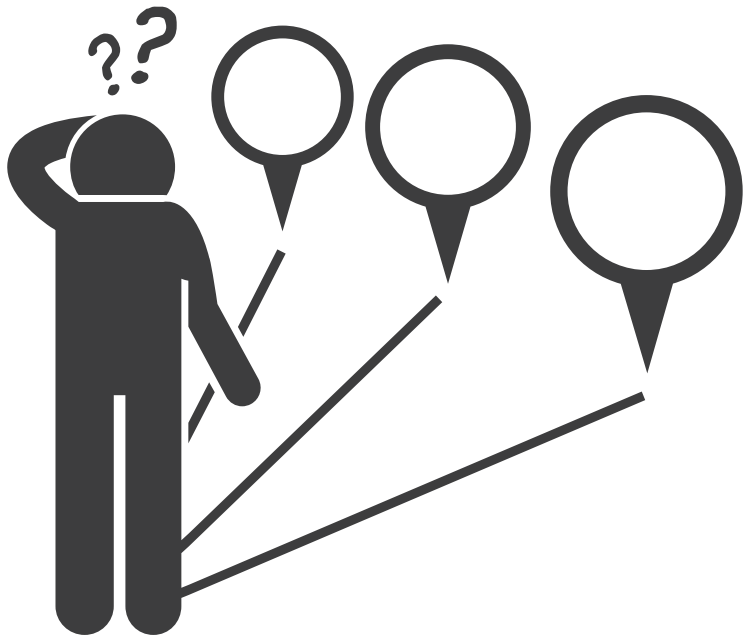


Central coherence

The term “central coherence” describes a person’s ability to determine meaning from a collection of details. People with strong central coherence looking at a large group of trees see a forest, whereas those with weak central coherence see only an assortment of individual trees.

Central coherence – what is it?



- Getting the “gist” of things ...
- Pulling information from different sources to establish a greater understanding.
- Strong coherence = ability to see the ‘whole’
- Weak coherence = a focus on and memory for detail and information in its exact representation:
  - Difficulty reading context
  - Taking things literally
  - Difficulty understanding multiple meanings

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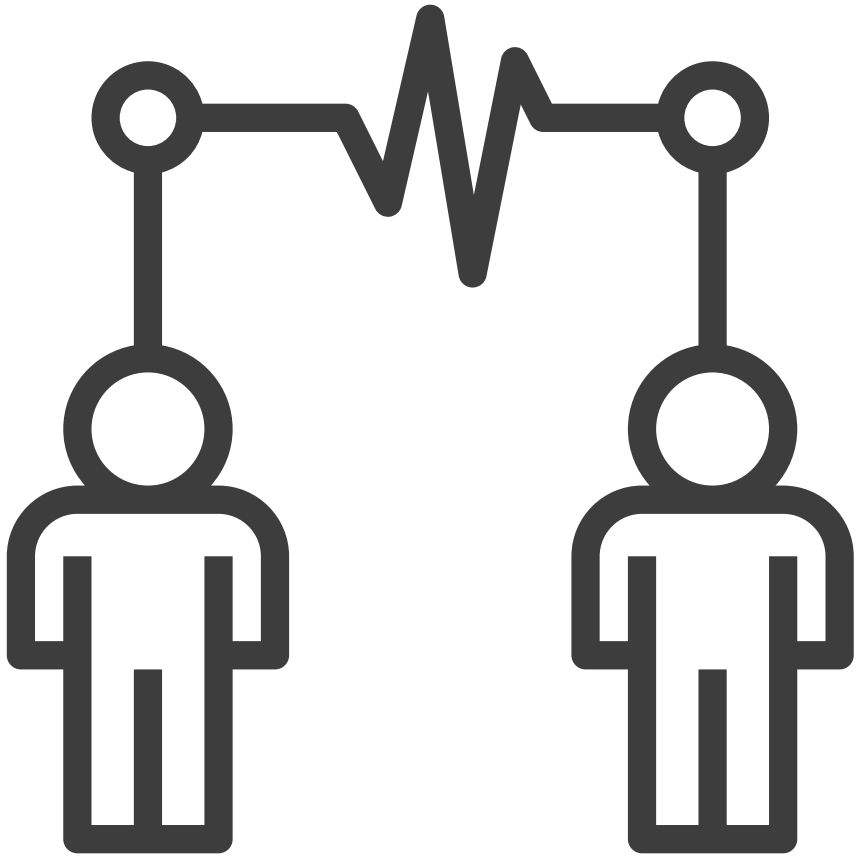
Impacts at work – the good news!



- Detail focused: in the right role, this is a significant strength
- Logical
- Strong pattern recognition
- Undistracted by social situations (for example gossip, politics)
- Honest

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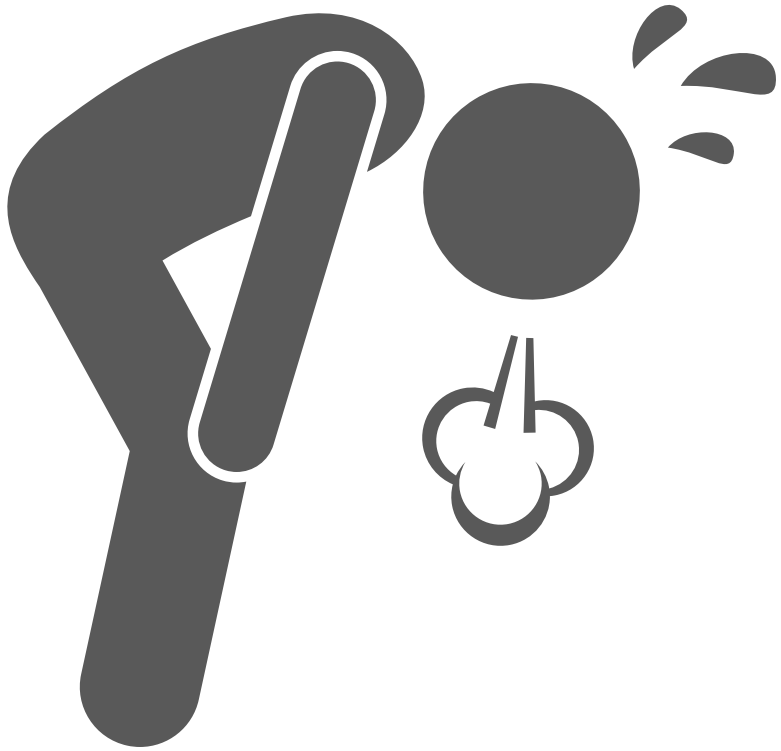
Impacts at work – challenges



- Approaching situations in a detail-oriented fashion – 'Tunnel vision'
- Switching attention can be challenging (because of different neurological anatomy and function)
- Being hyper-focused in conversations and missing the “bigger picture”

  Getting *exhausted* while learning “how to fit in”.
- “Socially appropriate” responses are often rigid and learned
- Taking things literally

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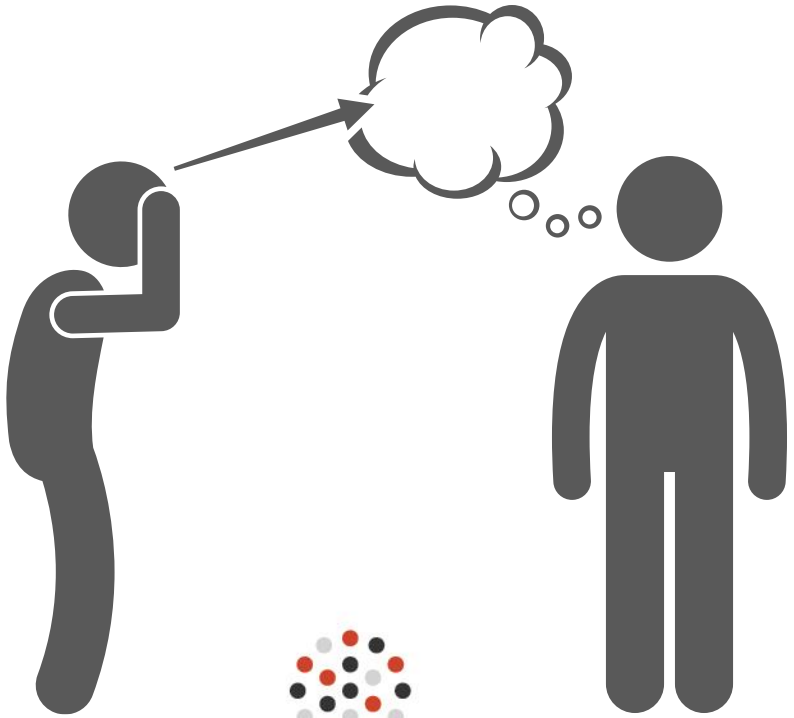
Theory of mind (ToM)

- 'The ability to recognise and understand thoughts, beliefs, desires and intentions of other people in order to make sense of their behaviour and predict what they are going to do next.'
- Also described as **'mindreading'** or **'mindblindness'**

– *Mindblindness,* Simon Baron-Cohen, 1995



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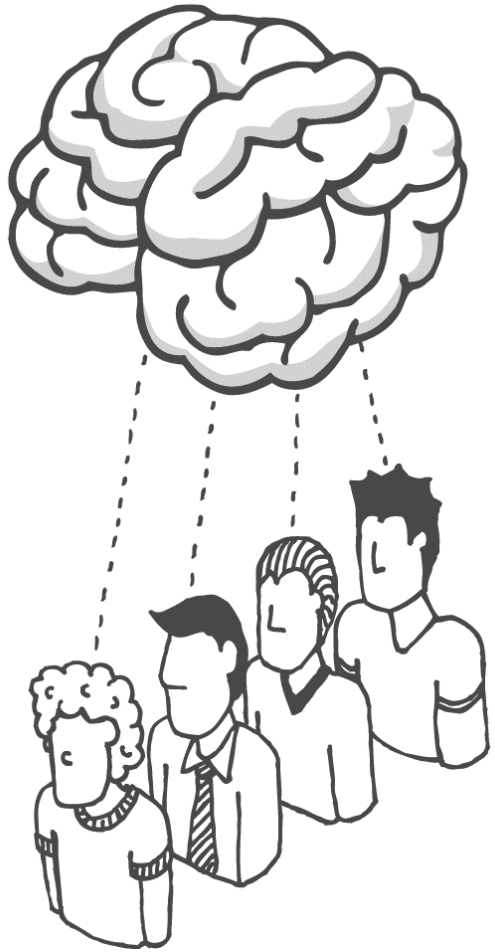
Theory of mind (ToM)



Daily life affected by under-developed ToM:

- Difficulty reading social/emotional messages in someone's eyes
- Making a literal interpretation
- Being considered disrespectful and rude. May not notice others becoming annoyed, doesn't respond to subtle warning signs
- Rigid honesty … greater allegiance to truth and fact rather than to thoughts and feelings of others
- Difficulty distinguishing accidental and deliberate acts
- Solitary problem solving – doesn't seek guidance or help easily

- Ch. 5, *The Complete Guide to Asperger's Syndrome*, Tony Attwood 2006

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Theory of mind (ToM) (cont.)

- Managing conflict requires considerable ToM skills
- Difficulty conceptualising the other person's perspective and priorities
- Having limited persuasion skills
- Tending to be confrontational and rigid
- Being reluctant to change decisions and admit errors
- Being averse to being interrupted
- Having a compulsion for completion
- Lacking knowledge of alternative strategies
- Not recognising the signals of when to stop arguing
- Using intellect rather than intuition, having difficulty understanding the complexity of a social situation
- Reaching physical and mental exhaustion – needing a huge mental effort to process social information

Video – Theory of Mind:

Theory of Mind – 10 min video by Uta Frith

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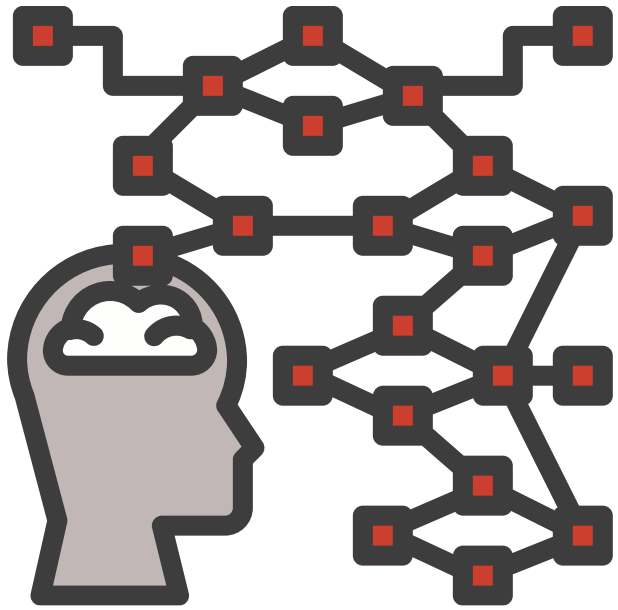
Context – it helps us predict

Context consists of the circumstances and facts that surround a situation, event or action



- Context helps us understand the variables relating to a situation, task or stimulus
- Context is required to adapt our learning to different situations or environments
- Contextual sensitivity is crucial for social interaction, communication and flexibility in thought and behaviour
- Understanding context helps you minimise confusion and make sense of the world
- Understanding context helps you predict
- The brain will guess without context
- The autistic brain can lack fast implicit guessing. More ‘absolute’ thinking is involved.

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Sensory differences

Sensory information includes things you see, hear, smell, taste or touch. Sensory overload occurs when one or more of the body's senses experiences over-stimulation from the environment.

Signs of sensory processing challenges:

- Hypersensitivity to sensory input
- Oversensitivity to sounds, sights, textures flavours, smells and other sensory input
- Difficulty focusing due to competing sensory input
- Inadequate multi-sensory integration processed in order to provide appropriate responses to the demands of the environment.

Our Senses

Sight

Smell

Taste

Balance

Hearing

Touch

Body position awareness

Body signal awareness

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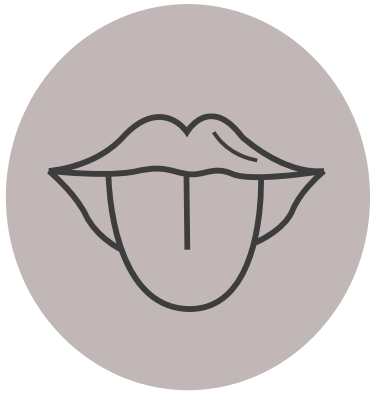
Our Senses

Vision or sight: the visual system tells us the shape, colour and size of an object as well as how far away that object is. In our eyes, we have two types of photoreceptors: cones and rods. Rods are responsible for detecting movement, whereas cones perceive colour and sharp image.

Olfactory or smell: this system links to the areas of the brain that are associated with emotional response and memories. Olfactory input is received through receptors in the nostril in the form of hair or cilia.



Gustatory or taste: taste input occurs in the form of receptors in the taste buds of the mouth. However, taste has a strong link to smell. When you taste something, you are also smelling it.

Auditory or hearing: the auditory sense provides us with sounds from the environment, from a conversation with a friend to the background sounds
of the air conditioning.
Auditory input comes in waves.

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Our Senses

Tactile or touch: touch input occurs through sensory receptors in the skin that are activated when a stimulus from the environment contacts the skin. It is important to note that different areas of the body have a different concentration of receptors, for example the face, hands and feet are generally more sensitive than other areas of the body.

Vestibular or balance is gained through detecting the position of your head. Semi-circular canals in the inner ear work in three different planes of the body to detect movement and maintain stability during movement.

Proprioception is the awareness of your body in space, for example when walking you maintain an upright posture and place one foot in front of the other to move yourself forward. Proprioceptors are in the muscles and joints to detect change in movement and position.

Interoception is the mindful awareness of internal body signals. (Interoception was first mentioned in Module 11 – Mental health)

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Videos – Sensory Processing:

How Sensory Processing effects Executive Functioning – 8 min video from Asperger's from the Inside

My Sensory Needs - 8 min video from Asperger's from the Inside

Autism and sensory sensitivity – 1 min video from the National Autistic Society

What is Sensory Processing Disorder – 10 min video from Ask an Autistic

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End of Module Reflections

(1) What are your strengths in:

- Executive Functioning?
- Central Coherence?
- Theory of Mind?
- How could these strengths be used in your work role?

(2) Where do you identify your difficulties in:

- Executive Functioning?
- Central Coherence?
- Theory of Mind?
- Sensory Processing?
- What are some strategies that you could implement in the workplace to help in these areas?