

Session 08
Sensory Processing
January 19, 2026

BOTTOM-UP
EXECUTIVE FUNCTIONING

Sensory processing impacts our executive functioning.

- Can't think if it is too cold or too hot, too loud or too bright, too emotional, etc.
- Building a lifestyle that sets your sensory needs up for success.

Quick detour:
Occupational Therapist

<https://www.occupational.com/>

From The Occuplaytional Therapist (Olds, 2026)

- What's the gentle way to make a kid obey immediately?
- What's the PDA-friendly way to get him to understand I'm the teacher and he has to do what I say?
- What's the neurodiversity-affirming way to show her that she can't just get whatever she wants?
- ***
- Just because you can Englishly make a phrase doesn't mean it makes sense.
- What's the silent way to ring this bell?
- What's the naked way to wear these pants?
- You can't, of course. To do so would be to defy the innate nature of the thing you're asking. You have presupposed a lack of clothing; a presence of silence; a revocation of the adults-on-top power structure that permeates society.
- ***
- Even more important: recognition of the existence of the thing's opposite.
- The bell's note exists only in destroyed silence.
- Immediate obedience exists only in threat of violence.
- Forced submission to power exists only when nervous systems live under threat.
- To feel the need to overtly teach the lesson "you can't get what you want all the time" is to begin with a misunderstanding of neurodivergence, because to diverge from the neuro norm is to live in a world, a body, made of not getting what you want all the time. If you affirmed that, you would already know.
- ***

From The Occupaytional Therapist

- This way of living is not a one for one swap of one thing for another.
- This is not taking the word “punishment” and swapping it for “consequence” and then taking the word “consequence” and swapping it for “boundary” and using all of them to mean, “you better...or else.”
- This is uprooting a tree a few thousand years old.
- This is saying “just because I have been alive longer than you does not make me superior to you.”
- This is respect for the most universally marginalized members of society.
- It can only come at the cost of revolutionized thinking. We can’t just swap out our old thoughts with new words that fit the exact same. **We have to take the whole thing down and start over.**
- ***
- What’s the gentle way to remind myself that kids take time to process what I’m saying? What’s the gentle way to get my own needs met? What’s the gentle way to take care of us both?
- What’s the PDA-friendly way to build a school? What’s the PDA-friendly way for society to equip kids to chase their passionate interests instead of having to have them either squelched or manipulated? **What’s the PDA-friendly joy look like and how can we make more of it?**
- What’s the neurodiversity-affirming way to communicate with her about the things we both want so that we both understand them? What’s the neurodiversity-affirming way to set up life for her so that it contains more successes overall and she doesn’t have to cling as hard to the one or two she has right now? What’s the neurodiversity-affirming way that she can get everything out of life she hopes for,
- and we hope for her, we really do, we always have,
- we’re just now learning to find the way to it?

○ LINK: <https://www.facebook.com/share/p/1DpkZmnSB1/>

Quotation adapted for ourselves:

- What does joy look like and how can we make more of it?
- How do we chase our passionate interests?
- How do we communicate about the things we both want so that we both understand them?
- How do we set up life so that it contains more successes overall and we don't have to cling as hard to the one or two we have right now?
- What's the way we can get everything out of life we hope for?

Bottom-up Executive Functioning

- ◉ Lifestyle
- ◉ Mindset
 - Nurture, nourishment, invigoration
 - Joy, passion, intensity
 - Rest, patience

Overview

Sensing & Processing the World

Senses

- Exteroception: sensing of the outside world through 5 senses
- Proprioception: body awareness of muscular-skeletal parts (limbs)
- Interoception: body awareness of internal organs (torso)
- Neuroception: nervous system awareness of danger or safety in the environment
- Pathoception: awareness of emotional experiences in other people

Exteroception

- Sight / visual
- Sound / auditory
- Taste / food
- Smell / olfactory
- Touch / tactile

Proprioception

- Balance
- Amount of force exerted by muscles
- Orientation in space: vertical, horizontal, spiral (spinning)
- Movement
- Speed of movement
- Complex skills (e.g. cartwheels)
- Repetition
- Vertigo, dizziness

Interoception

- Heart rate
- Breathing
- Hunger
- Thirst
- Bathroom needs

Neuroception

- Sensing danger, death threats, and safety/connection

Pathoception

(pathos = greek for feeling/suffering)

- Intentionally focusing on feeling what other people feel for a short time
- Unconsciously absorbing the feelings of other people (hyperempathy)
- Not being able to tell whose feelings are whose (e.g. is it my anxiety or is it theirs?)

Why do we care about “-ceptions”?

- Why does it matter if we are aware of these things?

Autistic & ADHD Sensory Processing Experiences

Statistics

- About 80% of autistic children have sensory processing disorder (Patil & Kaple, 2023).
- Auditory processing differencing in 70% of autistic children (Lau, 2023)
- Synesthesia is common in autism: sensory perception intermingled. E.g. sounds sensed as colors, visual patterns felt on the skin.

Autistic and ADHD exteroception

○ Sight / visual

- Light levels, angles, items lining up, distances apart, organization, beauty, color, brightness, clashes, variety, movement, connection to nature, neutrality

○ Sound / auditory

- Volume, clarity, pitch, sound frequency, music, pattern, number of sources of sound, silence, vocalizations

Autistic & ADHD exteroception

○ Taste / food

- Food quality, freshness, smells of food, sounds of food, tastes (sweet, bitter, salty, sour), intensity, textures, temperatures

○ Smell / olfactory

- Type, intensity, connection to nature, artificial chemicals, sources (candles vs real fruit)

Autistic & ADHD exteroception

○ Touch / tactile

- Pressure, movement, softness, unevenness, seams, sensations (slimy, wet, sticky), noise and sounds of objects, textures, fingertip sensitivity, temperature of objects, skin sensations (itchness, scabs, cuticles)

Combination of exteroception,
proprioception, & interoception)

- Temperature
- Pain
- Pressure
- Balance

Hunger & Food (exteroception, interoception)

- Threshold, intensity
- Food aversions
- Cravings, pleasure, preferred tastes
- Textures of food
- Temperature of food
- Sounds made by food
- Visual arrangement of food (e.g. plating)
- Separation vs mixing of food

Thirst & Drinks

(exteroception, interoception)

- ◉ Threshold, intensity
- ◉ Drink aversions
- ◉ Cravings, pleasure, preferred tastes
- ◉ Textures of drink (e.g. carbonated, thick)
- ◉ Temperature of drink
- ◉ Sounds made by drink
- ◉ Visual arrangement of drink (e.g. plating)
- ◉ Separation vs mixing of drinks

Hygiene (exteroception, interoception, proprioception)

- Sensations from showering
- Sensations from bathing
- Sensations from brushing teeth (e.g. type of toothbrush)
- Sensory aversions
- Sensory interests
- Rituals

Sleep (exteroception, interoception, proprioception)

- ◉ Quality of sleep
- ◉ Number of hours of sleep
- ◉ Chunking (number of contiguous hours)
- ◉ Naps
- ◉ Dreams, nightmares, night terrors
- ◉ Bedtime routine

Bathroom (exteroception, interoception, proprioception)

- Threshold and intensity of cues
- Responsiveness
- Control
- Privacy needs
- Cleanliness of facilities
- Hygiene concerns
- Rituals

Sex (exteroception, interoception, proprioception)

- Orientation
- Number of partners preferred (polyamorous vs monogamous)
- Type, positions, locations
- Frequency
- Duration
- Creativity
- Rituals
- Lack of interest

Body boundaries (exteroception, interoception, proprioception, pathoception)

- Distance from another person
- Duration of contact
- Pressure level of contact (e.g. firm handshake or light hug)
- Hygiene needs (e.g. not drinking after someone else)
- No contact at all

Clothing (exteroception, interoception, proprioception)

- Style preferred
- Visual appearance
- Sensory interests and aversions (e.g. must have socks, absolutely no socks)
- Consistency, rituals
- Amount of body covered
- Type of body part covered
- Jewelry, accessories
- Collections (e.g. shoes, scarves)
- Ease of movement
- Pressure
- No clothing at all

Transportation (exteroception, interoception, proprioception)

- Type preferred
- Visual stims (beauty of vehicle, scenery of path)
- Sensory interests and aversions (e.g. hate flying, love trains)
- Consistency, rituals
- Speed
- Novelty
- Amount of traffic (e.g. backroads vs interstate)
- Vehicle as a friend and/or home
- No traveling at all

Creativity (exteroception, interoception, proprioception, pathoception)

- Creativity is a type of sensory processing nobody thinks about.
- Athletic (e.g. sports, martial arts, dance)
- Verbal (e.g. poetry, novel, languages)
- Visual (e.g. art, architecture, interior design)
- Pattern (e.g. science, research, data)
- Music (e.g. performance, composition, songs, instruments)
- Spatial (e.g. environment, design)

Eye contact & facial expressions (exteroception, interoception, pathoception)

- ◉ Duration
- ◉ Intensity
- ◉ Range of expressions
- ◉ Frequency
- ◉ While listening
- ◉ While talking
- ◉ Subject of conversation

Pathoception & Hyperempathy

- Category of emotions (e.g. anger, sadness, pain)
- Nuances of emotions (e.g. resentment, contempt, rejection, disgust)
- Thoughts associated with emotions
- Urges for action
- Justice (what's fair)
- Morality (what's right or wrong)
- Pain and suffering (physical and emotional)
- Affection
- Aversion
- Ability to articulate or express emotions & empathy
- Hypoempathy

Why are all these variables in sensory processing important for executive functioning?

- ◉ Discussion

Enhanced Perceptual Functioning (EPF)

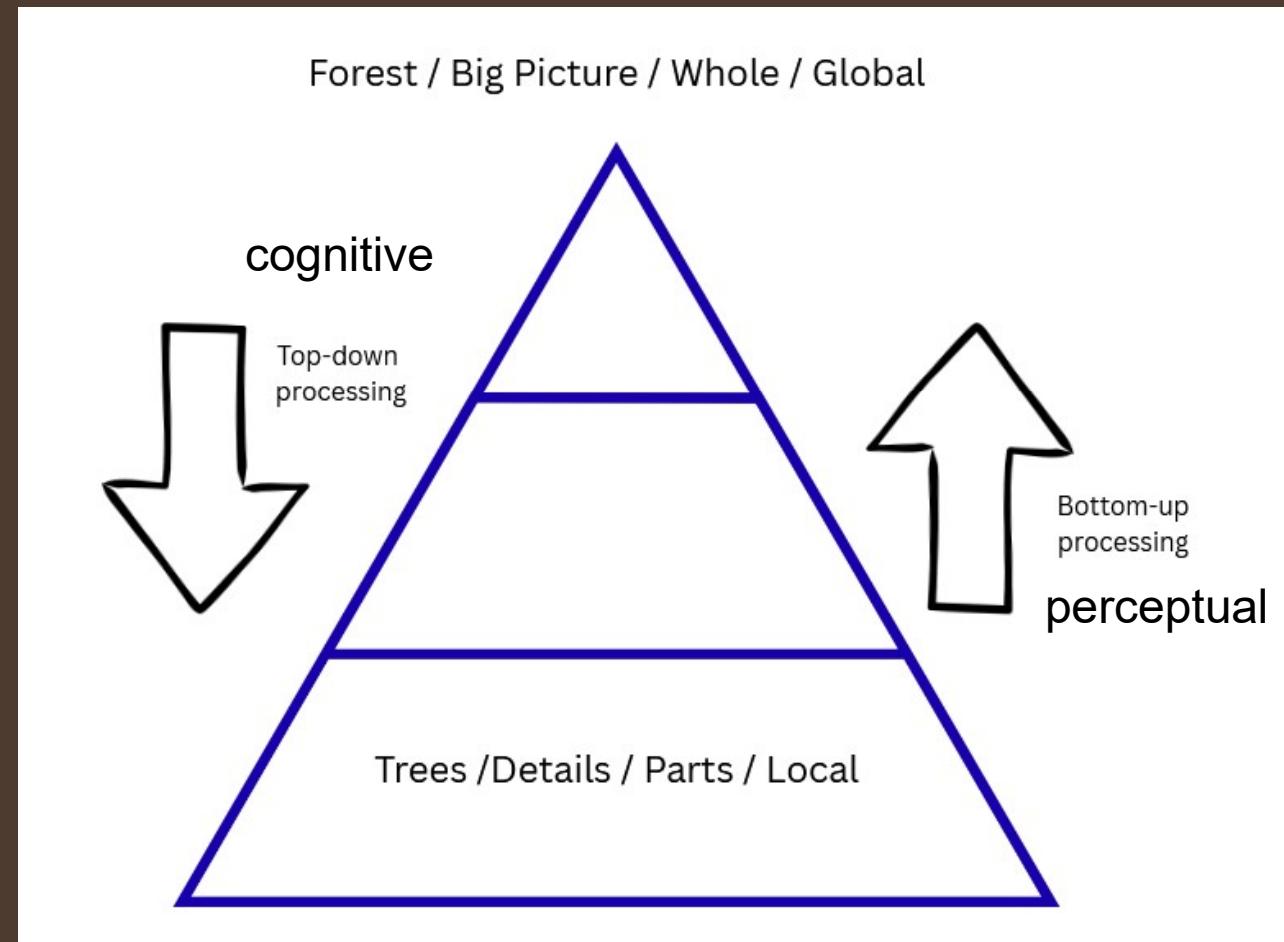
Enhanced Perceptual Functioning (EPF) Model of Autism

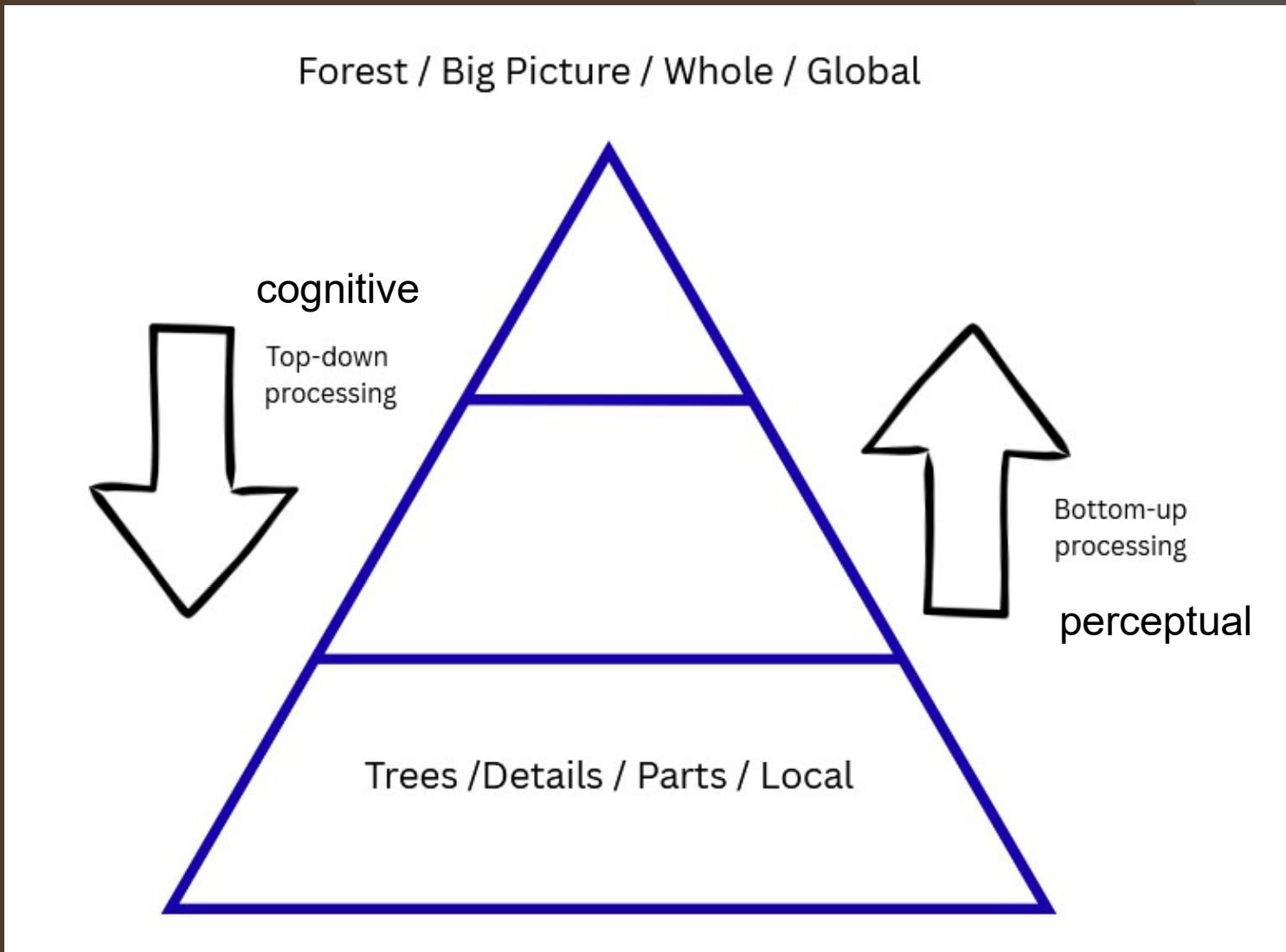
(Mottron et al., 2006)

- Model as an alternative to early explanation called **weak central coherence** (WCC; Frith, 1989; Frith & Happe, 1994)
- WCC said autistics are weak at seeing the forest because they get caught up in the trees (“Can’t see the forest for the trees.”)
- EPF said autistics are stronger (enhanced sensory abilities) at seeing the trees and that they have no deficit in seeing the forest.

Central Coherence Theory

(Frith, 1989)





Autistics and ADHD'ers have a lot of details going on at the bottom of the pyramid. They are not missing the ability to see the forest; it just takes them longer to be thorough about processing all the details before they get to the forest.

Hyperempathy as a sensory sensitivity

Emotional Burdening & Hyperempathy

- ◉ Emotional Burdening and / or hyperempathy is a sensory sensitivity just like sensitivity to light and sound.
- ◉ It can be disabling.
- ◉ You can wear sunglasses for light, and headphones for sound. What do you do for hyperempathy?

Emotional Burdening & Hyperempathy

- ◉ Avoid. Set boundaries. Limit exposure.
- ◉ Replace. Redirect attention to fun things.
- ◉ Recover. Focus on your body and self-care.
- ◉ Trust. Trust their agency.

Emotional Burdening & Hyperempathy

◎ Discussion

Emotional Burdening & Hyperempathy

- ◉ What if you choose to not block it off?
- ◉ Discussion

General ways to prevent “overflow.”

- Dam analogy

- Increase capacity
- Reduce inflow
- Increase outflow

General ways to prevent burnout

- Lifestyle of abundance
 - Increase capacity
- Lifestyle of connection
 - Reduce inflow
- Lifestyle of regulation
 - Increase outflow

Lifestyle of abundance



Danger
Anxiety
Insecurity in abilities
Fear of unsurvivable disaster

Safety
Regulation
Trust in self-efficacy
Trust in ability to survive

Lifestyle of abundance

- ◉ How do you increase your capacity?
- ◉ Pitcher analogy. Fill your pitcher so you have something to pour into other cups.
- ◉ Discussion

Lifestyle of connection

- ◉ Many people value us for our skills.
Fewer value us for who we are. How do we fill our lives with relationships that value our person rather than our skills?
- ◉ Discussion

Lifestyle of connection

- ◉ Side note about info-dumping.
- ◉ Info-dumping is one of the main ways autistics connect to each other.
- ◉ Listen for the emotion and enthusiasm, even if you don't understand the content.
- ◉ **Discussion**

Lifestyle of regulation

- ◉ How do you find your way back to safety?
- ◉ What routines and rituals can you incorporate to release any pain or burden?
- ◉ Discussion

Dunn's Sensory Processing Framework

Winnie Dunn, PhD. Occupational Therapist

- Author of Sensory Profile (for assessment; Dunn, 1999)
- Dunn's Sensory Processing Framework (Dunn, 1997)

hyposensitive

hypersensitive

| | PASSIVE self-regulation | ACTIVE self-regulation |
|----------------------------|------------------------------------|-----------------------------------|
| HIGH thresholds | Registration (oblivious) | Seeking |
| LOW thresholds | Sensitivity (precise) | Avoiding |

Dunn's Sensory Processing Framework

- Dr. Dunn sells a test to help you figure out the following.
- Four interactions with sensory experiences
 - Sensory seeking
 - Sensory avoiding
 - Sensory precision
 - Sensory oblivion

Dunn's Sensory Processing Framework

- **Sensory seeking (hyposensitive-active)**
 - Stimming with lava lamp, music, scents, fizzy drinks, soft blanket
- **Sensory avoiding (hypersensitive-active)**
 - Avoiding visual clutter, people chewing, smell of gasoline, taste of seafood, microfiber
- **Sensory precision (hypersensitive-passive)**
 - Can't be ok unless: picture frames are lined up, zero noise or a specific background noise, zero scents or a specific scent, only certain food combinations lined up with certain textures, clothes are a specific type of cotton blend
- **Sensory oblivion (hyposensitive-passive)**
 - Not aware of and don't care about: visual clutter, clashes of background noises, intense smells, clashing tastes, wearing 2 different shoes at the same

Sensory seeking

- ◎ Discussion

Sensory avoiding

- ◎ Discussion

Sensory precision

- ◎ Discussion

Sensory oblivion

- ◎ Discussion

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