

GETTING TO THE ROOT CAUSE(S) OF TWICE EXCEPTIONALITY (2E) BEYOND THE USUAL SUSPECTS

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AGENDA

- ◆ Could there be more to the 2e story?
- ◆ Why diagnose?
- ◆ 10 Most Overlooked Root Causes of 2e

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WHO ARE THE TWICE-EXCEPTIONAL (2E)?

Gifted, talented, highly capable, and/or high IQ

AND

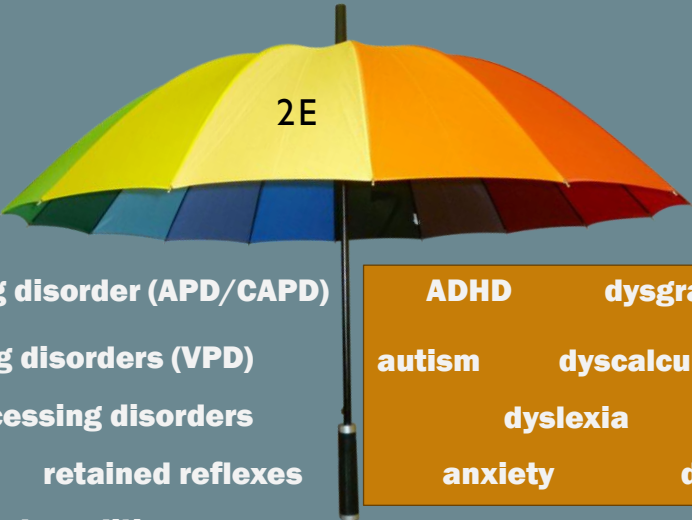
Neurodiversity, disability, learning difference,
mental health concern, or other challenge

“Their gifts may mask their disabilities and
their disabilities may mask their gifts.”

(Reis et al., 2014, p. 222)

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2E

auditory processing disorder (APD/CAPD)	ADHD	dysgraphia
vision processing disorders (VPD)	autism	dyscalculia
sensory processing disorders		dyslexia
medical conditions	retained reflexes	anxiety
physical conditions		depression
PANDAS/PANS	sleep problems	

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NEURODIVERSITY, ANOTHER LENS ON 2E

- Neurodiversity is not just about autism
- Every brain is unique, like a fingerprint (Valizadeh et al., 2018)
- Different brain “operating system,” patterns of strengths and challenges
- **Careful:** neurodiverse brains are not “worse” (or “better”)
 - They are **DIFFERENT**
- Many common diagnoses are better understood as neurodiversity
 - **ADHD** – strengths in quick response time, acting under pressure, noticing changes
 - **Dyslexia** – strengths in visual/spatial, creativity, big picture, entrepreneurial
 - **Autism** – strengths in spotting patterns, details, logic

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HIGH IQ IS ALSO A FORM OF NEURODIVERSITY

- Regional brain volume is **BIGGER** in some areas (left hemisphere, bilateral frontal cortex, phonological loop, working memory, sensory, anxiety, amygdala)
 - ...and **SMALLER** in others (lateral-parietal junction)
- **DENSER** connectivity between some areas (arcuate fasciculus, corpus callosum - “information highways”)
 - ...and **SPARSER** connectivity in others
- Brain maturation happens on a different timeline (4 year difference!)
- **High IQ brains are physically different than neurotypical brains**

Source: gro-gifted.org

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ARE YOU SURE IT ISN'T 2E?

- Quirky?
- Asynchronous?
- Sensitive?
- Perfectionistic?
- Anxious?

Overexcitabilities

(psychomotor, sensory, imaginal, intellectual, emotional)
may be another language to describe the 2e experience

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WHAT DOES 2E LOOK LIKE?

- explosive behavior
- distractible
- trouble finishing work
- trouble getting started
- anxiety
- perfectionism
- low frustration tolerance
- impulsive
- Sometimes, minimal outward clues

Easy to Misunderstand

“lazy”
“unmotivated”
“doesn't care”
“mis-identified as gifted”

Probably a lot more gifted kids are 2e than we think. Maybe even the majority, especially among highly gifted.

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BEHAVIOR IS COMMUNICATION

- When a 2e student is having a hard time, **you will see it in their behavior**
- “Not won’t, **CAN’T**” “Kids do well when they can.” – Ross Greene
- “Shifting from addressing behaviors to trying to **understand their origins and triggers** means making a shift from managing our children to **understanding them deeply.**” – Mona Delahooke
- **“It’s never about lazy.” – Austina De Bonte**

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WHY DIAGNOSIS MATTERS

“Why do you need a label?”

Because there is comfort in knowing you are a normal zebra, not a strange horse.

Because you can’t find community with other zebras if you don’t know you belong.

And because it is impossible for a zebra to be happy or healthy spending its life feeling like a failed horse.”

**The important part is that the label is
ACCURATE
Find the correct root cause(s)**



Image Credit: pngall.com Quote Credit: Instagram #omgimautisticaf

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WHY DIAGNOSIS MATTERS

Realize that
you're playing
the game in
hard mode



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(2017)

- Acc
- “L
- Mis
- App
- Wa
- Earl
- Dys
- 2e students are masters of masking & compensating
- **Accurate diagnosis is tricky! It's probably not just one thing...**

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BUCKET THEORY

- Everyone has a bucket to handle adversity
- As challenges stack up, they fill up your bucket
- When your bucket overflows, that's **overwhelm**

Game Plan

1. Identify the rocks in your bucket
2. Get them out (or make them smaller)

→ Create more space for **resilience**



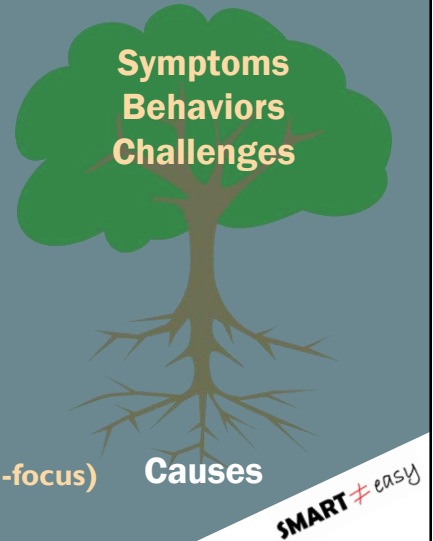
Bucket by farra nugraha; Rocks by James Cottell and Sean Maldjian from [Noun Project](#) (CC BY 3.0)

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LOOK FOR THE ROOT CAUSE(S)

- There's a reason. Find the reason.
 - "Kids do well if they can." –Ross Greene
- Find **ALL** of the causes
 - You will need **DIFFERENT** practitioners
 - Start at foundations (vision, auditory, etc.) and work up
- Different strategies for different causes
 - **Interventions**
 - **Tools**
 - **Accommodations**
 - **Understanding (Neurodiversity-affirming & Strength-focus)**



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POLYVAGAL SAFETY IS ESSENTIAL

Learning only happens here

Porges polyvagal theory

- **Autonomic nervous system is constantly evaluating the environment for safety**
- Co-regulation with safe, trusted others

Create a neurodiversity-affirming classroom (& home)

- Relationship with teacher (& parents)
- Environmental safety in classroom (& home)
- Relational safety with classmates (& family)

Ventral Vagal
safe, connected,
calm, social

Sympathetic
fight/flight/freeze
"take action"

Dorsal Vagal
shutdown,
overwhelm



Adapted from Deb Dana 2022; Porges 2011

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10 FLAVORS OF 2E

- The most common flavors
- Many 2e kids have more than one flavor

For informational purposes ONLY

Please use this information to consider whether to pursue diagnosis with the appropriate provider.



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VISION PROCESSING DISORDERS (VPD)

Common but subtle – worth screening anyone having trouble

How the brain processes what the eyes see

Many flavors: Convergence insufficiency, teaming, tracking, 3D, distance vs. near

Letters/words/numbers flip (b d p q), move, or get blurry

Goofy mistakes in math (+ - x)

Clumsy, trouble with sports & balls, dislikes 3D movies/rides

Fatigue, lack of stamina when reading, especially with small fonts

Inconsistent scores on standardized tests

NOT dyslexia, but it's common to have both

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VISION PROCESSING DISORDERS (VPD)

Common but subtle – worth screening anyone having trouble

How

How to Help

Interventions

- Diagnose with a specialist (covd.org)
- Vision therapy is effective at any age

Accommodations

- Large print
- Audiobooks, text-to-speech
- Dictation, speech-to-text
- Typing all classwork/assessments (SnapTypeApp.com)

NOT dyslexia, but it's common to have both

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AUDITORY PROCESSING DISORDER (APD)

Hearing is normal or super-sensitive

One ear “hears” a split second before the other

Hands over the ears as a young child

Wears hats, hoods, long hair, headphones that cover the ears

Doesn't hear name being called

Dislikes noisy environments, trouble understanding in background noise

Fatigue, comprehension problems in lecture halls, big classrooms

Trouble with conversational timing (social!)

Rising anxiety/fatigue/frustration through the day

May look like ADHD, ODD, PDA, explosive behavior, or withdrawal

Common reason for classroom overwhelm/behavior

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AUDITORY PROCESSING DISORDER (APD)

Hearing is normal or super-sensitive

One ear “hears” a sound before the other

How to Help

Interventions

- Auditory therapies (many options; mixed results)

Tools

- Ear filter (ablekidsfoundation.org)
- Low gain hearing aids (drraestout.com)

Accommodations

- Teacher always uses microphone!
- Preferential seating away from noise
- Check in with student for understanding
- Provide written notes, scribe, allow recording

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RETAINED PRIMITIVE REFLEXES

- Moro startle reflex – sensitivity to stimuli, sounds, tactile, lights, etc.
 - There are about a dozen others
- Primitive reflexes should have integrated by early childhood
- If still present, can cause a wide variety of concerns:
 - Trouble sitting still, poor coordination, motion sickness, anxiety, trouble with handwriting, unusual posture, unusual gait, toe walking, emotional dysregulation, balance/vestibular issues, clumsiness, ...
- Retained reflexes are often present alongside:
 - Vision processing disorders (VPD), ADHD, Autism

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RETAINED PRIMITIVE REFLEXES

- Moro startle reflex – sensitivity to stimuli, sounds, tactile, lights, etc.

How to Help

Interventions

- Exercises to re-integrate reflexes
- Available online, or work with a specialist ([senseenabled.com](https://www.senseenabled.com))

Accommodations

- Allow movement in class (walking lane)
- Provide alternate seating (standing, wobble chair, etc.)
- Provide fidget tools

- Vision processing disorders (VPD), ADHD, Autism

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AUTISM

- Probably way more common than we think, especially in girls (#actuallyautistic)
- Different brain operating system – not broken, different
- Creates challenges in **unsupportive environments**
 - → DSM lists distress responses of autistic individuals in unsupportive environments
- **Sensory sensitivity (tactile, auditory, visual, etc.)**
- **Autistic social patterns (see: Double Empathy Problem)**
- **Focus on details over big picture**
- **Different internal experience (interoception)**
- **Anxiety, irritability, perfectionism, prone to getting overwhelmed**
- Non-Clues: eye contact, empathy, social, affectionate, humor, creativity

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AUTISM

- Probably way more common than we think, especially in girls (#actuallyautistic)

How to Help

Interventions

- ABA – avoid! Pretending to be neurotypical today → Burnout later)
- Instead: Neurodiversity-affirming counseling/coaching

Accommodations

- Executive function supports
- Social supports (social/support group with other autistic students)
- Support specific individual needs (sensory, living space, etc.)

Understanding

- Self-understanding as **neurodivergent**, not broken
- Decide where to spend your energy

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(STEALTH) DYSLEXIA

- Phonological awareness, trouble with rhyming & wordplay
- Reads everything as a sight word, trouble sounding out
- Trouble with spelling, writing, grammar
- Skips or substitutes words when reading
- Inconsistent scores on standardized tests
- Trouble with rote memory
- Despite this, excellent comprehension

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Free oral screener for dyslexia - www.thepasttest.com

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(STEALTH) DYSLEXIA

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How to Help

Interventions

- Dyslexia-specific tutoring in structured literacy (phonics, etc.) with a focus on spelling/writing

Accommodations

- Audiobooks, text-to-speech
- Dictation, speech-to-text, or a scribe
- Typing all assignments/assessments (SnapTypeApp.com)
- Access to spellcheck for all classwork/assessments
- Extra time for assignments/assessments
- Provide written notes, scribe, allow recording

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DYSCALCULIA

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- Less well understood than cousin dyslexia
- Difficulty with judging quantities, less vs. more
- Lack of number sense
- Trouble with calculations
- Can memorize some sequences but not understand why
- Good math problem solving skills, but trouble with rote math facts?

→ **Consider dyslexia**

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DYSCALCULIA

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- Less well understood than cousin dyslexia
- Difficulty with judging quantities, less vs. more
- Lack of number sense
- Trouble with calculations

How to Help

Accommodations

- Provide manipulatives
- Provide number line, hundreds chart
- Provide multiplication table
- (Provide calculator)

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WRITING CHALLENGES (DYSGRAPHIA)

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- Many causes:
 - Physical/motor challenges, strength, pencil grip
 - Lack of motor automaticity in writing letters/numbers
 - Dyslexia (especially spelling)
 - Vision Processing Disorders (VPD)
 - Trouble getting ideas out, organizing thoughts

- **Figure out the specific cause(s)**

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THIS IS A TOUGH TRANSITION



Lots of interconnected ideas in brain



First, ● . Then ● , ● , and ● .

● . ● . ● because ● .

linear writing, one word at a time

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WRITING CHALLENGES (DYSGRAPHIA)

• Many causes:

How to Help

Figure out the specific cause(s)! tinyurl.com/2ereluctantwriters

Interventions

- Writing coach/tutor (braindump ideas in a messy way, then organize)

Accommodations

- Dictation, speech-to-text, or a scribe
- Typing all assignments/assessments (SnapTypeApp.com)
- Access to spellcheck for all classwork/assessments
- Extra time for assignments/assessments
- Provide written notes, scribe, allow recording

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ADHD

- **Types:** Inattentive, Hyperactive, Combined
- **“Interest-based nervous system”**
- Not lack of attention, but trouble regulating attention
- Can focus when: **(INCUP)**
 - **Interesting**
 - **Novel**
 - **Challenging**
 - **Urgent/Pressure**

(Dodson, 2018)

- **NOT:** rote, boring, easy, even if very important

Trouble getting started

Staying on task

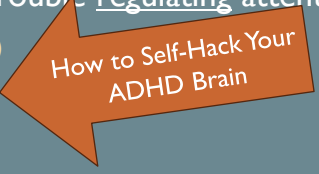
Time management

Breaking down big projects

Executive function

Can produce when interested in the topic

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ADHD

- **Types:** Inattentive, Hyperactive, Combined
- Not lack of attention, but trouble regulating attention
- Can focus when: **(INCUP)**

How to Help

Interventions

- ADHD meds can help (and may be therapeutic)

Accommodations

- Executive function supports (scaffold, reminders, cues, body doubling)
- **Make things INCUP (Interesting, Novel, Challenging, Urgent, Pressure)**
- Beware: “extra time” may not help

- **“Interest-based nervous system”**

Trouble getting started

Staying on task

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ADHD LOOKALIKES

• “A true diagnosis of ADD/ADHD should be as a last resort made by exclusion after ruling out other possible factors such as:

- depression, anxiety,
- learning disabilities,
- preoccupation with personal issues,
- unrealistic expectations, situational difficulties and abilities and expectations,
- auditory processing deficits,
- mild brain injury, ill health, substance abuse,
- lack of sleep and/or nutrition, current use of medication

(Webb et al, 2005)

Vision processing (VPD)
 Auditory processing (APD)
 Sensory processing (SPD)
 Sleep apnea
 Allergies (food or environment)
 Sensitivity to food coloring
 Chemical sensitivity
 Mold sensitivity
 PANDAS/PANS

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SLEEP APNEA (AND OTHER SLEEP DISTURBANCES)

• Sleep apnea in teens can be silent

No gasping, night waking, snoring, etc.

REM sleep is needed for consolidating and storing long-term memory

Lack of quality sleep can cause symptoms identical to ADHD

Easy to rule in/out with a sleep study

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SLEEP APNEA (AND OTHER SLEEP DISTURBANCES)

- Sleep apnea in teens can be silent
No gasping, night waking, snoring, etc.

RE

How to Help

Interventions

- Remove tonsils
- Revise tongue tie
- Orthodontic palette expander
- Nose/sinus surgery for bifurcated septum

Tools

- CPAP machine for sleeping

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PANDAS/PANS

- **Autoimmune reaction to strep** (and/or other bacteria/viruses/mold) that creates inflammation in the basal ganglia of the brain
- **Common:** Irritability, Low frustration tolerance, Mood swings, Anxiety (especially separation anxiety, irrational, bedtime, or constant)
- **Often:** Sleep disturbances, OCD, Repetitive/intrusive thoughts, Tics (physical or verbal), Picky/restricted eating, Sensory sensitivity
- **Sometimes:** Headache, Stomachache, Urinary frequency, Bedwetting, Math or handwriting regression, Aggression, School refusal
- **Stanford says only 40% of their PANDAS patients were acute onset**

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PANDAS/PANS

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- **Common:** Irritability, Low frustration tolerance, Mood swings, Anxiety (especially separation anxiety, irrational, bedtime, or constant)

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How to Help

Interventions

- Medical treatment needed, **MUST** find a specialist
 - Neuroimmune.org <http://aspire.care>
 - Pandalnetwork.org inflamedbrain.org
 - Pandasppn.org

Book: A Light in the Dark for PANDAS & PANS (Crista)

refusal

onset

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PROVIDING HELP THAT'S ACTUALLY HELPFUL

- Different strategies for different causes

Figure out the correct root cause(s)

- **Interventions**

Vision therapy for VPD, Tutoring for dyslexia, Reflex integration, Occupational Therapy, Medication for ADHD, Treatment for medical issues

- **Tools**

Ear filter/LGHA for APD, Assistive technology

- **Accommodations**

Preferential seating, written notes, notetaker/scribe, teacher uses microphone, extra time, large print, audio books, etc.

- **Understanding: Neurodiversity-affirming, Strength-focused**

For autism, ADHD, dyslexia, dysgraphia, and everything...

When in doubt,
Provide more support

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NOTE WHAT WASN'T ON THE LIST

- Sensory Processing Disorder
- Developmental Coordination Disorder/Dyspraxia
- Anxiety
- Depression
- Bipolar
- Tourette's/Tic Disorder
- ODD (Oppositional Defiant Disorder)
- PDA (Pathological Demand Avoidance/Persistent Drive for Autonomy)

Usually better described as one of the 10 most common causes

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THANK YOU
tinyurl.com/2ebeyondusualsuspects

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