Reconceptualizing ASDs as Autistic Learning Styles and Autistic Disabilities: A Developmental, Strength-Based Approach

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What Are Some of 'The Politics of Autism'?

Vulnerability of Truth

- Most non-autism specialists get info on autism from internet, TV or other popular media with a bias to sensationalism—this has filtered into clinical practice and research and made it hard to know what to expect.

Autism Realpolitik

- Vast majority of adults with ASDs are unemployed, under-employed & living with parents despite 15-18 years of IEPs & college-learning assistance programs.

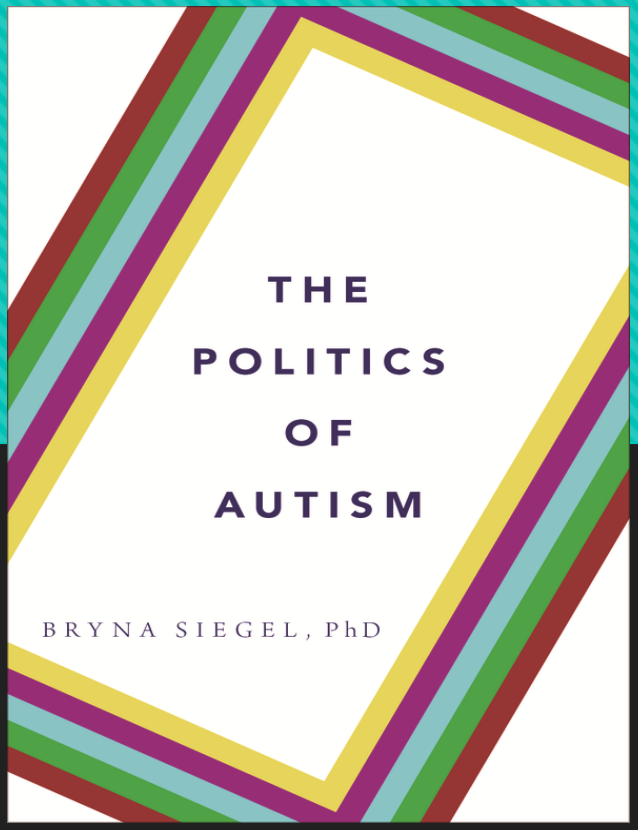
How Can We Do a Better Job by Utilizing Strengths to Help Compensate for Weaknesses?

The Politics of Autism Diagnosis: Core Social Policy Recommendations

- Note autism **strengths**, not just weaknesses to support longer-term educational planning rather than focus on 'normalization' through emphasis on 'core curriculum.
- **Address** the pressing need for 'continuity of care' for autism such as '10 year plans' after age 12.
- **Train teachers** and therapists not just in autism specific techniques, but methods that promote integrative an approach considering co-morbid features as well as ASD
- **Emphasize** family engagement at each stage of learning to promote generalization and focus on ecologically-valid outcomes.

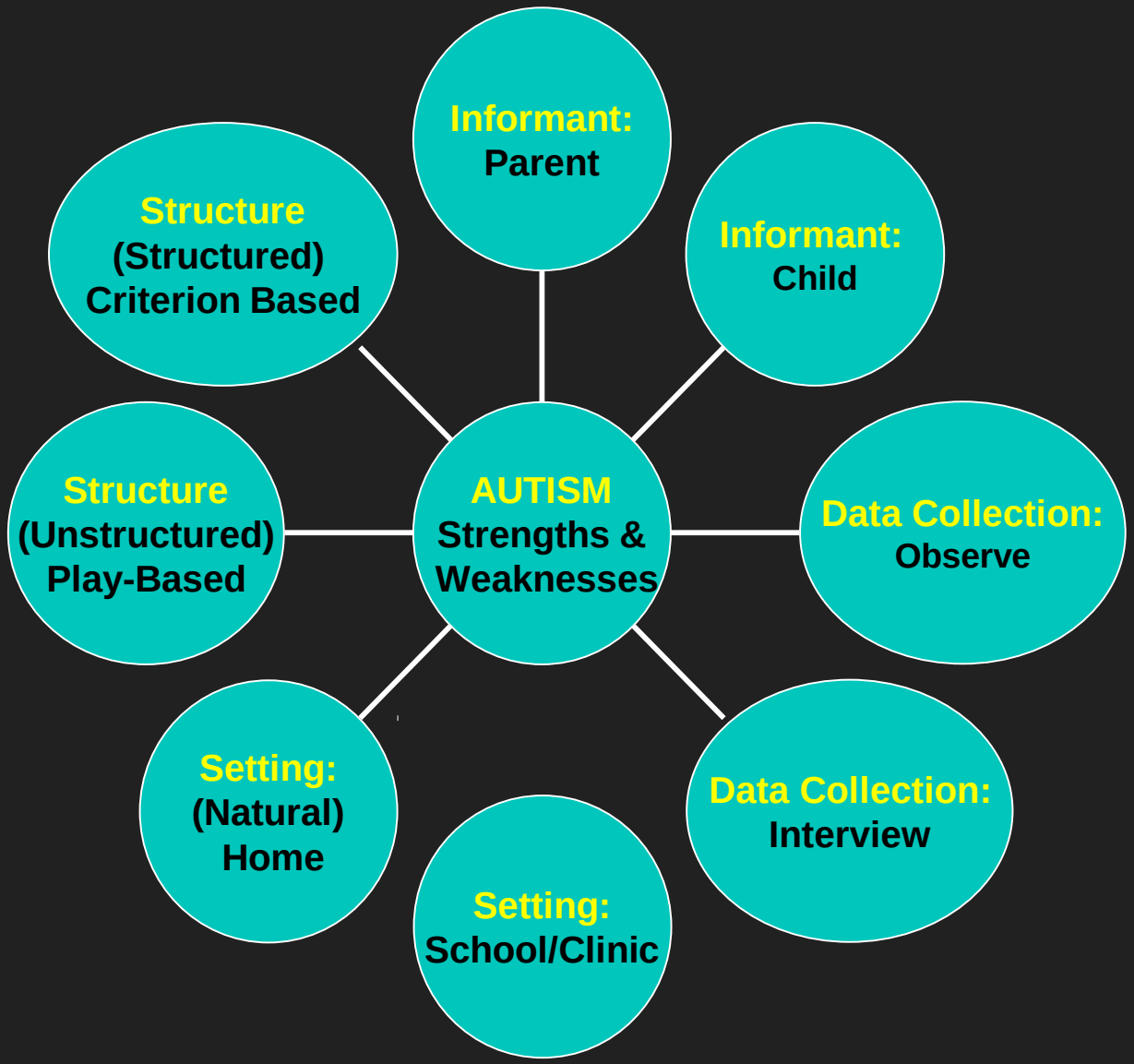
The Politics of Autism:

What's Political?



The Politics of Autism,
(Bryna Siegel, 2018, NY, NY: Oxford University Press)

Ecological Validity: Understanding the Whole Child

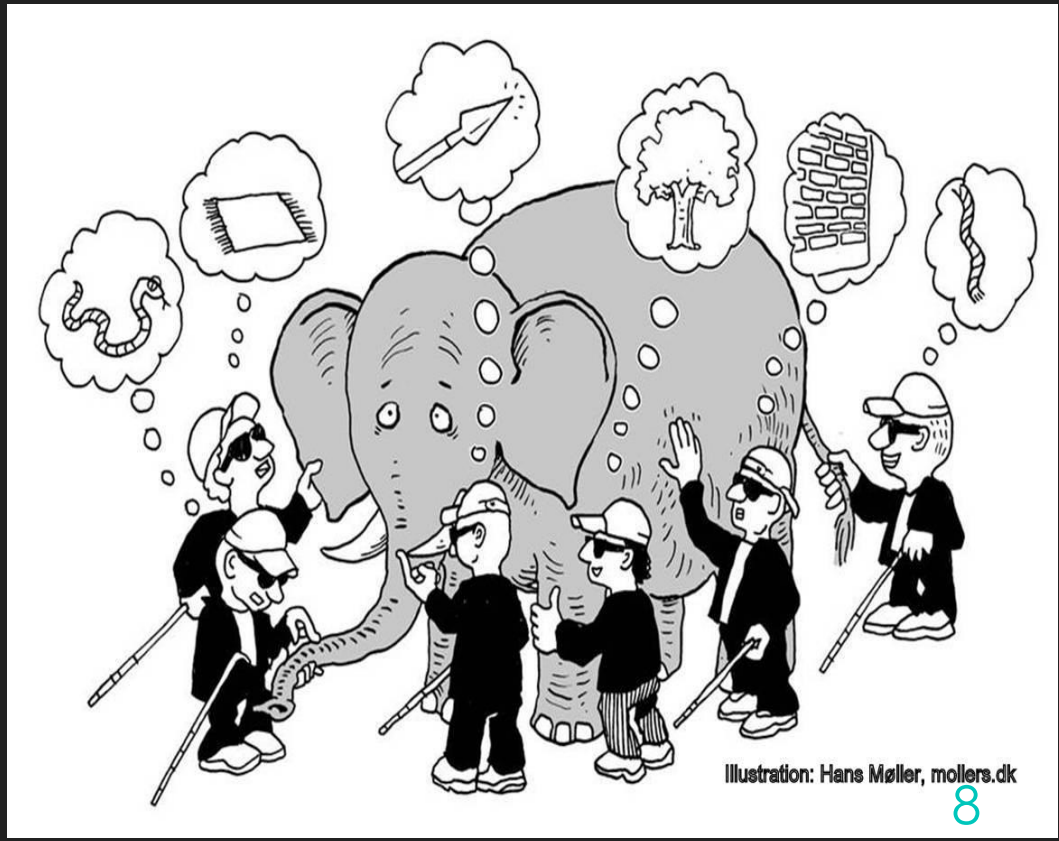


ASD & All Neurodevelopmental Disorders: Prevalence= 1:5? Or Are There Co-Morbidities?

- Autism Spectrum Disorders 1.5% (1:68)
- Attention Deficit Disorders (ADHD/ADD) 10.0%
- Intellectual Disability (ID) 0.9%
- Learning Disorders 4.7%
- Language Disorders 2.8%
- 'Emotional Disturbance' (CD/ODD/IED) 0.8%

ASDs Should Not Be Regarded as Unitary…

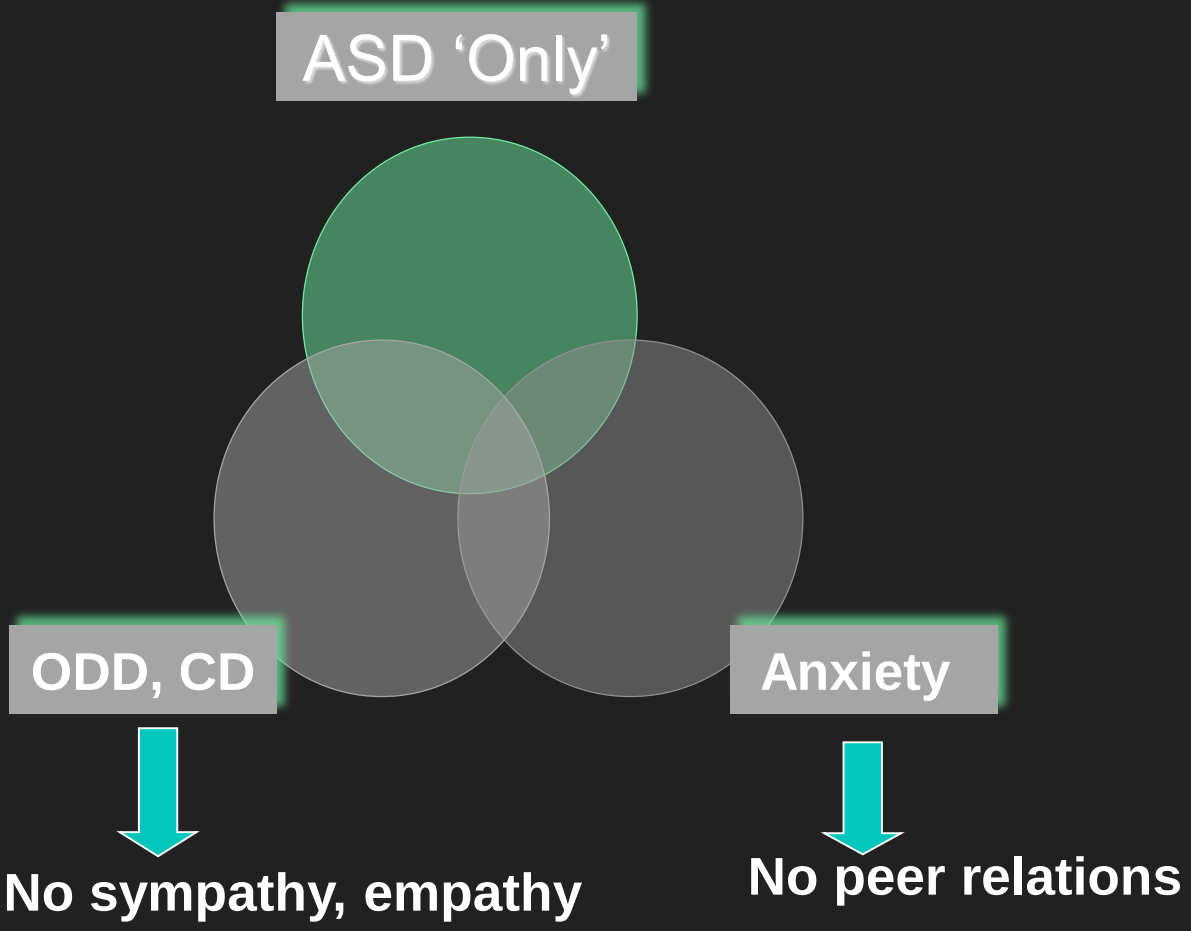
- No biomarkers
- Brain regions, neuronal projection contiguous and overlapping
- Other neurodevelopmental disorders likely overlap
- Think in terms of ‘pie chart’ children, not interdisciplinary disagreement



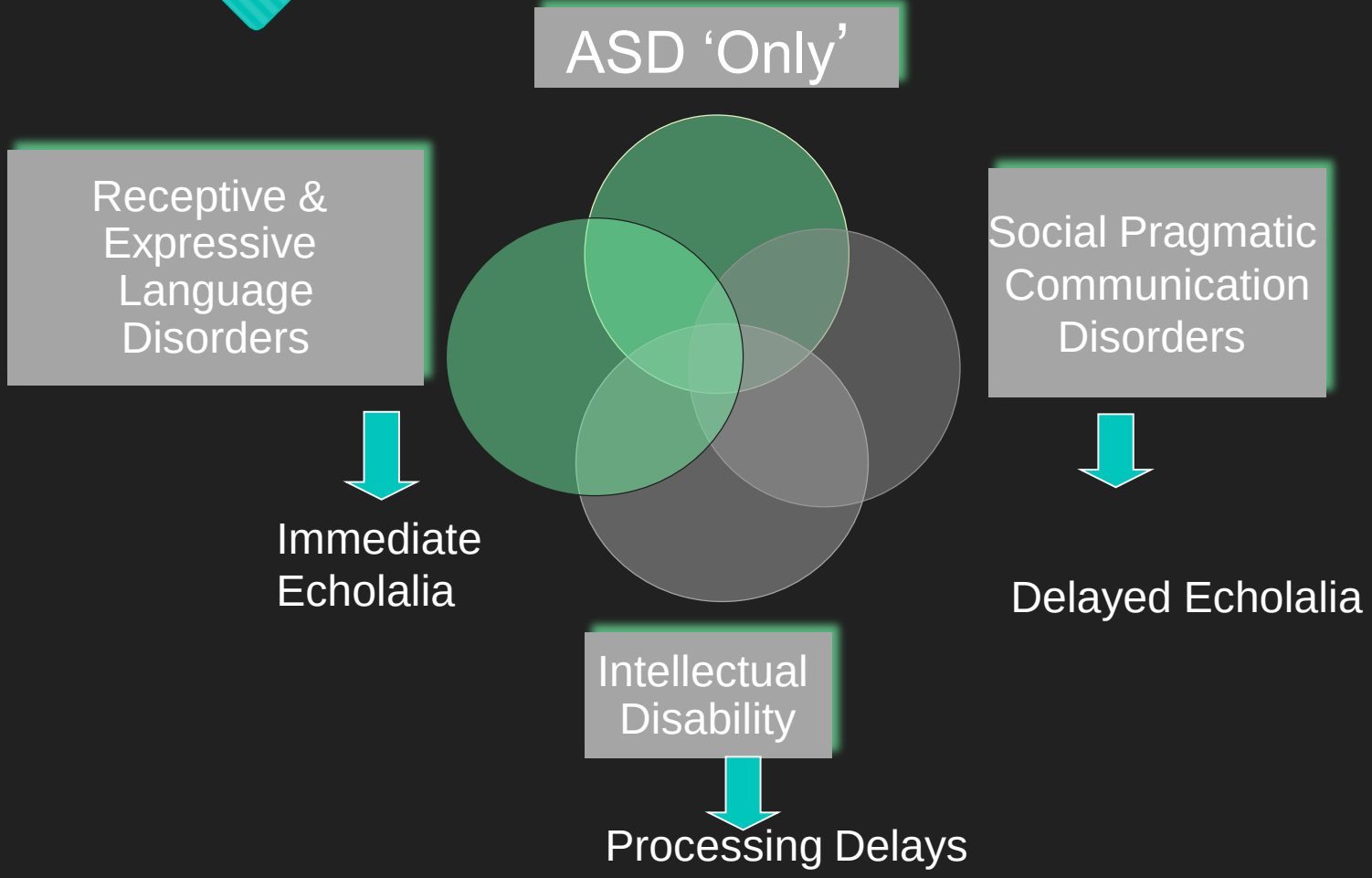
Considering ASD ‘Plus’…

- Autism, like all psychiatric diagnoses lacks biomarkers; DSM gives us a ‘moving target.’
- With ASD, we are treating symptoms, not the diagnosis.
- When are ASD symptoms consistent with other diagnoses & need to pull in tools from other treatment ‘toolboxes’?

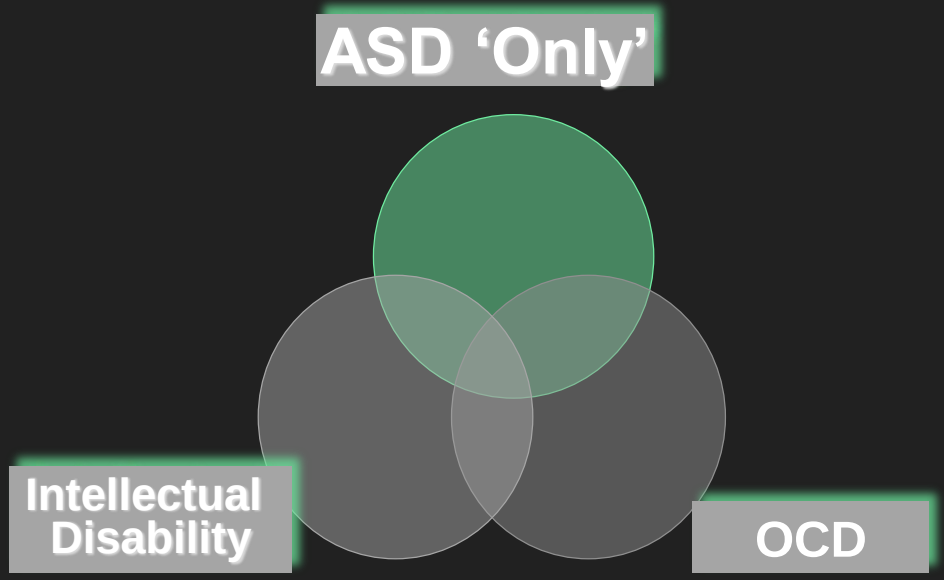
ASD:
'Social' Criteria & Overlapping Disorders



ASD: Communication Criteria & Overlapping Disorders

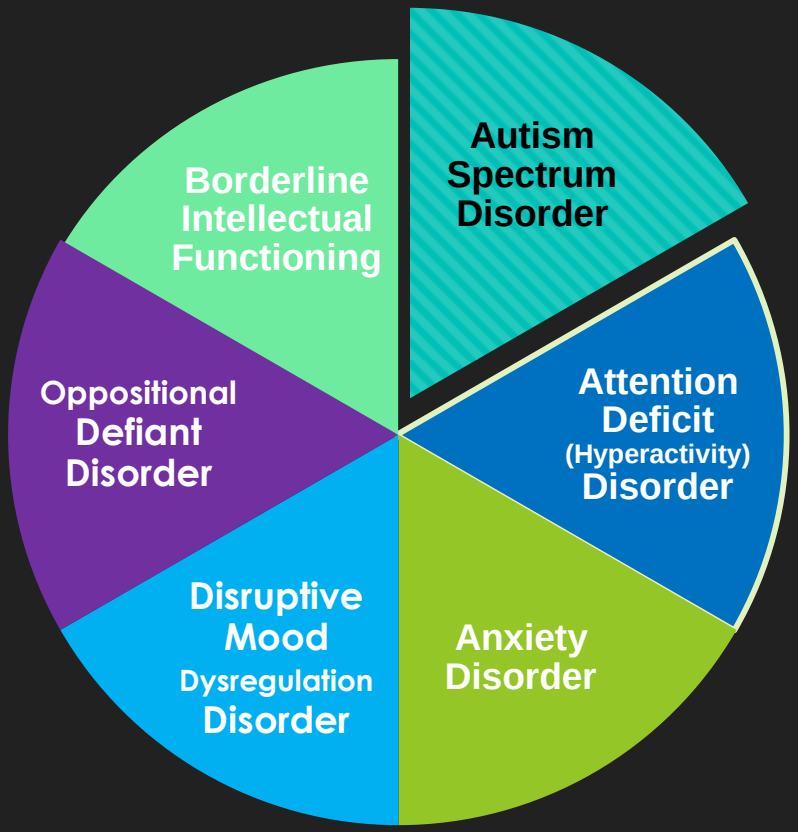


ASD:
Routine & Repetitive Behaviors & Overlapping Disorders



- Motor Stereotypies Sensory Abnormalities
- Routines & Rituals

‘Pie Chart’ Children:
How Many with ASD are ‘Pie Chart’ Children



Implications for Teaching Pupils with ASD:

'Autism' may be more than autism;
Treatment needs to be comprehensive

Follow-Up is Critical to On-going Treatment Plans

- If less than 6-8 years old, and not diagnosed w ID or ADHD may be b/c 'too young,' build in follow-up.
- We know comparatively little about early development in OCD, BPD, schizophrenia, etc., build in follow-up to see if signs of these emerge.
- We have good predictive validity for language development by age 8, so make sure parents understand that and treatment reflects prognosis.

Autism mostly chronic: Most will get better but will not be cured

- Parents need to know whether to save for college or a special needs trust—and need '10 year plans' after age 8-10 years of age.

The chain will be as strong as the weakest link—social or intellectual

How Do We Move to Individualized Educational Plans Based on Leveraging Strengths to Compensate for Weaknesses?

The way it is now:

- Treatment is proscribed more by diagnosis and weaknesses than by strengths to capitalize select intervention strategy.
- Too little focus on developmental trajectory.
- Individual weaknesses often dictate curriculum

What might be more productive?

research can do better by focusing on signs & not just diagnosis.

Thinking in Terms of Autistic Learning Styles and Autistic Learning Disabilities

Autistic Learning Styles (ALSs):

Strongest perceptual & cognitive abilities 'spared' in autism

Autistic Learning Disabilities (ALDs):

Functional translation of how specific autism symptom has a negative impact

The ALD/ALS Approach: A New Heuristic

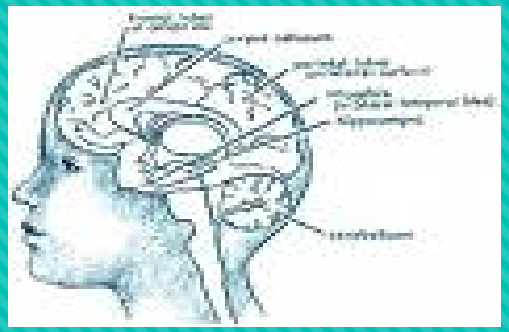
ASDs and ALSs can be used to classify autistic alterations in Perception, Cognition, Information-Processing, Motivation and Expression

The Challenges:

- How do alterations in the way a child with autism perceives, processes, stores, and retrieves information create an altered world view?

- How can these alterations be regarded as a cluster of ‘autistic learning disabilities’ (ALDs) so specific symptoms point to specific deficits, and ALSs point to specific compensatory treatments?

The Child with ASD May Perceive Differently



Sensory Threshold & Modulation Problems:

Audition:

Covers Ears ⟺ Appears Deaf

Tactile:

Clothes Sensitivities ⟺ Diminished Pain Response

Visual:

Gaze Avoidance ⟺ Visual Scrutiny

Olfactory:

Pica ⟺ Gags at Smells

The Child with ASD
Processes Differently

- **Sensory threshold** differences lead to misrepresentation of inputs
- **Processing speed** delays lead to loss of information

What you get = what you can 'think' (perceive plus process)

This needs to be delineated from inattention and non-compliance (which need different treatment—think 'pie chart' child)

The Child with ASD Stores Differently

- 'Constructive' memory borrows from more fully represented data sources
- Retention is probably better where comprehension is better
- Many with ASD learn best 'instrumentally' i.e., when what they 'learn' gets them what they want

Autistic Learning Disabilities:
How Social Deficits Affect Learning

Lack of socio-emotional reciprocity=

- Lack of desire to please others
- Low response to social reinforcers
- Lacks concern re: effect on others

Lack of awareness of others/ ToM=

- Motive to please self is foremost
- Instrumental learning style

Lack of social imitation=

- Low "incidental" learning via copying others
- No drive to follow group norms

Autistic Learning Disabilities: *How* Non-Verbal Communication Deficits Affect Learning

Low comprehension of facial/ vocal cues such as:

- Smiles, frown, more subtle facial affect
- Tone of voice to mark affective/ semantic meaning

Ignores gestures that are 'first' language such as:

- Gaze toward topic of conversation directs listening
- Pointing to topic of interest gains topic-directed attention
- Poor affect and gaze coordinated with communicative intent produces ambiguous communication

Autistic Learning Disabilities: ***How*** **Verbal Communication Deficits Affect Learning**

Receptive Language

- Signal : noise problem for verbal 'signal'
- Language processing with poor 'parsing'
- Overly literal/ concrete, limited generalization

Expressive Language

- Without 'theory of mind,' no drive to 'share' ideas
- Without instrumental motive, no drive to express
- Oral-motor apraxia synergistic w/ low expressive drive

Autistic Learning Disabilities:
How Play and Exploration Deficits Affect Learning

Lack of imagination in play=

- No assimilation of experience via play
  (small world/ 're-presentational' play)
- No symbolic actions to link to language to abstract thinking

Stereotyped and repetitive interests=

- Averse to novelty/ low curiosity
- Limited learning through exploration
- Repetitive interests = mental 'down time'

Autistic Learning Styles Defined:

- Autistic learning styles are intact functions automatically being deployed to compensate for impaired systems

- By looking for autistic learning styles, we discover what works and can make more use of those intact systems (improving on success)

Recognizing an Autistic Learning Style

ALD + Intact Abilities = ALS

What the Child Does Well Shows Us:

How to 'deconstruct' 'symptoms' into what works & what doesn't (e.g., Echolalia)

Compensatory strategies that are autism-specific (e.g., VAC vs ASL)

Processing modality 'substitution' (e.g., Hearing for blind vs visual memory for ASD)

Defined by **Matrix of Ability and Disability:**

What the child can't do (ALD) plus what the child can do = autistic learning style (ALS)

Matrix of Ability and Disability

Examples:

Auditory Processing & Visual Memory

	Intact Abilities		
Impaired Functions		Auditory Memory	Visual Memory
	Slow Auditory Processing Speed	Echolalia with low comprehension	
	Low language comprehension		Insists on routines

Autistic Learning Styles (ALSs) Related to *Motivation*

Verbal Intelligence-Related

- Better use of language when requesting than commenting—so set up teaching to involve spontaneous requesting (i.e., PRT)

Performance Intelligence-Related

- Good visual-motor-spatial ability without need for semantic supports—so use visual supports and routines to elicit language

Autistic Learning Styles (ALSs) Related to *Memory*

Verbal Intelligence-Related

- Good Auditory Memory without 'Parsing'—so link song to action to promote decoding, use books without words to evoke verbal description

Performance Intelligence-Related

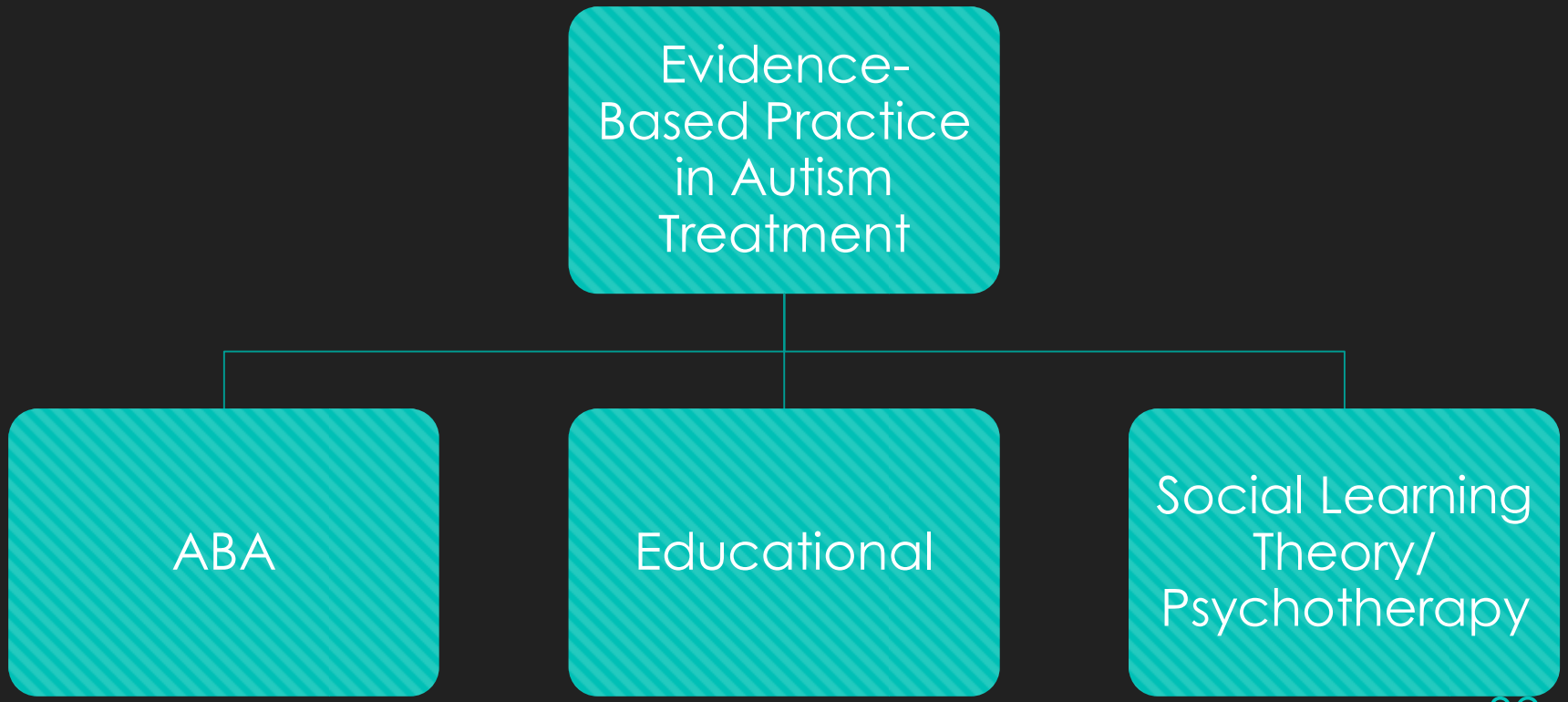
- Good Procedural Memory (Prefers Routines)—develop a little 'movie director' who knows/ can choose the next 'scene'

The Autism Treatment Toolbox

Selecting the Right Tool (Exploiting ALSs) for the Job (Fix ALDs)

National Development Center on ASDs (2017)

www.autismpdc.fgp.unc/evidence-based-practices



ABA Evidence Based Practices

National Professional Development Center on ASDs, 2017

- Antecedent-based interventions
- Differential reinforcement
- Discrete trial training
- Extinction
- Modeling
- Pivotal Response Training
- Prompting
- Reinforcement
- Response interruption/ Redirection
- Scripting
- Task Analysis
- Video Modeling
- Time Delay

Educational Evidence Based Practices
National Professional Development Center on ASDs, 2017

- Modeling
- Natural teaching strategies
- Parent implemented intervention
- Peer training
- Pivotal response training
- Schedules
- Scripting
- Visual supports

Psychotherapy Evidence Based Practices

National Professional Development Center on ASDs, 2017

- Cognitive behavioral therapies
- Parent training
- Parent implemented intervention
- Self-management
- Social skills training
- Story-based intervention
- Social narratives

Themes Across Evidence-Based Autism Treatments

- Individualization/ Intensity
- Efficacy of behavioral methods
- Sensitivity to developmental level
- The natural environment's opportunities as a teaching milieu
- Role of parents/ home/ outside world in acquisition & generalization of useable knowledge and skills

So—Research Tells Us What Can Work—But Less About With Whom

The Goal is to Select a Method that Plays to ALS to Compensate for ALD:

A GUIDE HOW TO SELECTING THE RIGHT TOOL FOR THE JOB

ANY EBP EXPLOITS ONLY *SOME* AUTISTIC LEARNING STYLES

Autistic Learning Styles in Motivation & Memory Targeted by ABA Practices

Autistic Learning Style →	Better Language when Instrumental	Good Visual-Spatial-Motor	Good Auditory Memory w/o Semantics	Good Procedural Memory
Examples of ABA Evidence-Based Practice ↓				
Discrete Trial	x	x	x	x
PRT	x			
Video Modeling			x	x
Differential Reinforcement	x			

Autistic Learning Styles in Motivation & Memory Targeted by Education Practices

Autistic Learning Style →	Better Language when Instrumental	Good Visual-Spatial-Motor	Good Auditory Memory w/o Semantics	Good Procedural Memory
Examples of Education-Based Practice ↓				
Scheduling		X		X
Peer Training			X	X
Visual Supports		X		X
Modeling		X	X	X

ANY EBP ADDRESSES ONLY *SOME* AUTISTIC LEARNING DISABILITIES

Social Autistic Learning Disabilities & ABA Practices

SOCIAL AUTISTIC LEARNING DISABILITY →	Low desire to please others	No response to social reinforcer	No concern re: effect on others	Motive to please self foremost	Low imitative drive	Low interest in group norms
Examples of EVIDENCE-BASED ABA PRACTICE ↓						
Discrete Trial	X	X		X	X	
PRT	X	X	X	X		
Video Modeling					X	X
Differential Reinforcement	X	X		X		

Verbal & Nonverbal Autistic Learning Disabilities & ABA Practices

Verbal & Nonverbal AUTISTIC LEARNING DISABILITY →	Low Comp. of Face & Gesture	Low Comp. of Tone of Voice	'Signal': 'Noise' Auditory Process. Problems	Low ToM/ View of Listener	Low Commun. w/o Instrum. Drive
Examples of EVIDENCE-BASED ABA PRACTICE ↓					
Discrete Trial	X				X
PRT	X				X
Video Modeling	X	X	X		
Differential Reinforcement	X				X

Autistic Learning Disabilities Related to Play & Exploring & ABA Practices

PLAY & EXPLORING AUTISTIC LEARNING DISABILITY →	Lack of Imagine	Lack of Use of Symbols	Aversion to Novelty	High Repetition/ Perseverate		
Examples of EVIDENCE-BASED ABA PRACTICE ↓						
Discrete Trial			X	X		
PRT			X	X		
Video Modeling	X	X				
Differential Reinforcement			X	X		

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Examples of EVIDENCE-BASED EDUCATION PRACTICE ↓						
Scheduling		X			X	X
Peer Training	X		X		X	X
Visual Supports	X	X			X	X
Modeling				X		

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Examples of EVIDENCE-BASED EDUCATION PRACTICE ↓						
Scheduling					X	
Peer Training	X	X				
Visual Supports	X		X		X	
Modeling	X	X			X	

Autistic Learning Disabilities Related to Play & Exploring & Education Practices

PLAY & EXPLORING AUTISTIC LEARNING DISABILITY →	Lack of Imagine	Lack of Use of Symbols	Aversion to Novelty	High Repetition/ Perseverate		
Examples of EVIDENCE-BASED EDUCATION PRACTICES ↓						
Scheduling			X	X		
Peer Training	X	X				
Visual Supports			X	X		
Modeling	?	?				

IN CONCLUSION:
IT'S COMPLICATED…

- A 'TOOL' THAT PLAYS TO A STRENGTH (ALS) MAY NOT ADDRESS A WEAKNESS (ALD)
- ON TOP OF ALL THIS—CURRICULUM MUST BE DEVELOPMENTAL AND FUNCTIONAL
- WE ARE NOT ALWAYS TREATING 'JUST' AUTISM.
- KEEPING TRACK OF WHAT WORKS AND WHERE IT IS TAKING US IS THE CLEAREST ROAD TO 'BEST PRACTICE' IN THE BEST INTEREST OF THE CHILD

Dr. Siegel's Books Related to Today's Talks

On THE POLITICS OF AUTISM

Siegel, B (2018). *The Politics of Autism*, New York: Oxford University Press.

On COLLABORATION BETWEEN PARENTS AND SCHOOLS

Siegel, B (2008). *Getting the Best for Your Child with Autism,* New York: Guilford Press.

On the DEVELOPMENTAL-BEHAVIORAL-APPROACH

Siegel, B (2003). *Helping Children with Autism Learn: Treatment Approaches for Parents and Professionals*, New York: Oxford University Press.

On HELPING PARENTS UNDERSTAND WHAT AUTISM is

Siegel, B (1996). *The World of the Autistic Child: Understanding and Treating Autistic Spectrum Disorders*, New York: Oxford University Press.

On WORKING WITH FAMILIES

Siegel, B. and Silverstein, S. (1994). '*What About Me? Siblings of Developmentally Disabled Children'* New York: Perseus Press