

## Mental Health Issues in ASD Workshop 021 2/20/14

James Coplan, MD  
Neurodevelopmental Pediatrics of the Main Line  
Rosemont, PA  
info@drcoplan.com  
[www.drcoplan.com](http://www.drcoplan.com)  
(610) 520-2130



[www.drcoplan.com](http://www.drcoplan.com)

## Disclosures

- Dr. Coplan is author of *Making Sense of Autistic Spectrum Disorders: Create the brightest future for your child with the best treatment options* (Bantam-Dell, 2010), and receives royalties on its sale



- This presentation will include a discussion of off-label drug use

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## First Principles

- Biologically driven behaviors / traits**
  - Occur *irrespective of environmental contingencies*
  - Do not serve a function*
  - Specific behaviors / traits are tied to specific neurotransmitters / brain systems
- Socially driven behaviors**
  - Occur in response to environmental contingencies
  - Serve a function
    - Attention
    - Access to desired objects or activities
    - Escape from undesired activities
    - [ Anxiety reduction ]
- Intervention: Often requires biological (i.e. pharmacologic) as well as environmentally-based measures**

## Outline

### Neuropsychological Deficits in persons with ASD

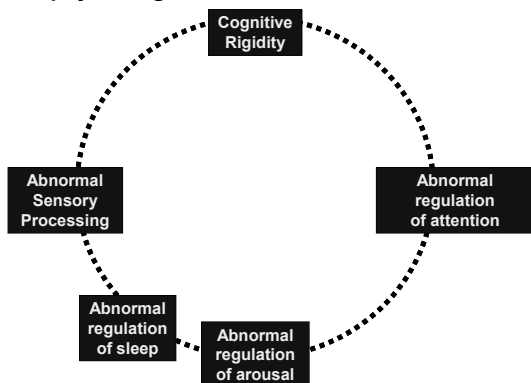
- Cognitive Rigidity
- Dysregulation of attention
- Dysregulation of arousal
- Dysregulation of mood
- Psychopharmacology for the non-physician
- Behaviorism: Its utility and its limits

### Mental Illness in persons with ASD: The Elephant in the Room

- Co-Morbidity, Continuum, or Metamorphosis?
  - Case Histories
  - Epidemiology
  - Laboratory Data
- Where do we go from here?

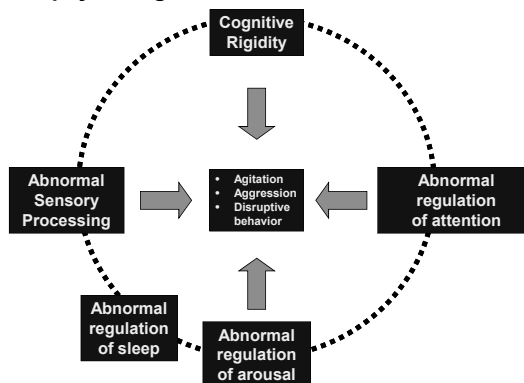
### Summary

### Neuropsychological Deficits in Children with ASD

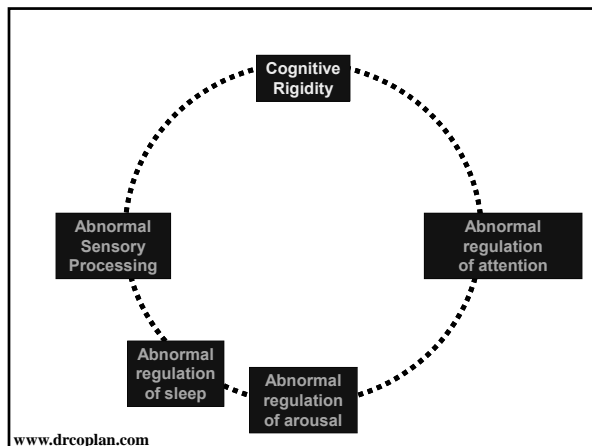


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### Neuropsychological Deficits in Children with ASD



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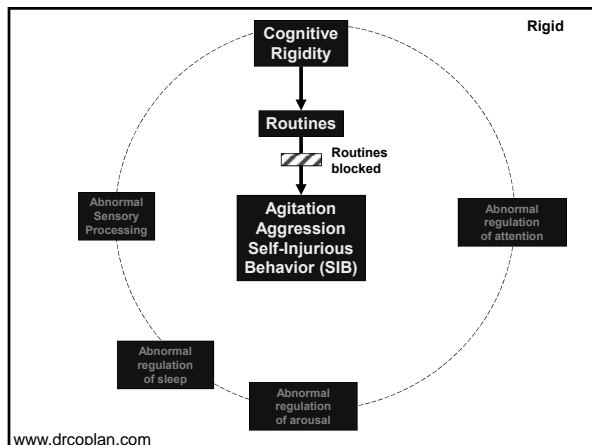


**Cognitive Rigidity [difficulty shifting mental sets]**  
→ Anxiety → Disruptive Behavior

**“Our son experiences extreme anxiety when what he anticipates isn’t what happens...When we know a change is coming we can prepare him, but those we can’t anticipate are still very upsetting for him...The switch flips in his mind, and it’s out of his control.”**

6 y.o. boy with ASD, anxiety, and normal nonverbal IQ

MRN 12-0782

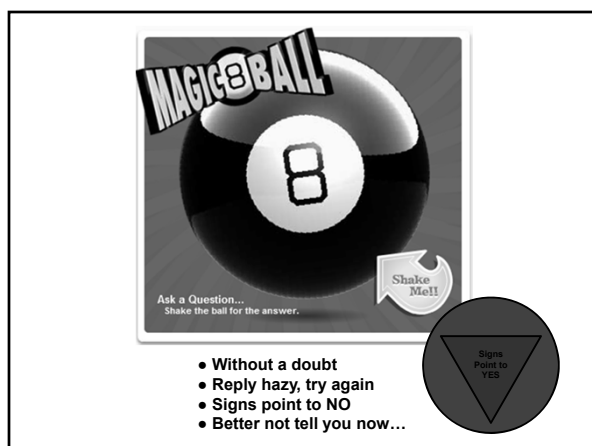


### Cognitive Rigidity: Changes in Routine / Unmet Expectations

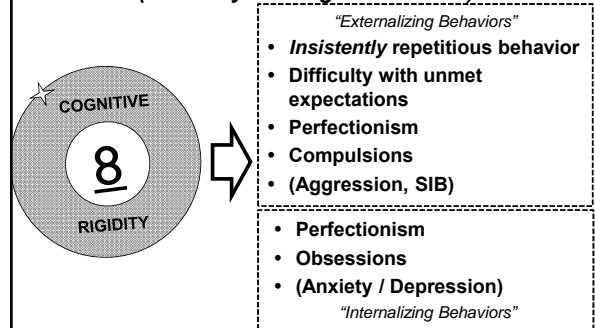


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Rainman, 1988



### Cognitive Rigidity (Difficulty shifting mental sets)



## IDEA, Section 614(d)(2)(B)

<http://idea.ed.gov/explore/view/pl.root.statute.l.B.614.d>

### (B) Consideration of special factors.--The IEP Team shall--

(i) in the case of a child whose behavior impedes the child's learning or that of others, consider the use of positive behavioral interventions and supports, and other strategies, to address that behavior.

ED.gov

U. S. Department of Education  
Promoting educational excellence for all Americans

*This site was created to provide a "one-stop shop" for resources related to IDEA and its implementing regulations...*

- **Comment:** A few commenters recommended that Sec. 300.324(a)(2)(i) refer specifically to children with *internalizing and externalizing behaviors*.
- **Discussion:** We do not believe it is necessary to make the recommended change because Sec. 300.324(a)(2)(i) is written broadly enough to *include children with internalizing and externalizing behaviors*.
- **Changes:** None.

<http://idea.ed.gov/explore/view/pl.root.regs.preamble2.prepart2.D.2766>

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*This site was created to provide a "one-stop shop" for resources related to IDEA and its implementing regulations...*

- **Comment:** Many commenters recommended changing Sec. 300.324(a)(2)(i) to require that the positive behavioral interventions and supports for a child whose behavior impedes the child's learning or that of others be based on a *functional behavioral assessment*.
- **Discussion:** Section 300.324(a)(2)(i) follows the specific language in section 614(d)(3)(B)(i) of the Act and focuses on interventions and strategies, not assessments.... Therefore, while conducting a functional behavioral assessment typically precedes developing positive behavioral intervention strategies, *we do not believe it is appropriate to include this language in Sec. 300.324(a)(2)(i)*.
- **Changes:** None.

<http://idea.ed.gov/explore/view/pl.root.regs.preamble2.prepart2.D.2766>

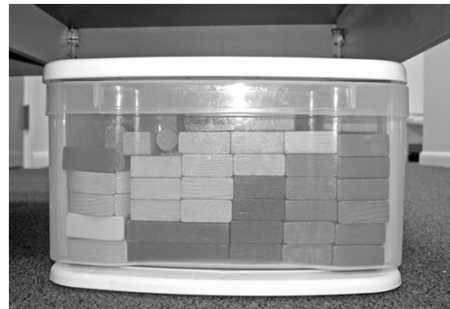
## IDEA

- **As a practical matter, however:**
  - “Behavior” is tacitly interpreted to mean “Externalizing” behavior
  - “Impedes Learning” is equated with academic failure
  - Assessment is in the hands of BCBAs (who disregard internalizing behavior)

## Perfectionism



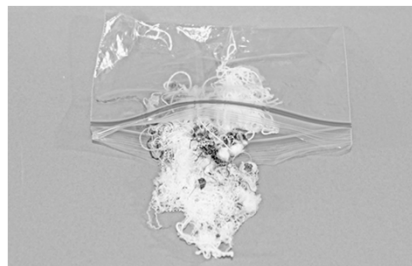
## Perfectionism



### Perfectionism



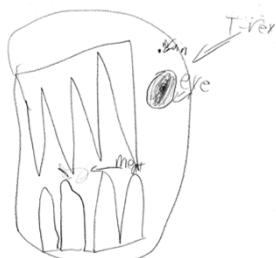
### Compulsions



Joseph F: 15 y.o. boy Asperger Syndrome

MRN: 05-0096

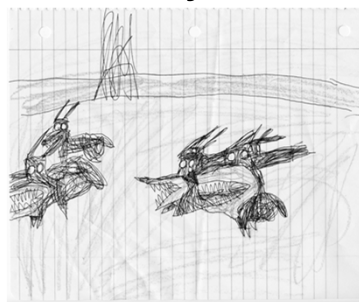
### Anxiety



RM: 9 y.o. boy: ASD, normal IQ, anxiety d/o, disruptive behavior.  
Mother: Anxiety D/O; PGM hoarding & OCD  
[www.drcoplan.com](http://www.drcoplan.com)

MRN: 10-0642

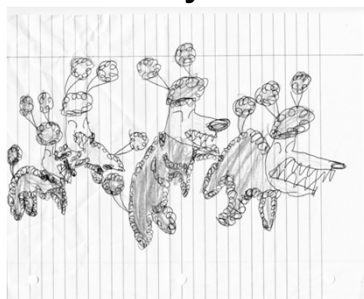
### Anxiety



RD. 7 y.o. F, nl IQ, PDD-NOS & Anxiety. Father: GAD  
[www.drcoplan.com](http://www.drcoplan.com)

MRN: 07-0427

### Anxiety



RD. 7 y.o. F, nl IQ, PDD-NOS & Anxiety. Father: GAD  
[www.drcoplan.com](http://www.drcoplan.com)

MRN: 07-0427

### Anxiety



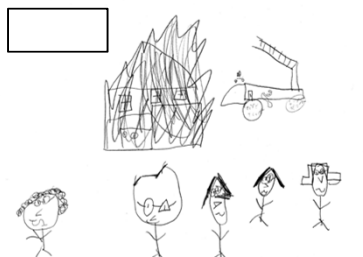
RD. 7 y.o. F, nl IQ, PDD-NOS and Anxiety. Fa: GAD  
R.D. MRN 07-0427

### Anxiety



RD. 7 y.o. F, nl IQ, PDD-NOS & Anxiety. Father: GAD  
www.drcoplan.com MRN: 07-0427

### Anxiety



"The house is on fire and we are running for our life."

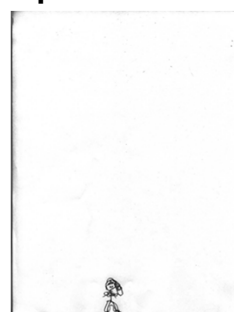
A.W.: 9 year old boy with PDD-NOS and normal IQ (MRN 11-07710)

### Anxiety



"Standing in the Atlantic Ocean. The ocean has a very high surface, up to their mouth, so they can't breathe." Six year old boy with ASD and Anxiety. BK:MRN 09-0605

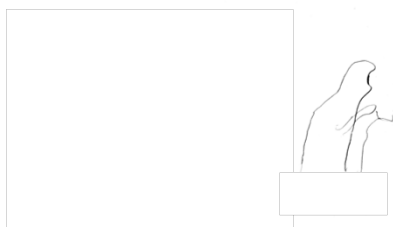
### Depression



www.drcoplan.com KO; 10 yr old female, PDD-NOS, normal IQ

### Depression

"Draw a picture of your family, with everybody in the picture doing something."

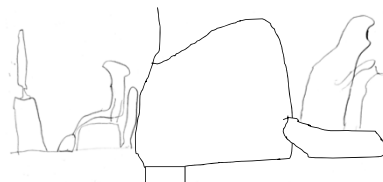


IB; 12 yr old male, Mild ASD, Superior IQ

I. B. MRN 06-0256

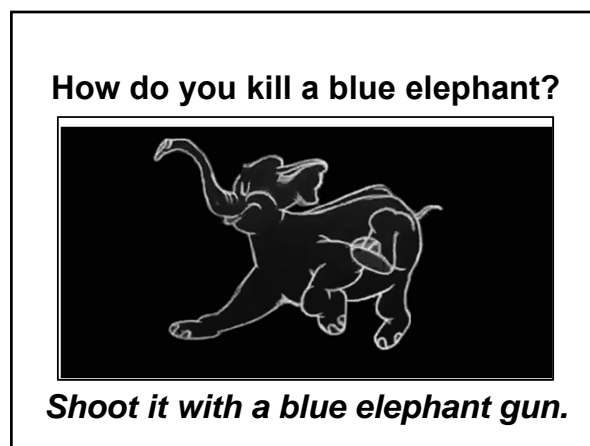
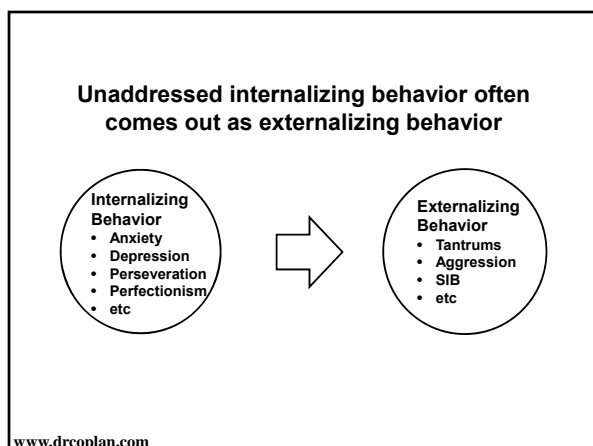
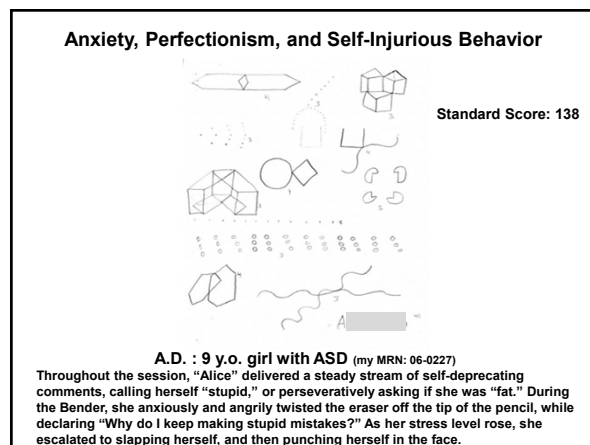
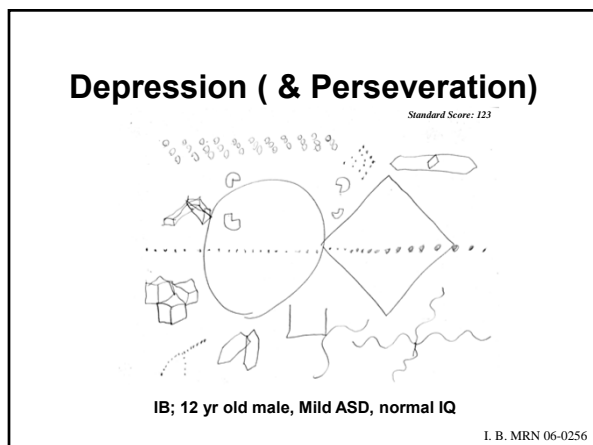
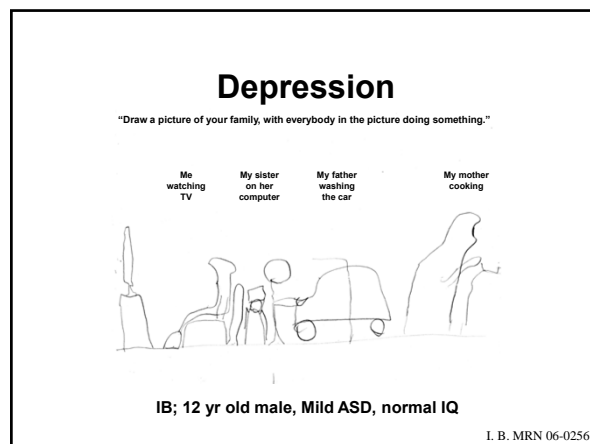
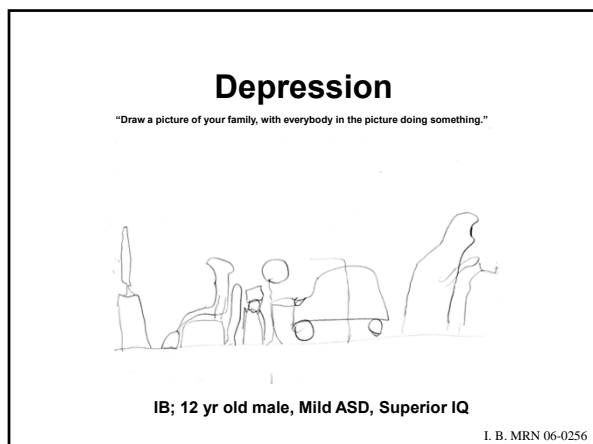
### Depression

"Draw a picture of your family, with everybody in the picture doing something."



IB; 12 yr old male, Mild ASD, Superior IQ

I. B. MRN 06-0256



How do you kill a pink elephant?



How do you kill a pink elephant?



Hold it by the trunk until it turns blue,  
then *shoot it with a blue elephant gun.*

### Positive Behavior Support Plan for Internalizing Behavior

- Staff Awareness
- Visual Schedules
  - What am I supposed to be doing *now*?
  - What am I supposed to do *next*?
- Relaxation Techniques
  - Mental Imagery
  - Isometrics
  - Deep Breathing
  - “Break” cards
- Cognitive Behavioral Therapy (CBT)
- SSRIs

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Disrespectful  
Non-compliant  
Unmotivated  
Stubborn  
Aggressive

Disruptive  
Impulsive  
Inattentive  
Could do better if only  
he tried harder

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SOCIALLY  
UNAWARE

ANXIOUS

RIGID

PERFECTIONISTIC

[www.drcoplan.com](http://www.drcoplan.com)

### J.B. Watson

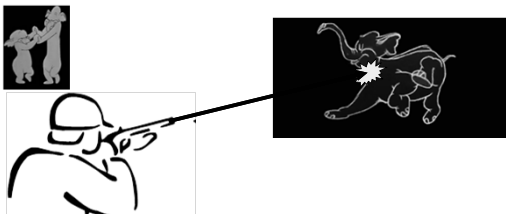
*Psychology as the behaviorist sees it. (1913)*

- “The behavior of animals can be investigated without appeal to consciousness.”
- Limits psychology to the study of outwardly visible (i.e. externalizing) behavior.

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## Behaviorism's Blind Spot

- Behavior Analysis fails to address internalizing behavior (ex: Sometimes the function of task-avoidant behavior is anxiety reduction, not escape from task *per se*).



## Not seeing the vase

(ignoring internalizing behavior)

"We caution against the use of the word "stubborn" to characterize Ryan's classroom behavior. Ryan's task avoidance and non-adherence to teacher instruction reflect **cognitive rigidity and anxiety, rather than "stubborn" behavior**. Re-framing his actions will lead to more appropriate intervention, placing the focus on **anxiety management and cognitive flexibility**, rather than **"compliance."**

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RH; MRN: 11-0717; 7 y.o. male;  
Anxiety D/O & Mild Atypicality

## Not seeing the vase

(ignoring internalizing behavior)

ASSESSMENT SUMMARY:			
Antecedents to the behavior of concern	Behavior of concern	Consequences maintaining the behavior of concern	Perceived function of the behavior of concern
Denied Access Transitioning Task Demand (Individual) Social Situations (Competitive)	Tantrum (4 levels) Level of Tantrums: 1. Isolation tantrum: eloping from adults or from the classroom/assigned area, not responding or refusing staff prompting 2. Low Frustration tantrum: clenching fists, stomping feet, grunting, whining, crumpling/bending objects, or crying. 3. Physical tantrum: aggression is defined	anxiousness entering into regular education classroom increased academic standards difficulty maintaining focus on instructor and tasks limited time frames for task completion increased expectations for written work	To gain Attention  To avoid, escape, or postpone Academic tasks/expectations

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MW; MRN 06-0211

## Seeing the vase

(recognizing internalizing behavior)

ASSESSMENT SUMMARY:			
Antecedents to the behavior of concern	Behavior of concern	Consequences maintaining the behavior of concern	Perceived function of the behavior of concern
Denied Access Transitioning Task Demand (Individual) Social Situations (Competitive)	Tantrum (4 levels) Level of Tantrums: 1. Isolation tantrum: eloping from adults or from the classroom/assigned area, not responding or refusing staff prompting 2. Low Frustration tantrum: clenching fists, stomping feet, grunting, whining, crumpling/bending objects, or crying. 3. Physical tantrum: aggression is defined	anxiousness entering into regular education classroom increased academic standards difficulty maintaining focus on instructor and tasks limited time frames for task completion increased expectations for written work	To gain Attention  To avoid, escape, or postpone Academic tasks/expectations

**Antecedents**  
Anxiousness  
Perfectionism  
Fear of Failure

**Behaviors**  
Tantrums  
Eloping  
Task Refusal

**Consequences**  
Temporary  
reduction in  
anxiety via task  
avoidance

**Perceived Function**  
Avoidance of self-  
blame for not  
completing the  
task perfectly

www.drcoplan.com

MW; MRN 06-0211

## The Story of Billy's Box - 1

(or, why it's important to ID internalizing behavior)

- 8 y.o. boy with ASD and normal Nonverbal IQ
- Severe tantrums at school
- Antecedents:
  - TRANSITIONS
- Function?
  - Not attention, escape, access
  - "Biological" (i.e. "just part of his ASD")?

## The Story of Billy's Box - 2

(or, why it's important to ID internalizing behavior)

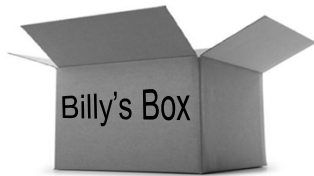
**Q: "Billy – You're always getting in trouble at school. What's going on?"**

**A: "I'm afraid that if I hand in my work, I'll never get a chance to go back and make it perfect."**



## The Story of Billy's Box - 3

(or, why it's important to ID internalizing behavior)



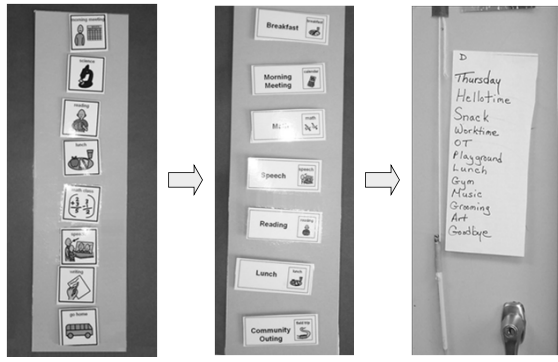
"Put your papers in the box, and we promise you will be able to go back later and work on them some more, if you want to."

## Positive Behavior Support Plan for Internalizing Behavior

- Staff Awareness
- Visual Schedules
  - What am I supposed to be doing *now*?
  - What am I supposed to do *next*?
- Relaxation Techniques
  - Mental Imagery
  - Isometrics
  - Deep Breathing
  - "Break" cards
- Cognitive Behavioral Therapy (CBT)
- SSRIs

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## Visual Schedules



## Positive Behavior Support Plan for Internalizing Behavior

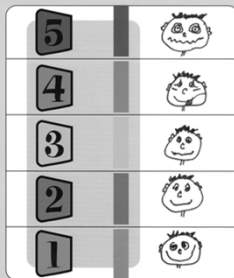
- Staff Awareness
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## The Incredible 5-Point Scale

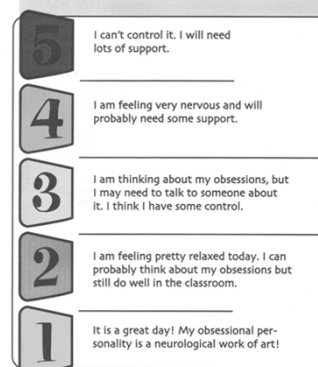
Assisting students with autism spectrum disorders in understanding social interactions and controlling their emotional responses

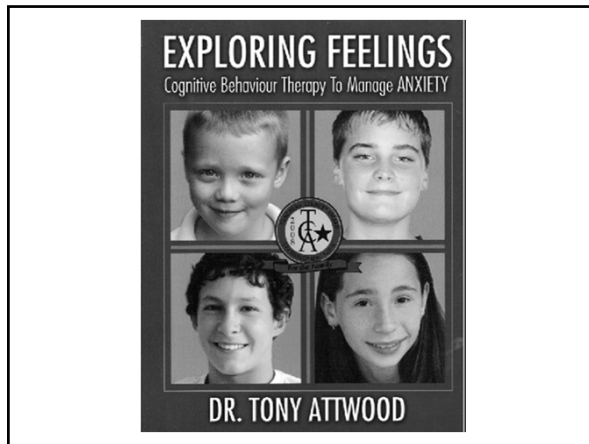
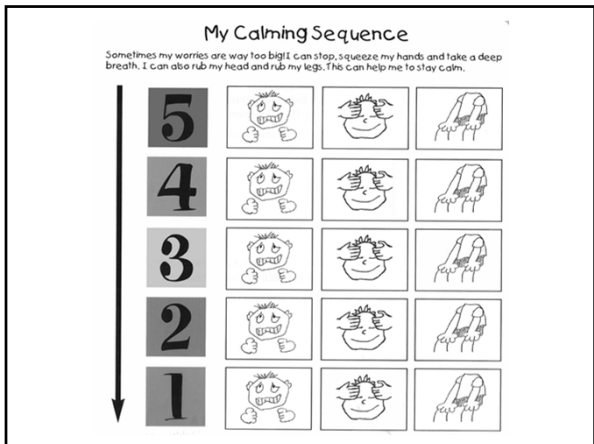
Kari Dunn Buron and Mitzi Curtis



The Incredible 5-Point Scale

### Obsessional Index





## Positive Behavior Support Plan for Internalizing Behavior

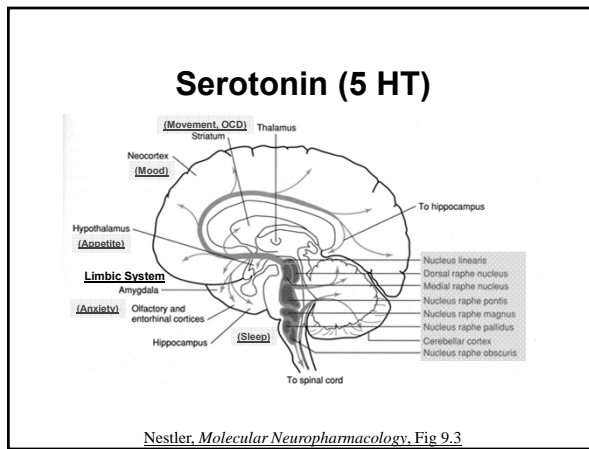
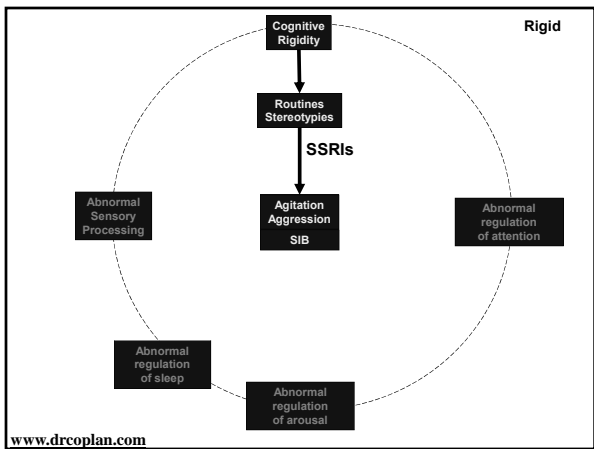
- **Staff Awareness**
- **Visual Schedules**
  - What am I supposed to be doing *do now?*
  - What am I supposed to do *next?*
- **Relaxation Techniques**
  - Mental Imagery
  - Isometrics
  - Deep Breathing
  - “Break” cards
- **Cognitive Behavioral Therapy (CBT)**
- **SSRIs**

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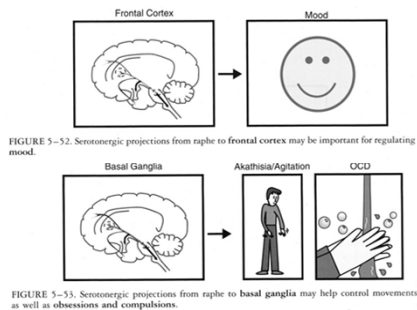
## Selective Serotonin Reuptake Inhibitors (SSRIs)

- **Primary targets**
  - Cognitive Rigidity
    - Anxiety
    - Obsessions (thoughts)
    - Compulsions (behavior)
    - Perfectionism
  - Depression
  - Stereotypes: Probably not
- **“Downstream” benefit:**
  - ↓ Disruptive Behavior
  - ↑ Quality of Life

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## Serotonin (5 HT) Pathways



Stahl, *Essential Psychopharmacology*, fig 5.52-3

## SSRIs in ASDs

### • Side Effects

- Activation
  - Hyperactivity
  - Irritability
  - Insomnia
  - Agitation
- Uncommon or irrelevant
  - GI dysfunction
  - Sexual dysfunction
  - “Black Box” warning (suicidal mentation)

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## Selective Serotonin Reuptake Inhibitors (SSRIs)

Generic Name	Brand Name	Comment
Fluoxetine	Prozac	• The first selective SRI
Fluvoxamine	Luvox	
Sertraline	Zoloft	• May be less activating
Citalopram	Celexa	• Prolonged QT interval
Escitalopram	Lexapro	• Prolonged QT interval
And others...		

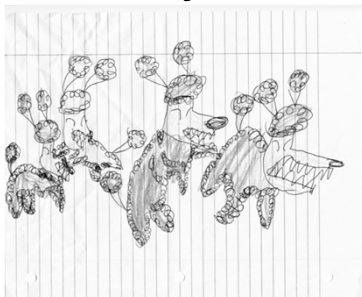
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## Pharmacotherapy for anxiety disorders in children and adolescents

Ipsier JC, Stein DJ, Hawkrig S, Hoppe L. Cochrane Database of Systematic Reviews 2009, Issue 3.

- Studies reviewed: 22 RCTs/ 2,519 participants
  - Short-term (average 11 wks)
  - Mean age 12 yrs
  - Drugs studied (versus placebo)
    - SSRIs :15 (fluoxetine 6, fluvoxamine 2, paroxetine 3, sertraline 4)
    - SNRIs: 5, (clomipramine 3), venlafaxine 2)
    - Benzodiazepines: 2 (alprazolam 1, clonazepam 1)
    - Tricyclic antidepressants: 1 (desipramine)
- Meta-analysis
  - Response rate: Medication 59%; Placebo 31%
  - 7.3% of subjects treated with SSRIs withdrew bec/o side effects
  - “The overwhelming majority of evidence of efficacy was for the SSRIs, with the most evidence in paediatric OCD”

## Anxiety



RD. 7 y.o. F, nl IQ, PDD-NOS & Anxiety. Father: GAD

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MRN: 07-0427

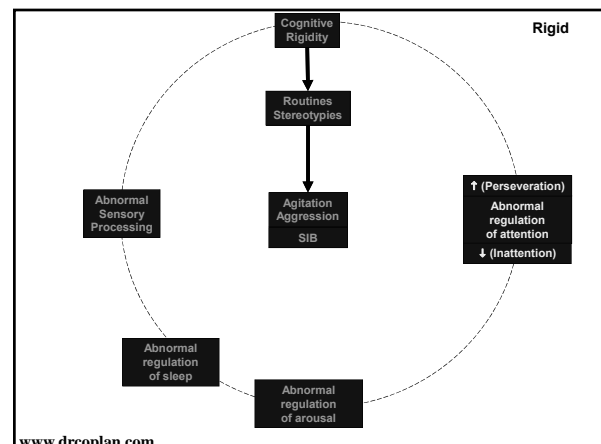
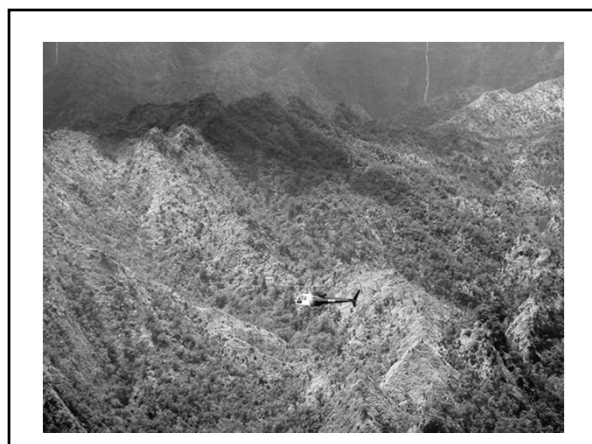
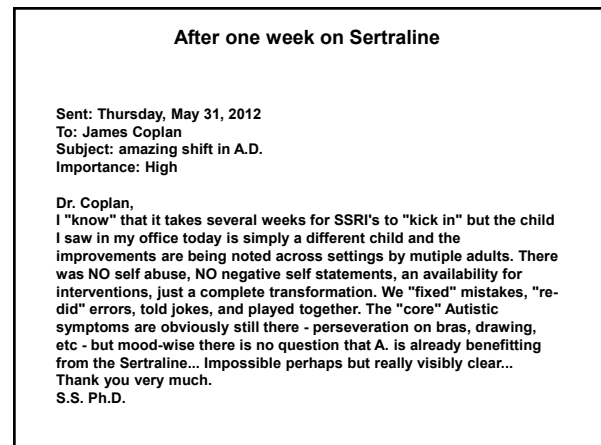
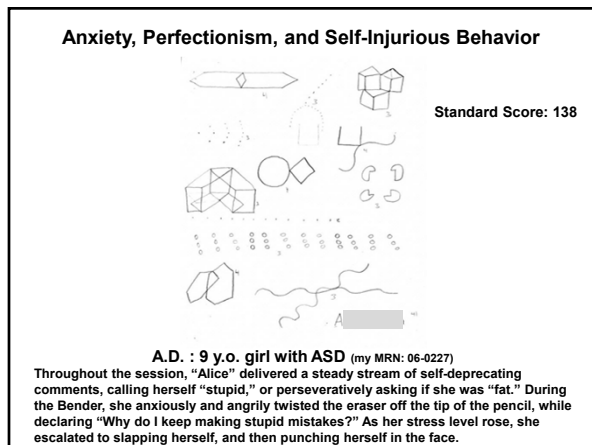
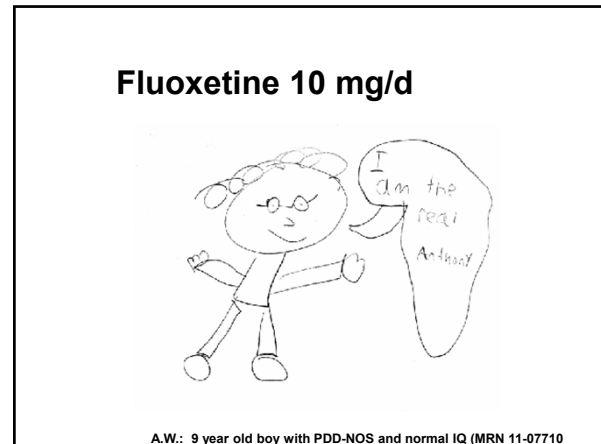
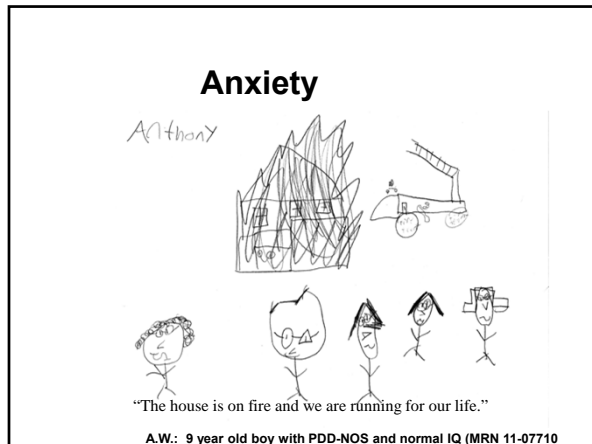
## Anxiety after Rx with CBT & Escitalopram



RD. 9 y.o. F, nl IQ, PDD-NOS & Anxiety. Father: GAD

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MRN: 07-0427



## Regulation of Attention

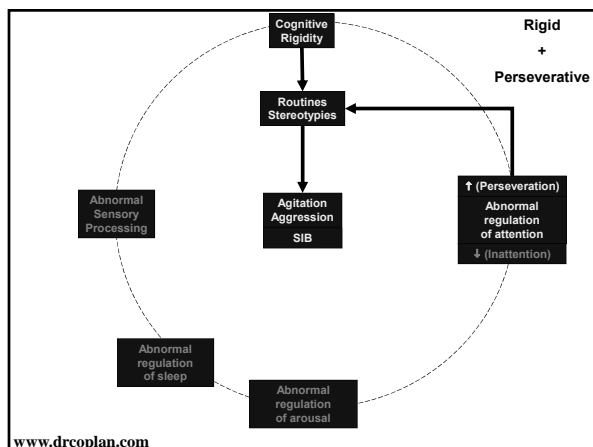


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## Abnormal Regulation of Attention - 1

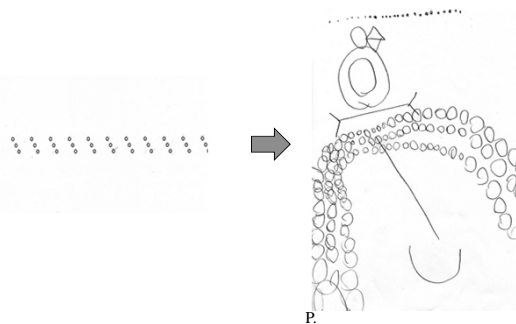
- **Perseveration**
  - Inability to “Let go and shift”
  - Gets “stuck”
  - “Overattention Deficit Disorder”
- **Compounds the effects of cognitive rigidity**

www.drcoplan.com



www.drcoplan.com

## Perseveration



P

## Perseveration

“Draw a picture of your family, with everybody doing something”



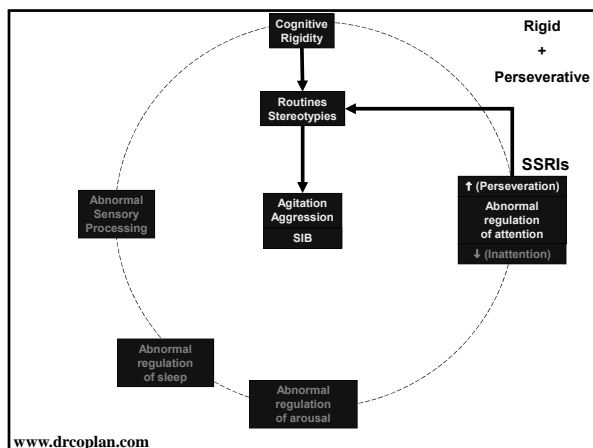
“We are going into the Grand Hyatt”

Wm W; 10 y.o. male; ASD & Anxiety; MRN 12-0827

## Abnormal Regulation of Attention (Perseveration)

- **Interventions**
  - Verbal preparation for transitions
  - Visual Schedules
  - SSRIs (OCD: Proven; ASD: likely)

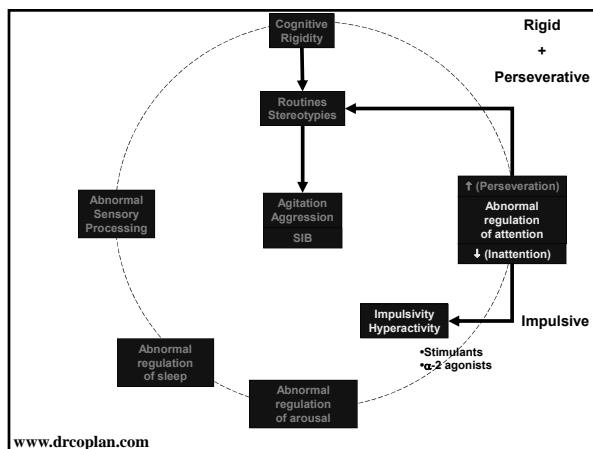
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## Abnormal Regulation of Attention - 2

- **Inattention**
  - Inability to focus
  - Impulsive
  - Distractible

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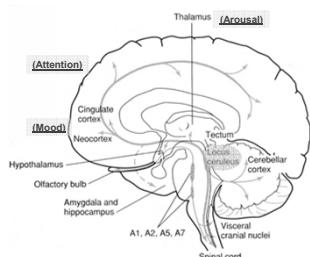


## Inattention

- **Interventions**
  - Limited stimuli
  - Short work periods
  - Medication
    - Stimulants (may ↑ anxiety / rigidity / agitation)
    - alpha-2 agonists

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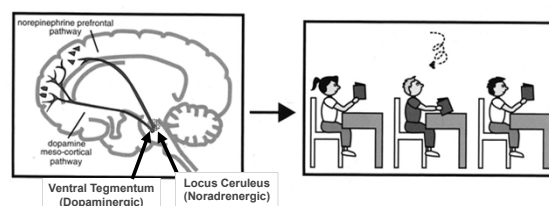
## Noradrenergic pathways (Norepinephrine)



Locus Ceruleus ("blue spot"): Principal noradrenergic source in brain.

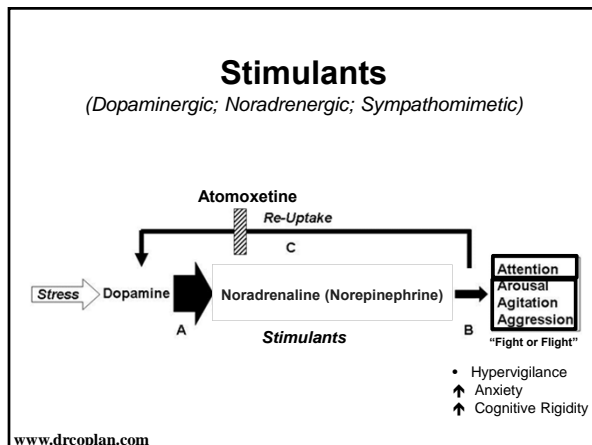
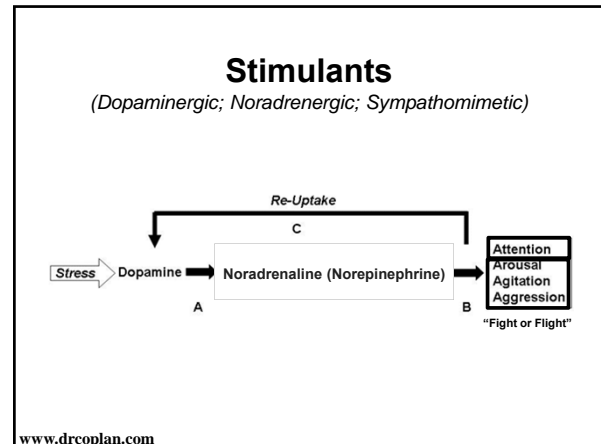
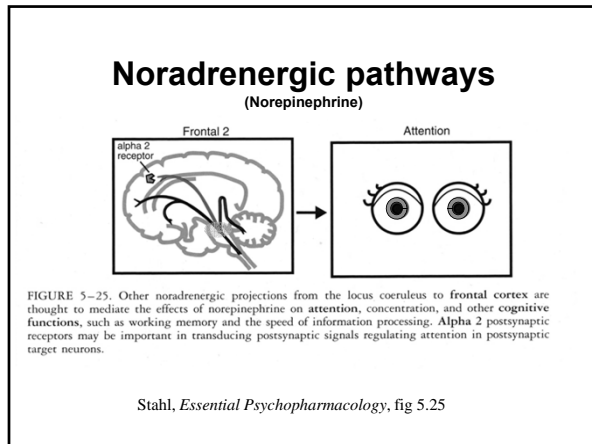
Nestler, Molecular Neuropharmacology, Fig 8.5

## Inattention



Insufficient activation of frontal cortex → → → Inattention

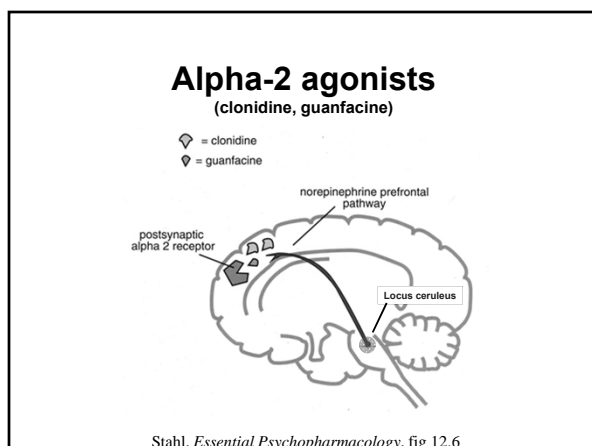
Stahl, Essential Psychopharmacology, fig 12.1



### Stimulants, NRI's

Generic Name(s)	Brand Name(s)	Comment
Amphetamine		FDA Schedule II
Dextroamphetamine	Dexedrine, Dextrostat	FDA Schedule II
Dextroamphetamine + amphetamine	Adderall	FDA Schedule II
Methylphenidate	Concerta, Ritalin, Metadate	FDA Schedule II
Dexmethylphenidate	Focalin	FDA Schedule II
Atomoxetine, Attentin	Strattera	Norepinephrine reuptake Inhibitor (NRI), not FDA Schedule II

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### Alpha-2 Agonists

Generic Name	Brand Name(s)	Comment
Clonidine	Catapres	More sedating than guanfacine
Guanfacine	Tenex, Intuniv	

- Frontal cortex / Locus Ceruleus: post-synaptic alpha-2 receptors
- Sympathetic outflow (autonomic nervous system): Pre-synaptic autoreceptors → BP

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## Alpha-2 Agonists

### Benefits

- ↓ Agitation
- ↓ Hyperactivity
- ↑ Attention Span
- No exacerbation of anxiety / rigidity

### Side Effects

- Sleepiness: Common
- Emotional Lability (crying) - occasional
- Hypotension (low BP) - rare

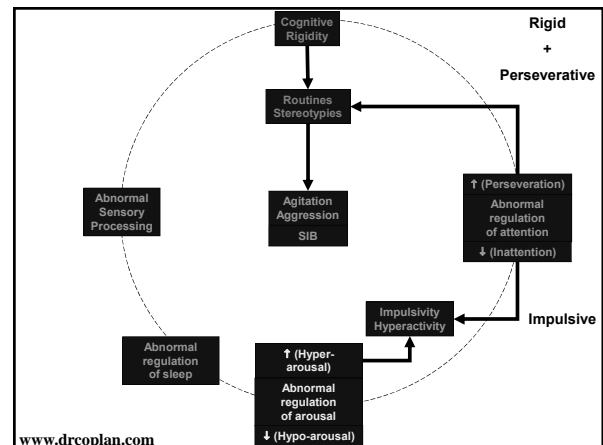
## Clinical Pearl

- **Beware of Cognitive Rigidity masquerading as ADHD**
  - Perseveration on inner stimuli: “Inattentive”
  - Perfectionism:
    - “Problems w. task completion”
    - (Or: Task avoidance!)
  - Anxiety:
    - “Rushes through work”
    - “Out of seat behavior”

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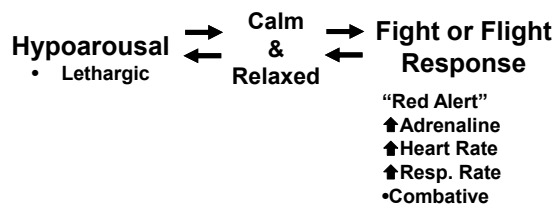


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## Regulation of Arousal



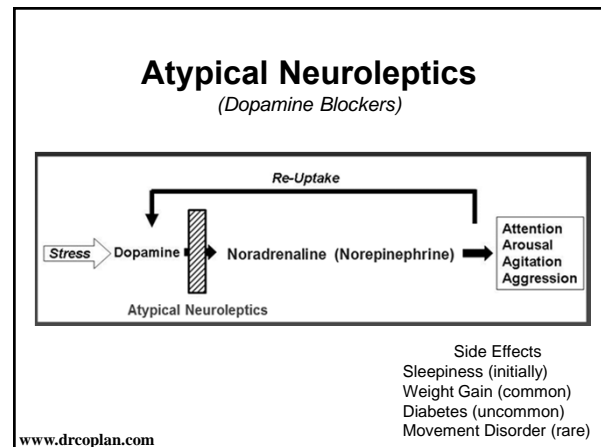
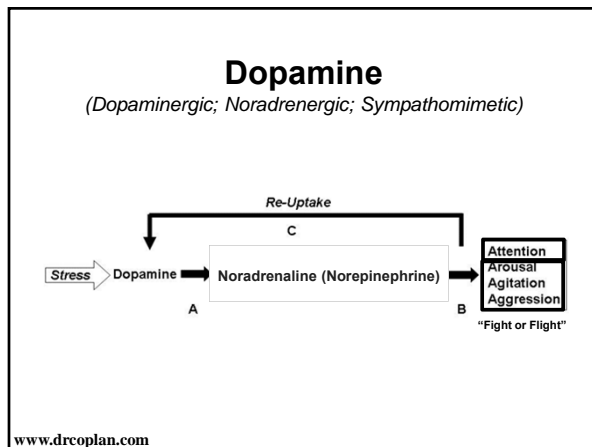
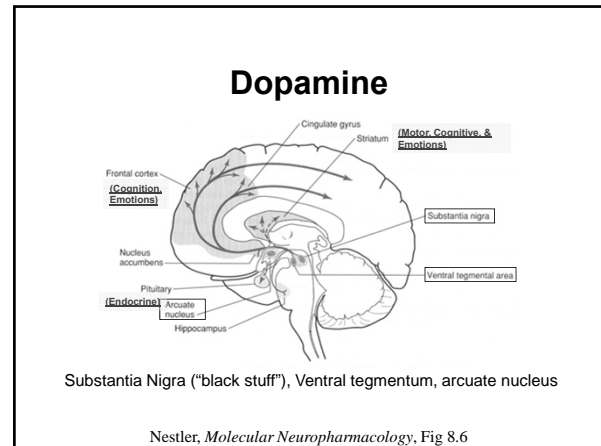
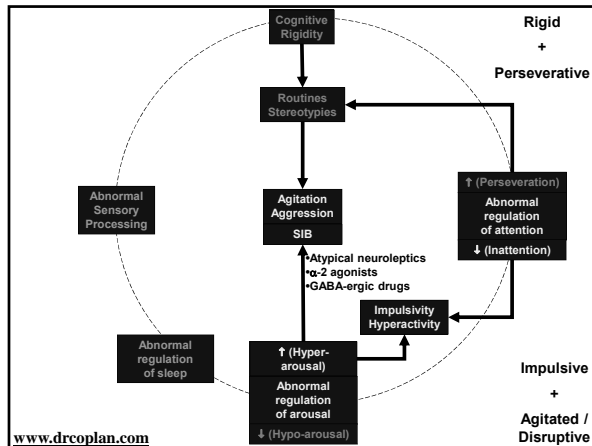
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“He is so hard to calm down when he gets upset....His emotional thermostat doesn’t work”

Parent of an 8 year old with ASD

F. O. MRN 06-0208

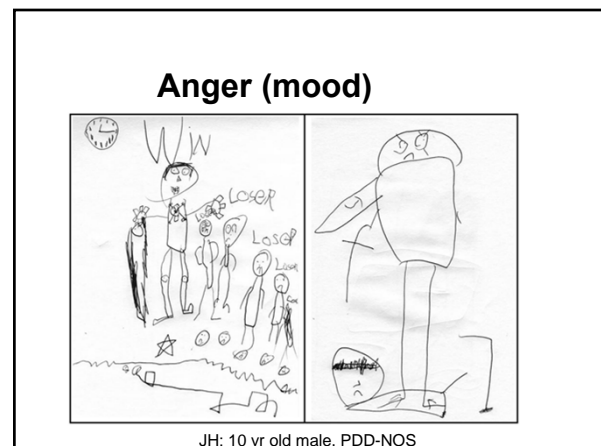


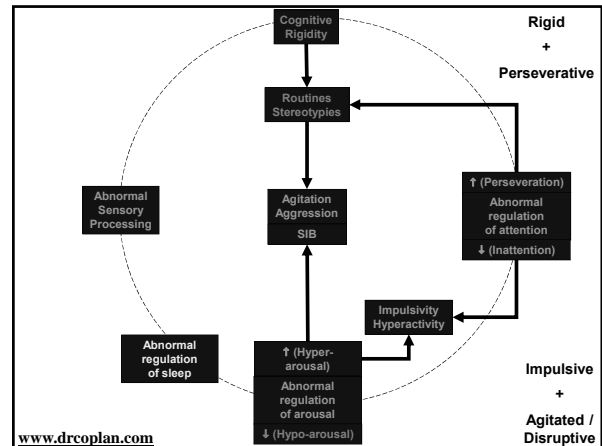


**Atypical Neuroleptics**

Generic Name	Brand Name	Comment
Aripiprazole	Abilify	• Relatively less risk of weight gain • FDA approved for Rx of ASD
Clozapine	Clozaril	• Bone marrow suppression
Olanzapine	Zyprexa	• Greater risk of weight gain
Quetiapine	Seroquel	• Greater sedation
Risperidone	Risperdal	• Greater risk of weight gain • FDA approved for Rx of ASD
Ziprazidone	Geodon	• Relatively less risk of weight gain

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### Regulation of Sleep - 1

- **Melatonin**
  - Brain hormone
  - ↓ Metabolic rate (Heart, Temp)
  - “You’re sleepy now”
- **Suppressed by light**
  - 24 hr cycle
  - Seasonal cycle

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### Regulation of Sleep - 2

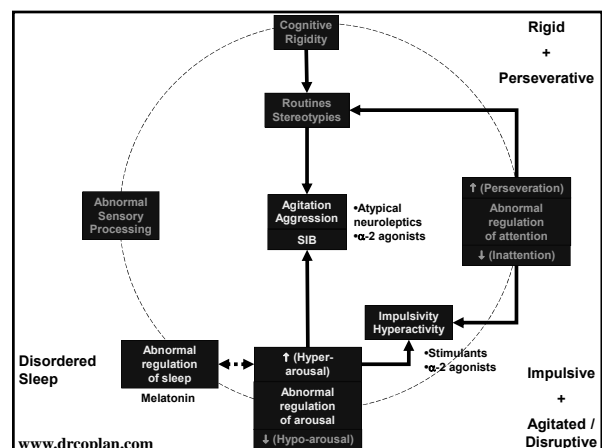
- **Abnormal melatonin cycling**
  - Primary disorders of sleep
  - Blindness
  - ASD
- **Symptoms**
  - Delayed onset of sleep
  - Shortened duration / frequent waking

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### Regulation of Sleep - 3

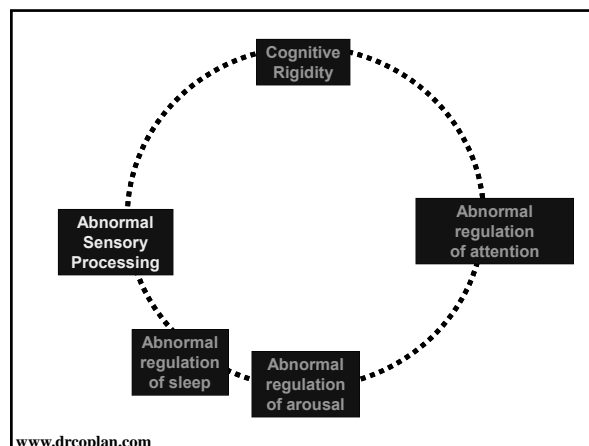
- **Shared genetic control**
  - Regulation of sleep
  - Regulation of arousal
- **Family history of sleep disorder**

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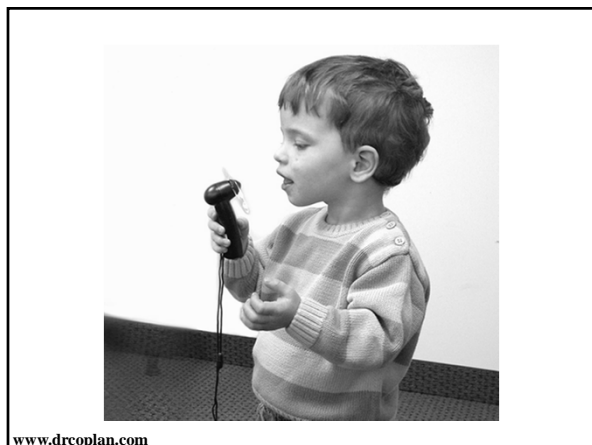




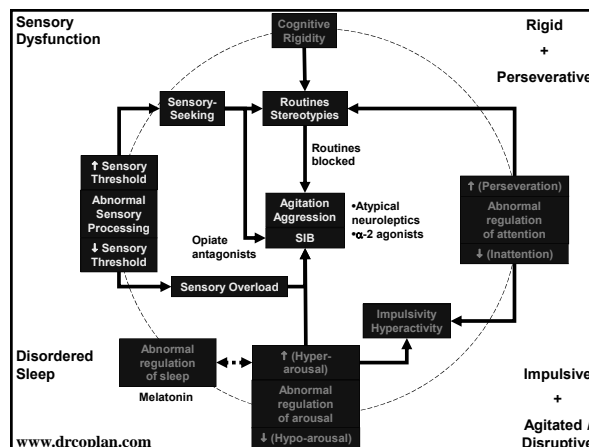
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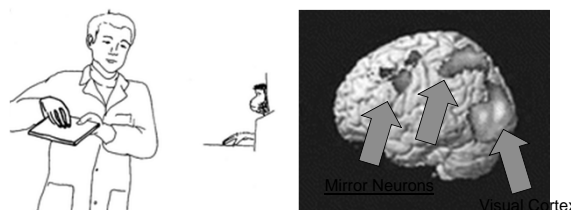
## Sensory Processing

- **Subjective Properties**
  - Familiar / Unfamiliar
  - Pleasant / Unpleasant
  - Strong / Weak
  - Internal / External
- **Sensory Input → Self-awareness**
- **Mirror Neurons → Empathy**

Mostofsky, S. and J. Ewen, *Altered Connectivity and Action Model Formation in Autism Is Autism*. Neuroscientist, 4/15/2011

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## Mirror Neurons: The Missing Link?



"The observation of actions done by another individual activates, besides visual areas, also areas that have motor properties."

Mirror Neurons: From discovery to autism  
Rizzolatti & Fabbri-Destro; Exp Brain Res 2010



Figure 2.5. Stimulus faces of Andrew Meltzoff and a young mimic.

Meltzoff, Andrew N. and Moore, M. K. Imitation of facial and manual gestures by human neonates. Science 198:75-78, 1977



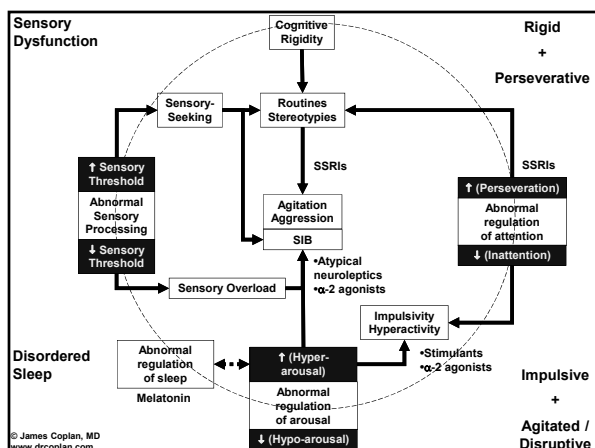
[http://en.wikipedia.org/wiki/File:Makak\\_neonatal\\_imitation.png](http://en.wikipedia.org/wiki/File:Makak_neonatal_imitation.png)



**The whole is greater than the sum of its parts**

Max Wertheimer

[www.drcoplan.com](http://www.drcoplan.com)



## Summary

### • Why this child?

- What is this child's developmental Level?
  - Is this stage-appropriate behavior?
- Does the behavior serve a social function?
  - Escape, access, attention
- Is the classroom placement appropriate?
  - Language level?
- Does this behavior occur in other settings?
  - Family factors?
    - Parents consistent at home?
    - Parental psychopathology? (Anxiety, Depression, Alcohol)

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## Summary

### • Why this child?

- Neuropsychological factors?
  - Cognitive Rigidity
  - Dysregulation of attention
  - Dysregulation of arousal
  - Sensory Seeking / Sensory Overload
- Behavioral Intervention – Usually
  - FBA's usually disregard internalizing behavior
- Change in classroom setting – sometimes
  - Shift from rote to inferential learning (2<sup>nd</sup> - 3<sup>rd</sup> grade): challenge
- Medication: Often
- Family mental health intervention: Often

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## An ounce of prevention....

### • Identify *internalizing* behaviors *before* they lead to *externalizing* behaviors

- Positive Behavior Support Plan that proactively addresses internalizing behaviors (anxiety, perfectionism, obsessive mentation, depression, e.g.)

More on IDEA and FBAs here:

<http://www.wrightslaw.com/info/discipl.index.htm>

<http://www.pent.ca.gov/lq/addressingbehaviorIDEA.pdf>



**BREAK**

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## Outline

### Neuropsychological Deficits in persons with ASD

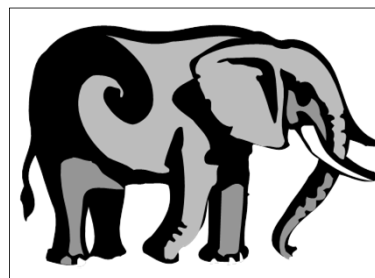
- Cognitive Rigidity
- Dysregulation of attention
- Dysregulation of arousal
- Dysregulation of mood
- Psychopharmacology for the non-physician
- Behaviorism: Its utility and its limits

### Mental Illness in persons with ASD: The Elephant in the Room

- Losing the Diagnosis does not equal "cured"
- Co-Morbidity, Continuum, or Metamorphosis?
  - Case Histories
  - Epidemiology
  - Laboratory Data
- Where do we go from here?

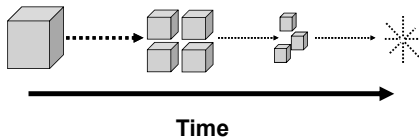
Summary

## Mental Health in ASD.....



*the elephant in the room*

**Atypical features improve over time...**



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**...But society is raising the bar.**



### **Transition to Middle School**

***“Friendship is getting more complex and he is falling further behind his peers... We think he may be lonely.”***

Parent of a 10 y.o. boy with ASD and normal IQ

ZE: MRN 06-0361

### **Transition to Middle School**

***Now that he’s 10, he’s less cute. It was cute when he was 5; not when he’s 10.***

MRN 06-0299

### **Transition to Adulthood**

***Our son turned 13 last year. We are noticing that...the world interacts very differently to an autistic child vs. an autistic man.***

MRN 04-0011

### **Transition to Adulthood**

***Sometimes he is so average. Sometimes he is so autistic.***

Mother of a 16 y.o. boy with ASD and uneven cognitive development

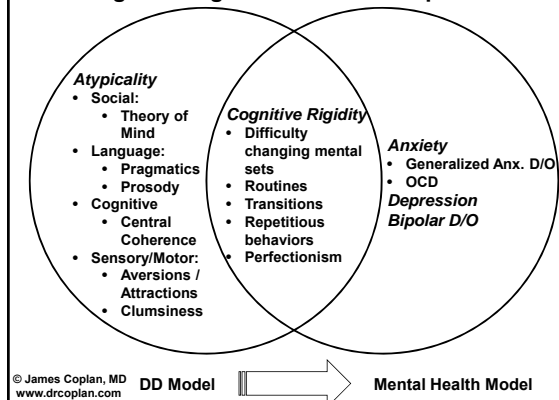
DC: MRN 13-0854

## Long-Term Outcome

- “Losing the diagnosis” does not mean “cured”
- Persistence of
  - Cognitive patterns
  - Behavioral patterns
  - Emotional patterns
- Symptoms ⇒ Quirks ⇒ Traits
- Non-ASD neuropsychiatric disorders

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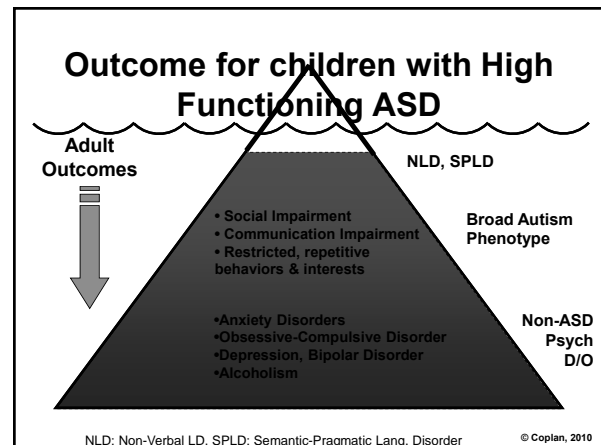
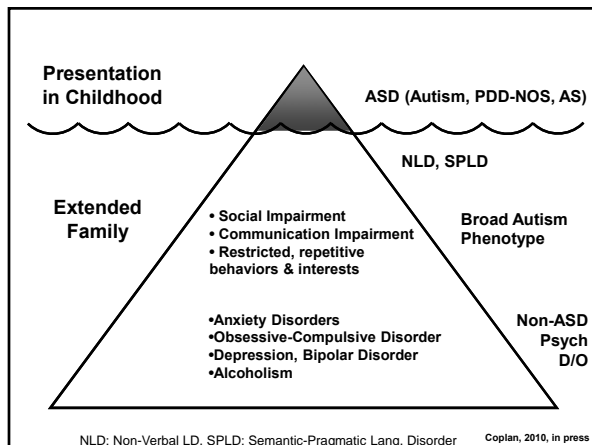
## “Losing the Diagnosis” does not equal “Cured”



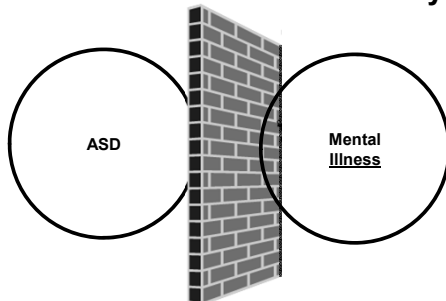
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DD Model

Mental Health Model

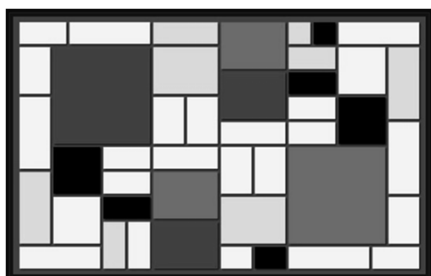


## ASD and Mental Illness: The Myth



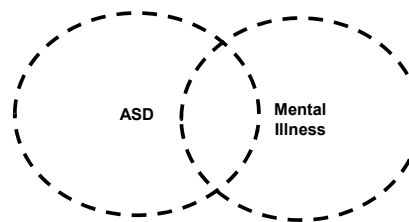
## ASD and Mental Illness: Reality

- Comorbidity
- Continuum
- Metamorphosis



Piet Mondrian (1872-1944) – Line over Form

### ASD and Mental Illness: Reality

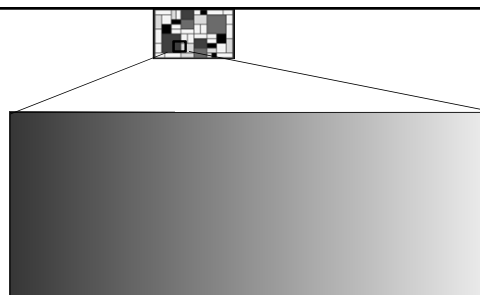


- Comorbidity,
- Continuum, or
- Metamorphosis?



#### **Comorbidity:**

**“ASD and Mental Illness are different entities that sometimes co-exist”**

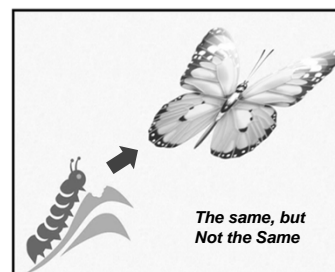


#### **Continuum:**

**“ASD *shades into* Mental Illness, with no ‘bright line’ of separation.”**



Claude Monet (1840-1926) – Water Lilies



#### **Metamorphosis:**

**“Over time, ASD *evolves into* Mental Illness.”**



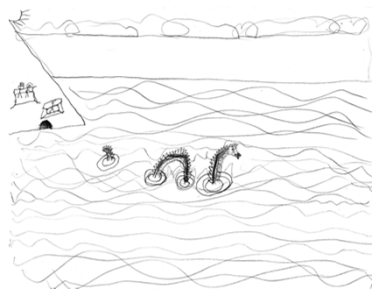
### An example...

- **DB** (MRN 08-0543)
  - 1<sup>st</sup> visit: Age 6 ½
    - Occasional ↓ Eye contact
    - Pedantic, overly precise, adult-like speech
    - Mild verbal perseveration
    - Preference for routines
    - Sensory issues
    - “Likely” Dx of AS on the ASDS (mom as reporter)
- **FH**
  - Mother: Anxiety D/O, OCD traits
    - 12 page typewritten single spaced note attached to PQ

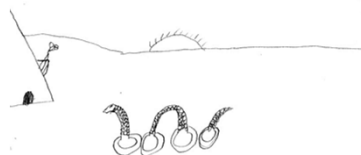
### An example...

- **DB** (MRN 08-0543)
  - Age 12
    - Anxiety D/O
    - OCD
    - TS
    - Minimal residual atypicality
      - Normal pragmatics & prosody
      - Normal social skills
      - Occasional gaze aversion
      - Some narrowing of range of interests

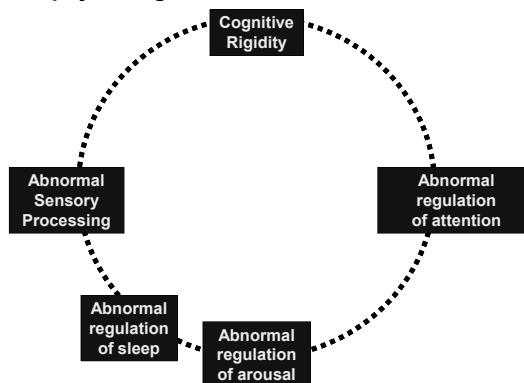
### “Draw anything you want” (DB, age 10)



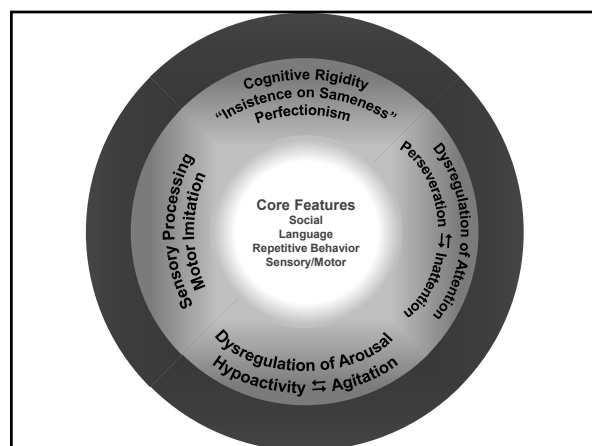
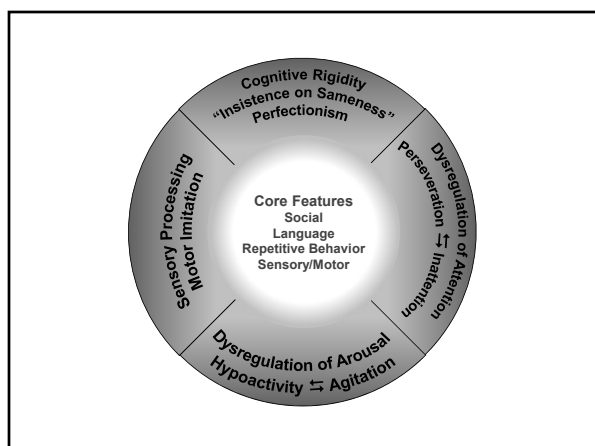
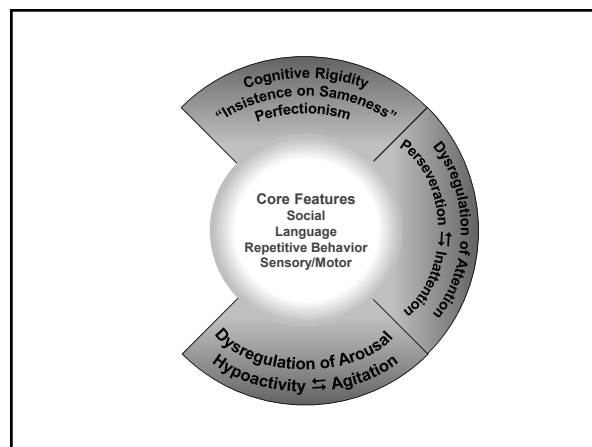
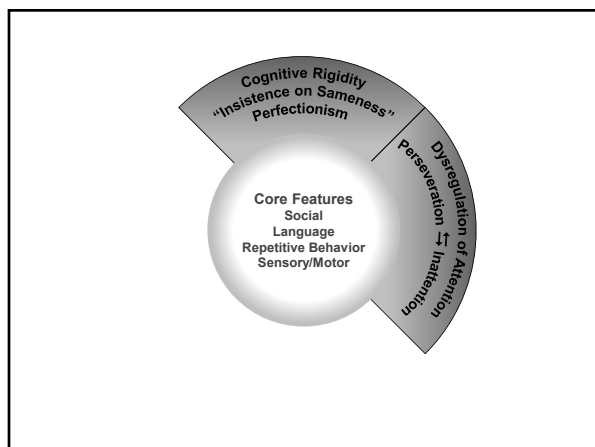
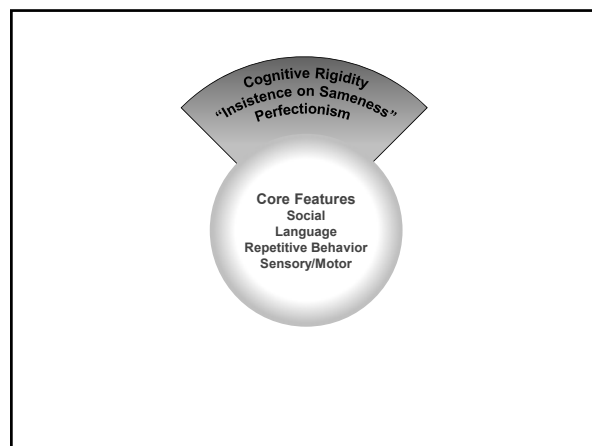
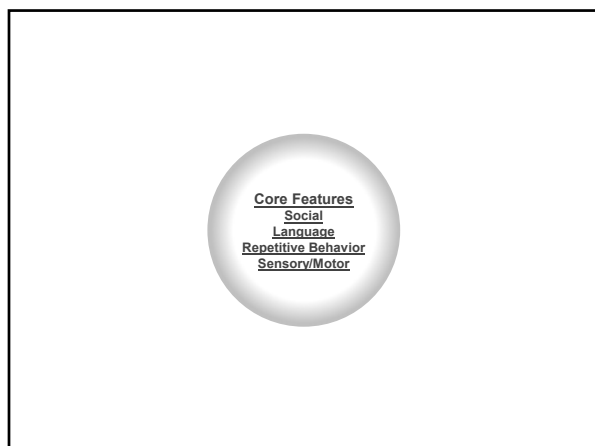
### “Draw anything you want” (DB, age 12)

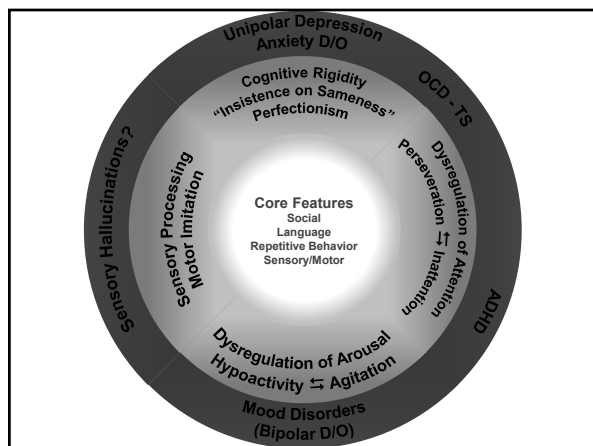
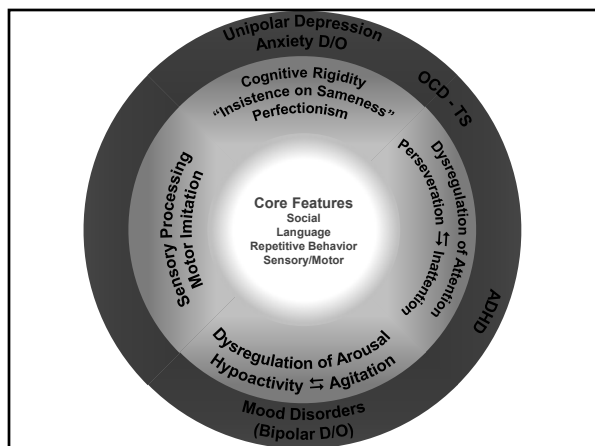
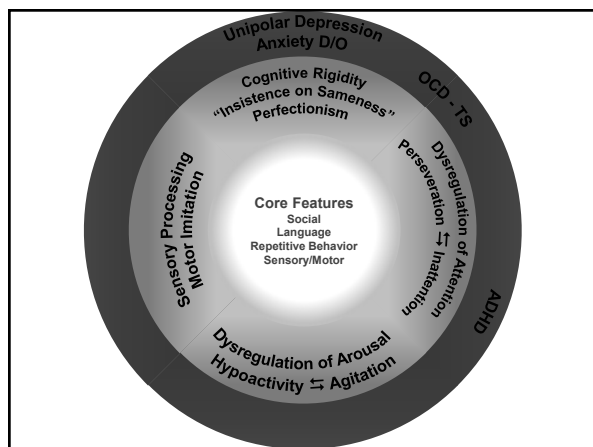
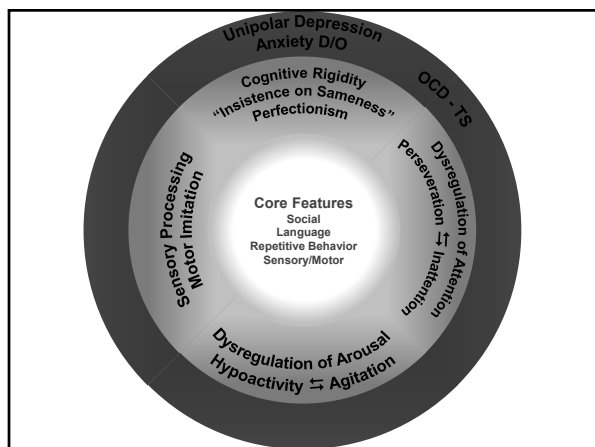
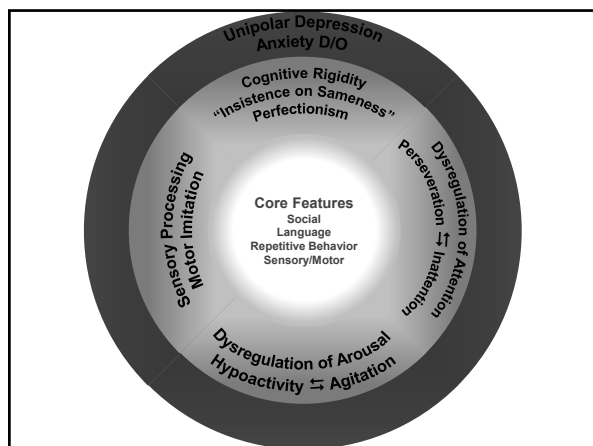
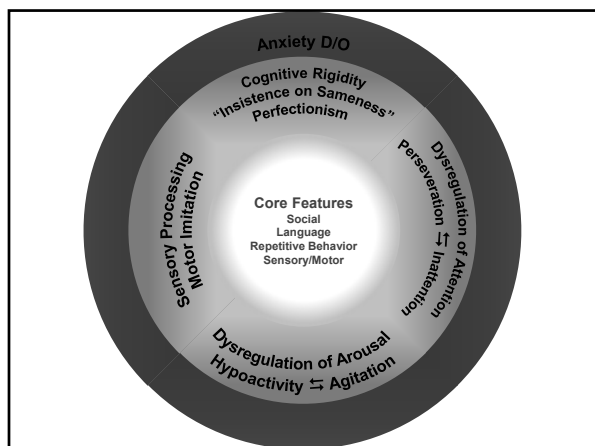


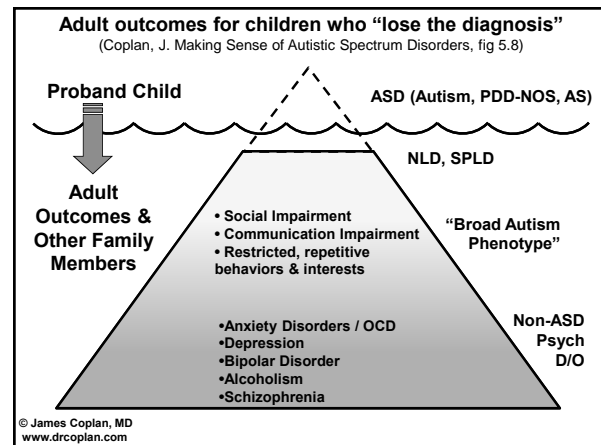
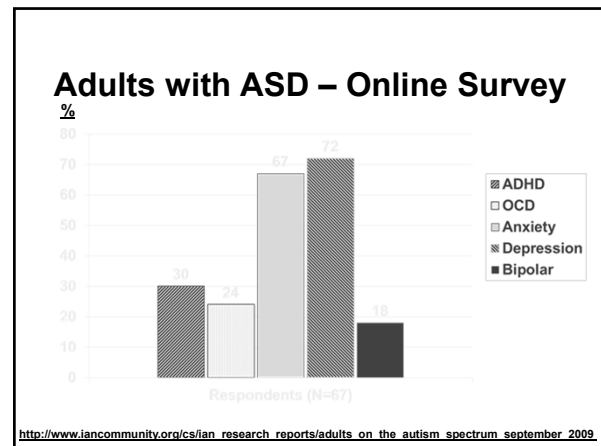
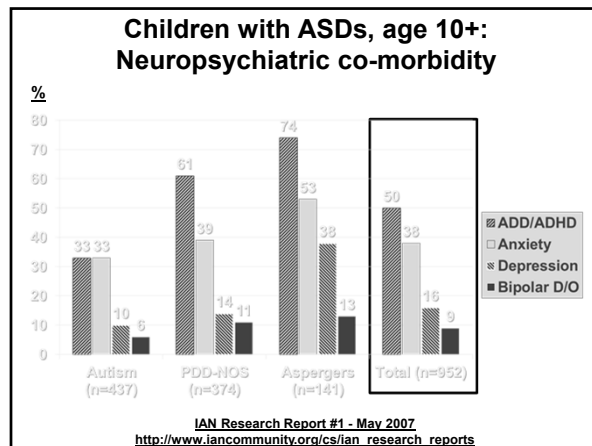
### Neuropsychological Deficits in Children with ASD



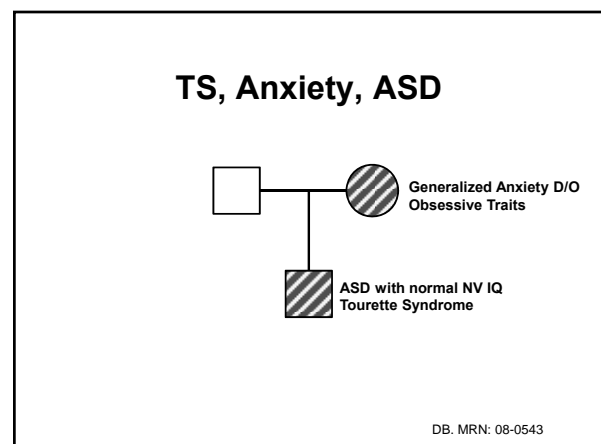
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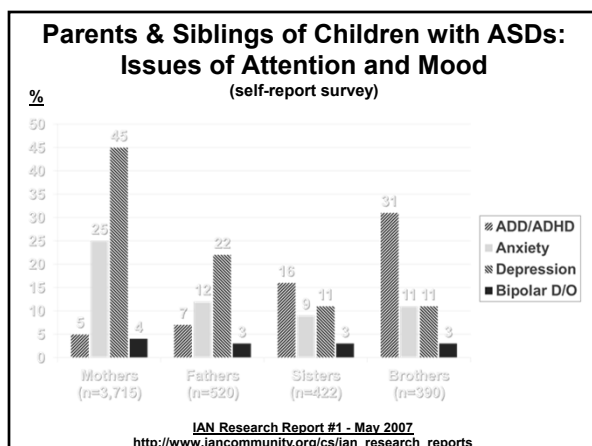
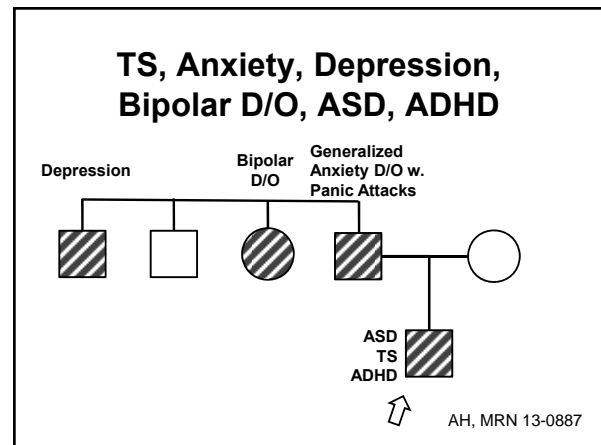
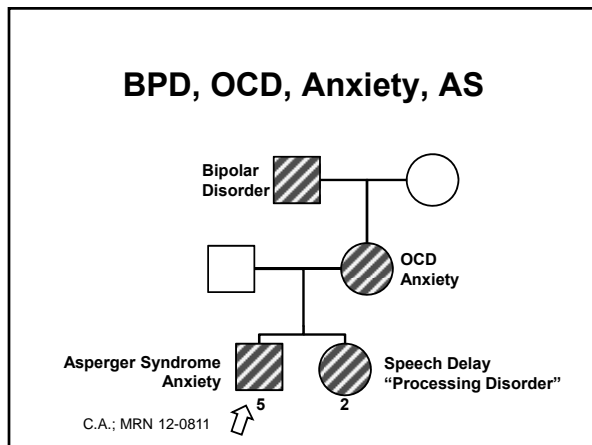
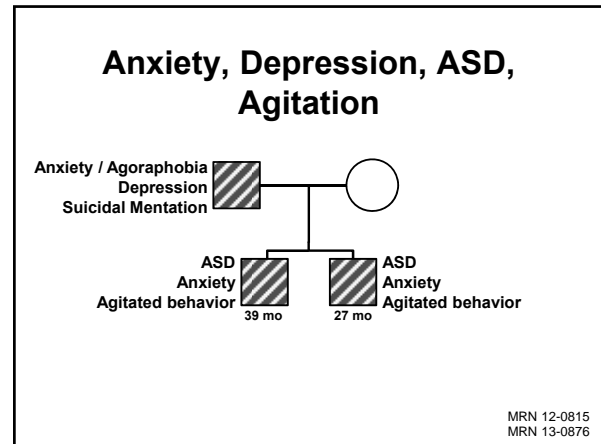
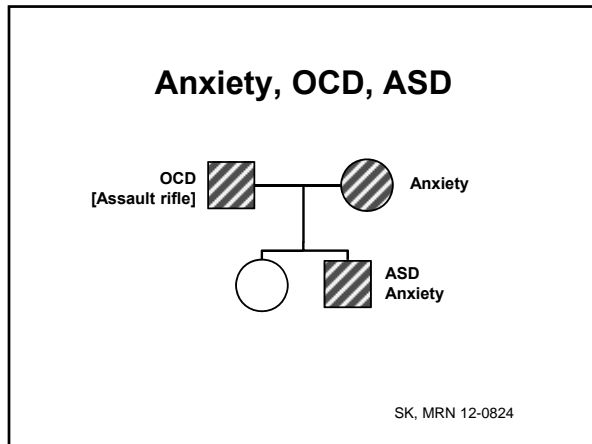






- Causes of ASD**
- **Prenatal**
    - Genetic: *Nearly all cases of ASD with a known etiology*
    - Teratogenic (rare; rubella, valproate)
    - Associations: Parental Age; Infertility, ?ART
  - **Perinatal:**
    - Associations: (extreme prematurity), but no proven causes
  - **Postnatal:**
    - Some associations, but no proven causes
    - No proof: Diet, immunizations



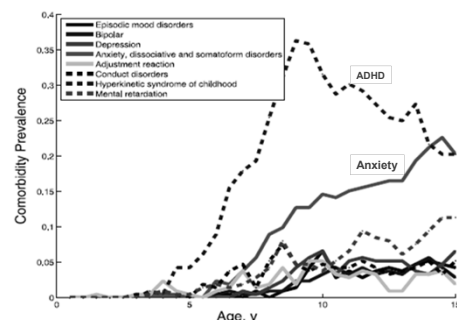


- ### Epidemiologic Evidence
- ADHD
  - Anxiety
  - ASD
  - Bipolar D/O
  - Schizophrenia

Comorbidity Clusters in Autism Spectrum Disorders: An Electronic Health Record Time-Series Analysis  
*Doshi-Velez et al, Pediatrics, Volume 133, Number 1, January 2014*

- **Electronic health record review**
- **4,934 children (78% boys), at least 15 years old**
- **Empirically observed clusters:**
  - 1: Seizures: N=120
  - 2: Multisystem (GI, ENT, other): N=197
  - 3: Psychiatric D/O: N=212
  - 4: No associated morbidity: N=4316

Comorbidity Clusters in Autism Spectrum Disorders: An Electronic Health Record Time-Series Analysis  
*Doshi-Velez et al, Pediatrics, Volume 133, Number 1, January 2014*



Prevalence of associated diagnoses in subgroup 3, over the first 15 years of life.

Examining the comorbidity of bipolar disorder and autism spectrum disorders: a large controlled analysis of phenotypic and familial correlates in a referred population of youth with bipolar I disorder with and without autism spectrum disorders.  
*J Clin Psychiatry. 2013 Jun;74(6):578-86. Joshi G, Biederman J, Petty C, Goldin RL, Furtak SL, Wozniak J.*

- **Subjects & Methods:**
  - Secondary analysis of data from a family study of youth with Bipolar I D/O (probands = 157, relatives = 487)
- **Results**
  - 30% (47/155) of Bipolar I probands met criteria for ASD
  - Onset of Bipolar I occurred earlier in the presence of ASD (4.7±2.9 y vs 6.3±3.7 y;  $p=.01$ )

## “Is Schizophrenia on the Autism Spectrum?”

*King & Lord, 2011*

- “Schizotypal Personality” is distinguished by “unusual preoccupations, unusual perceptual experiences, odd thinking and speech (e.g., overelaborate, or stereotyped), inappropriate or constricted affect, behavior or appearance that is odd, eccentric, or peculiar; lack of close friends or confidants other than first-degree relatives, and social anxiety...”
- c/w Wing’s “Active but odd” ASD phenotype

## “Is Schizophrenia on the Autism Spectrum?”

*King & Lord, 2011*

- “What arguably distinguishes schizophrenia spectrum from autism spectrum in two individuals who otherwise share all of these symptoms is the presence of paranoid ideation...”

## “Is Schizophrenia on the Autism Spectrum?”

*King & Lord, 2011*

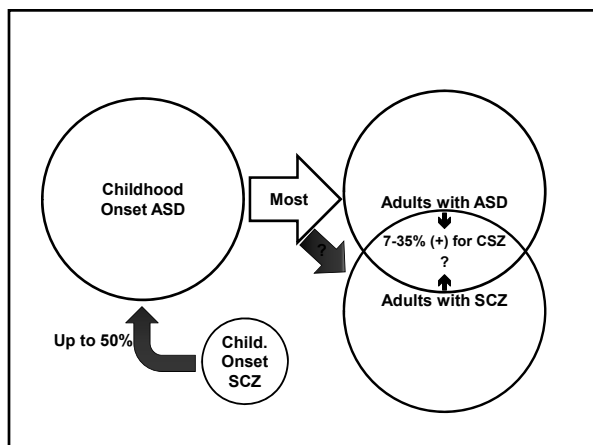
- “Given the degree of overlap, one might reasonably ask if paranoid thinking could be a logical downstream consequence of a common underlying difficulty in the perception of social communication”



## ASD & Schizophrenia: Epidemiology

- **Prevalence**
  - ASD ~ 1/100
  - SCZ ~ 1/100 (lifetime risk)
- **Joint occurrence of ASD and SCZ**
  - Predicted (if independent): 1/10,000
  - Observed (small samples, ascertainment bias):
    - Outcome studies, children w. ASD: How many develop SCZ?
      - Howlin 2004 (N=68; none developed SCZ; underpowered)
    - Childhood Onset Psychosis: 50% had prior PDD
      - Rapoport et al 2009, Unenge & Hallerback 2012
    - Adults with ASD: 7-35% meet criteria for SCZ
      - Howlin 2000, Stahlberg 2004; Mouridsen 2008a, b
    - Adults with SCZ: Unknown how many meet criteria for ASD

Refs: King & Lord 2011; deLacy & King 2013



## Laboratory Evidence

- **ADHD**
- **Anxiety**
- **ASD**
- **Bipolar D/O**
- **Schizophrenia**

## Developmental brain dysfunction: revival and expansion of old concepts based on new genetic evidence

Andres Moreno-De-Luca\*, Scott M Myers\*, Thomas D Challman, Daniel Moreno-De-Luca, David W Evans, David H Ledbetter

Lancet Neurology 2013; 12: 406-414

	Frequency in clinical cohorts*	Intellectual disability or developmental delay	Autism spectrum disorder	Schizophrenia	Epilepsy
22q11.2	1 in 167	✓	✓	✓	✓
16p11.2	1 in 241	✓	✓	..	✓
1q21.1	1 in 309	✓	✓	✓	✓
15q13.2-q13.3	1 in 358	✓	✓	✓	✓
7q11.23	1 in 415	✓	✓	..	✓
15q11.2-q13	1 in 553	✓	✓	✓	✓
17q21.31	1 in 700	✓	✓	..	✓
16p13.11	1 in 788	✓	✓	✓	✓
17q12	1 in 985	✓	✓	✓	✓
17p11.2	1 in 985	✓	✓	..	✓
8p23.1	1 in 1854	✓	✓	..	✓
5q35	1 in 1970	✓	✓	..	✓
3q29	1 in 2101	✓	✓	✓	..

\*Frequency in individuals referred for chromosomal microarray testing. Common indications for testing include neurodevelopmental disorders and multiple congenital anomalies.<sup>21</sup>

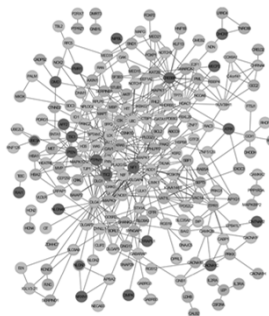
Table 1: Variable expressivity in selected microdeletion syndromes Moreno De Luca et al, 2013

### Network Topologies and Convergent Aetiologies Arising from Deletions and Duplications Observed in Individuals with Autism

Hyun Ji Noh, Chris P. Ponting, Hannah C. Boulding, Stephen Meader, Joseph D. Buxbaum, Dalia Pinto, Christian R. Marshall, Anath C. Lionel, Stephen W. Scherer, Caleb Webber  
PLOS Genetics, June 6 2013  
<http://www.plosgenetics.org/article/info%3Adoi%2F10.1371%2Fjournal.pgen.1003523>

- 192 genes form an interconnected cluster
- Patients with copy number variations within this cluster possess on average, 3 CNV's
- Many of these genes are implicated in psychiatric disorders in humans (anxiety, e.g.), and/or behavioral abnormalities in animal models (abnormal nurturing behavior, e.g.)

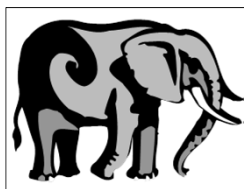
Figure 2. An ASD-associated interaction network.



Noh HJ, Ponting CP, Boulding HC, Meader S, et al. (2013) Network Topologies and Convergent Aetiologies Arising from Deletions and Duplications Observed in Individuals with Autism. PLoS Genet 9(6): e1003523. doi:10.1371/journal.pgen.1003523  
<http://www.plosgenetics.org/article/info%3Adoi%2F10.1371%2Fjournal.pgen.1003523>

PLOS GENETICS

### The Real Elephant in the Room



Child w. ASD + Parent with MH D/O =



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### Family Mental Health

("We give our children roots and wings" — Hodding Carter)

Family Mental Health is a key ingredient in outcome for all children, but especially for the child with developmental disability, who is less able to work around obstacles arising from family dysfunction than a child with normal development.

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### Signs of Family Mental Health

- **Cognitive, Emotional, and Tactical Flexibility**
  - Shifting alliances (adults vs. kids, "boys vs. girls," etc.)
  - Shifting roles (role of "hero" or "in the doghouse")
  - Shifting solutions (one size does not fit all; "equitable" vs. "equal")
  - Shifting combinations for activities. All legitimate combinations should come up once in a while.
- **Sense of humor / playfulness / resilience**

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### Individual Mental Health as a contributor to family mental health

- **Parents of children with ASD:**
  - High frequency of neuropsychiatric disorders (esp. anxiety, depression)
  - Decreased Theory of Mind skills
  - Limits adult's ability to respond in a flexible manner to the extraordinary demands from child w. ASD

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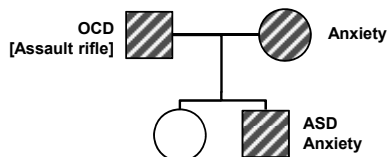
### Danger Signs

- **Inflexibility**
  - Fixed roles
  - Fixed solutions
- **Hypervigilance**
  - Lack of trust in care providers
- **Social Isolation**
  - “Circle the wagons” mentality
  - “Nobody helps us!”

### Vignette #1

- **“Obedience is very important to me.”**
  - Father of 10 y.o. boy with ASD
    - Father has untreated anxiety d/o
    - Works in law enforcement
    - Keeps unsecured firearms in the home
    - Perceives his son with ASD as “a predator,” because “everything is all about him”

### Anxiety, OCD, ASD



SK, MRN 12-0824

### Vignette #2

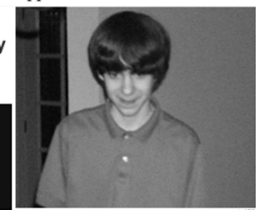
- **“Nobody helps us.”**
  - Mother of 14 y.o. boy with ASD
    - Family has no social supports
    - Child is on homebound instruction
    - Spends hours / day watching violent video games
    - Threatens to “kill” the examiner during home visit
  - Mother has untreated Anxiety D/O



Adam Lanza: What We Think We Know  
About the Apparent Newtown Shooter

#### Ryan Lanza reveals brother Adam Lanza was autistic, had personality disorder (Video)

CONNECTICUT SCHOOLS SHOOTING | DECEMBER 15, 2012 | BY RACHAEL MONAGHAN | 4 Shares



#### Adam Lanza Diagnosed With Sensory Integration Disorder

Hartford Courant, Frontline investigation looks into Newtown-school shooter's background.

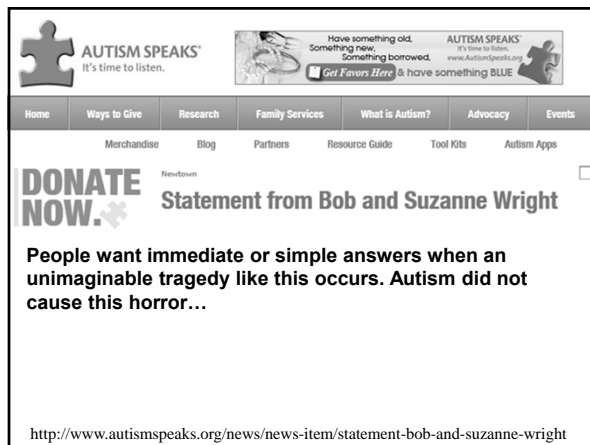
08/25 | 02/19/2013

<http://www.examiner.com/article/ryan-lanza-reveals-brother-adam-lanza-was-autistic-had-personality-disorder>  
<http://www.theatlanticwire.com/national/2012/12/adam-lanza-bio/60018/>  
<http://abcnews.go.com/Health/video/cancer-survivor-catches-fire-at-oregon-hospital-18538818>

## Does ASD predispose to violent crime?

FOR EVERY COMPLEX  
PROBLEM THERE IS A  
SIMPLE SOLUTION...  
AND IT IS WRONG

H. L. Mencken



**AUTISM SPEAKS**  
It's time to listen.

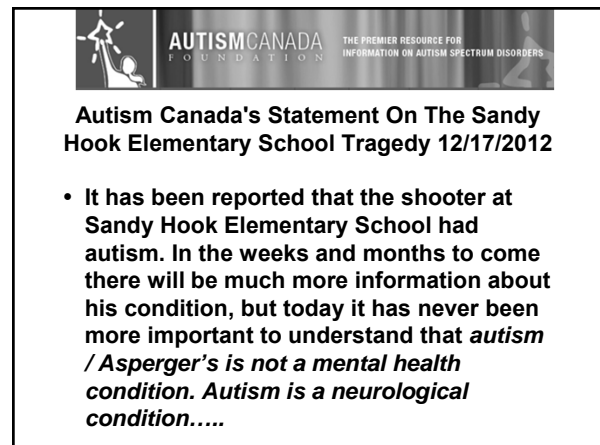
Have something old.  
Something new.  
Something borrowed.  
[Get Favors Here](#) & have something BLUE

**DONATE NOW.**

**Statement from Bob and Suzanne Wright**

People want immediate or simple answers when an unimaginable tragedy like this occurs. Autism did not cause this horror...

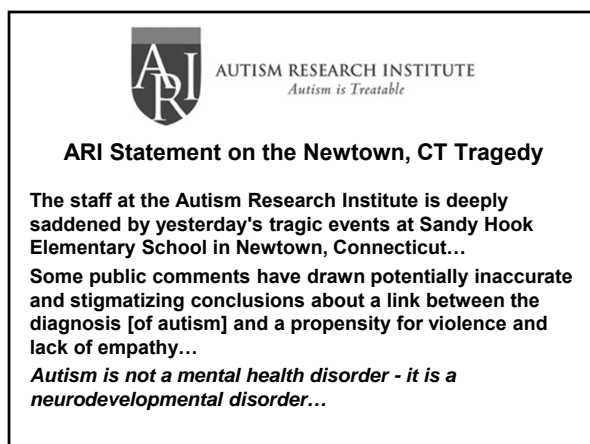
<http://www.autismspeaks.org/news/news-item/statement-bob-and-suzanne-wright>



**AUTISM CANADA FOUNDATION**  
THE PREMIER RESOURCE FOR INFORMATION ON AUTISM SPECTRUM DISORDERS

**Autism Canada's Statement On The Sandy Hook Elementary School Tragedy 12/17/2012**

- It has been reported that the shooter at Sandy Hook Elementary School had autism. In the weeks and months to come there will be much more information about his condition, but today it has never been more important to understand that *autism / Asperger's is not a mental health condition. Autism is a neurological condition.....*



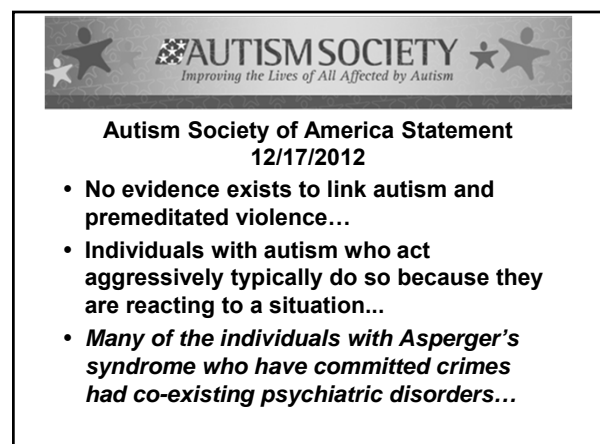
**ARI** AUTISM RESEARCH INSTITUTE  
*Autism is Treatable*

**ARI Statement on the Newtown, CT Tragedy**

The staff at the Autism Research Institute is deeply saddened by yesterday's tragic events at Sandy Hook Elementary School in Newtown, Connecticut...

Some public comments have drawn potentially inaccurate and stigmatizing conclusions about a link between the diagnosis [of autism] and a propensity for violence and lack of empathy...

*Autism is not a mental health disorder - it is a neurodevelopmental disorder...*



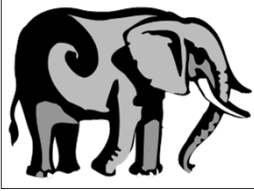
**AUTISM SOCIETY**  
Improving the Lives of All Affected by Autism

**Autism Society of America Statement 12/17/2012**

- No evidence exists to link autism and premeditated violence...
- Individuals with autism who act aggressively typically do so because they are reacting to a situation...
- *Many of the individuals with Asperger's syndrome who have committed crimes had co-existing psychiatric disorders...*

## We have a problem here...

- ASD and MH are not mutually exclusive, separable entities
- Shifting responsibility onto “Mental Health Disorders”:
  1. Stigmatizes the MH population, and
  2. Ignores the MH needs of the ASD population

Search Journals Books Multimedia My Workspace Primal Pictures EBP Tools				
Search History (3 searches) (close)				
	#	Searches	Results	Search Type
<input checked="" type="checkbox"/>	1	exp Crime/	106461	Advanced
<input checked="" type="checkbox"/>	2	exp Autistic Disorder/	16808	Advanced
<input checked="" type="checkbox"/>	3	1 and 2	92	Advanced

## Emerging Perspectives on Adolescents and Young Adults With High-Functioning Autism Spectrum Disorders, Violence, and Criminal Law

Lerner, M et al; J. Am Acad of Psychiatry and the Law Online, 4/2012

- “Link between ASD and violent crime is inconclusive and is supported by only 11 of 147 studies on the subject

## Asperger's syndrome in forensic settings

Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59–70, 2002

### Case Series of adult males referred for forensic evaluation

#### Charges:

- Arson (1)
- Sexual assault (4)
- Attempted murder (1)

## Asperger's syndrome in forensic settings

Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59–70, 2002

### Case History

AB: 31 y.o. male, arrested for arson  
Referred for forensic psychiatric evaluation after 11 episodes  
No prior criminal history or clinical diagnosis

His parents described a developmental history in which he was generally shy and quiet and considered “peculiar” by teachers. In school, he had some concentration difficulties due to being extremely careful about details. His parents described a series of special interests, to which AB devoted extensive research time....His parents also described a strict adherence to routines. For example, they described meals as “ceremonies” in which every part was to be performed in a certain order. When his parents tried to make changes in his routines, AB became very irritated....

## Asperger's syndrome in forensic settings

Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59–70, 2002

Often, he left jobs after conflicts with supervisors or other staff. His boss described AB as so wedded to routines that he was unable to be flexible or cope with unanticipated changes.

Socially, he had some friendships, but these occurred one at a time. He was reportedly bullied, or at least showed an over-sensitivity to behaviors by peers. For example, years later, he reported being unable to forget incidents such as being shot at with a water gun.

AB lived with his parents and had no sexual or romantic relationships. But, he explained that if he could just afford a large apartment, he would immediately be married.

**Asperger's syndrome in forensic settings**

Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59-70, 2002

*According to his parents, about one year before the crimes AB became increasingly irritable and verbally aggressive. During this time, he tended to isolate himself more often, to purchase numerous pornographic magazines, and to ruminate about episodes during his childhood in which he believed schoolmates mistreated him.*

*During evaluation, AB described the year prior to his offense as a period in which he became increasingly preoccupied with those who had wronged him and increasingly convinced that he needed to avenge himself. He reportedly considered burglary for revenge, but later began to fantasize about firesetting. When AB saw an arson report on the news, he decided that firesetting was the best way to solve his problems.*

**Asperger's syndrome in forensic settings**

Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59-70, 2002

*AB was referred for forensic evaluation after he was charged with 11 cases of arson. For two months, he broke into summer homes in his neighborhood, dousing them with gasoline and setting them ablaze.*

*When apprehended by police, he immediately confessed to the crimes and explained that they were a means of revenge against schoolmates who had harassed him during his youth. Investigation revealed that there was actually no relationship between the summer homes and the schoolmates, but AB described small details of the houses that had reminded him of peers who had harassed him. He reported feeling satisfied and calm after the fires.*

**Asperger's syndrome in forensic settings**

Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59-70, 2002

*CD, a 27 year-old male, was referred for evaluation after a sexual offense involving a teenage male. At the time of the evaluation CD carried an Asperger's diagnosis based on adult functioning and early history. In kindergarten, for example, he was described as "oblivious to everyone around him." Mental health records from his adulthood also noted his marked social impairments and deficits in nonverbal communication. CD graduated high school with a mediocre academic record, and worked for several years as a fast-food worker with limited customer contact.*

*Although he was intensely preoccupied with having intercourse, his efforts to find partners tended to be rather passive and naive. CD summarized his courtship strategy as "hanging around" a woman "until sex happened."*

**Asperger's syndrome in forensic settings**

Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59-70, 2002

*... His first contact with the legal system and our subsequent evaluation occurred after CD had repeated sexual contact with a 15-year-old male over a period of several days. CD met the young man, who reportedly had no place to stay at the time, in their apartment complex laundromat and the two subsequently went to CD's home. Over the ensuing days, CD bought the young man a variety of presents, gave him money, and had an active sexual relationship with him.*

*The contact ended when CD was no longer willing to give the youth money. The youth left CD's home, taking his stereo. When CD went to the police station to report this theft, he was subsequently arrested for sexual assault against a minor.*

**Asperger's syndrome in forensic settings**

Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59-70, 2002

**Common Themes**

- **Deficient Empathy:** Each of the four men charged with a sex offense, as well as the man who attempted murder, seemed genuinely unaware of the harm they caused their victims. Likewise, the arsonist appeared untroubled that he destroyed property belonging to strangers, rather than to those against whom he sought revenge

**Asperger's syndrome in forensic settings**

Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59-70, 2002

**Common Themes**

- **Interpersonal Naiveté:** A naïve and often impoverished understanding of human relationships...not only leaves Asperger's syndrome patients vulnerable to mistreatment by others, but also may lead them to seek interpersonal contact in misguided ways...CD maintained a sexual relationship with a teenage male and demonstrated his ignorance of the inappropriateness of this relationship by going to the police to complain that the youth took his stereo when the relationship ended.

#### Asperger's syndrome in forensic settings

Murrie DC, Warren JL, and Kristiansson M  
Int J Forensic Ment Health 1:59-70, 2002

##### Common Themes

- **Immediate Confession:** At least four of the six men were quick to confess to the police. This could reflect a variety of traits ranging from deficient shame, poor judgment, lack of experience, or an impaired appreciation of the social and legal consequences of a confession, to simple forthrightness, rule-abiding behavior or honesty. This warrants additional research, as it would be of considerable significance if such confessions were not fully competent or voluntary.

#### Asperger's syndrome in forensic settings

Murrie DC, Warren JL, and Kristiansson M  
Int J Forensic Ment Health 1:59-70, 2002

##### Common Themes

- **Sexual Frustration:** At least five of the six men had sexual problems, and four were quite harmful to others when acting upon their sexual drive, highlighting the quandary faced by men who are interpersonally less equipped to initiate or sustain the types of intimate relationships commonly associated with consensual sexual contact...Clinicians working with Asperger's syndrome patients should recognize that social impairments combined with a desire for attachment or sexual experience could lead to illegal behavior...The use of pornography was one socially tolerated way by which several of the men in our sample pursued an impersonal sexual outlet....

#### Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior

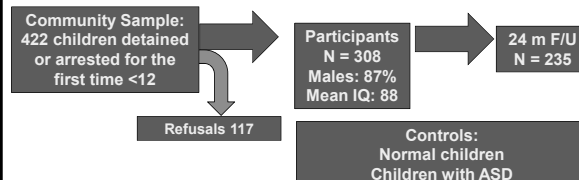
Journal of Child Psychology and Psychiatry, 2012. 53(2): p. 160-167

##### • Research Objectives:

- To compare childhood arrestees with matched comparison groups on levels of autistic symptoms
- To assess the predictive value of autistic symptoms for future delinquent behavior
- Children's Social Behavior Questionnaire (CSBQ)
- Observed Antisocial Behavior Questionnaire
- Diagnostic Interview Schedule for Children (DISC)

#### Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior

Journal of Child Psychology and Psychiatry, 2012. 53(2): p. 160-167



#### Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior

Journal of Child Psychology and Psychiatry, 2012. 53(2): p. 160-167

##### • Results:

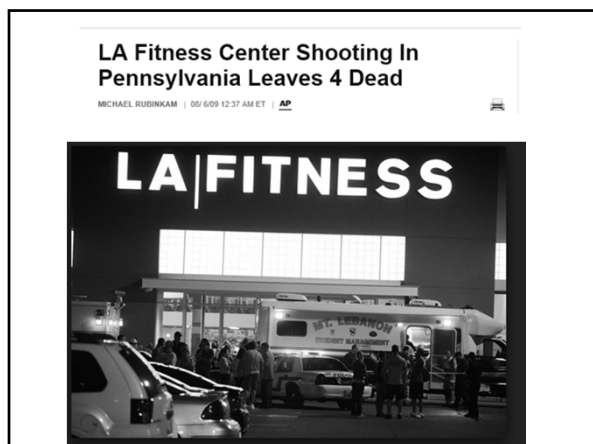
- Indicators of atypicality:
  - ASD > Arrestees > Normals,  $p < 0.01$
- For Arrestees:
  - CBSQ score predicted future delinquent behavior ( $p < 0.001$ , even after adjusting for externalizing behavior)

#### Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior

Journal of Child Psychology and Psychiatry, 2012. 53(2): p. 160-167

##### • Conclusions:

- Childhood arrestees...have more autistic symptoms than children from the general population, and less than autistic individuals
- Among the arrestees, autistic symptoms were uniquely positively associated with future delinquent behavior
- Although mediated by co-occurring externalizing disorders, autistic symptoms predicted delinquent behavior over and above externalizing disorders



AUTISM'S GADFLY  
WE DON'T NEED NO STINKIN' NEURODIVERSITY

<http://autismgadfly.blogspot.com/2009/08/will-neurodiversity-diagnose-george.html>

August 5, 2009

**Will neurodiversity diagnose George Sodini with autism?**

Last night.....a man entered a gym in the vicinity of Pittsburgh Pennsylvania. He walked into a room where a "Latin impact" aerobics class was being held. He turned out the lights and drew a gun out of his gym bag. He started shooting, killing three women and then killing himself....

AUTISM'S GADFLY  
WE DON'T NEED NO STINKIN' NEURODIVERSITY

<http://autismgadfly.blogspot.com/2009/08/will-neurodiversity-diagnose-george.html>

".... Apparently, the man was frustrated by the fact that he was 48 years old and had not had a girlfriend for a long time. In fact he kept a detailed online diary describing his frustrations and his plan to go out and kill some women at some point; apparently revenge for being rejected so much. Looking at the diary we see his occupation was a software designer, a job that Simon Baron-Cohen, Temple Grandin and others have claimed requires autistic traits...."

AUTISM'S GADFLY  
WE DON'T NEED NO STINKIN' NEURODIVERSITY

<http://autismgadfly.blogspot.com/2009/08/will-neurodiversity-diagnose-george.html>

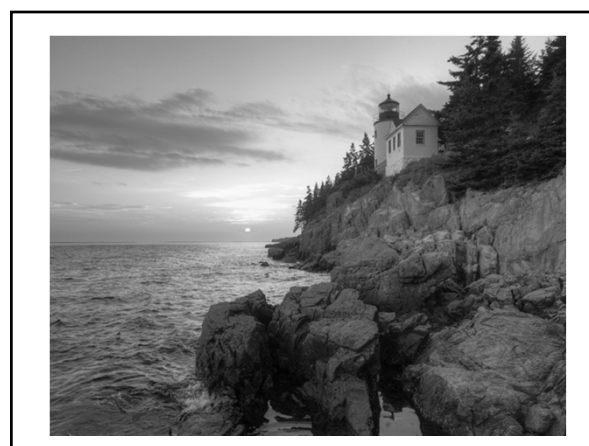
Sodini had written: 'The biggest problem of all is not having relationships or friends, but not being able to achieve and acquire what I desire in those or many other areas....Everything stays the same regardless of the effort I put in...'

Sound familiar? Well, this is someone with computer skills and social impairments who was frustrated by celibacy. Perhaps neurodiversity could diagnose him with autism as they have diagnosed Bill Gates...."

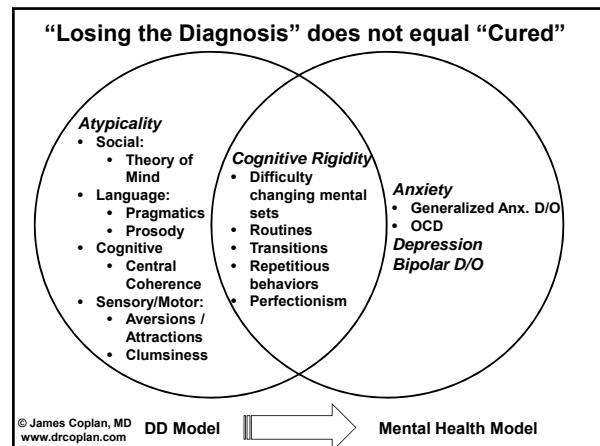
AUTISM'S GADFLY  
WE DON'T NEED NO STINKIN' NEURODIVERSITY

<http://autismgadfly.blogspot.com/2009/08/will-neurodiversity-diagnose-george.html>

"...Of course, most persons who suffer from loneliness regardless of whether or not they are autistic will not go out on a shooting spree, but it is frustrating. This man was clearly deranged. He may or may not have had an autism spectrum disorder, but I feel in order to be fair neurodiversity should take the bad with the good. If they are going to preach about what a gift autism is and say that Bill Gates, Stephen Spielberg, Einstein, Jefferson, etc. prove that autism is such a gift because these individuals have or had it, why not say that Sodini may have been autistic also."



## What you can do

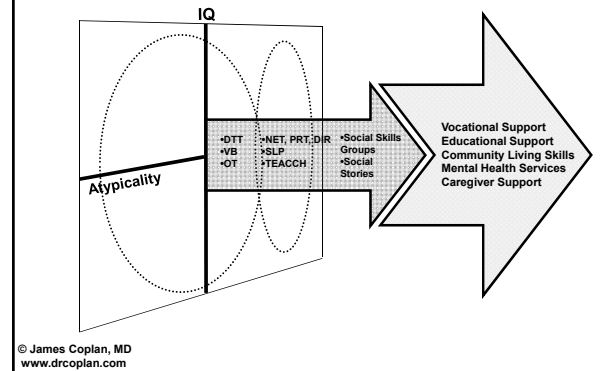


## NASP: School-based Mental Health Services

- "Mental health is directly related to children's learning and development. It encompasses or intersects with interpersonal relationships, social-emotional skills, behavior, learning, academic motivation, certain disabilities, mental illness (e.g., depression or bipolar disorder), crisis prevention and response, school safety and substance abuse. Each of these issues affects not only the success and well-being of the individual student but also the school climate and outcomes for all students
- "School-Based Health Clinics" where students and their families can come to the school for all medical, social-emotional, and/or behavioral health services

[http://www.nasponline.org/advocacy/overview\\_sbmh.pdf](http://www.nasponline.org/advocacy/overview_sbmh.pdf)

## Progression of Interventions



## House Rule #1

- The family is a system → The unit of treatment is the family**
- Assess mental health of all players**
- Assess relationships among the players**
- Fostering the family's ability to move forward is my #1 goal. The child's parents & siblings will be involved with my patient long after I have left the stage.**

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## House Rule #1a

- Get both parents to come in for the interview & informing session**
  - Have a sofa if possible, and watch the body language
  - "What do you think about what your spouse just said?"

### Probe Questions

(In ascending order of intimacy)

- Do you and your partner ever go out as a couple? When was the last time?
- Who else do you have as supports?
- What have you told your other children / parents?
- Tell me a little bit about yourself / how you were raised / your own mental health?

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### House Rule #2

- **No medication unless parents agree to behavioral and MH evaluation for their child and/or themselves, if you deem it necessary**

#### Neurodevelopmental Pediatrics of the Main Line, PC

##### Psychoactive Medication – Informed Consent Form

Medication cannot cure developmental or behavior problems. However, medication can sometimes alleviate biologically-based symptoms, such as inattention, impulsivity, anxiety, depression, cognitive rigidity, agitation, disruptive, or self-injurious behavior. Medication alone is frequently less effective than medication plus behavioral or mental health services.

Therefore, in addition to administering psychoactive medication to your child, Dr. Coplan may recommend behavioral and/or mental health services as part of your child's treatment plan as follows: .....

#### Neurodevelopmental Pediatrics of the Main Line, PC

##### Psychoactive Medication – Informed Consent Form

##### Therapy for your child focusing on:

- Direct modification of your child's behavior
- Anxiety management
- Enhancing your child's self-esteem
- Enhancing your child's social skills
- Self-awareness, including the implications of your child's diagnosis

##### Therapy for yourselves (parents) to address one or more of the following:

- Differences between parents in management style
- Intrinsic parental issues, such as anxiety or depression, that may be impacting your ability to address your child's behavior
- The impact of your child's disability on family function



### Summary

- ASD has a natural history for improvement over time, insofar as visibly atypical features are concerned
- Cognitive & behavioral patterns persist
- Mental Illness is not “a separate problem.” Rather, impaired MH is another expression of shared neurobiology
- Over time, mental health issues present a progressively greater challenge, that may supersede the ASD

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### Summary

- ASD in a child is a red flag for developmental and/or mental health disorders in parents / siblings
- Optimal outcome for the child with a disability depends upon addressing the parents' mental health issues, as well as the child's developmental and mental health needs

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### Summary

- To be successful, intervention needs to be multimodal and family-centered
  - Mental health intervention
    - Child: Self-awareness, self-esteem, self-regulation
    - Parents: Address their own MH issues
    - Family: Take a family-system approach
      - Flexibility / Resilience within the family structure
      - Siblings are at high risk for genetically based morbidity, and/or collateral damage bec/o family system dysfunction
  - Educational / Vocational services
  - Psychotropic Medication - often

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### Summary

- Need for Adult Services
  - Clinics for “Long-Term Survivors of Childhood ASD” patterned after Long-Term Survivors of Childhood Cancer
    - Mental Health
    - Job coaching
    - Social contact
    - Family / Caregiver support (parents, partners)
    - Developmental screening of offspring

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### Summary

- Need for Better Research
  - Prevalence of ASD in adults?
  - Psychiatric Comorbidity
  - Obstacles
    - Privacy issues
      - “Informative censoring”
    - Cross-Disciplinary collaboration
      - Child / Adult
      - DD / Mental Health
    - Long-term funding

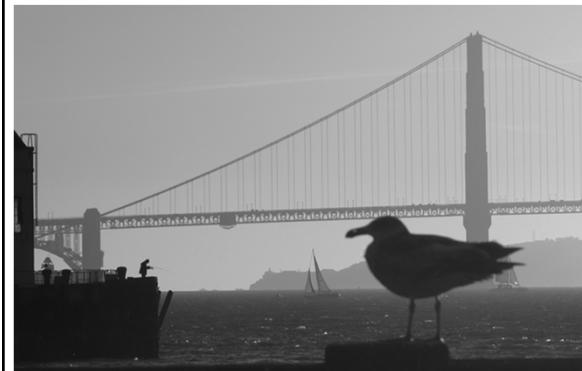
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### Resources


- Coplan, J. Making Sense of Autistic Spectrum Disorders. Random House, 2010.
- Married with Special Needs Children; A couples' guide to keeping connected. Marshak LE and Prezant, FP. Woodbine, 2007
- Voices from the spectrum. Parents, grandparents, siblings, people with autism, and professionals share their wisdom. Ariel, CN and Naseef, R (eds). Jessica Kingsley, 2006
- The American Association of Marriage and Family Therapy <http://www.aamft.org/iMIS15/AAMFT/>
- The Bowen Center: <http://www.thebowencenter.org/>

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JAMES COPLAN, M.D.  
*Neurodevelopmental Pediatrician • Author • Speaker*  
Making Sense of Autistic Spectrum Disorders

James Coplan, MD  
Neurodevelopmental Pediatrics of the Main Line, PC  
COPLAN@DRCOPLAN.COM  
www.drcoplan.com

***Thank you***