



Sensory Information, Sensory Integration & Strategic Functioning

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Sensory Processing

Sensory Information



Modality, Threshold & Arousal, Location, Duration

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Sensory Processing

Sensory Systems

Proximal
Tactile
Proprioceptive
Vestibular
Gustatory
Inception

Distal
Olfactory
Auditory
Visual

Sensory Integration

Modulation (Responsiveness)
Threshold & Arousal
Strategic Behaviour
Balance of Excitation and Inhibition

Discrimination (Interpretation)
Spatial Temporal Qualities
Strategic Behaviour
Enhance Awareness

Organised Adaptive Behaviour

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Dysfunction - Modulation



**Over-Responsiveness
(low threshold)**

**Under-Responsiveness
(high threshold)**

Fluctuating Responsiveness

Dysfunction - Modulation

Behavioural Responses to External Stimulation:

- **Over-responsiveness** e.g. might claim to be assaulted
- **Under-responsiveness** e.g. apathy, lethargic as a result of failure to notice



Dysfunction - Modulation

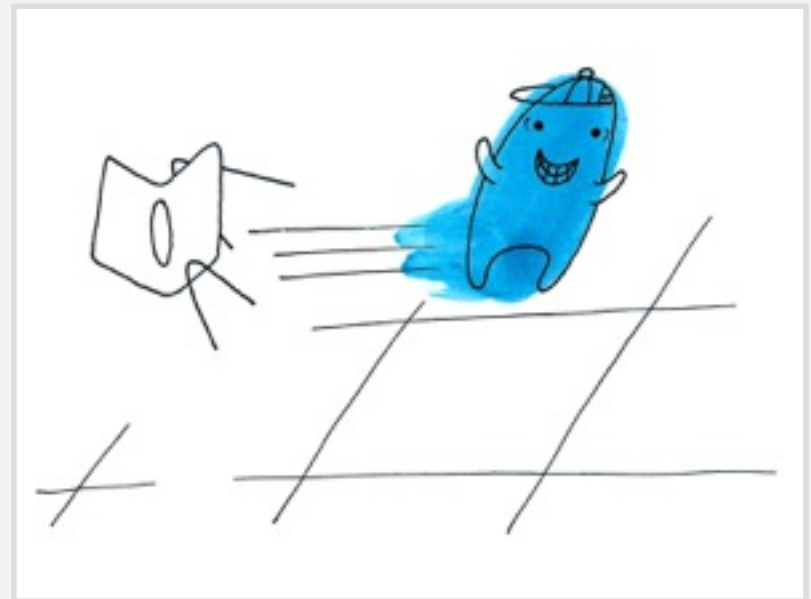
High/Low Threshold

Defensive to touch



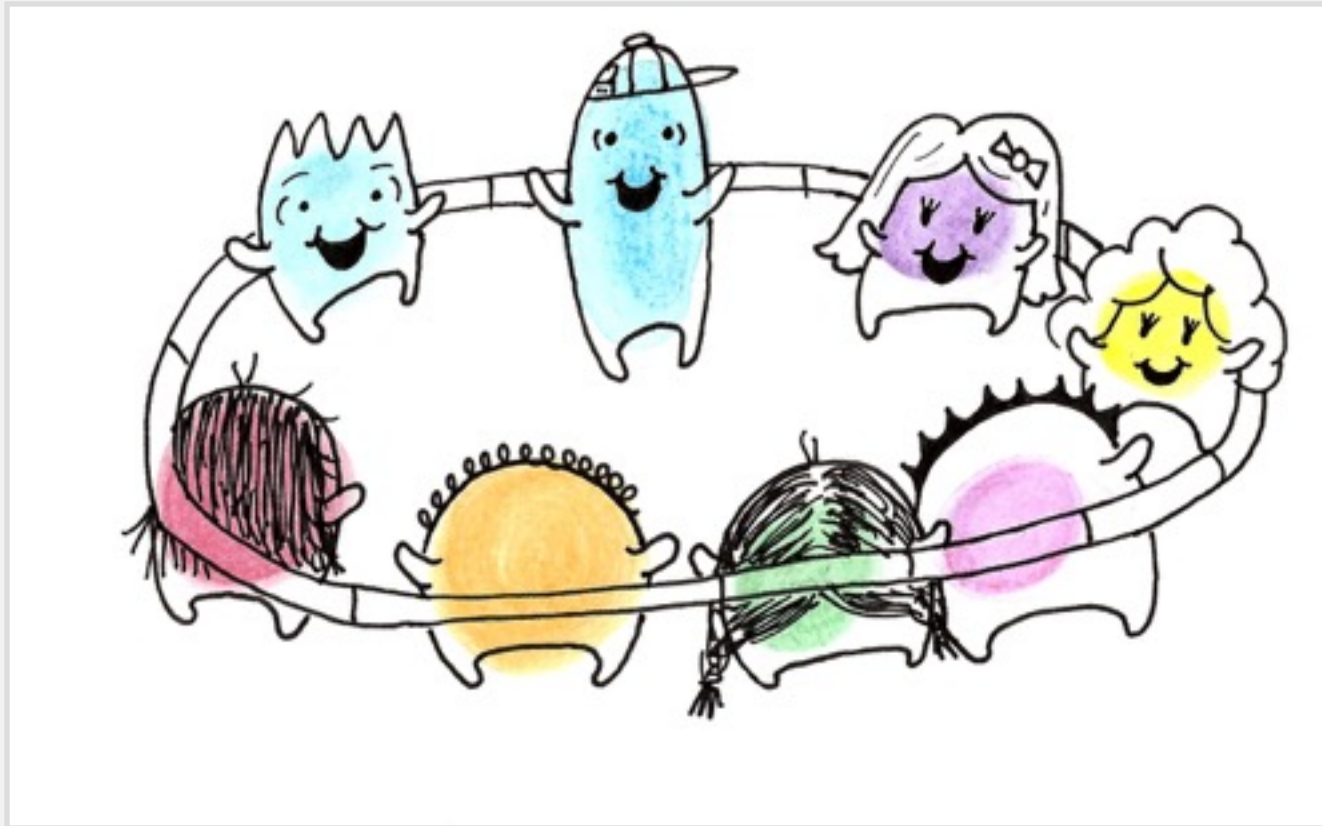
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Seeks High Intensity
Movement



Intervention

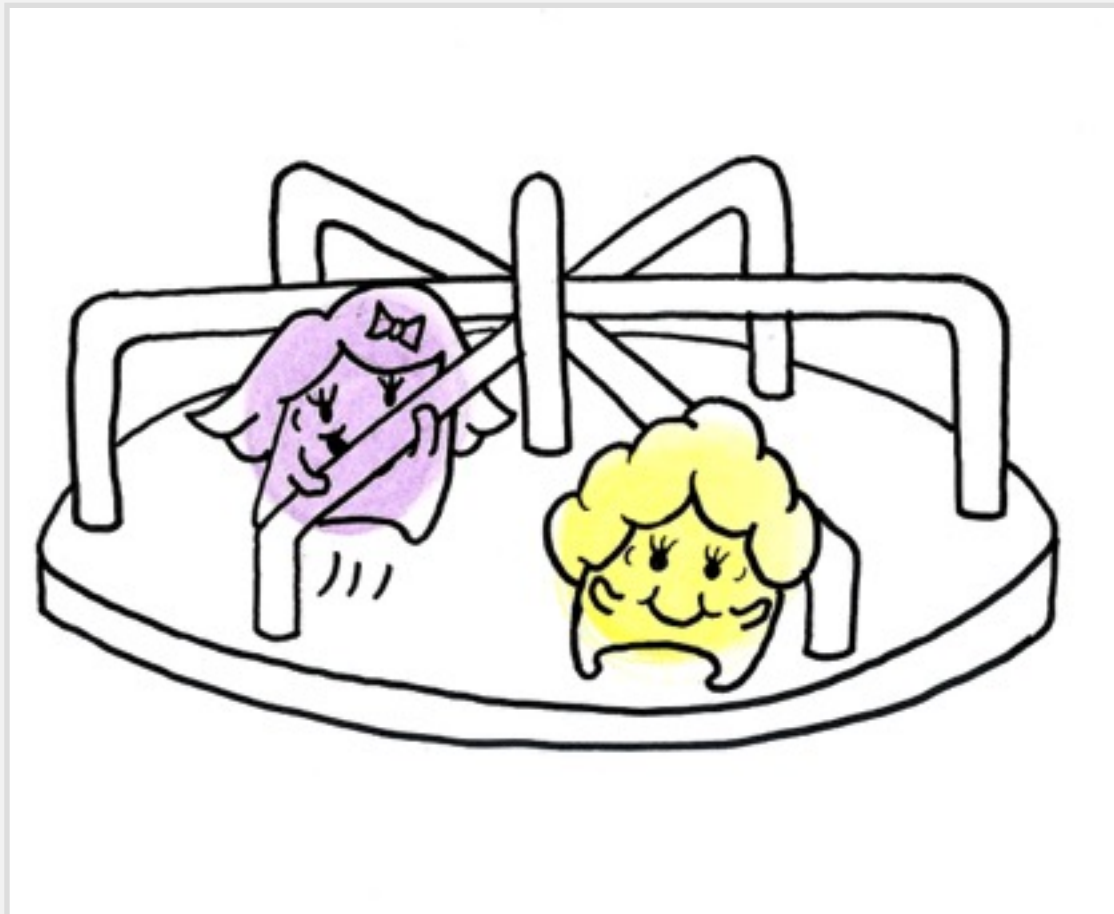
Proprioception - Down Regulation



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Intervention

Vestibular - Up Regulation



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Dysfunction - Discrimination

- Co-ordination, grading and sequencing of movement, poor sense of direction.
- Remembering: sequences of information, names, dates, spellings, tables.

Intervention

Get the child to physically explore how many ways an object or a piece of play equipment could be used.

The child is expected to figure out what to do next if the plan doesn't work in order to promote adaptive behaviour.



Intervention

Sensory Rich Activities to develop spacial temporal awareness.



Strategic Functioning

- Ayres believed if we let the child follow their inner drive they usually do what is best for their nervous system.
- The brain is designed to give itself the experiences that are necessary for it's own development.

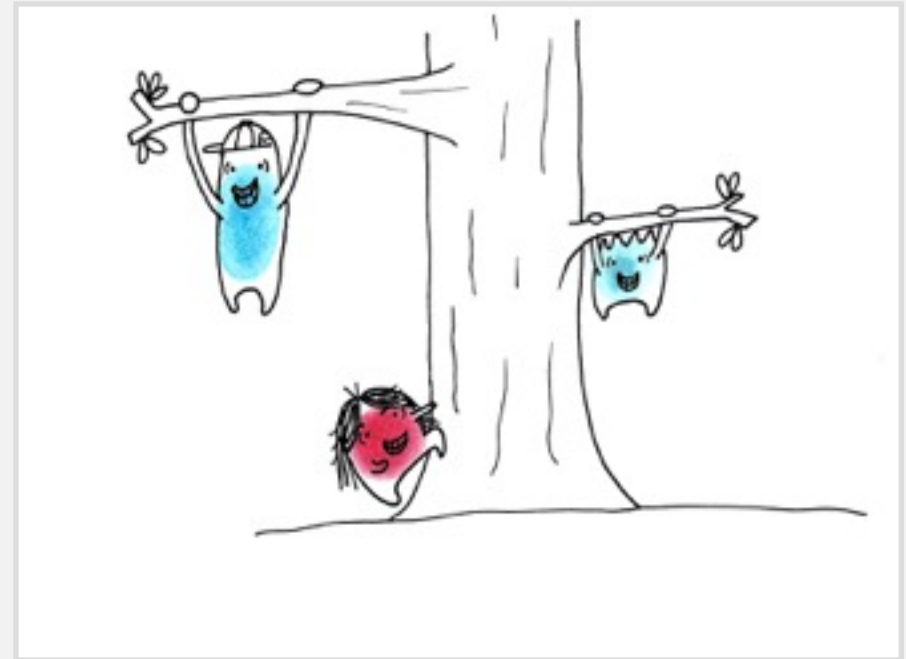
(Ayres 1989)

Strategic Functioning

Actions which either inhibit or enhance sensory information as a means of achieving the appropriate state of arousal.

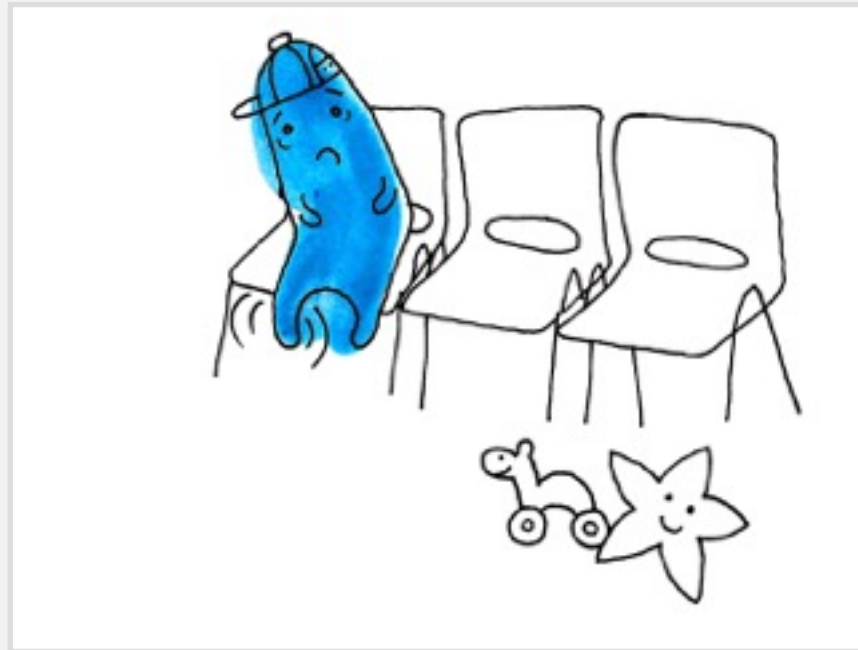
Proprioceptive Seeking

- **Proprioceptive Seeking** i.e. climbing, hanging, jumping, bashing.
- Misinterpreted as **risk taking**, dangerous, attention seeking.
- **Aggression** in unstructured environment or where needs are not understood.



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Proprioceptive Seeking



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When child tries to sit still and be quiet e.g. in school-close observations will show quiet agitated behaviours e.g. biting lips.wrapping legs around legs of chair.

Proprioceptive Seeking

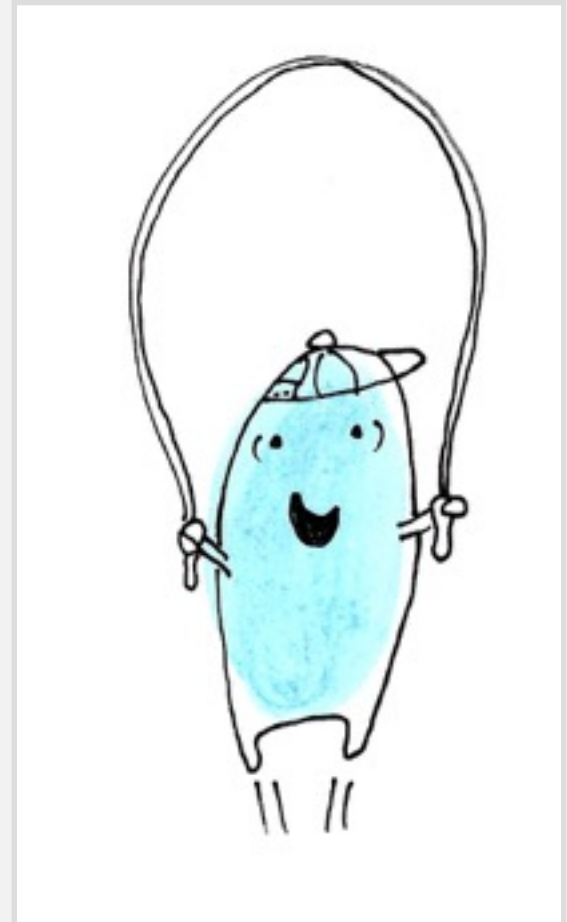
Child explodes at school gates. Parent has to pick up the pieces, but is also blamed for poor parental control.



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Intervention

- Require movement breaks in school
- Active play and crunchy and chewy snacks



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Intervention

Focused attention is achieved once the proper amount of sensory input has been accumulated.

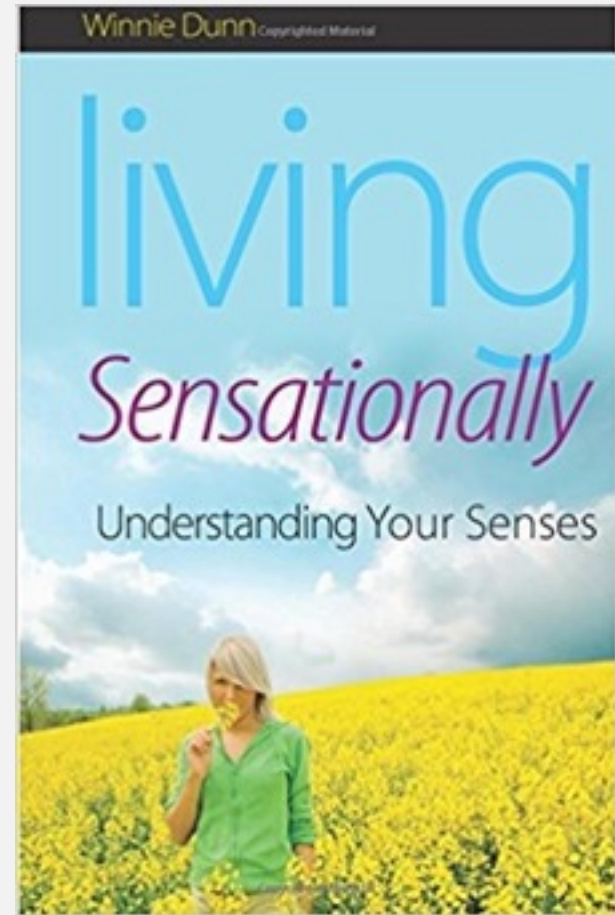
Avoiding Strategies

- Control the level of stimulus in the environment e.g. eat in, avoid lifts, choose quiet spaces.
- Don't like spontaneity, surprises.
- Require order, routine, know plans in advance, schedules.

Strategies

Living Sensationally by
Winnie Dunne, Occupational
Therapist

- Sensory Patterns
Implications for
Relationships, and how to
accommodate different
patterns.



Impact of SI Dysfunction

- Lack of responsiveness – rejection, failure to bond
- Incompetence – carrying out wrong advice
- Complaints regarding child's aggressive behaviour

Impact of Attachment Trauma

It is important to differentiate whether the child is triggered by the sensory experience or by the attachment experience.

Sensory Attachment Patterns

- Sensation acts as a reminder of the original trauma.
- Use of touch in assessment and interventions may be traumatising.

Movement activates Flight & Fight:
not responsive to attachment work or SI requires SAI.

An Integrative Approach

- Crittenden and Ayres models respectively provide a conceptual and a pragmatic framework for analysing the complexities of behaviour.
- Each model provides assessment methodologies that enables the clinician to differentiate causality thus more reliably informing intervention

An Integrative Approach

There is a danger however in behaviour being misinterpreted because of the omission of information in this case sensory or attachment.

An Integrative Approach

“We must all carefully differentiate behaviour from its meanings because the former is objective i.e. we can all agree what happened, and the latter is unique to each viewer.”

(Crittenden 2008)

An Integrative Approach

Over-expression of affection, or risk-taking behaviour is regarded as being symptomatic of sensory seeking. Excess or flattened emotional responses are hypothesised to be indicative of poor sensory registration and inadequate self-regulation.

(Dahl Reeves 2001; Miller et al 2007)

An Integrative Approach

- Risk taking in the DMM literature is perceived to be a coercive strategy to elicit a response from the parent
- Flat affect – A type

(Crittenden 2008)

An Integrative Approach

What are the Core Fears?

- **Attachment:** fear of rejection, fear of abandonment
- **Sensory:** fear of sensation e.g. touch, sound, or fear arising from the incapacity to organise sensation for use (dyspraxia)

An Integrative Approach

One could argue that assessment of sensory processing and attachment should not be carried out in parallel as is the current practice. There needs to be assessments that integrate both perspectives.

An Integrative Approach

- Sensory Attachment Intervention combines the theories of SI & DMM
- SAI Therapists are required to train in the DMM – differential diagnoses regarding behaviour i.e. is it sensory or is it attachment?

An Integrative Approach

- There is a growing recognition that a transdisciplinary approach is needed when working with families.
- Development of sensory coding for CAPA
- Development of arousal states coding system
OT's from Ireland, England, South Africa, Finland have signed up to be part of this.
- Research Proposal exploring the links between physiological patterns, sensory patterns and attachment patterns.

An Integrative Approach

Crittenden suggests the balance between what is understood and new information that is not fully understood may lead to feelings of frustration or exhilaration.

An Integrative Approach

I would suggest a feeling of eagerness, even impatience, to learn what will emerge, and exhilaration at the prospect of discovering new patterns.

References

Ayres, J. (1989) *Sensory Integration and Praxis Tests*. Los Angeles: Western Psychological Services.

Bhreathnach, É. (2008) *The Scared Gang*. Belfast: Aldertree Press.

Crittenden, P. (2008) *Raising Parents. Attachment, representation, and treatment*. 2nd edn. Routledge Publishing.

Ash Cottage SAI Clinic

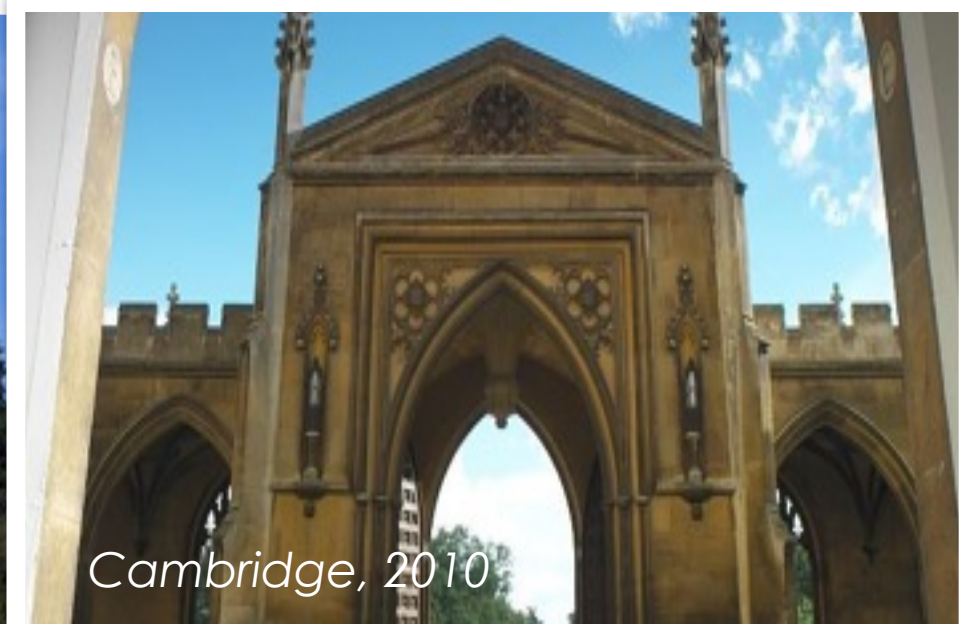
Northern Ireland



www.sensoryattachmentintervention.com



Bertinoro, 2008



Cambridge, 2010

To download program materials, click here
<https://www.iasa-dmm.org/iasa-conference/>



Frankfurt, 2012



Miami, 2015