

Neuropsychiatric and Neuropsychological Co-Morbidity in ASD

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



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Outline / Basic Premises - 1

- **Biologically driven behaviors / traits**
 - Cognitive Rigidity
 - Dysregulation of Attention
 - Dysregulation of Arousal
 - Dysregulation of Sleep
 - Dysregulation of Sensory Processing
- **Occur *irrespective of environmental contingencies***
- **Do not serve a social function**
- **Specific behaviors / traits are tied to specific neurotransmitters / brain systems**

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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Outline / Basic Premises - 2

- **Socially driven behaviors**
 - Occur in response to environmental contingencies
 - Serve a social function
 - Attention
 - Access to desired objects or activities
 - Escape from undesired activities
 - A-B-C Model
 - What is the Antecedent to the behavior?
 - What is the Behavior itself?
 - What are the Consequences for the behavior?

Outline

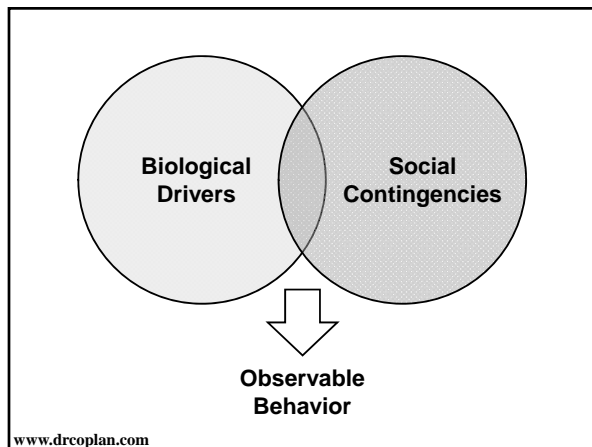
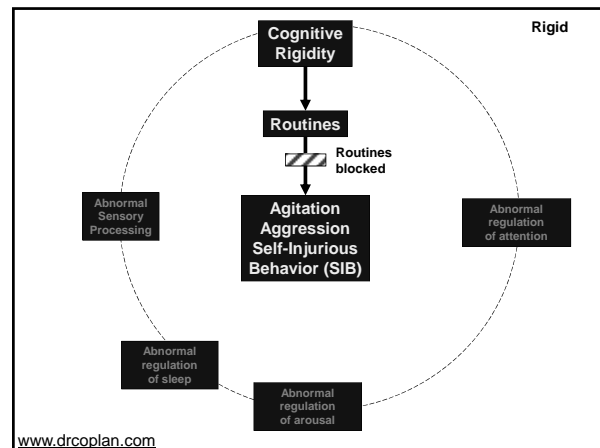
Neuropsychiatric and Neuropsychological Co-Morbidity; 1:00 – 2:30

- Cognitive Rigidity: Internalizing and externalizing behaviors
- Dysregulation of attention
- Dysregulation of arousal
- Dysregulation of mood
- Positive Behavior Support for internalizing behavior
- Psychopharmacology for the non-physician
- Behaviorism: Its utility and its limits

Break 2:30 – 2:45

Outline / Basic Premises - 3

- **Behavior analysis needs to take biological and environmental factors into account:**
 - Underlying biological traits often provide the child with lots of opportunities to make unfortunate discoveries (viz: Tantrums or SIB are great ways to get attention or escape from tasks)
- **Intervention often requires both pharmacologic and behavioral measures**

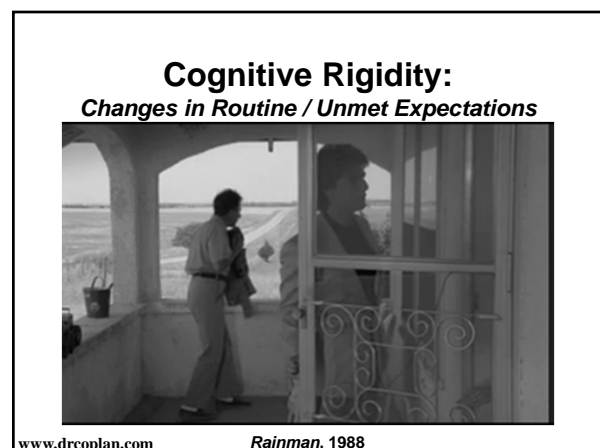
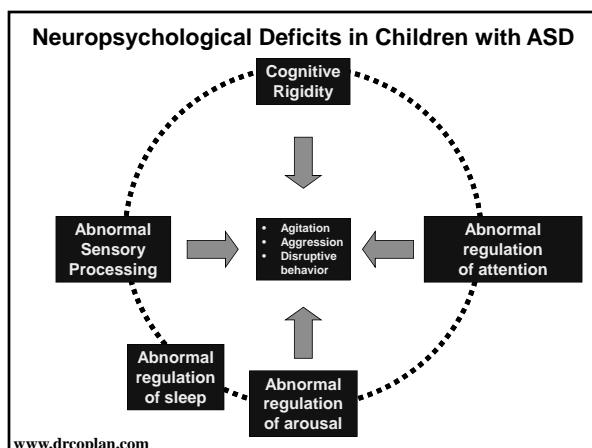


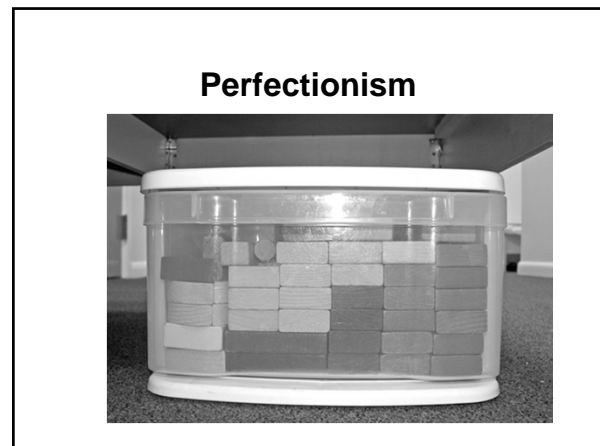
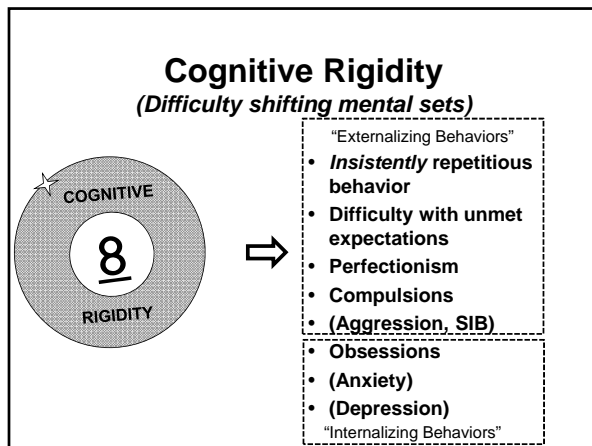
Cognitive Rigidity → Anxiety → Disruptive Behavior

“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.”

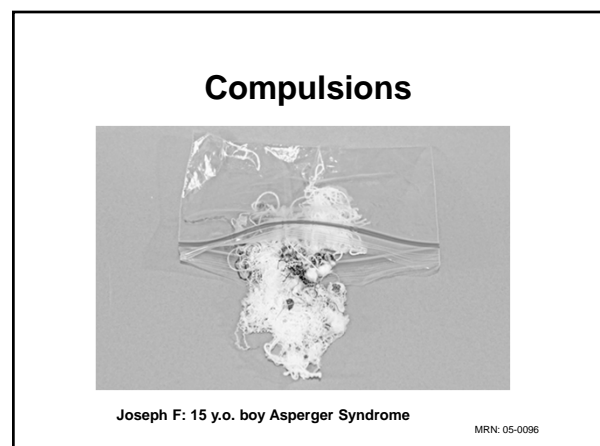
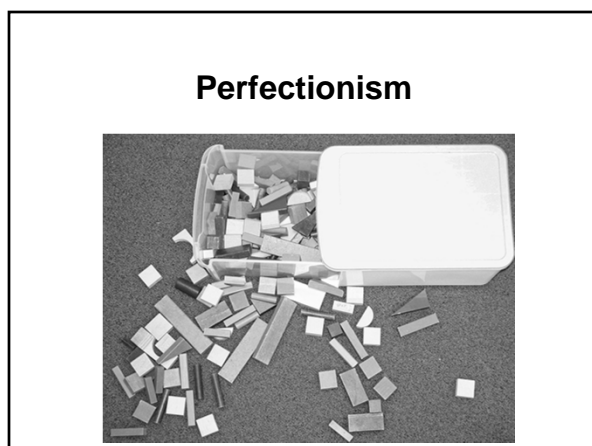
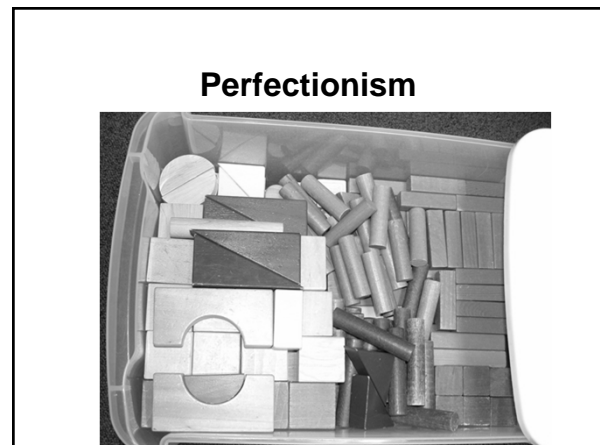
6 y.o. boy with ASD, anxiety, and normal nonverbal IQ

MRN 12-0782

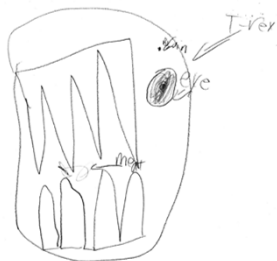




- IDEA**
- IDEA requires the IEP to address “behavior that impedes child’s learning or that of others” (IDEA Section 614(d)(2)(B))
 - Unfortunately, as implemented, this section of IDEA is usually applied only to *externalizing* behaviors



Anxiety



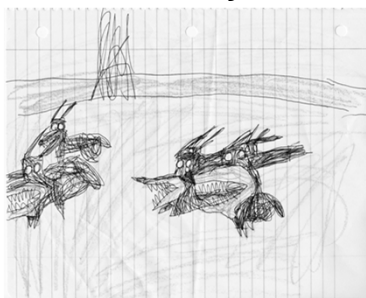
RM: 9 y.o. boy: ASD, normal IQ, anxiety d/o, disruptive behavior.
Mother: Anxiety D/O; PGM hoarding & OCD
www.drcoplan.com MRN: 10-0642

Anxiety



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

Anxiety



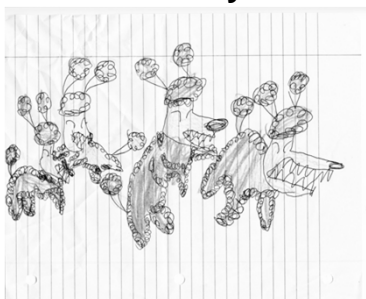
RD. 7 y.o. F, nl IQ, PDD-NOS & Anxiety. Father: GAD
www.drcoplan.com MRN: 07-0427

Anxiety



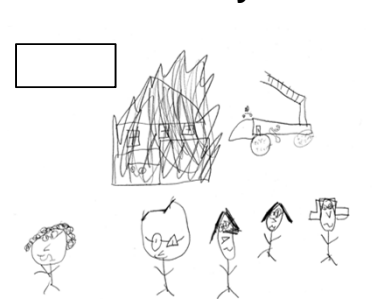
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Anxiety



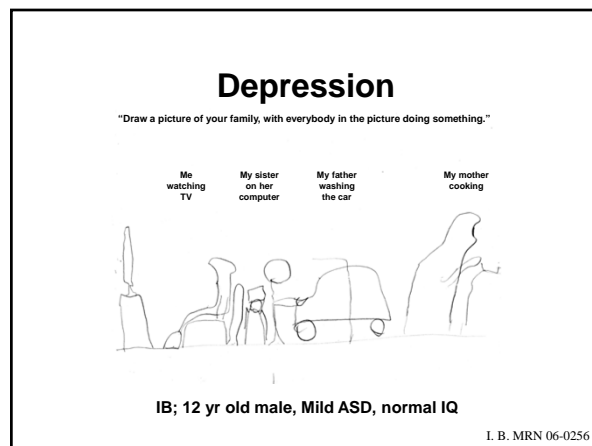
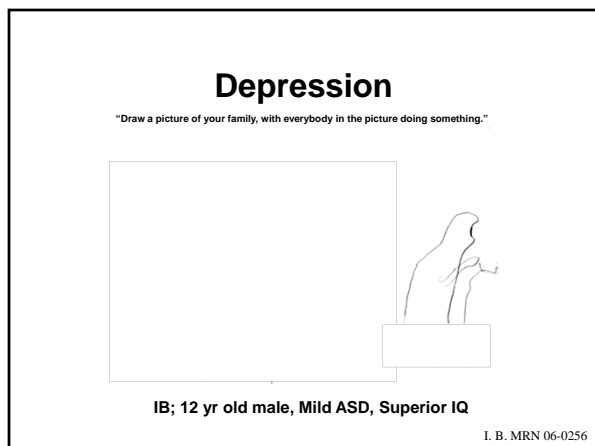
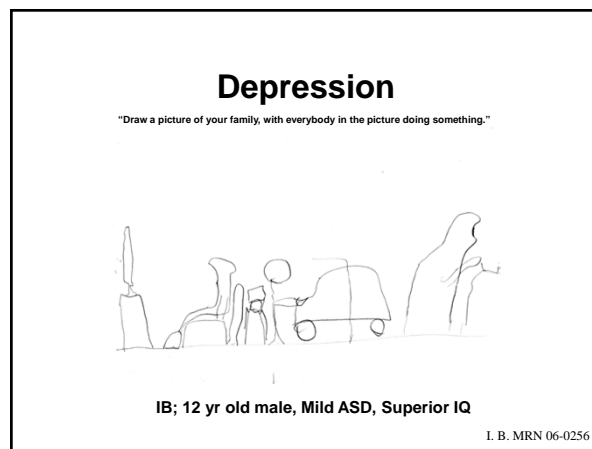
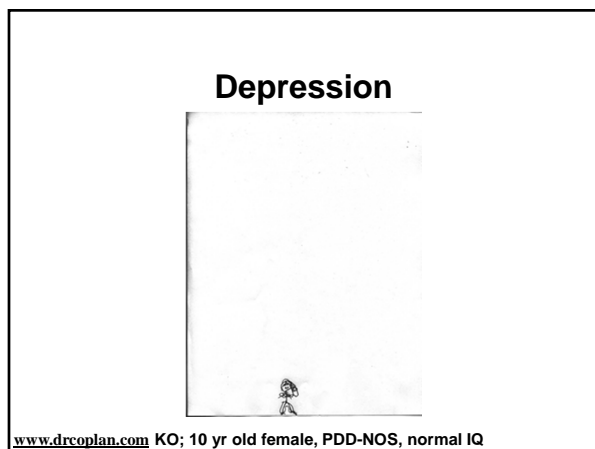
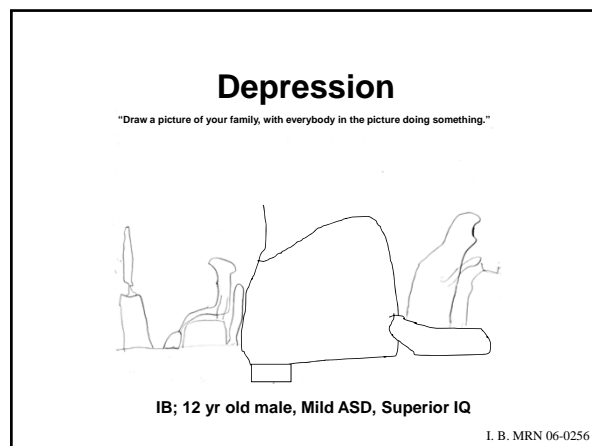
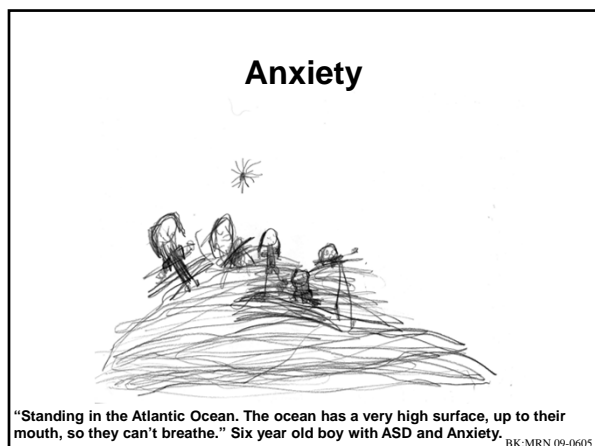
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Anxiety



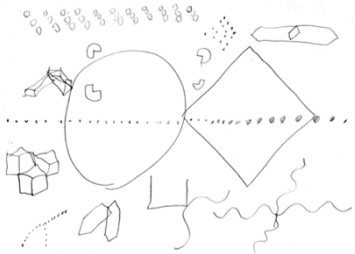
"The house is on fire and we are running for our life."

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



Depression (& Perseveration)

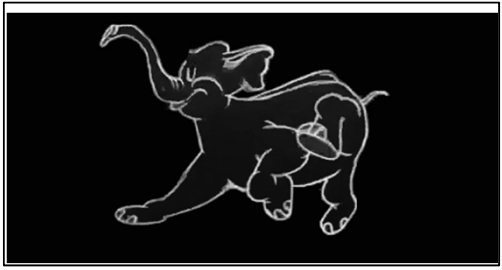
Standard Score: 123



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

I. B. MRN 06-0256

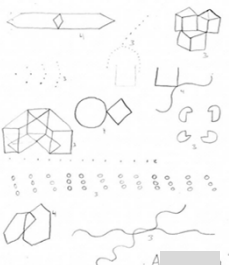
How do you kill a blue elephant?



Shoot it with a blue elephant gun.

Anxiety, Perfectionism, and Self-Injurious Behavior


Standard Score: 138



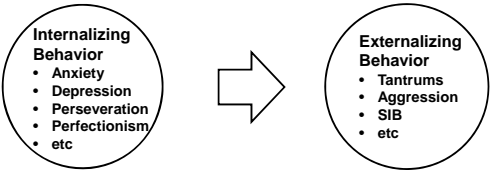
A.D. : 9 y.o. girl with ASD (my MRN: 06-0227)

Throughout the session, "Alice" delivered a steady stream of self-deprecating comments, calling herself "stupid," or perseveratively asking if she was "fat." During the Bender, she anxiously and angrily twisted the eraser off the tip of the pencil, while declaring "Why do I keep making stupid mistakes?" As her stress level rose, she escalated to slapping herself, and then punching herself in the face.

How do you kill a pink elephant?

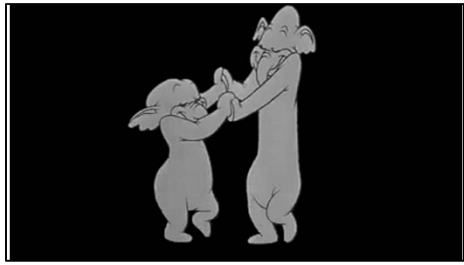


Unaddressed internalizing behavior often comes out as externalizing behavior



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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

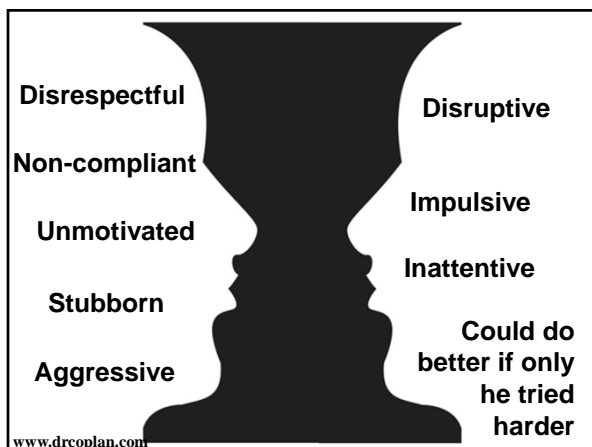
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Not seeing the vase (ignoring internalizing behavior)

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 <i>gain</i> Attention To <i>avoid, escape, or postpone</i> academic tasks/expectations

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MW; MRN 06-0211



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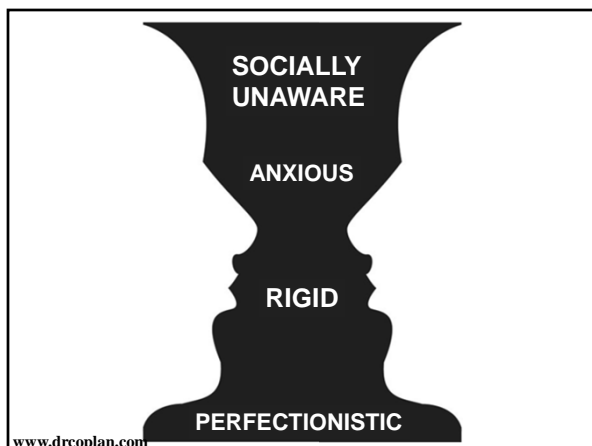
Seeing the vase (recognizing internalizing behavior)

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 <i>gain</i> Attention To <i>avoid, escape, or postpone</i> academic tasks/expectations

Antecedents	Behaviors	Consequences	Perceived Function
Anxiousness Perfectionism Fear of Failure	Tantrums Eloping Task Refusal	Temporary <i>reduction</i> in anxiety via task avoidance	Avoidance of self-blame for not completing the task perfectly

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MW; MRN 06-0211



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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)

Ryan continues to wrestle with the impact of anxiety, cognitive rigidity, and probable depression. His episodic task avoidance at school probably serves the function of anxiety reduction (by avoiding tasks that he perceives as too difficult). His need for constant reassurance and his self-deprecating comments are additional evidence of the burden of his anxiety. Likewise, his episodic outbursts can be traced to his cognitive rigidity, and reflect his perception that "rules have been broken" (as when he attacked another child for misstating the facts)...

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RH; MRN: 11-0717; 8 y.o. male;
Anxiety D/O & Mild Atypicality

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."

Not seeing the vase (ignoring internalizing behavior)

...Ryan's FBA of 10/11/2013, Section II, "Physiological and Medical Factors" Question 1 "Could the behavior be the result of medical or psychiatric condition or any form of physical discomfort?" is marked "NO" by the behavior analyst who completed the form. This is incorrect. Anxiety Disorder is a "psychiatric condition," and underpins many of Ryan's maladaptive behaviors in the classroom. For children who are anxious and self-critical (as Ryan is), **task avoidance serves the function of anxiety reduction**. The focus of behavioral intervention needs to be on cognitive flexibility and anxiety reduction, rather than "compliance."

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RH; MRN: 11-0717; 8 y.o. male;
Anxiety D/O & Mild Atypicality

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."

The Story of Billy's Box - 1

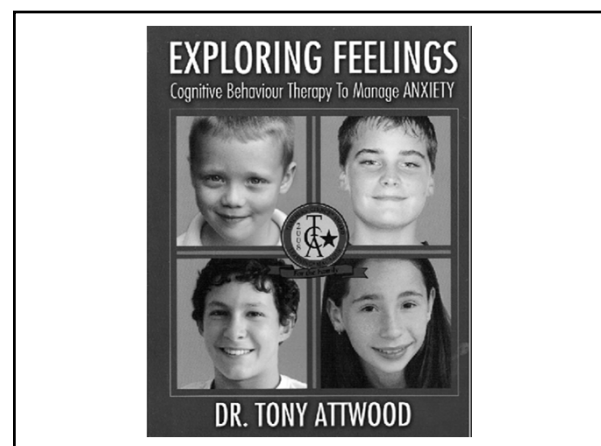
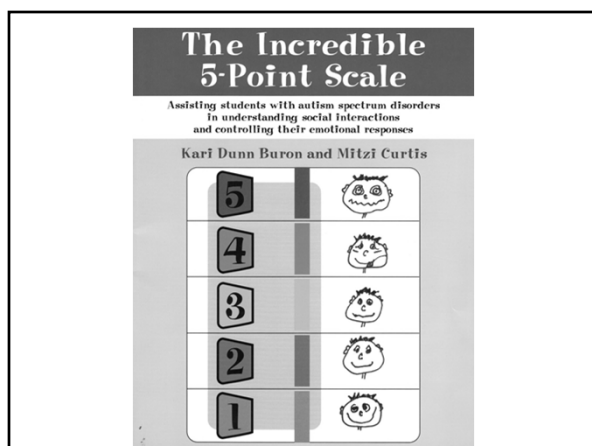
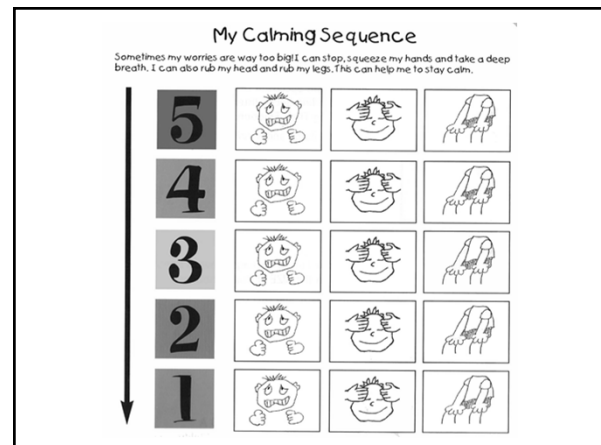
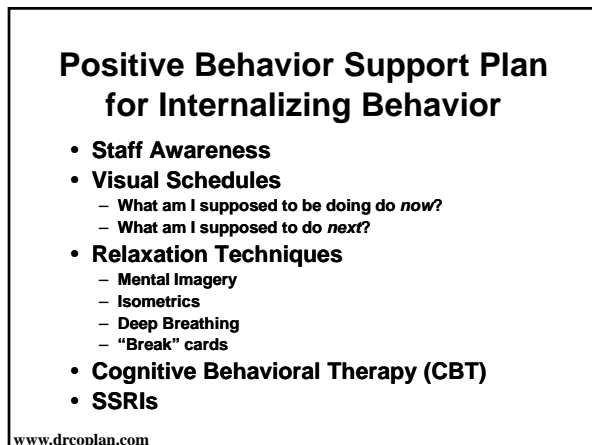
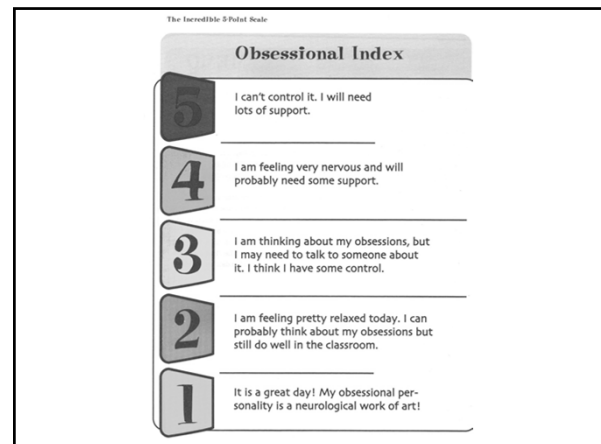
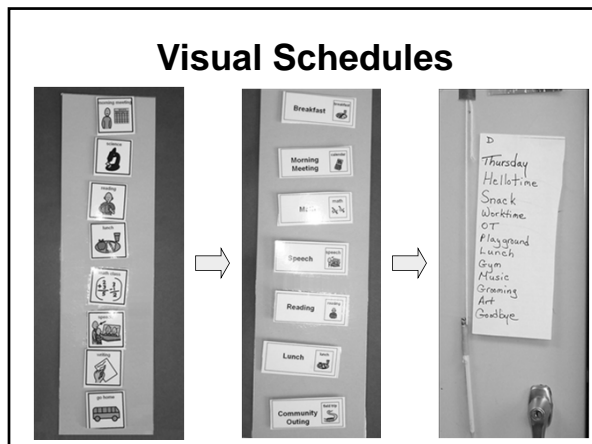
(or, why it's important to ID internalizing behavior)

- 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")?

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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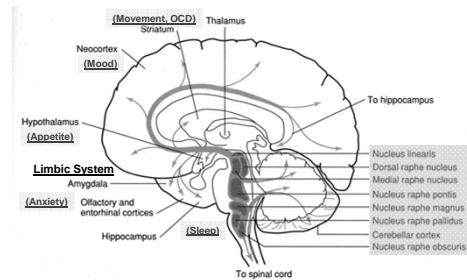


Positive Behavior Support Plan for Internalizing Behavior

- **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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Serotonin (5 HT)



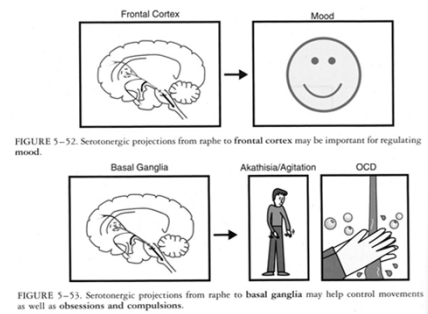
Nestler, *Molecular Neuropsychopharmacology*, Fig 9.3

Selective Serotonin Reuptake Inhibitors (SSRIs)

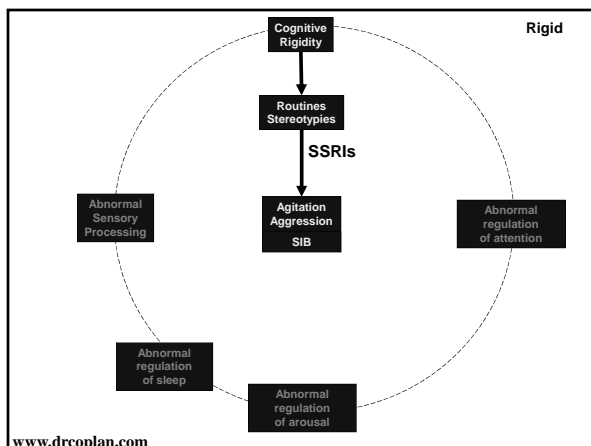
- **Primary targets**
 - Cognitive Rigidity
 - Anxiety
 - Obsessions (thoughts)
 - Compulsions (behavior)
 - Perfectionism
 - Depression
 - Stereotypies: Probably not
- **“Downstream” benefit:**
 - ↓ Disruptive Behavior
 - ↑ Quality of Life

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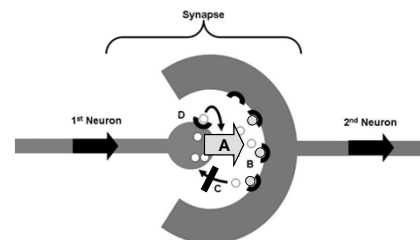
Serotonin (5 HT) Pathways



Stahl, *Essential Psychopharmacology*, fig 5.52-3



Serotonin promoting (serotonergic) drugs



- A. Promote release of serotonin (Mirtazapine)
- B. Mimic the action of serotonin at the 2nd neuron (Buspirone)
- C. Block re-uptake of serotonin (SSRIs)

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) for autism spectrum disorder (ASD).

Williams, K., et al., Cochrane Database Syst Rev, 2010. 8: p. CD004677

Authors' conclusion:

“There is no evidence that SSRIs are effective as a treatment for children with autism. In fact, there is emerging evidence that they are not effective and can cause harm. As such SSRIs cannot be recommended as a treatment for children with autism at this time.”

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

Ipser 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

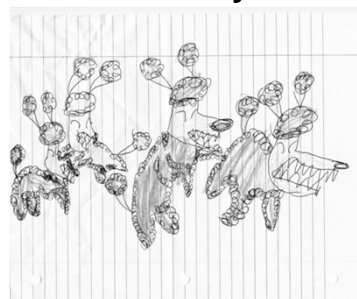
- Response rate: Medication 59%; Placebo 31%
- 7.3% of subjects treated with SSRIs withdrew bec/o side effects
- “The overwhelming majority of evidence of efficacy was for the SSRIs, with the most evidence in paediatric OCD”

Selective serotonin reuptake inhibitors (SSRIs) for autism spectrum disorder (ASD).

Williams, K., et al., Cochrane Database Syst Rev, 2010. 8: p. CD004677

- Studies reviewed: 7 randomized controlled trials / 271 participants
 - Fluoxetine (2), fluvoxamine (2), fenfluramine (2), citalopram (1)
 - Subjects: Children (5); Adults (2)
 - Varying inclusion criteria for Dx of ASD and IQ
 - 17 different outcome measures
- “Data were unsuitable for meta-analysis”

Anxiety



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

www.drcoplan.com

MRN: 07-0427

Anxiety after Rx with CBT & Escitalopram



RD. 9 y.o. F, nl IQ, PDD-NOS & Anxiety. Father: GAD
www.drcoplan.com MRN: 07-0427

Anxiety, Perfectionism, and Self-Injurious Behavior



Standard Score: 138

A.D. : 9 y.o. girl with ASD (my MRN: 06-0227)
Throughout the session, "Alice" delivered a steady stream of self-deprecating comments, calling herself "stupid," or perseveratively asking if she was "fat." During the Bender, she anxiously and angrily twisted the eraser off the tip of the pencil, while declaring "Why do I keep making stupid mistakes?" As her stress level rose, she escalated to slapping herself, and then punching herself in the face.

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)

After one week on Sertraline

Sent: Thursday, May 31, 2012
To: James Coplan
Subject: amazing shift in A.D.
Importance: High

Dr. Coplan,
I "know" that it takes several weeks for SSRI's to "kick in" but the child I saw in my office today is simply a different child and the improvements are being noted across settings by multiple adults. There was NO self abuse, NO negative self statements, an availability for interventions, just a complete transformation. We "fixed" mistakes, "re-did" errors, told jokes, and played together. The "core" Autistic symptoms are obviously still there - perseveration on bras, drawing, etc - but mood-wise there is no question that A. is already benefitting from the Sertraline... Impossible perhaps but really visibly clear... Thank you very much.
S.S. Ph.D.

Fluoxetine 10 mg/d



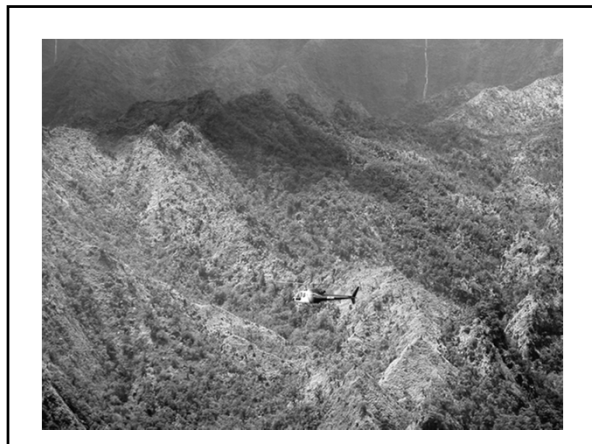
A.W.: 9 year old boy with PDD-NOS and normal IQ (MRN 11-07710)

Cognitive Rigidity

"I haven't been 'fired' or told that I was 'the worst mom ever' in a month! ... Our son has been more adaptable. He has not had a meltdown in a month. (He has come close – but we managed or problem-solved, to come back from the cliff.)"

Mother of an 8 y.o. with ASD and normal IQ, 4 wk after starting SSRI

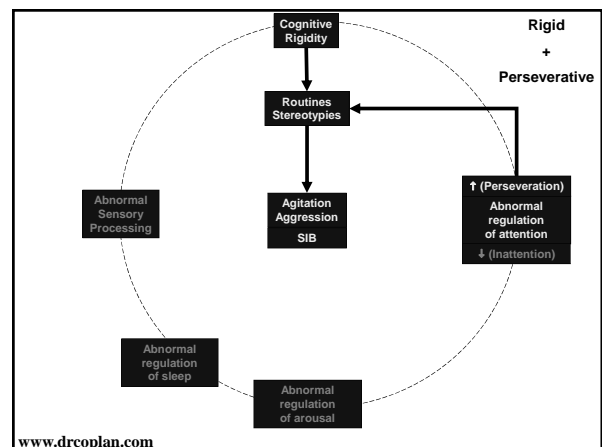
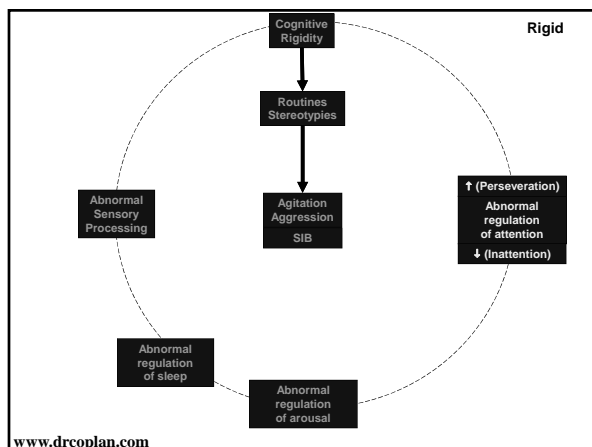
MRN 10-0701



Abnormal Regulation of Attention - 1

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

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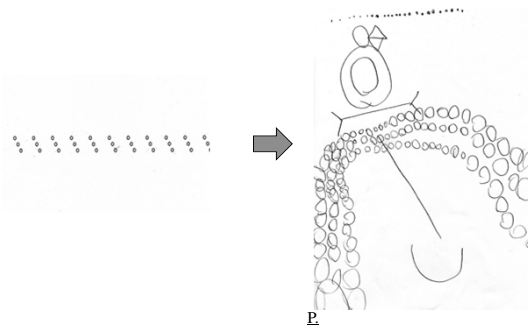


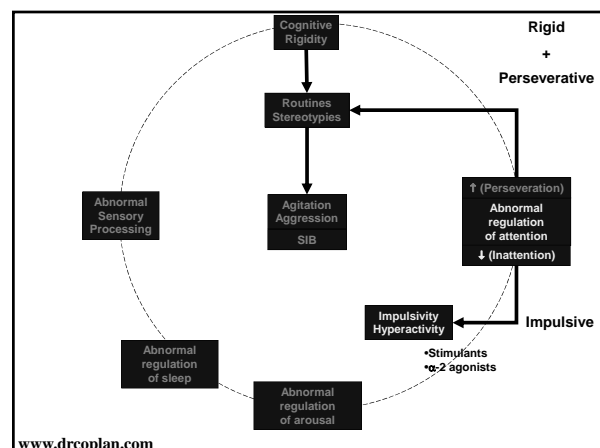
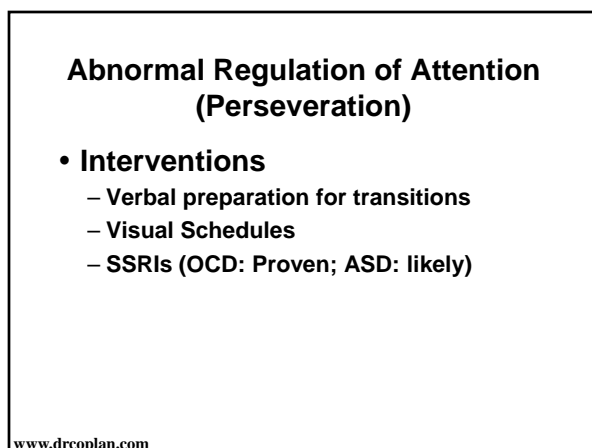
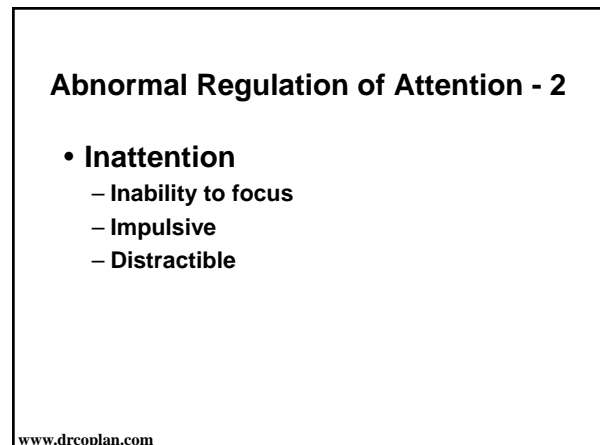
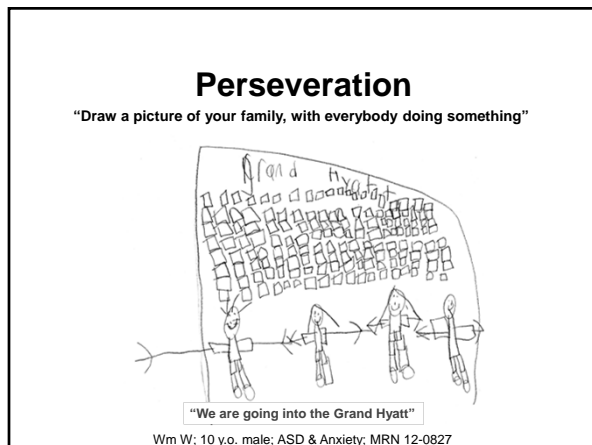
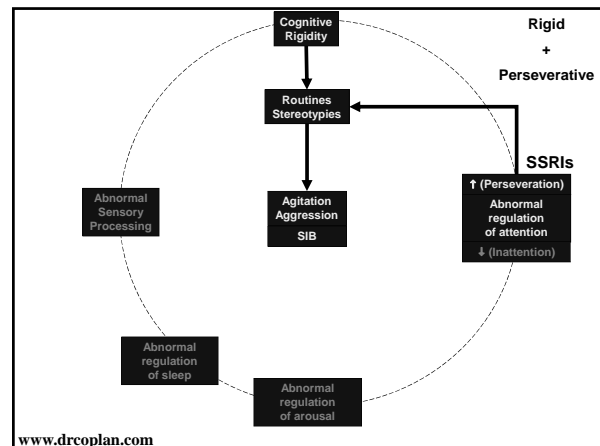
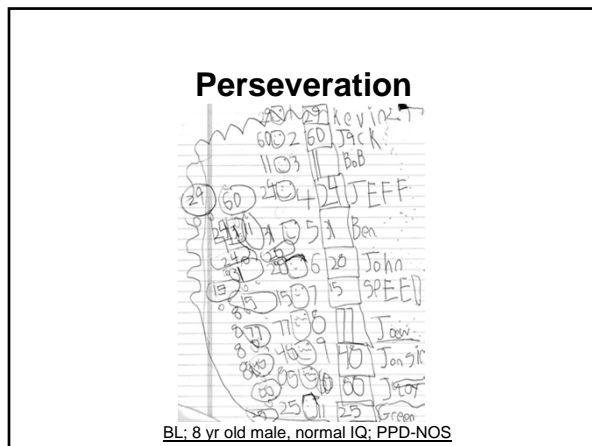
Regulation of Attention



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Perseveration





Inattention

• Interventions

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

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Noradrenergic pathways (Norepinephrine)

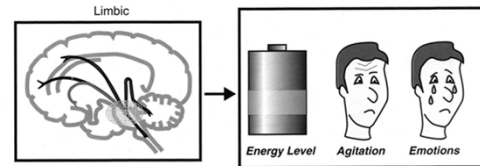
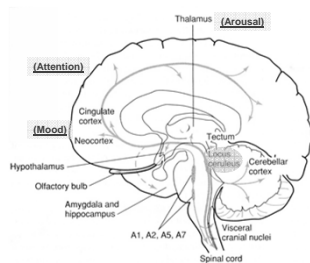


FIGURE 5–26. The noradrenergic projection from the locus coeruleus to limbic cortex may mediate emotions, as well as energy, fatigue, and psychomotor agitation or psychomotor retardation.

Excess Noradrenergic Activity → Hypervigilance, Agitation

Stahl, *Essential Psychopharmacology*, fig 5.26

Noradrenergic pathways (Norepinephrine)

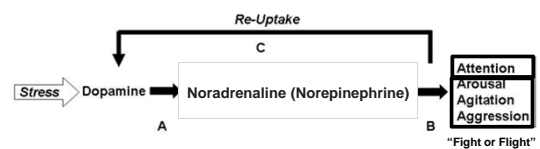


Locus Coeruleus ("blue spot"): Principal noradrenergic source in brain.

Nestler, *Molecular Neuropharmacology*, Fig 8.5

Stimulants

(Dopaminergic; Noradrenergic; Sympathomimetic)



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Noradrenergic pathways (Norepinephrine)

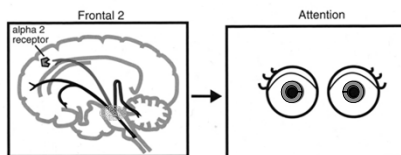
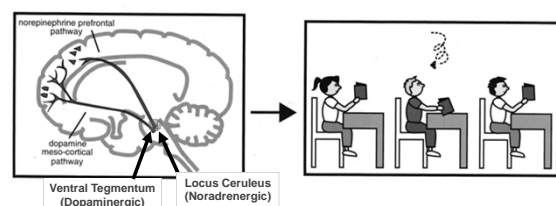


FIGURE 5–25. Other noradrenergic projections from the locus coeruleus to frontal cortex are thought to mediate the effects of norepinephrine on attention, concentration, and other cognitive functions, such as working memory and the speed of information processing. Alpha 2 postsynaptic receptors may be important in transducing postsynaptic signals regulating attention in postsynaptic target neurons.

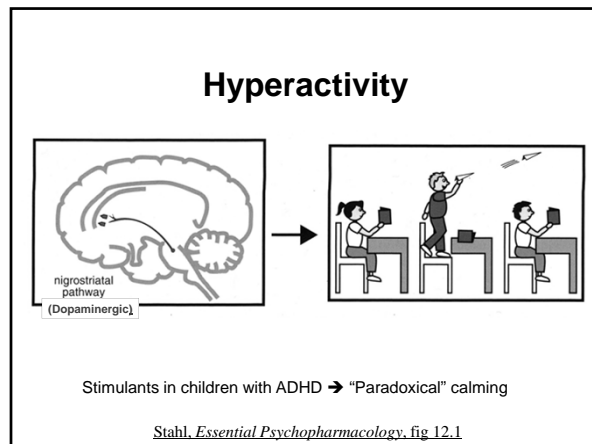
Stahl, *Essential Psychopharmacology*, fig 5.25

Inattention



Insufficient activation of frontal cortex → → → Inattention

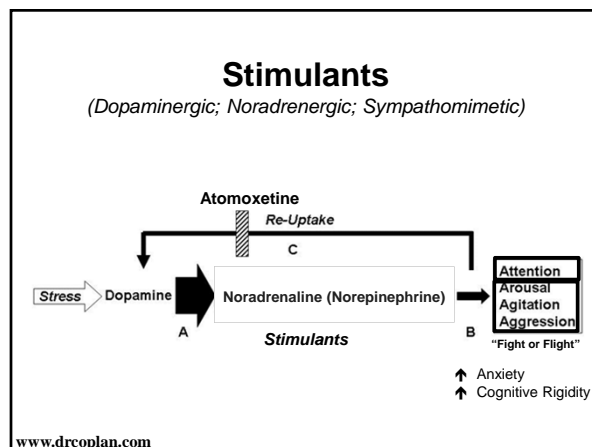
Stahl, *Essential Psychopharmacology*, fig 12.1



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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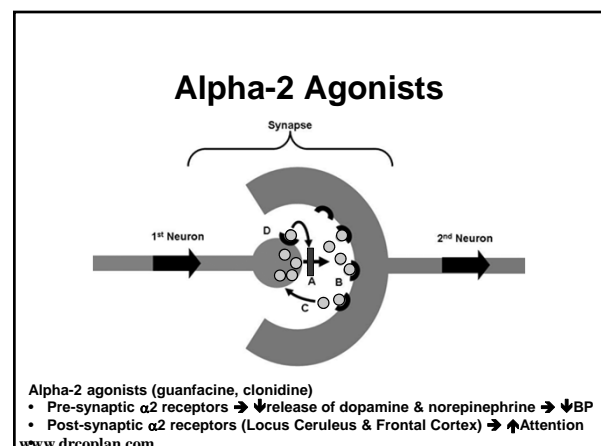
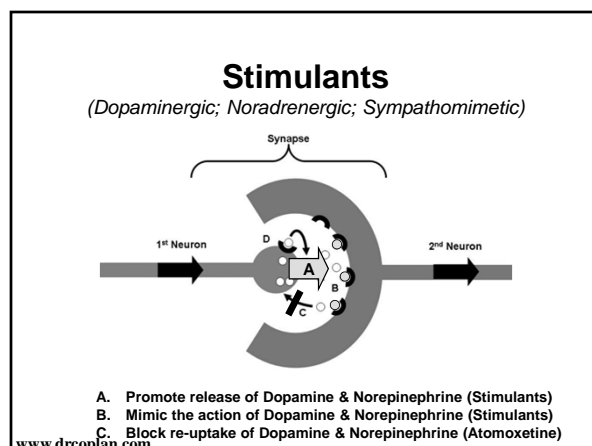


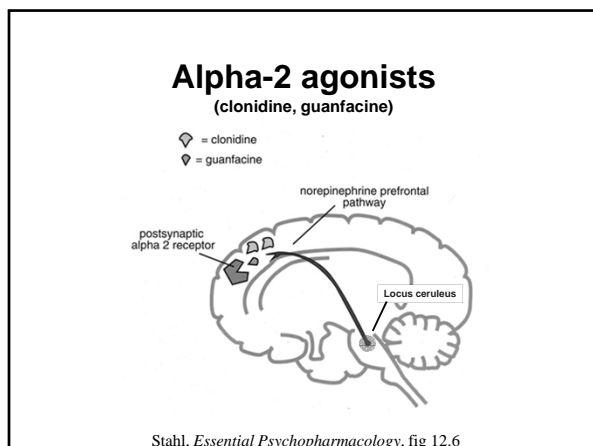
Alpha-2 Agonists

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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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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Alpha-2 Agonists

Benefits	Side Effects
<ul style="list-style-type: none"> • ↓ Agitation • ↓ Hyperactivity • ↑ Attention Span • No exacerbation of anxiety / rigidity 	<ul style="list-style-type: none"> • Sleepiness: Common • Emotional Lability (crying) - occasional • Hypotension (low BP) - rare

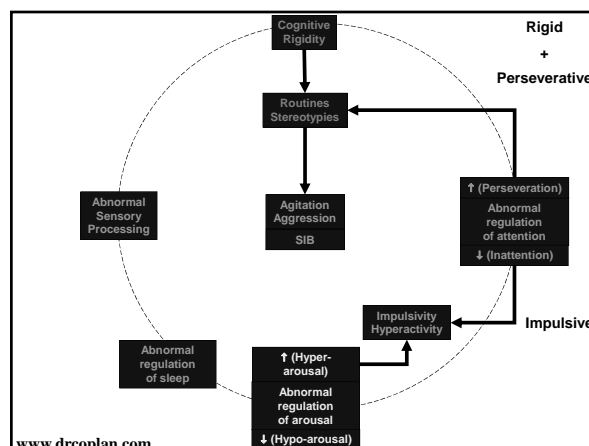


Alpha-2 Agonists

“It’s buying him the split second before he reacts.”

Parents of a child with ASD, agitation, anxiety, and cognitive rigidity after starting guanfacine.

(ML; MRN 13-0839)



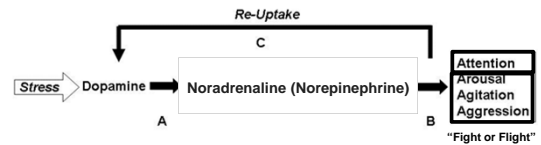
“He is so hard to calm down when he gets upset....His emotional thermostat doesn't work”

Parent of an 8 year old with ASD

F. O. MRN 06-0208

Dopamine

(Dopaminergic; Noradrenergic; Sympathomimetic)



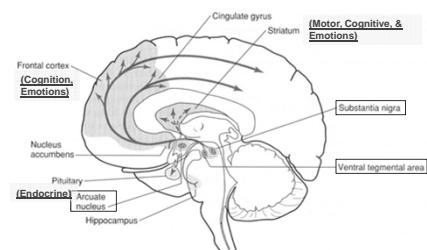
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Regulation of Arousal



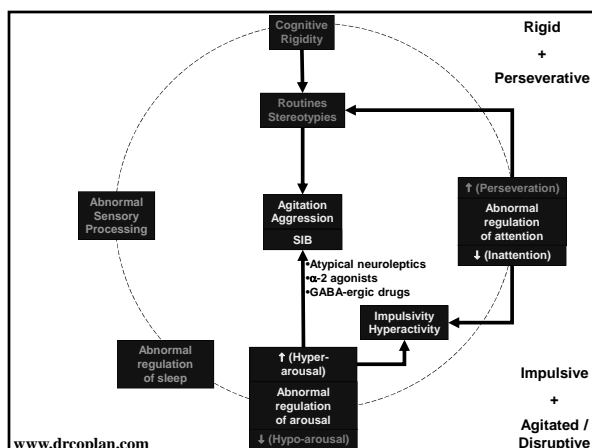
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Dopamine



Substantia Nigra ("black stuff"), Ventral tegmentum, arcuate nucleus

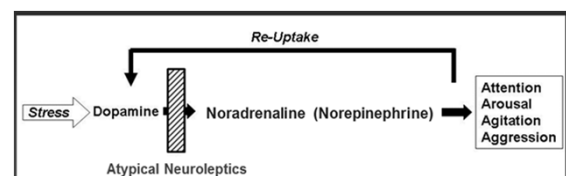
Nestler, *Molecular Neuropharmacology*, Fig 8.6



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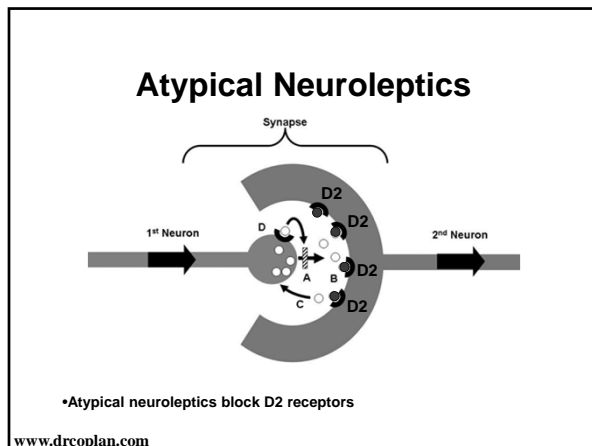
Atypical Neuroleptics

(Dopamine Blockers)



Side Effects
Sleepiness (initially)
Weight Gain (common)
Diabetes (uncommon)
Movement Disorder (rare)

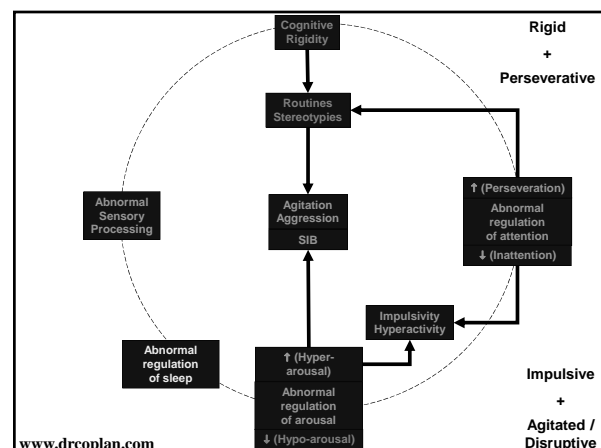
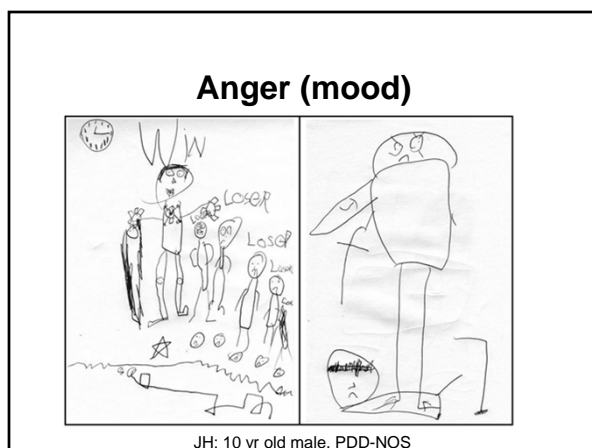
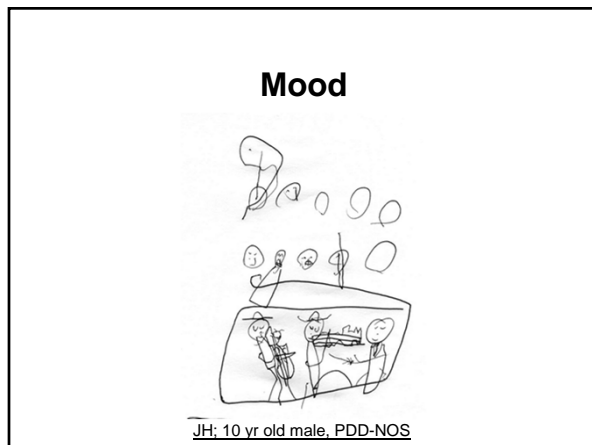
www.drcoplan.com



Atypical Neuroleptics

Generic Name	Brand Name	Comment
Aripiprazole	Abilify	<ul style="list-style-type: none"> • Relatively less risk of weight gain • FDA approved for Rx of ASD
Clozapine	Clozaril	<ul style="list-style-type: none"> • Bone marrow suppression
Olanzapine	Zyprexa	<ul style="list-style-type: none"> • Greater risk of weight gain
Quetiapine	Seroquel	<ul style="list-style-type: none"> • Greater sedation
Risperidone	Risperdal	<ul style="list-style-type: none"> • Greater risk of weight gain • FDA approved for Rx of ASD
Ziprazidone	Geodon	Relatively less risk of weight gain

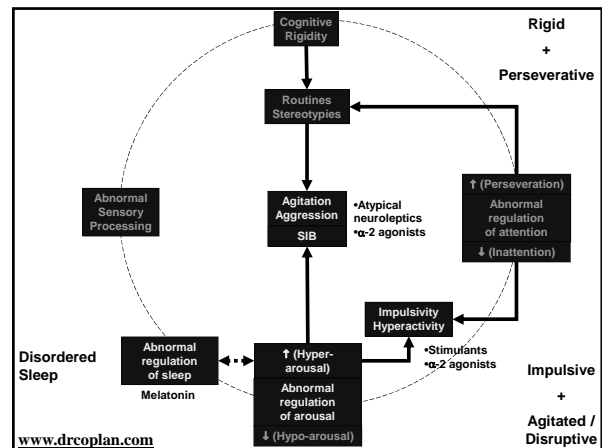
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Regulation of Sleep - 1

- **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

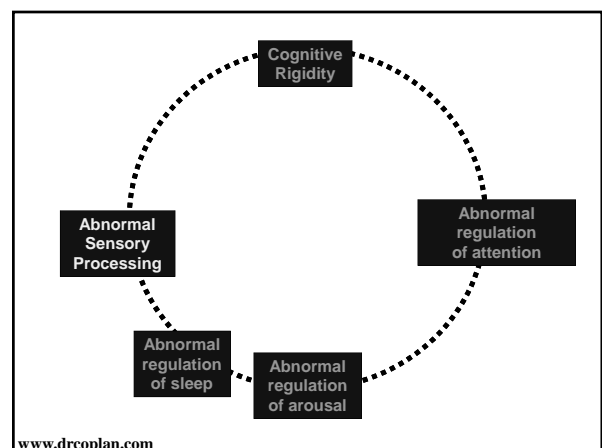
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Regulation of Sleep - 3

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

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The whole is greater than the
sum of its parts

Max Wertheimer

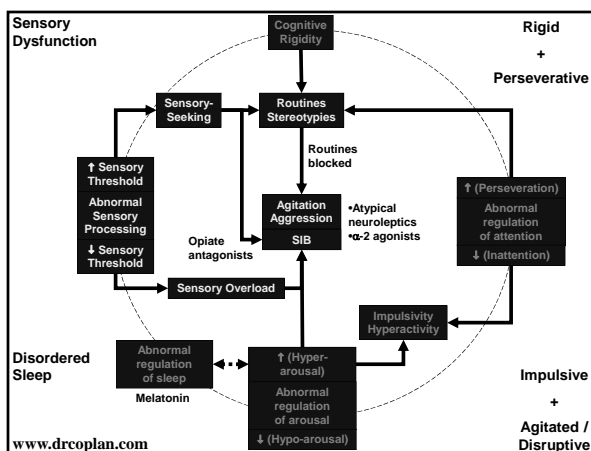
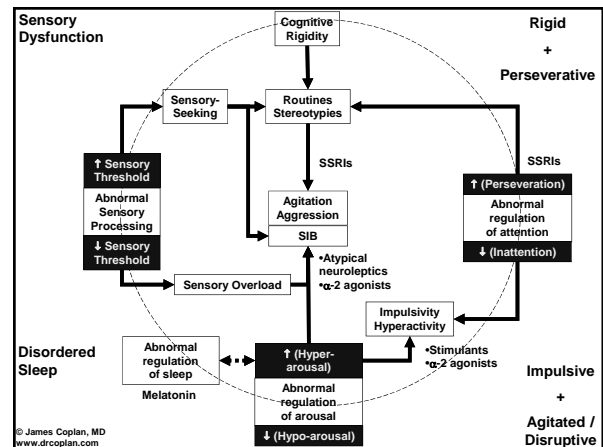
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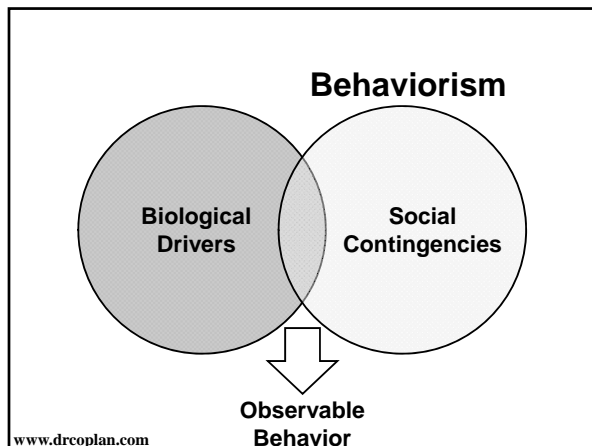
Sensory Processing

- **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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Law of Effect

Animal Intelligence. Edward Thorndike, 1911

"Of several [possible] responses...to the same situation, those which are...closely followed by satisfaction to the animal will...be more likely to recur. Those which are...followed by discomfort to the animal will...be less likely to occur. The greater the satisfaction or discomfort, the greater the strengthening or weakening of the bond"

Behaviorism made simple

STIMULUS (the Antecedent)



RESPONSE (the Behavior)



The Consequence

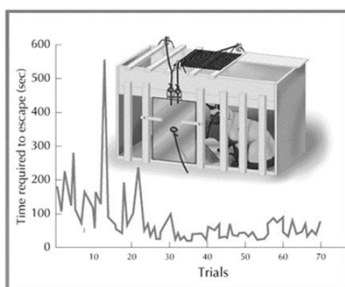
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Operant Conditioning

Skinner

- ***Experimental manipulation of the consequences for a given behavior (by the subject) alters probability that that behavior will recur.***

Thorndike 1905

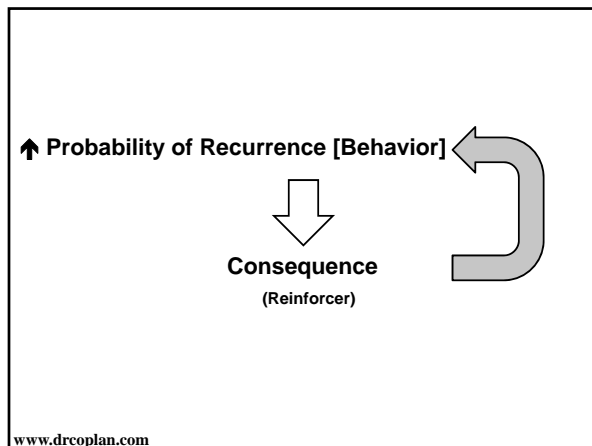


http://en.wikipedia.org/wiki/File:Puzzle_box.jpg

Skinner, ca. 1950

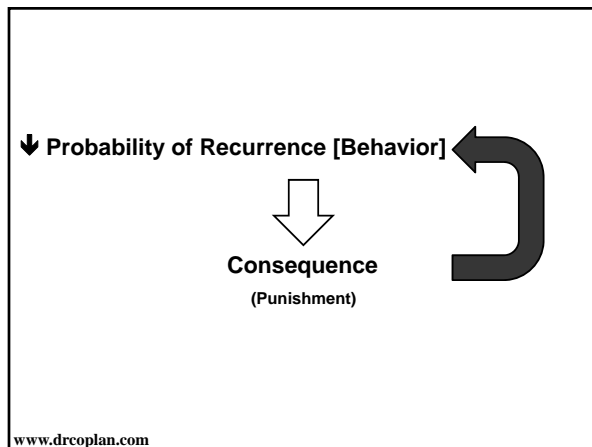


<http://www.youtube.com/watch?v=SUwCgFSb6Nk&NR=1&feature=endscreen>



The ABC's of Behavior Analysis

- What is the Antecedent?
- What is the Behavior?
- What is the Consequence?



Disruptive Behavior: Function & Best Response

- **Attention**
 - 1-2-3 ➔ “Time Out” (T.O.)
- **Access**
 - *Never* grant access to desired object in response to disruptive behavior
- **Escape**
 - *Never* permit the child to escape from a task via disruptive behavior.
 - Walk child through task first, *then* ➔ T.O.
 - OR: Send child to T.O., and as soon as T.O. is complete, resume the task where you left off.

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J.B. Watson

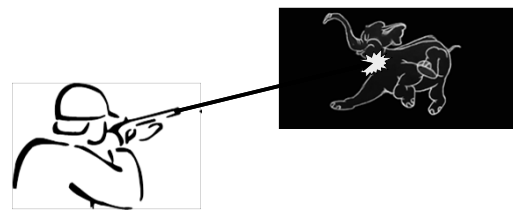
Psychology as the behaviorist sees it. (1913)

- “The behavior of animals can be investigated without appeal to consciousness.”
- Limit psychology to the study of outwardly visible behavior.

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Behaviorism's Blind Spot

- “Internalizing Behavior” is an oxymoron to a behaviorist.



Token Economy: The next step beyond Time Out

- **Concretely specified behaviors**
- **Earn and Lose Points**
- **Points ➡ Access to preferred items**
 - Preferred toys, Computer time, etc.
 - **NO access to preferred item at other times**
 - “Extra” treats not as effective
- **Works with children who understand rule-based play (CandyLand, Uno, etc.)**

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Camp David Trading Post Rules

Rewards		Fees	
Good Day	+30	Bad Day	0
Doing Chore - Each	+10	Cursing - Each Time	-20
Doing a Good Deed	+10	Disrespect Parents	-10
Compliment About You	+10	Lies - Each	-20
Do Morning Work (NO Whining)	+10	Don't Do Morning Work (Whining)	-10
Do Pre-Bedtime Checklist	+5	Don't Do Pre-Bedtime Checklist	-5
		Ask More Than Once	-5
		Touch Another Kid or Being Mean	-10

Red = 5

White = 10

Blue = 50

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 (2nd - 3rd 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
 - Behavior Management Plan that proactively seeks to avert or dissipate anxiety

More on IDEA and FBAs here:

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

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



BREAK

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