Autism from the Inside Out

A Neurodiversity Affirming Approach

neurodivergentspacetime.com

Warm Up

My Background

Education

- Studied Fine & Performing Arts in Undergrad
- Masters in Applied Drama from Goldsmiths: University of London
- Part Time University Instructor


I’m also autistic.
I was diagnosed nearly eight years ago.

Katherine May

Author of *Wintering*

Greta Thunberg

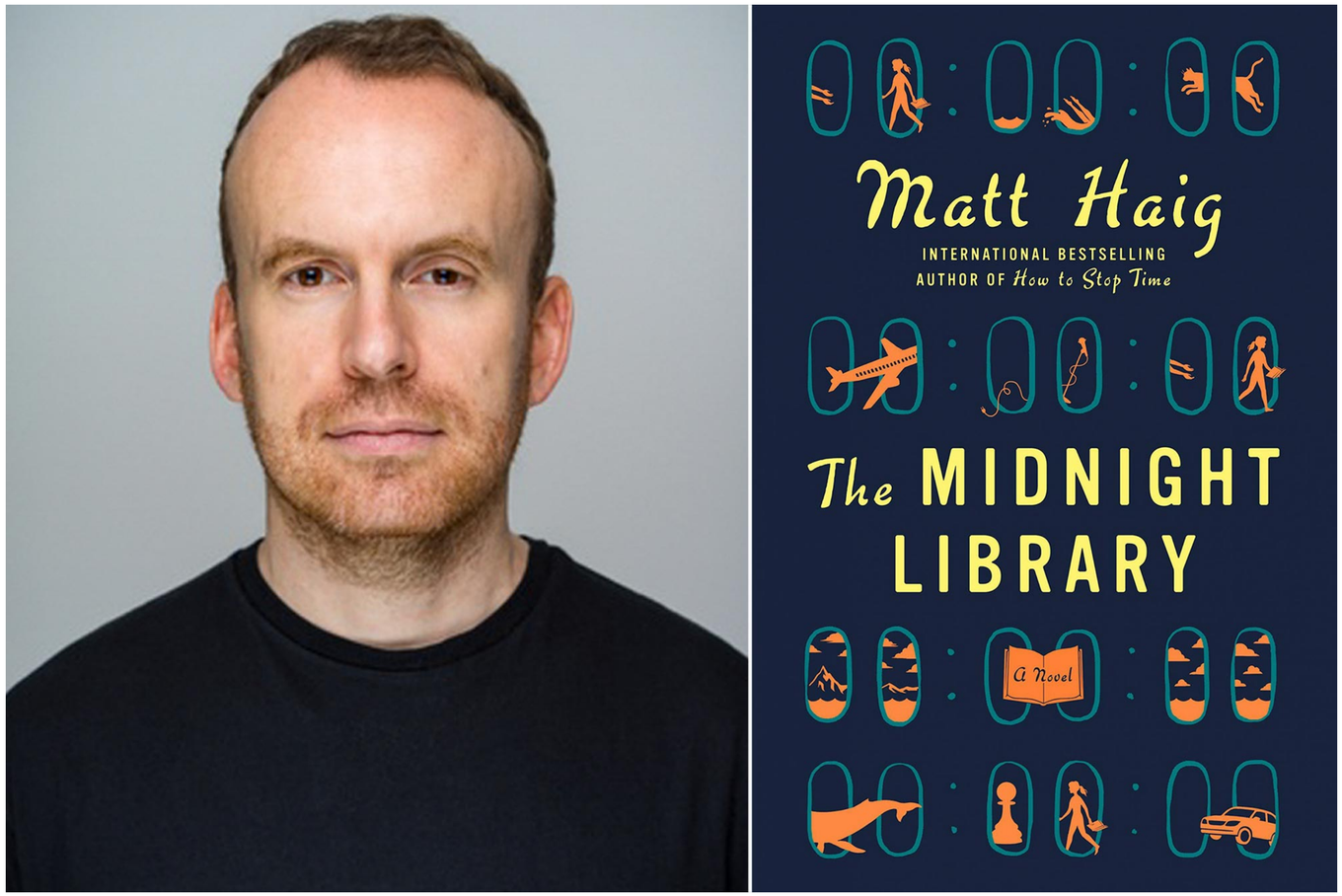
Climate Activist

Morgan Harper Nichols

Artist, Poet & Author

Matt Haig

Author of *Reasons to Stay Alive*, *Notes on a Nervous Plant* & *The Midnight Library*



Life as an Autodidact

A Decade of Self Motivated Study

- 20 books
- 170+ pages of academic studies
- 100+ hours of podcast and video content
- 9 trainings including...
  - Sensory Integration, Karen Purvis Ph.D.
  - Gestalt Language Processing, Alexandria Zachos MS, CCC-SLP
  - Building Communication with Sensory Strategies, Jessie Ginsburg MS, CCC-SLP

What I'm sharing today is a synthesis of my lived experience and the newest research.

Neurodiversity

Differences are Not Deficits

"The Neurodiversity movement embraces and celebrates differences and focuses on inclusion, needed accommodations and support over finding a cure."

"As well as the value that Neurodivergent individuals bring to the world."

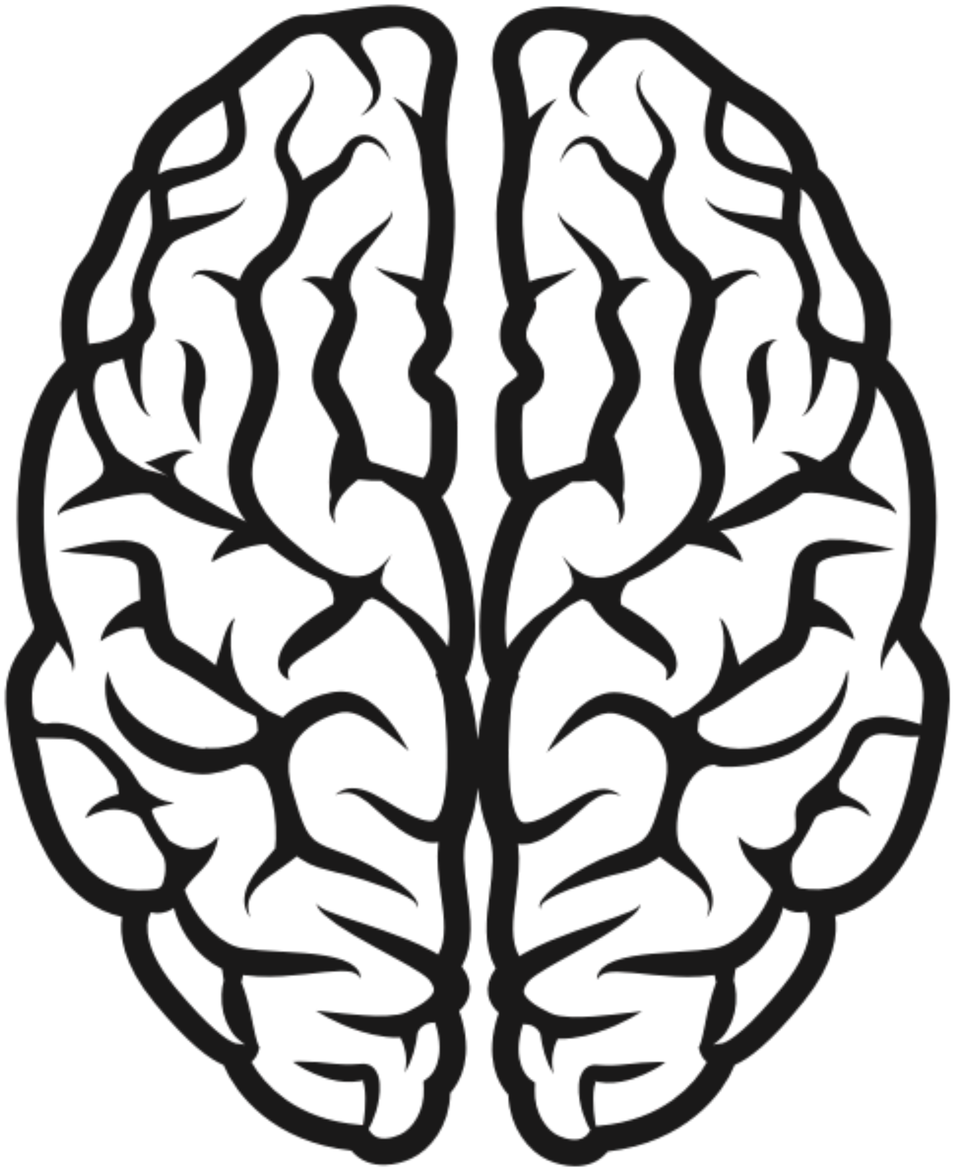
The Autism Handbook

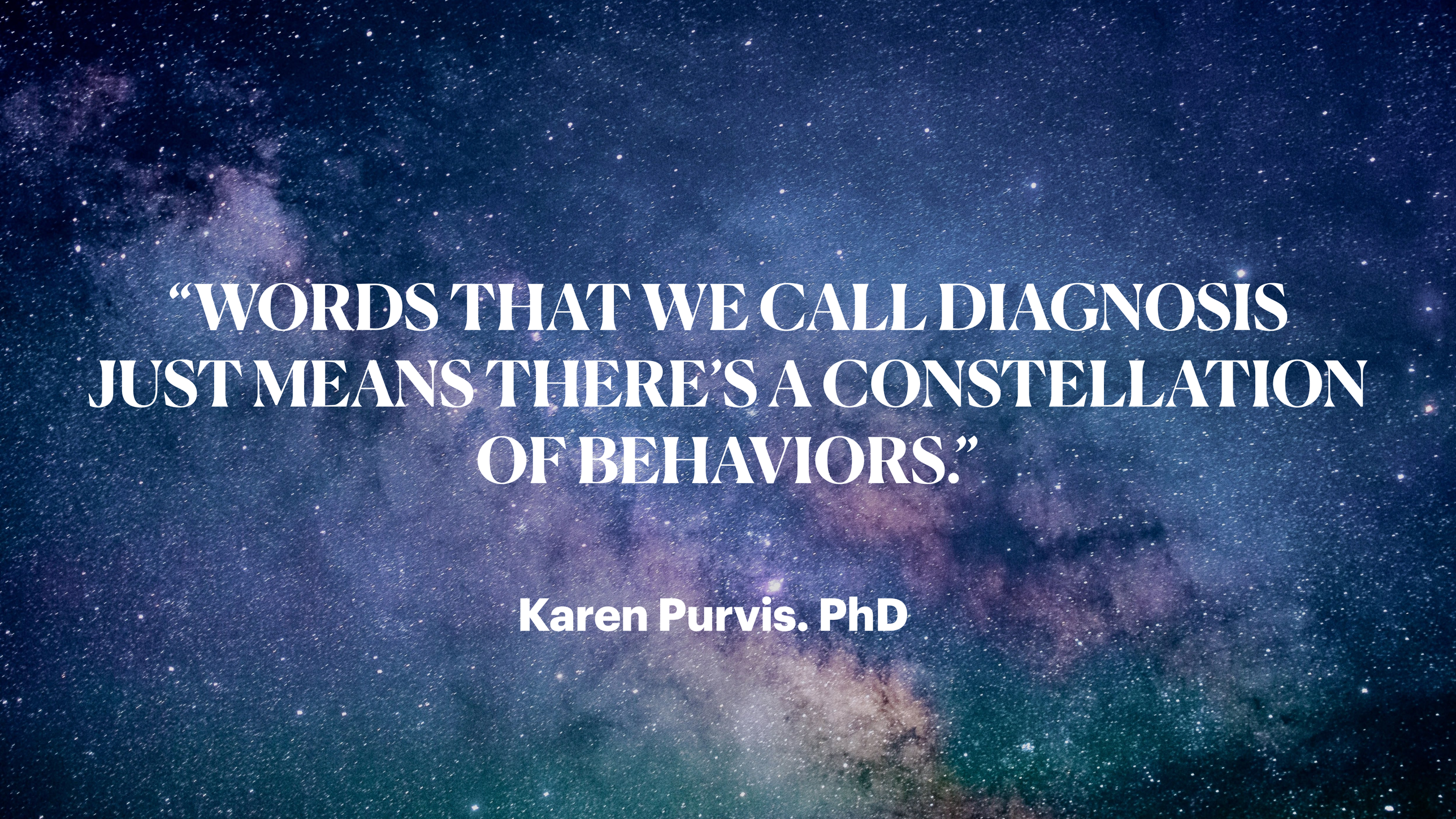
Andi Putt, M.S., CCC-SLP

Neurodivergence

includes

- Autism
- ADHD
- Dyslexia
- Dyscalculia
- Apraxia
- Sensory Processing Disorder
- Synesthesia
- OCD and more...




“WORDS THAT WE CALL DIAGNOSIS JUST MEANS THERE’S A CONSTELLATION OF BEHAVIORS.”
Karen Purvis. PhD

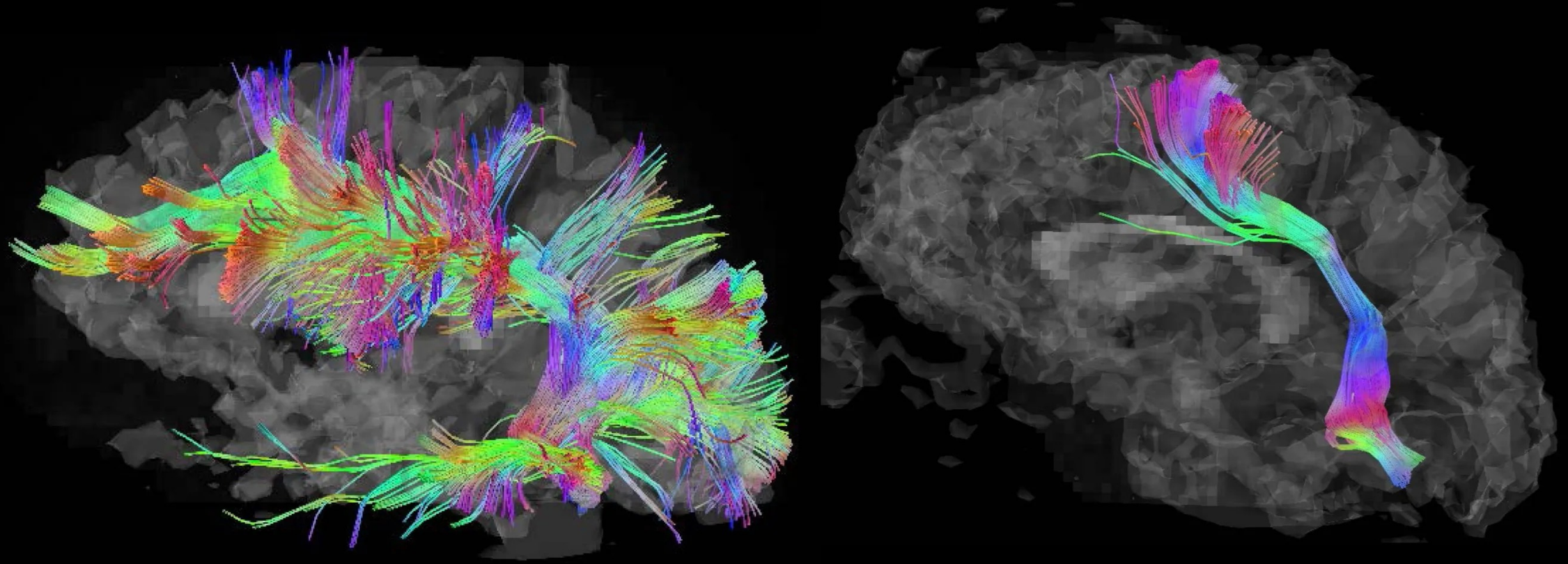
The Trouble with Diagnosis

Why Neurodivergence Gets Missed

- Pervasive stereotypes
- Outdated information
- Fear of social stigma
- Diagnostic bias toward white males*
- Inaccessibility (cost, referrals, access to fully informed professionals, etc.)

*studies are cited on Sources slide

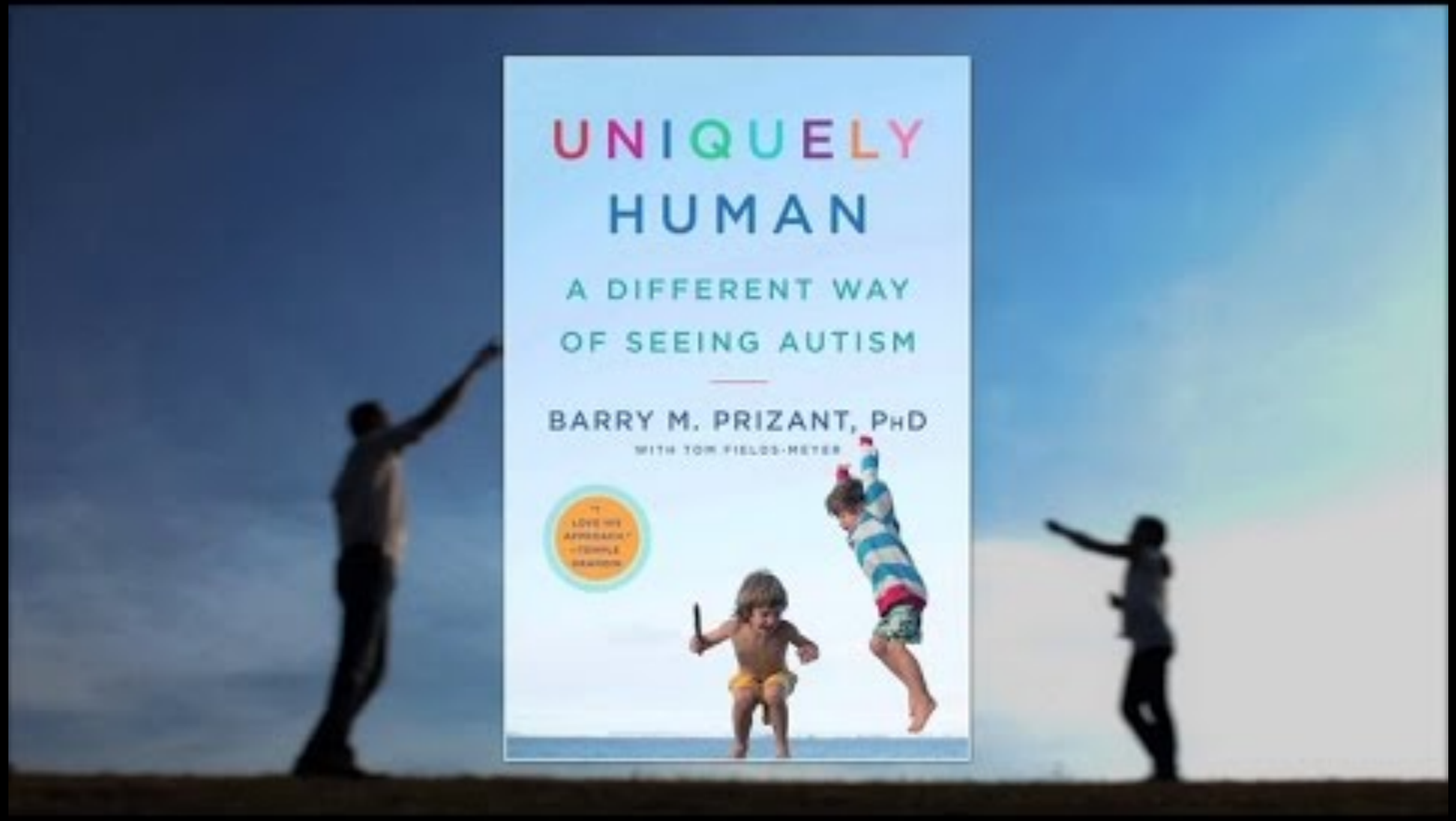
What is autism?



Autistic Strengths

- Creative Thinking
- Pattern Recognition
- Attention to Detail
- Visual Memory
- Spatial Awareness
- Analytical Problem Solving
- Strong Sense of Justice
- Hyperlexia (early self taught reading)

Autistic behavior is human behavior.


UNIQUELY
HUMAN
A DIFFERENT WAY
OF SEEING AUTISM
BARRY M. PRIZANT, PhD
WITH TOM FIELDS-MEYER

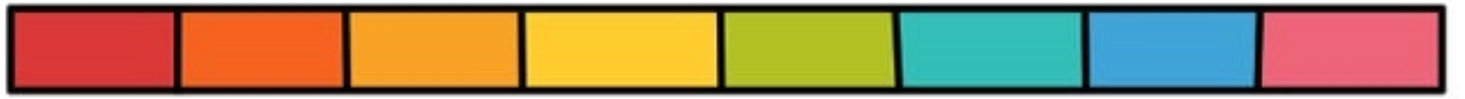
“But…”

Autistic behavior is human behavior.

1. Be Open

2. Embrace possibility

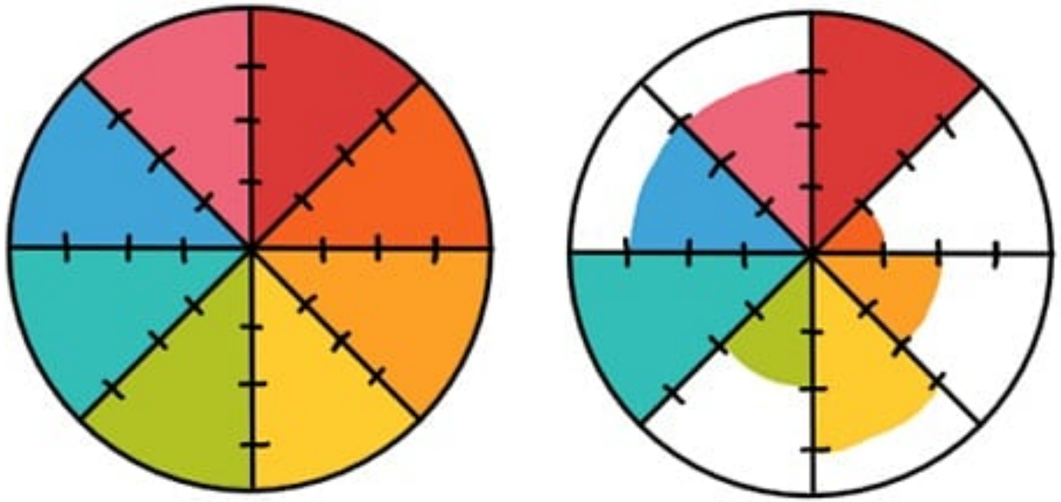
The Autism Spectrum is NOT linear



less autistic

very autistic

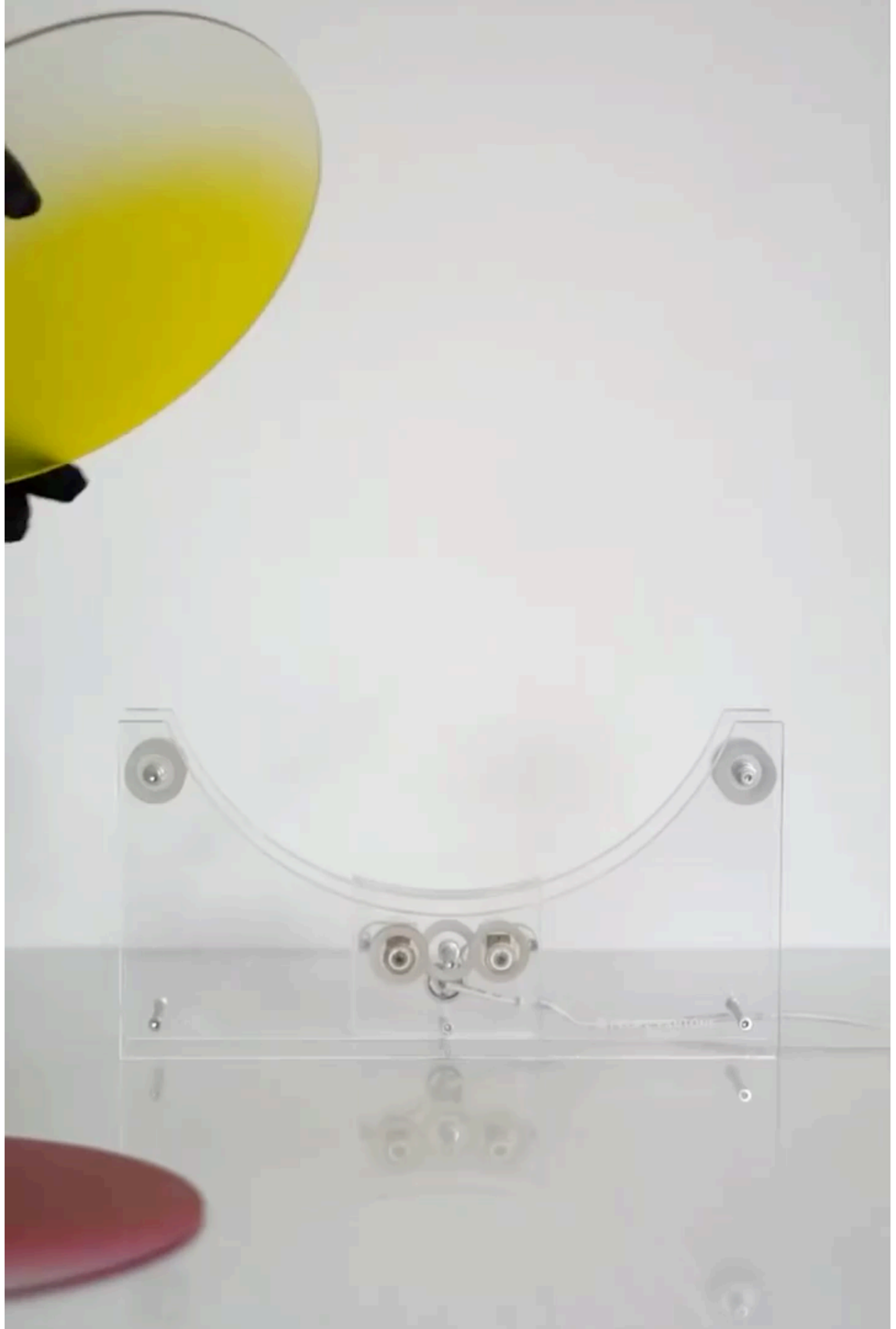
The Autism Spectrum looks more like:



- Social differences
- interests
- repetitions
- sensory sensitivities
- emotional regulation
- perception
- executive functioning
- other

@autism_sketches

I would say it looks like this...



“If you’ve met one autistic person you’ve met one autistic person.”

Sensory Processing

A Neurodiversity Affirming Approach

8 Senses

Vestibular

Gravity Receptors

- Jumping
- Running
- Swinging
- Spinning
- Moving Head

"[This input] tells us exactly where we are in relation to gravity, whether we are moving or still, and how fast we are going in what direction."

Sensory Integration and the Child Ayres, Ph.D.

“The sensations of gravity flowing through our nervous system help to form a basic reference for all other sensory experiences.”

Sensory Integration and the Child **Ayres, Ph.D.**

Proprioception

Sense of Position or Body Map

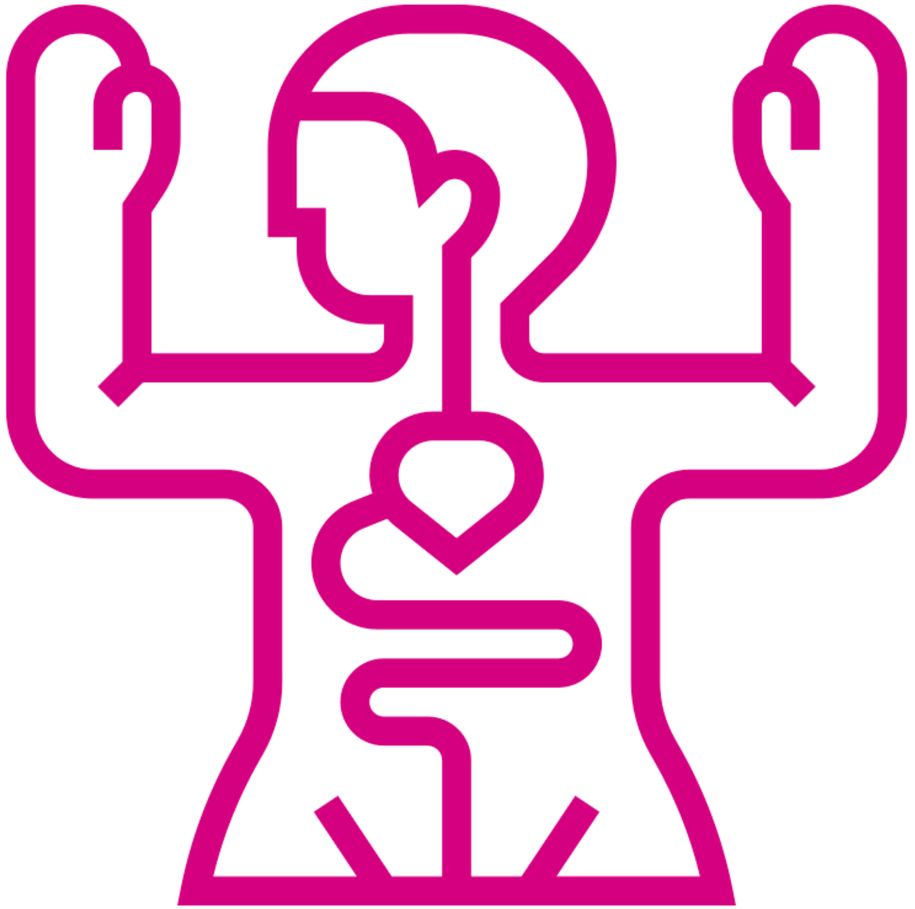
- Awareness of the position of your body & deep pressure in muscles
- A mental “body map” of how joints and muscles connect with each other
- Information we receive from joints and muscles when bending, straightening, pulling or compressing

Sensory Integration and the Child Ayres, Ph.D.

Interoception

Noticing What Your Body Needs

- Hunger
- Thirst
- Pain
- Bladder
- Bowels
- Temperature
- Pulse



What is Interoception Kelly Mahler, OTD, OTR/L

What is Sensory Integration?

organizes information detected by one’s senses

gives meaning to what is experienced

by sifting through all the information & selecting what to focus on

allows us to respond to the situation we are experiencing in a purposeful manner

forms the underlying foundation for academic learning and social behavior

it is an unconscious process

like breathing

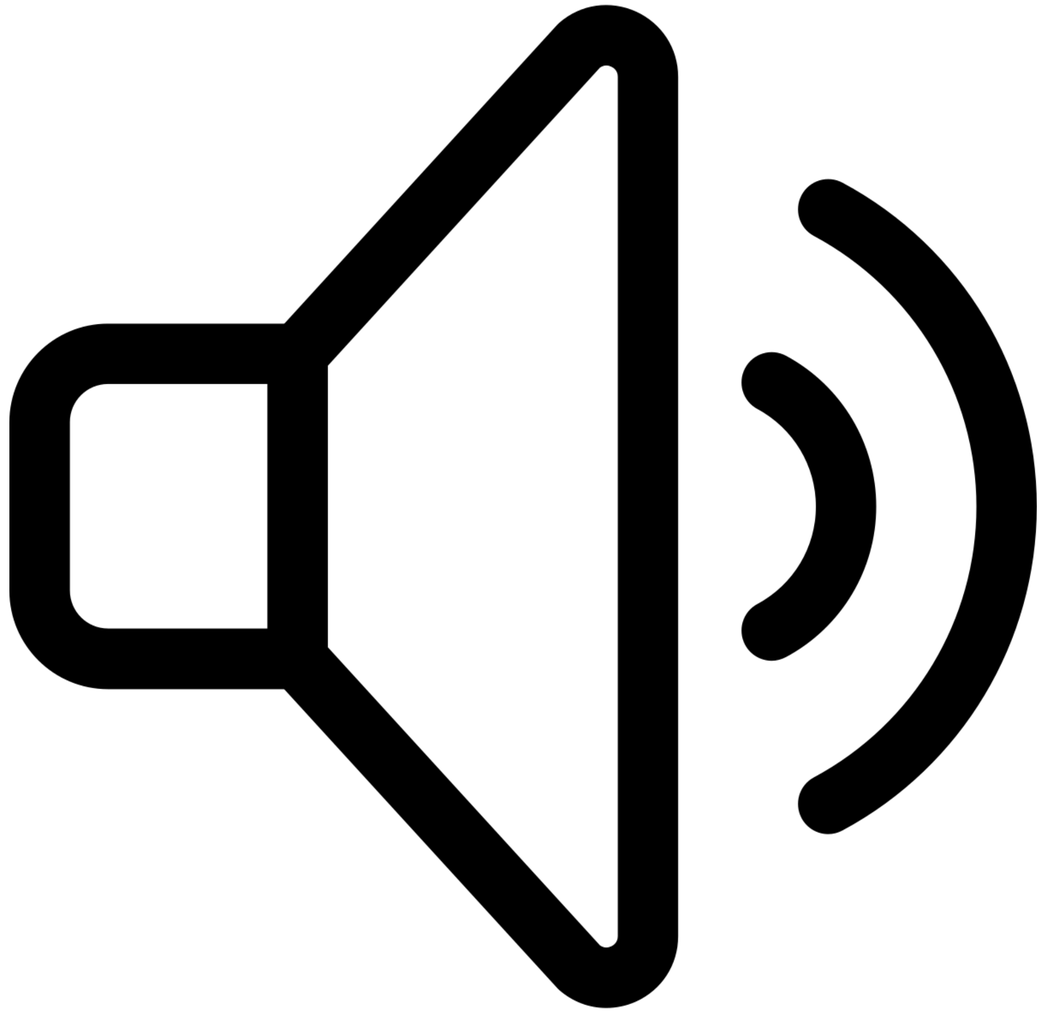
How does the brain do that?
Modulation.

Modulation

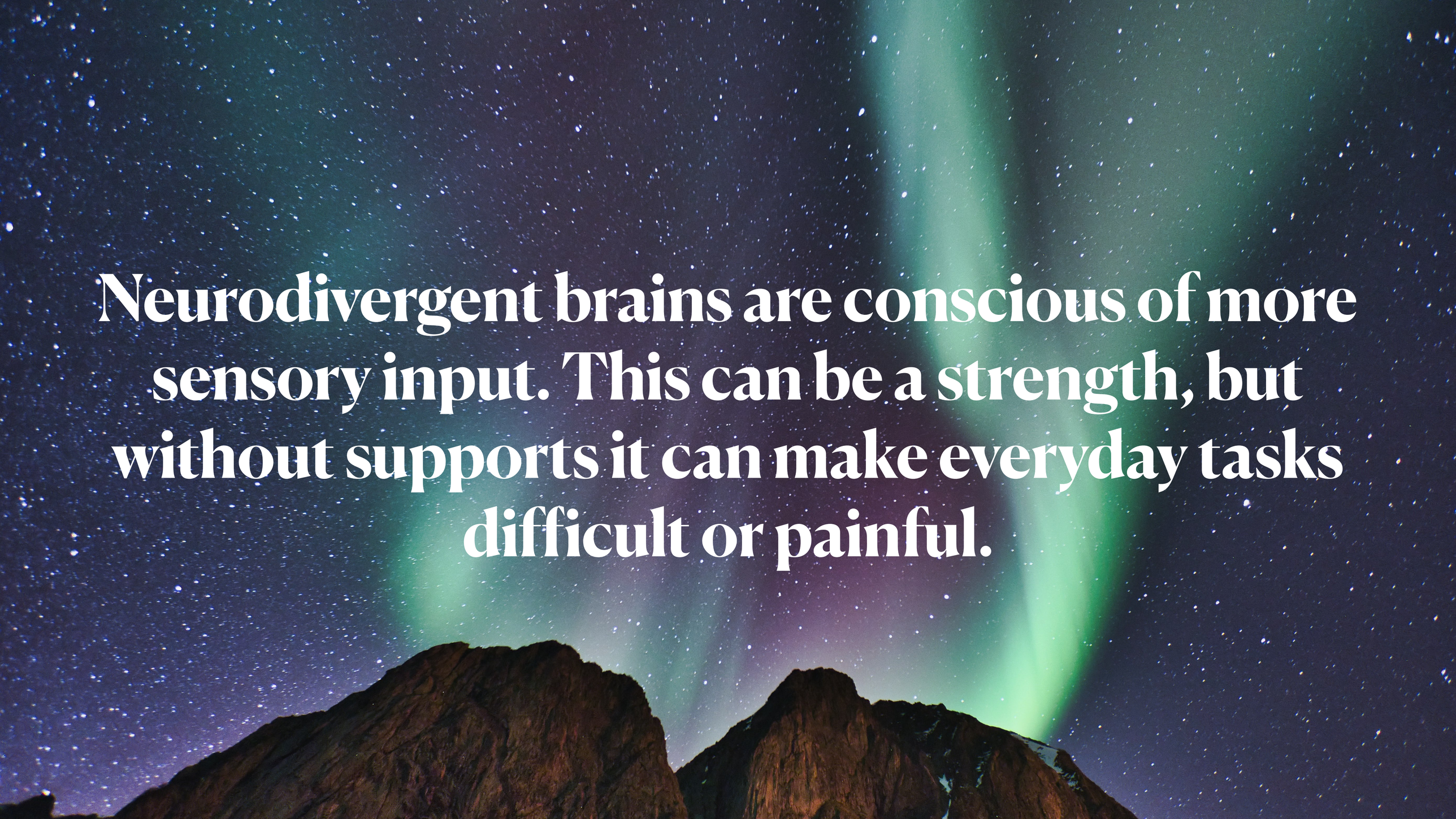
Changing the Volume

This is the process brains use to adjust the intensity of sensory input to keep our conscious sensations in harmony.

When one or more of the senses is not modulated it can make other input difficult or impossible to receive.



Your brain decides what information is important. It filters out sensations that it considers unnecessary like background noise or the way you clothes feel on your skin.


Neurodivergent brains are conscious of more sensory input. This can be a strength, but without supports it can make everyday tasks difficult or painful.

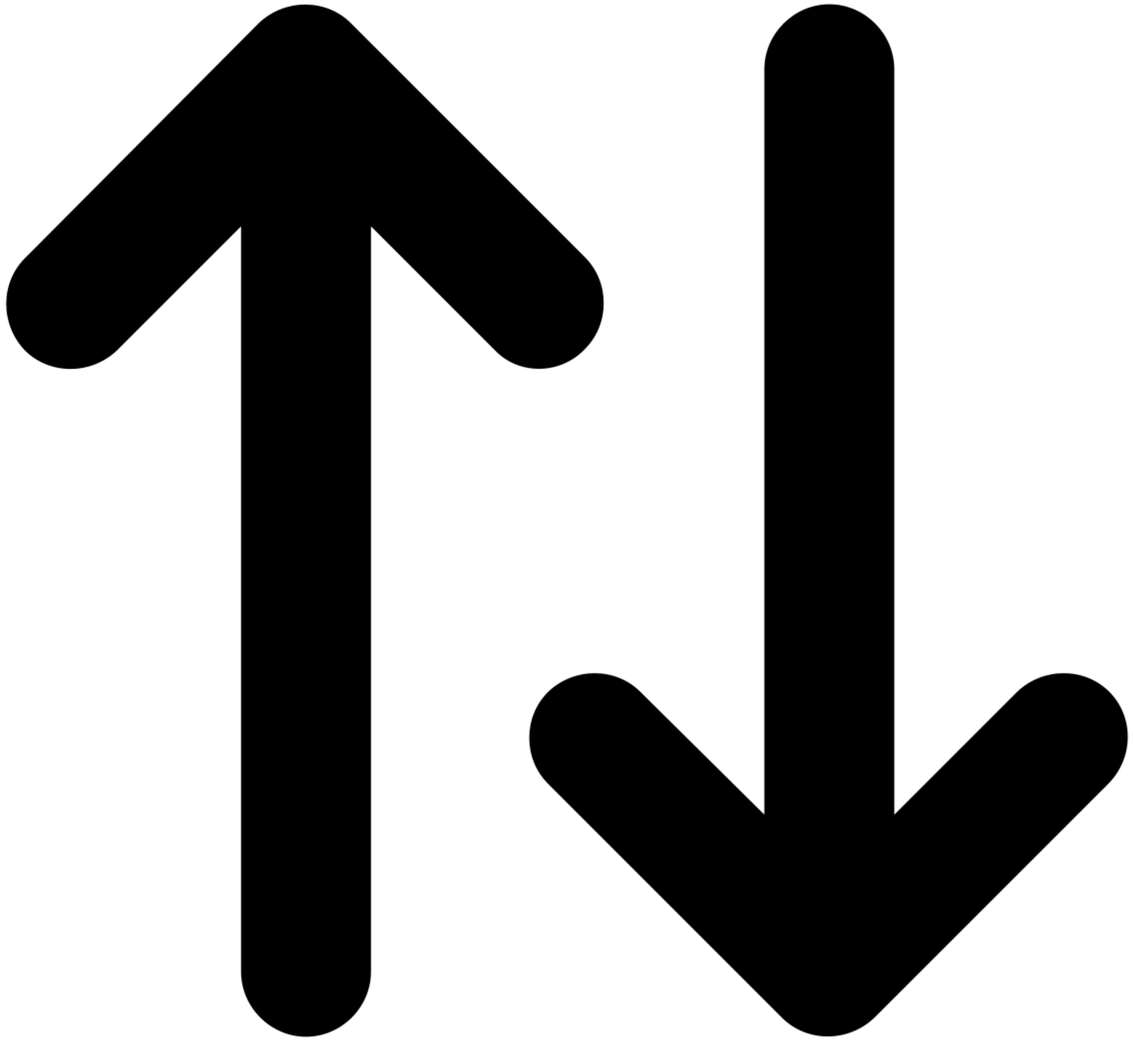
Over & Under

Responsive

For neurodivergent brains each sense can be over or under responsive.

Sometimes this concept is oversimplified and a child is described as sensory seeking or sensory avoidant.

But it is much more nuanced. There will be a response tendency for each sense and even some variation within that.



Overstimulation

Overstimulation is invisible until it reaches intolerable levels. Then it can be observed through actions, emotions, or lack of responsiveness.

“Most people see only the end products of poor sensory integration: that the child is hostile or that he is shy, that his activity is excessive or aimless, that he forgets things or bumps into them, that he cannot read, write, or add two numbers. They tend to think that he is “goofing off” or trying to make trouble or “not using his head.”

Sensory Integration and the Child, **Ayres Ph.D**

Sensory Integration Impacts

Every Neural Process Including

- Hyperactivity
- Concentration
- Behavior
- Speech and language
- Muscle tone
- Digestion
- Motor skills
- Social skills
- Academic Learning
- Organization
- Executive functioning
- Emotional regulation
- Self care
- Independent toileting
- Confidence
- Self worth

Sensory Integration and the Child, Ayres Ph. D.

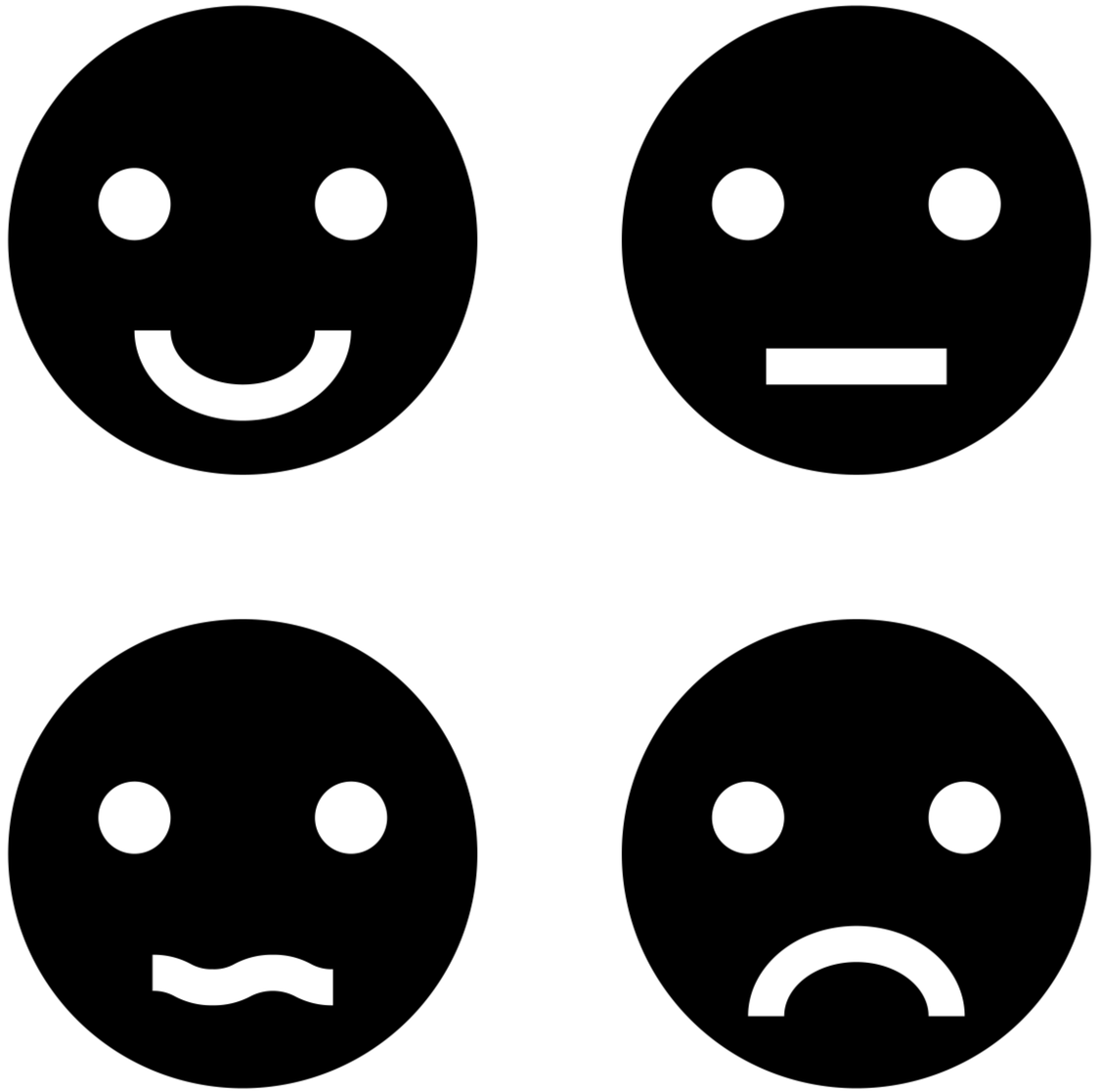
Emotions

And Overstimulation

The impact of emotional stimulation is often overlooked.

Both positive and negative emotions have the potential to overwhelm senses both while they are happening and through emotional memories.

Big emotions like joy, anxiety, or fear all benefit from sensory supports to avoid dysregulation.



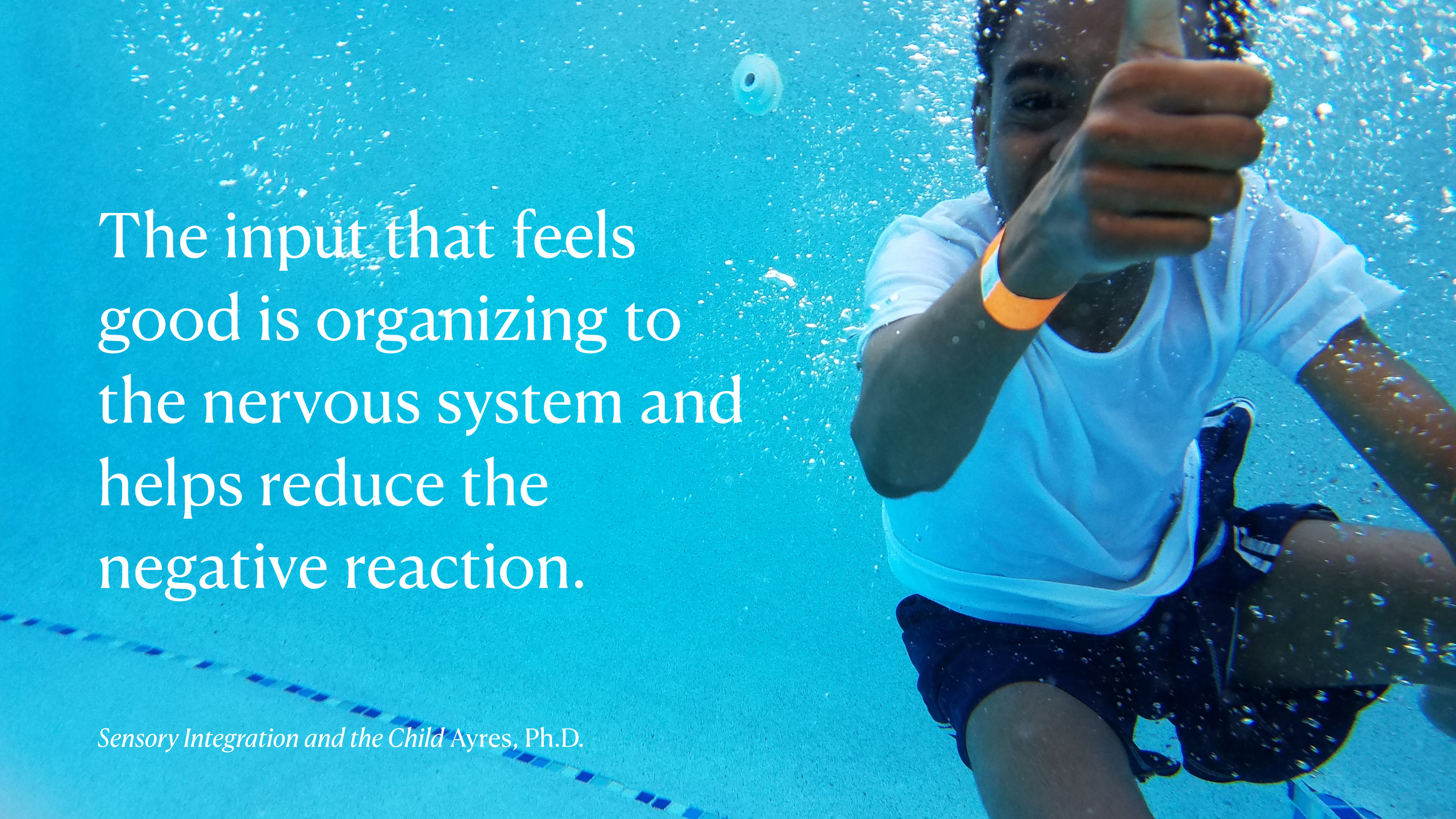
Recognizing Sensory Needs

Tactile Defensiveness

Pain or Sensitivity to...

- Clothing or shoes
- Water
- Textures (paint, sand, etc.)
- Light touch
- People standing too close

Will seek certain textures and avoid others.


The input that feels good is organizing to the nervous system and helps reduce the negative reaction.
Sensory Integration and the Child Ayres, Ph.D.

Auditory Processing

Challenges

- Difficulty isolating specific sound from background noise
- Related to complexity of sound not volume of speaker
- Certain pitches cause pain
- Hypersensitive to sound
- Hears things others cannot

Signs of

Auditory Processing Challenges

- Hands over ears
- Responding inconsistently when spoken to
- Sometimes misunderstanding what is being said
- Confuses similar sounding words
- Upset in noisy environments
- Difficulty modulating volume of voice (often speaks too loud or too softly)

Dyspraxia

Motor Planning & Body Map

- May get “lost in space” or bump into things
- Often appear clumsy, awkward, or accident prone
- Struggle to organize body movements
- Does not have a good internal sense of where their body is or how much pressure they are using
- May accidentally break things (like crayons) from using too much pressure


“Often the best approach with children with dyspraxia is to let him develop at his own pace.”
Sensory Integration and the Child Ayres, Ph. D.

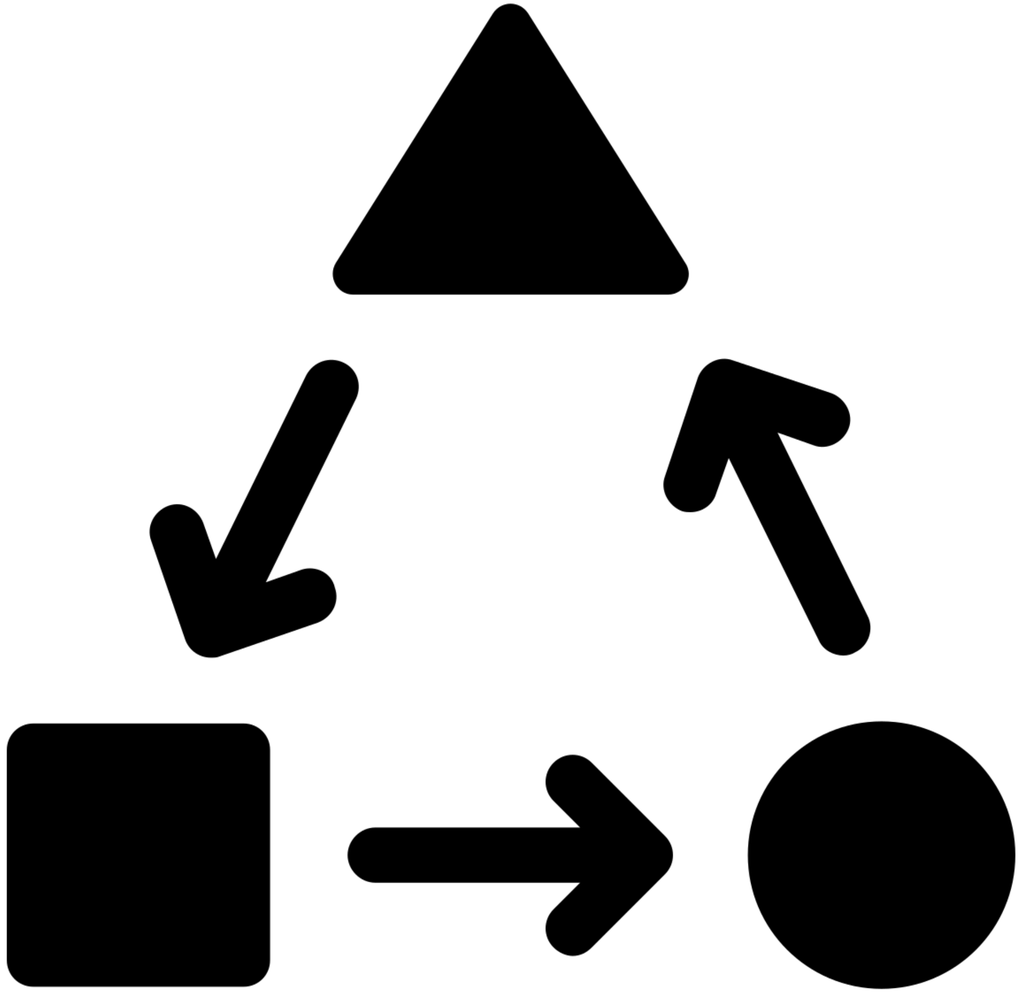
Change

Transitions and Uncertainty

Change, transitions, and uncertainty can be more difficult for those with sensory processing differences.

Additional sensory and emotional support may be needed during...

- Parties, Events & Holidays
- Trips
- Life Transitions
- Changes in Schedule, Staff or Environment



Supporting Sensory Needs

1. Validation

“The most important things you can do are to acknowledge that the problem is real and to respect [the] child’s reactions in various situations.”

Sensory Integration and the Child **Ayres, Ph.D.**

2. Observe

Name: Date: Time:

AUDITORY 	VISUAL 
TACTILE 	SMELL & TASTE 
VESTIBULAR (GRAVITY)	PROPRIOCEPTIVE (BODY MAP)

VESTIBULAR (GRAVITY) 	PROPRIOCEPTIVE (BODY MAP) 
INTEROCEPTION (PHYSICAL NEEDS) 	CHANGE IN ENVIRONMENT, STAFF OR ROUTINE 
COMMUNICATION ATTEMPTS (ACTIONS, EMOTION, VOCALIZATION, AAC, ETC.)	

3. Ask Why?

Behavior is communication.

Look for clues and patterns.

- **What do you observe?**
- **Are there any patterns (time, place, activity, people)?**
- **What senses might be overstimulated?** Or understimulated.
- **What function might behavior it be serving?** Self regulation, communication, etc.)
- **Could the dysregulation be due to a misunderstanding?** When attempts at communication are ineffective this itself can lead to dysregulation.

Open dialogue with parents and therapists to collaborate and exchange information.

The trigger could be an emotional memory you're not aware of or a change at home.

4. Offer Supports

Sensorimotor Supports

For Vestibular and Proprioceptive Input

- **Heavy work (**push, pull, lift and carry heavy items) contracts muscles and compresses joints for proprioceptive input
- **Spinning and bouncing** can help regulate the sense of gravity
- **Rocking chairs and swings** help reduce anxiety and emotional upset
- **Therapy chewing supports and fidgets** can promote focus
- **Chewy snacks** can reduce mouthing items
- **Weighted blankets, vests, or shoulder wraps** can be calming and grounding
- **Gross motor play** promotes sensory integration (especially self propelled action)

Sight, Sound & Touch

Supports to Avoid Overstimulation

- **Ear defenders or noise cancelling headphones** for students who are sensitive to sound
- **Sunglasses or hats** for students who are sensitive to sunlight
- **Gloves** for students who are hypersensitive to touch
- **Textured items** can help students with tactile defensiveness (specific to student, but could be rough, soft, squishy, etc.)
- **Personal space** students who are sensitive to touch may benefit from being at the front or back of line so they are less likely to be brushed against by other children
- **Soft, comfortable clothing** is essential for most touch sensitive kids

4. Prepare Environment

Prepare Environment

To Support Sensory Integration

- **Movement work** available throughout day
- **Time outside** for gross motor play
- **Quiet area** to provide opportunity for self regulation
- **Comfort items** from home may help some children reset or transition
- **Additional supports** for specific student's needs
- **Keep supports clearly visible** and accessible to all who need them

5. Meltdowns & Shutdowns

Meltdowns & Shutdowns

1. Validate Feelings

- If possible give language to the emotion the student seems to be experiencing.*

2. Attempt Communication

- If student is not able to respond offer communication supports like AAC.
- Or hold up two hands with options they can point to.

3. Minimize Sensory Input

- If any of the senses seem overwhelmed offer supports (ear defenders, etc.)
- Change environment if needed (create personal space, remove items, step outside, move to another room, etc.)

4. Support Regulation

- Depending on the student this may be: quiet & space, music, weighted blanket, swinging, rocking, fidget toys, etc. They can't just "stop" they need a way to move through it.

* It's important to accept we sometimes misinterpret the situation. Always ask for the student's perspective after they are regulated. Parents and therapists may also have helpful insight.

Name: Date: Time:

AUDITORY 	VISUAL 
TACTILE 	SMELL & TASTE 
VESTIBULAR (GRAVITY) 	PROPRIOCEPTIVE (BODY MAP) 
INTEROCEPTION (PHYSICAL NEEDS) 	CHANGE IN ENVIRONMENT, STAFF OR ROUTINE 
COMMUNICATION ATTEMPTS (ACTIONS, EMOTION, VOCALIZATION, AAC, ETC.)	

Remember sensory overload is accumulative. Document triggers from throughout the day. Even details you perceive to be inconsequential may be relevant.

AUDITORY: Close your eyes and notice any sounds you hear (even if very faint.)
VISUAL: Notice visual environment, lighting, visible movement, etc.
TACTILE: Observe reaction to textures, clothing, wetness, proximity to touch & other people.
SMELL & TASTE: Respect food restrictions due to taste, smell or texture. Notice other smells.
VESTIBULAR: Students seek or avoid input from jumping, spinning, or climbing.
PROPRIOCEPTIVE: Students may seek input by tip toes, flapping, tapping, or chewing.
INTEROCEPTION: Notice signs of physical needs (hunger, sickness, hot/cold, tired, etc.)

Breathe

To Review Sensory Integration

- is an unconscious process of the brain
- organizes information detected by one's senses
- gives meaning to what is experienced by sifting through all the information and selecting what to focus on
- allows us to act or respond to the situation we are experiencing in a purposeful manner
- forms the underlying foundation for academic learning and social behavior

Sensory Integration and the Child by A. Jean Ayres, Ph.D.
25th Anniversary Edition

Sources

- *The Autism Handbook* by Andi Putt, M.S., CCC-SLP
- Examining overlap and homogeneity in ASD, ADHD, and OCD: a data-driven, diagnosis-agnostic approach (2019)
- Structural neuroimaging correlates of social deficits are similar in autism spectrum disorder and attention-deficit/ hyperactivity disorder: analysis from the POND Network (2019)
- Sensory Integration Training, Karen Purvis, Ph.D
- What is interoception? by Kelly Mahler, OTD, OTR/L
- *Sensory Integration and the Child (25th Anniversary Edition)* by A. Jean Ayres, Ph.D.
- Mapping Brain Connectivity in Autism by Walter Schneider, Ph.D.
- Females with ADHD: An expert consensus statement taking a lifespan approach providing guidance for the identification and treatment of attention-deficit/ hyperactivity disorder in girls and women (2020)
- Gender Differences in Misdiagnosis and Delayed Diagnosis among Adults with Autism Spectrum Disorder with No Language or Intellectual Disability (2021)
- Racial/Ethnic Disparities in the Identification of Children With Autism Spectrum Disorders (2009)

Media Sources

- HDFT Brain Scans (Autistic & Neurotypical) via Schneider Lab
- Autism Spectrum by @autistic_artist
- *Subtractive Variability* spectrum video by @felipepantone
- Overstimulation Fishbowl by myself
- Goldsmiths Campus via https://www.gold.ac.uk
- Stock Photographs via Unsplash
- Rainbow Neurodiversity Symbol via Shutterstock
- Icons via Noun Project
- Galaxy Neurodiversity Symbol by myself
- Uniquely Human video by Dr. Barry Prizant

Further Reading

- *Uniquely Human* by Dr. Barry Prizant

  The original edition is outdated. Be sure to read the expanded and revised edition released in 2022.

- *The Autism Handbook* by Andi Putt, M.S., CCC-SLP
- *Sensory Integration and the Child (25th Anniversary Edition)* by A. Jean Ayres, Ph.D.
- Behavior is Not the Issue (Part One and Two) by Dr. Barry Prizant and Amy Laurent

  (A practical guide for emotional regulation in school or home settings.)

- neurodivergentspacetime.com for monthly updates from me

www.neurodivergentspacetime.com