


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



**Mental Health and Autism Spectrum Disorder:  
The Elephant in the Room**

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

 Council for  
Exceptional  
Children

 DADD  
Division on Autism and  
Developmental Disabilities

The voice and vision of special education  
January 22-23, 2015

## 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 treatments



## Outline

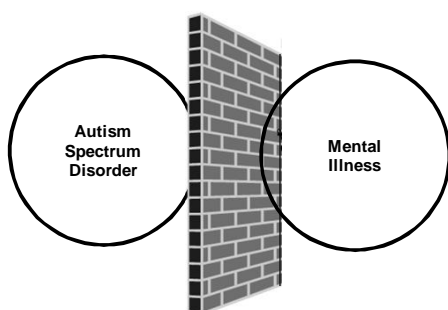
- 1) Statement of the Problem
  - 1) Compartmentalized Thinking
  - 2) "Us vs. Them" : What I learned from Newtown – part 1
- 2) Show me the data
  - 1) Intra-individual
  - 2) Intra-familial (with a glance at Family Mental Health)
  - 3) Basic Science
- 3) ASD, Mental Illness, and Violence
  - 1) What do the data show?
  - 2) Newtown Part 2
- 4) Where do we go from here?
  - 1) Individual & Family care
  - 2) System change

## Outline

- 1) Statement of the Problem
  - 1) Compartmentalized Thinking
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## ASD and Mental Illness: The Myth



## The History of Science in 1 Slide

### Description & Classification\*

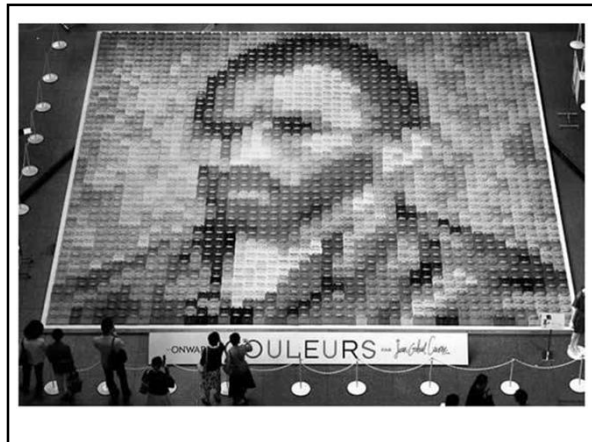
(Group items into categories, based on externally visible characteristics)



### Analysis

(Explain & predict, based on an understanding of why and how things happen)

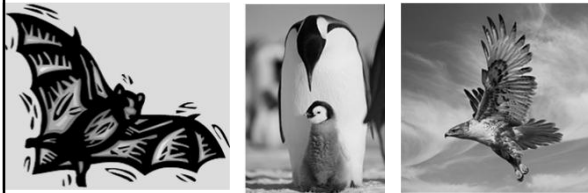
\* Plato (428-328 BCE): "Carve Nature at its joints." We can't explain why or how things happen, but if we observe carefully, and group similar items into categories, eventually the big picture will emerge.



### Problems with classification schemes based on appearance

- Different underlying mechanisms can produce similar-appearing results
- Similar underlying mechanism can produce different-appearing results

### Which 2 go together?

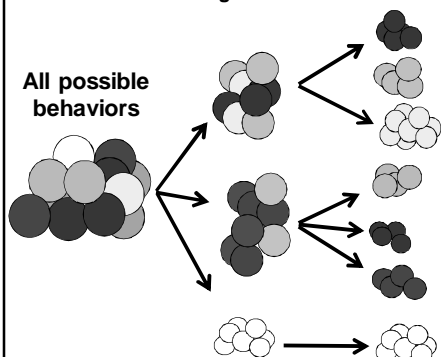


### Psychiatry: Where we are today

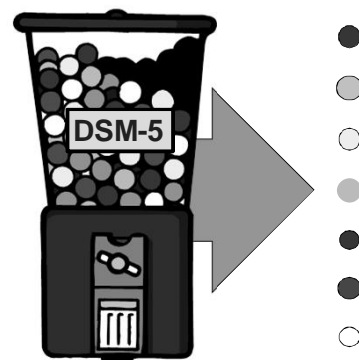
**Description & Classification**  
(based on externally visible characteristics)  
↓  
**Analysis**  
(based on an understanding of fundamental mechanisms)

**DSM5:**  
Categories based on symptoms → quest for *symptom homogeneity within categories*  
↓  
**DSM 6**  
(classification based on causation and brain systems)

Keep sub-dividing until clinical uniformity within categories has been achieved.



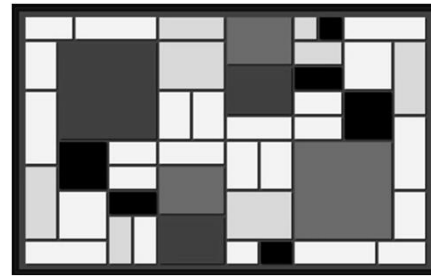
### Make Diagnoses





**Comorbidity:**  
*A, B, C.... etc. are completely different entities, that sometimes happen to co-exist.*

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Piet Mondrian (1872-1944) – Line over Form

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As DSM would have it.....



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

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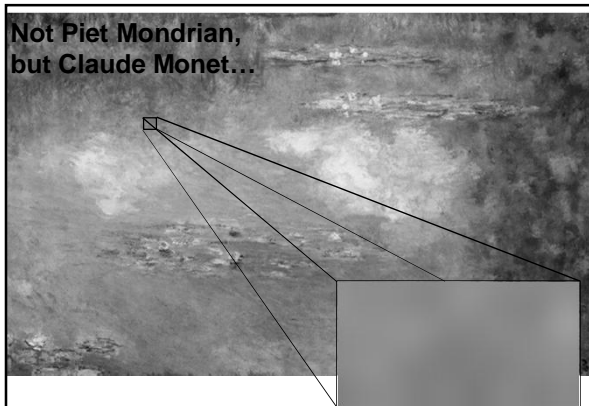
As per Mother Nature....



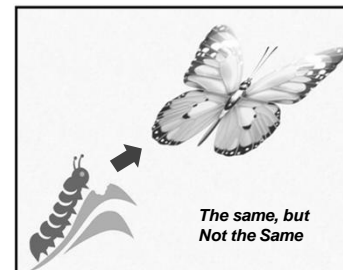
**Continuum:**  
*ASD shades into Mental Illness, with no ‘bright line’ of separation.*

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Not Piet Mondrian,  
but Claude Monet...



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*The same, but  
Not the Same*

**Metamorphosis:**  
*Over time, symptoms of ASD evolve into symptoms of Mental Illness.*

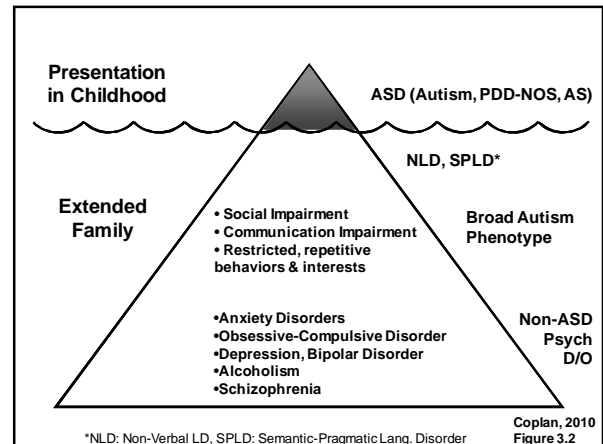
© James Coplan 2014  
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## In the world of Metamorphosis...

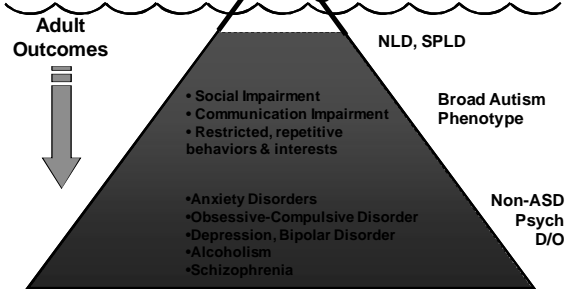
*"Losing the diagnosis" does not mean "cured"*

- Persistence of
  - Cognitive patterns
  - Behavioral patterns
  - Emotional patterns
- Emergence of Non-ASD psychiatric disorders
  - Anxiety
  - Depression
  - Mood Disorders
  - Schizophrenia

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## Outcome for children with High Functioning ASD



NLD: Non-Verbal LD, SPLD: Semantic-Pragmatic Lang. Disorder

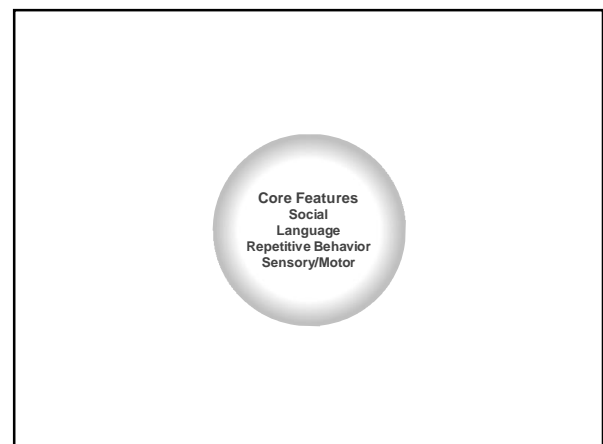
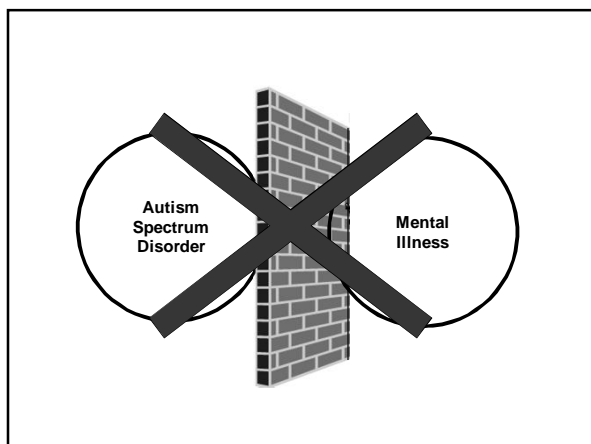
## Psychiatry: Coming soon...

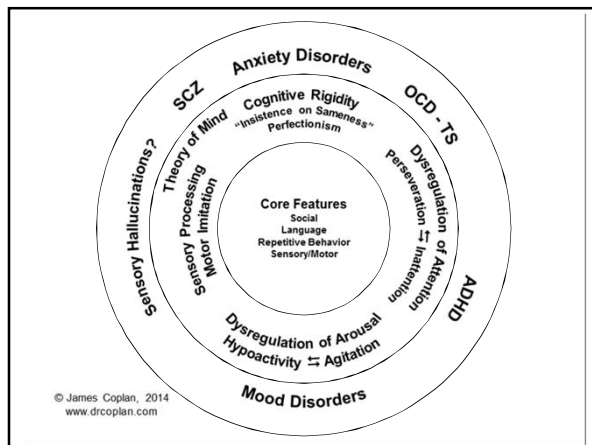
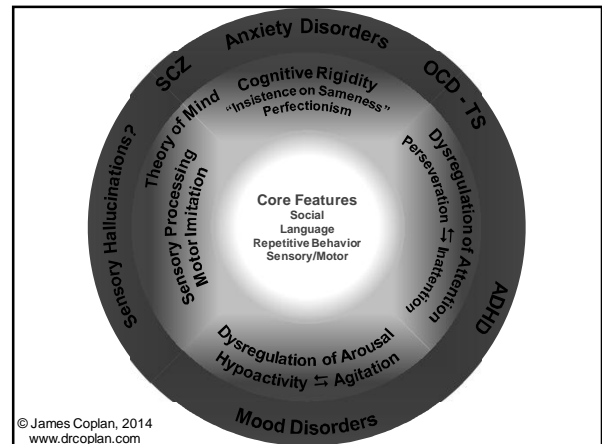
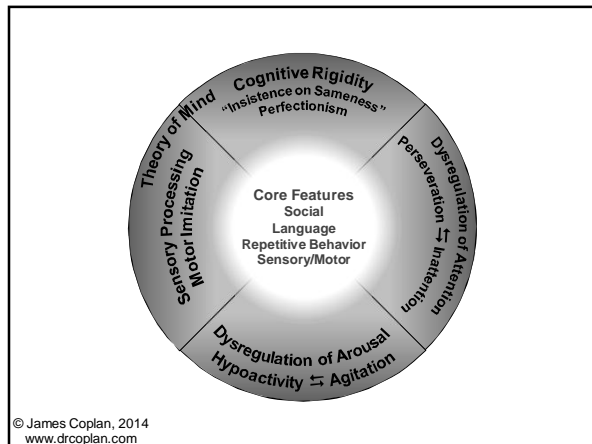
**Description & Classification**  
(based on externally visible characteristics)

**Analysis**  
(based on an understanding of fundamental mechanisms)

**DSM5:**  
Categories based on symptoms → quest for *symptom homogeneity within categories*

**DSM6**  
Classification based underlying biology; "Mapping ASD from the inside out" (King & Lord 2011)

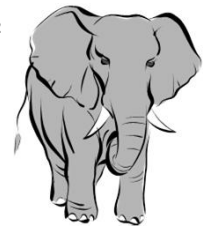




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### 1) Statement of the Problem

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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 SCHOOL SHOOTING | DECEMBER 15, 2012 | BY RACHAEL MONACO | Subscribe

Adam Lanza Diagnosed With Sensory Integration Disorder

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


10.25 | 12/18/2013

<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>



### 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.....*




**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...*



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

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

Home Ways to Give Research Family Services What is Autism? Advocacy Events  
Merchandise Blog Partners Resource Guide Tool Kits Autism Apps


**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>


**We have a problem here...**  
(3 problems, actually)

1. There is no bright line between Autism Spectrum D/O and "Psychiatric" disorders
2. Shifting responsibility onto persons with "mental illness":
  - Stigmatizes the mentally ill, and
  - Ignores the mental health needs of persons with ASD



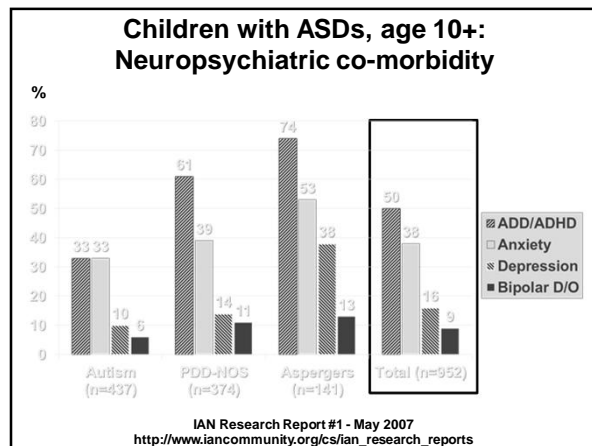
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  - a) Intra-individual
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**(a) Intra-Individual**

- **When co-morbidity approaches 100%, is it still "co"- morbidity?**
  - *Or is it an integral part of the disorder itself ?*



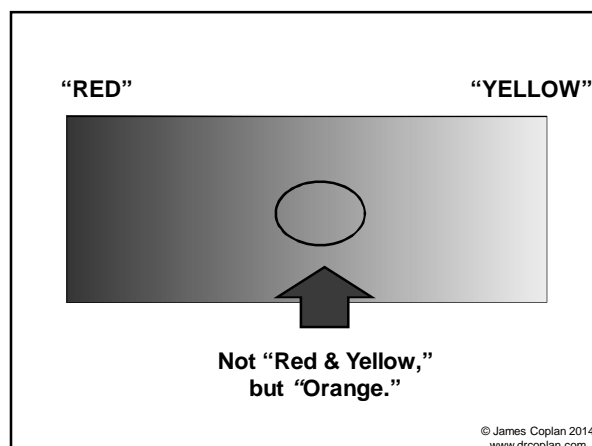
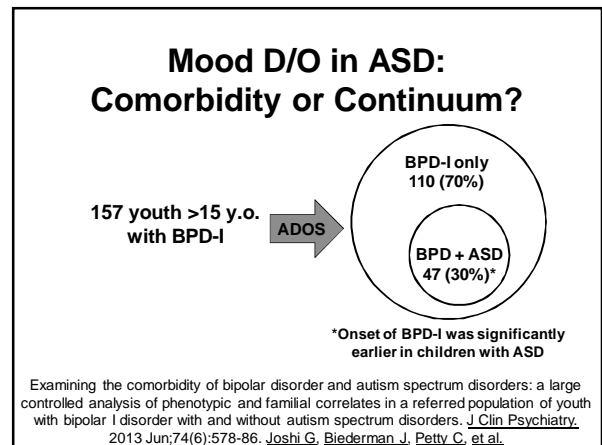
**Psychiatric Symptom Impairment in  
Children with Autism Spectrum Disorders**  
Kaat, A.J., et al. Journal of Abnormal Child Psychology, 2013

- 115 pts w. ASD at University Hosp. Child Devel. Clinic
  - Age 6–12 yr; Male : 86 %; White: 91 %
  - Mean IQ : 85
    - ≥70: 91 (77%)
    - <70: 24 (23 %)
  - Spectrum Dx:
    - Autistic Disorder: 31 %
    - Asperger's Disorder: 19 %
    - PDD-NOS: 50%
- Child and Adolescent Symptom Inventory-4R
  - Parent & teacher ratings

**Psychiatric Symptom Impairment in  
Children with Autism Spectrum Disorders**  
Kaat, A.J., et al. Journal of Abnormal Child Psychology, 2013

| Disorder                        | Prevalence (%)* |                 |
|---------------------------------|-----------------|-----------------|
|                                 | Impairment**    | DSM-IV criteria |
| ADHD (any type)                 | 83%             | 82%             |
| Oppositional defiant disorder   | 53%             | 34%             |
| Conduct disorder                | 23%             | 9%              |
| Anxiety disorders               | 70%             | 47%             |
| • Generalized anxiety disorder  | • 48%           | • 32%           |
| • Social phobia                 | • 51%           | • 23%           |
| Major Depressive D/O, Dysthymia | 45%             | 19%             |
| Manic episode                   | 53%             | 18%             |
| Schizophrenia                   | 48%             | 10%             |
| Any disorder                    | 94%             | 84%             |

\* Combined Parent & Teacher ratings  
\*\* "Impairment" = Symptoms "Often or Very Often"



**ASD, Psychosis, and  
Schizophrenia (SCZ)**

## Psychosis

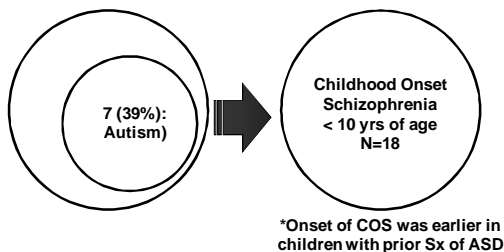
- **Psychosis:** A symptom of mental illness characterized by radical changes in personality, impaired functioning, and impaired reality testing (hallucinations / delusions).
- Psychosis may appear as a symptom of
  - Mood d/o
  - Personality d/o
  - Schizophrenia
  - Schizophreniform d/o, Schizoaffective d/o, etc.
  - Psychotic disorders (Brief psychotic d/o, psychotic d/o due to a general medical condition, substance-induced psychotic d/o, etc.)

## Schizophrenia

<http://medical-dictionary.thefreedictionary.com/schizophrenia>

- A **chronic psychotic disorder** (or a group of disorders) marked by severely impaired thinking, emotions, and behaviors.
- **Symptoms:**
  - (+): Hallucinations, delusions, disorganized speech (loose associations); inappropriate, odd, or catatonic behavior
  - (-): Apathy / avolition; anhedonia, poor social function, ↓ speech
  - Cognitive: Impairment of attention, memory, planning (executive function), insight

## Autism → Schizophrenia *Comorbidity, Continuum, or Metamorphosis?*

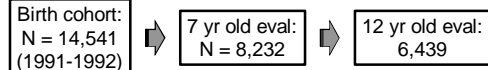


Symptom development in childhood onset schizophrenia  
Watkins JM, Asarnow RF, Tanguay PE.  
J Child Psychol Psychiatry. 1988 Nov;29(6):865-78

## The association between early autistic traits and psychotic experiences in adolescence

Jones, R.B., et al., Schizophr Res, 2012. 136(1-3): p. 164-189

- **Avon Longitudinal Study of Parents and Children (ALSPAC) birth cohort**



## The association between early autistic traits and psychotic experiences in adolescence

Jones, R.B., et al., Schizophr Res, 2012. 136(1-3): p. 164-189

### Questions at age 7:

- Speech development
- How they got on with others (social interaction problems)
- Odd rituals or unusual habits that were hard to interrupt

### Questions at age 12: Any of the following in past 6 mo?

- Hallucinations (visual, auditory)
- Delusions (being spied on, persecution, thoughts being read, reference, control, grandiose ability, other)
- Thought interference (thought broadcasting, insertion and withdrawal)

## The association between early autistic traits and psychotic experiences in adolescence

Jones, R.B., et al., Schizophr Res, 2012. 136(1-3): p. 164-189

- “Childhood autistic traits, .... particularly speech problems and odd rituals or unusual habits, are associated with psychotic experiences in adolescence.
- This may be a result of a shared aetiology or because autistic traits may also be an early precursor of psychotic experience”



### **“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...”

### **“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”

### **Theory of Mind**



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

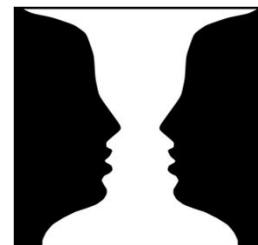
### **Theory of Mind**

- Realization that other people have an internal mental & emotional state, different from one's own
- Ability to gauge the internal mental & emotional state of others
  - Able to infer motives & predict behavior of others
  - Empathy
  - Humor

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

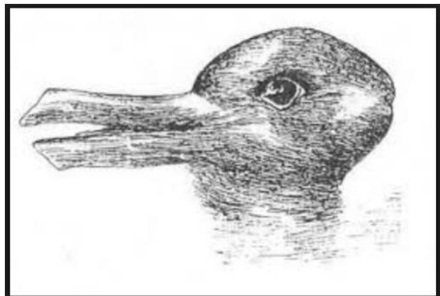
### **Central Coherence**

- The ability to see the big picture

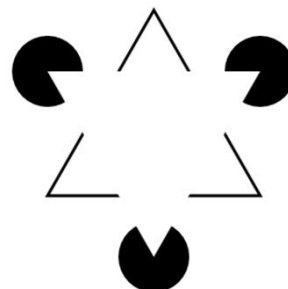


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### Joseph Jastrow, 1899



### Virtual Borders



Gaetano Kanizsa, 1976



**Q: What's happening in this picture?**

© Coplan, J. Making Sense of Autistic Spectrum Disorders. Bantam-Dell, 2010



**Q: What's happening in this picture?**  
**A: The boy is hoarding animals.**



**Q: What's happening in this picture?**  
**A: The kitten is on the boy's back and is about to eat him.**

© Coplan, J. Making Sense of Autistic Spectrum Disorders. Bantam-Dell, 2010

### Tom & Central Coherence

#### Muff

Muff is a little yellow kitten.

She drinks milk.

She sleeps on a chair.

She does not like to get wet.

**Q: How would Muff feel, if you gave her a bath?**

## Tom & Central Coherence

### Muff

Muff is a little yellow kitten.

She drinks milk.

She sleeps on a chair.

She does not like to get wet.

**Q:** How would Muff feel, if you gave her a bath?

**A:** Clean!

**A:** I don't know. We haven't got to that part of the story yet.

What's happening in this picture?



What's happening in this picture?



Two strangers got into the house and are handing out newspapers.

What's happening in this picture?



"They are stealing the children."

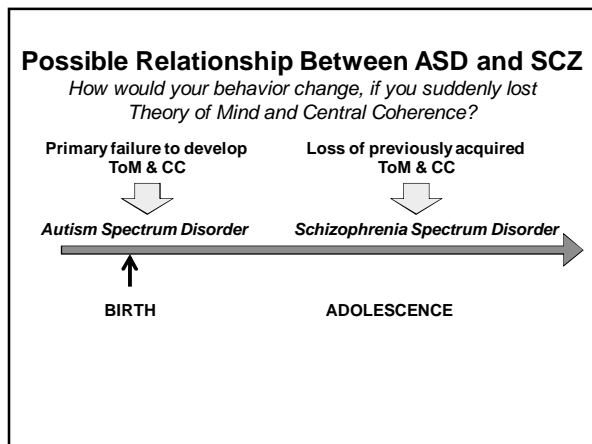


**Q:** How does the boy feel?



**Q:** How does the boy feel?

**A:** "I don't know, because I can't see his mouth."



**(b) - Intra-Familial: Psychiatric morbidity in the families of children with ASD**

*It's a family affair...*

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*The*  
**NERVOUS CHILD**  
Quarterly Journal of Psychopathology, Psychotherapy, Mental Hygiene, and Guidance of the Child

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**AUTISTIC DISTURBANCES OF AFFECTIVE CONTACT**  
By LEO KANNER

SINCE 1938, there have come to our attention a number of children whose condition differs so markedly and uniquely from anything reported so far, that each case merits—and, I hope, will eventually receive—a detailed consideration of its fascinating peculiarities.

Kanner, L. Autistic Disturbances of Affective Contact. *Nervous Child*, (2) 217-250, 1943  
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JAMES COPLAN, M.D.  
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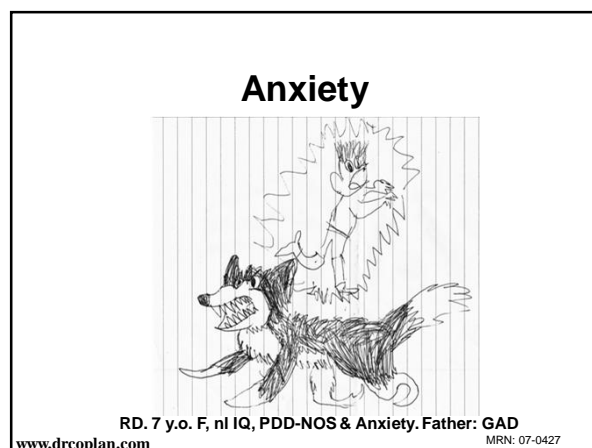
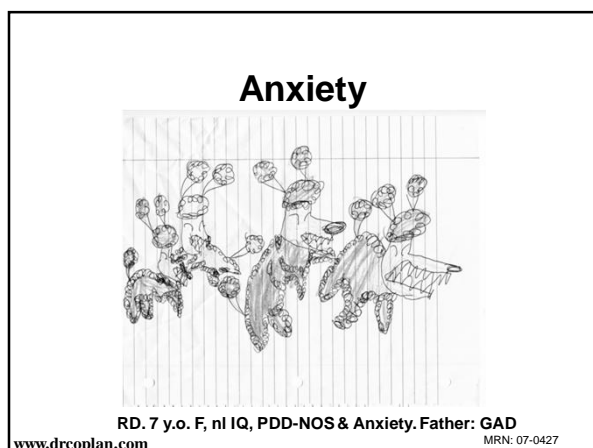
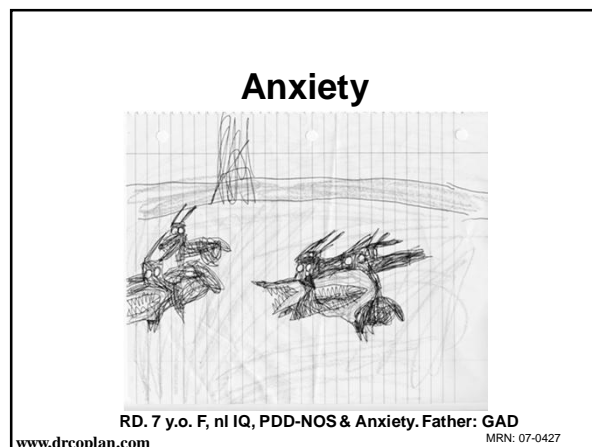
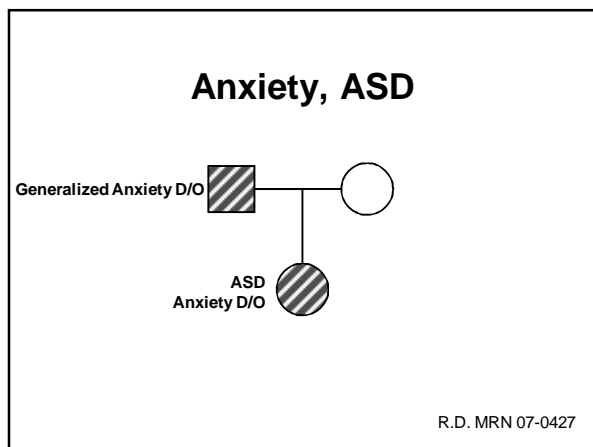
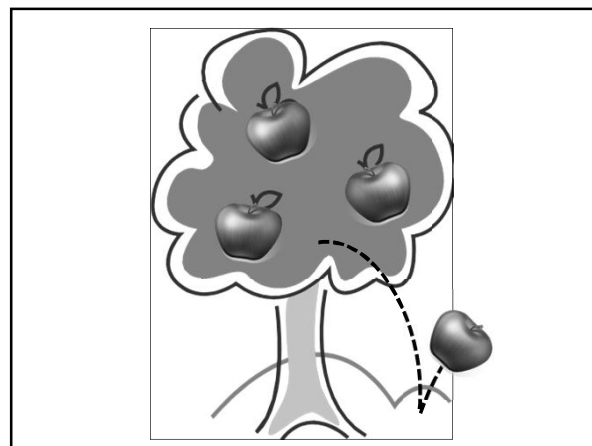
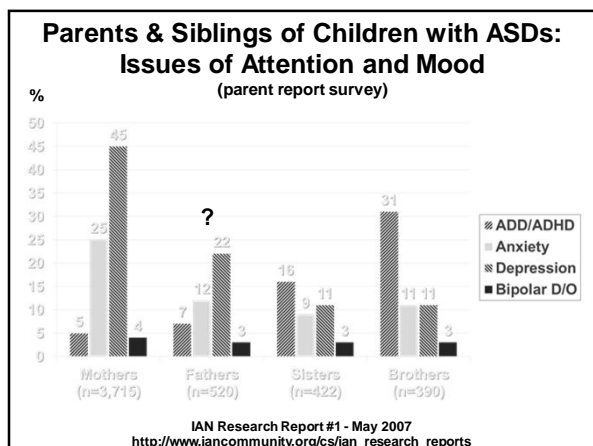
## Kanner, 1943

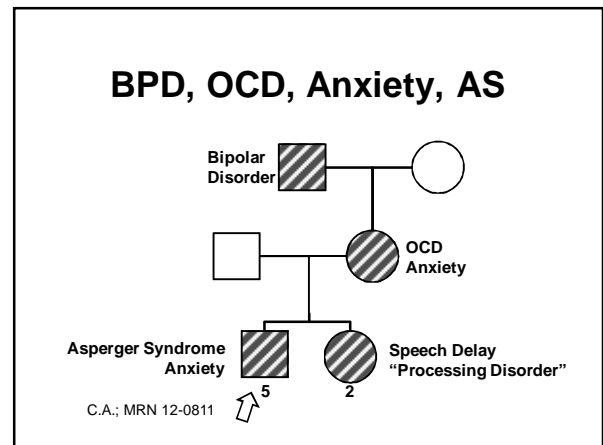
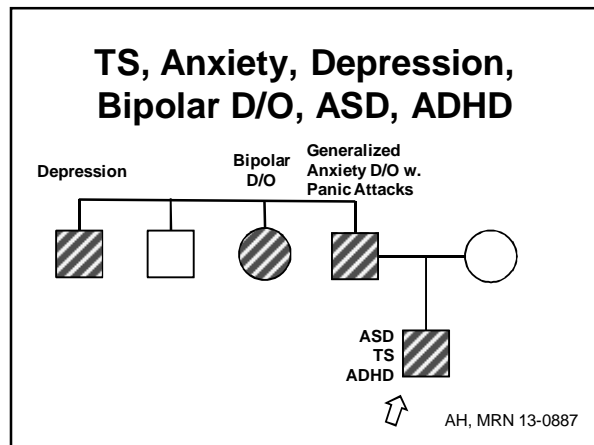
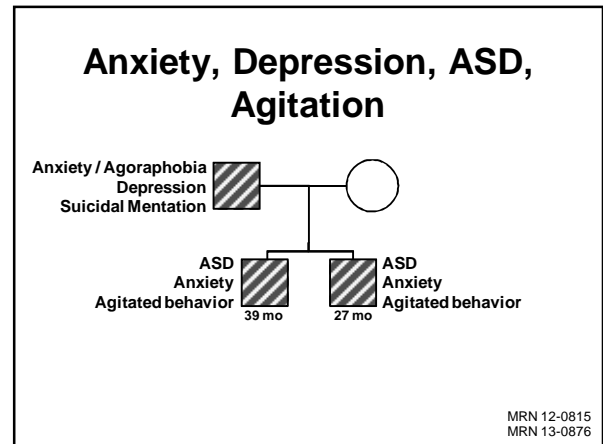
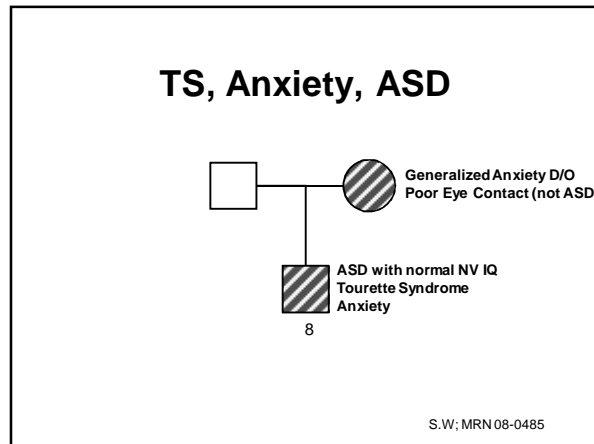
[T]here is a great deal of obsessiveness in the family background. The very detailed diaries and reports and the frequent remembrances, after several years, that the children had learned to recite twenty-five questions and answers of the Presbyterian Catechism, to sing thirty-seven nursery songs, or to discriminate between eighteen symphonies, furnish a telling illustration of parental obsessiveness.

## Kanner, 1943

The child's aloneness from the beginning of life makes it difficult to attribute the whole picture exclusively to the type of early parental relations with our patient. We must, then, assume that these children have come into the world with innate inability to form the usual, biologically provided affective with people, just as other children come into the world with innate physical or intellectual handicaps.

If this assumption is correct, a further study of our children may help to furnish concrete criteria regarding the still diffuse notions about constitutional components of emotional reactivity. For here we seem to have pure-culture examples of *inborn autistic disturbances of affective contact*. (italics in the original)





### Severe mood problems in adolescents with autism spectrum disorder

Simonoff, E., et al., Journal of Child Psychology and Psychiatry, 2012. 53(11): p. 1157-1166

- 91 adolescents w. ASD (M: 83)
- **Methods:**
  - IQ, Adaptive function, neuropsych measures
  - "Severe Mood Problems (SMP) Scale"
    - Explosive rage
    - Low mood
    - Depressive thoughts
    - Labile mood
  - Maternal self-report (GHQ)
    - maternal mood, anxiety and somatic difficulties

### Severe mood problems in adolescents with autism spectrum disorder

Simonoff, E., et al., Journal of Child Psychology and Psychiatry, 2012. 53(11): p. 1157-1166

#### Results

- High SMP: 24 (26%)
  - Predictors of High SMP:
    - Emotional & behavioral problems at age 12
    - Autism severity (by parent report)
    - Maternal GHQ: "The current analyses suggest a specific relationship between maternal affective symptoms and SMP in offspring"
  - Not predictors:
    - Full Scale IQ
    - Adaptive function

***Bullying Experiences Among Children and Youth with Autism Spectrum Disorders.***

Cappadocia, M.C., J.A. Weiss, and D. Pepler, JADD, 2011

**Subjects**

- 192 children / young adults w. ASD age 5–21
  - HFA (14%)
  - AS (54%)
  - PDD-NOS (13%)
  - Autism (19%)

**Results**

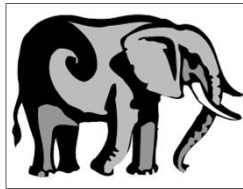
- Bullied (physical, verbal, social, cyber) within the past month: 77%
  - 1 time: 11%; 2-3 times: 23%; ≥ 4 times: 43%

**Cappadocia, M.C., J.A. Weiss, and D. Pepler, *Bullying Experiences Among Children and Youth with Autism Spectrum Disorders.* JADD, 2011**

| Risk factors for being bullied               | p*     |
|--|--------|
| Child - Gender                               | NS     |
| Child - Age (being younger)                  | < .05  |
| Child - Social skills deficit                | NS     |
| Child - Communication difficulties           | < .05  |
| Child - Internalizing mental health problems | < .001 |
| Child - Externalizing mental health problems | NS     |
| Parent - Mental health problems              | < .01  |
| Child - Fewer friends at school              | < .05  |

\*NS = Not statistically significant. Smaller p = less likely to occur by chance.

**The Real Elephant in the Room**



Child w. ASD ( ± MH D/O) + Parent w. 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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**Danger Signs**

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

### Vignette #1

- ***“Obedience is very important to me.”***
  - Father of 10 y.o. boy with ASD
    - Fa: Untreated anxiety d/o
    - Keeps unsecured firearms in the home
    - Describes son with ASD as “a predator,” because “everything is all about him”

### Vignette #2

- ***“Nobody helps us.”***
  - Mother of 14 y.o. boy with ASD
    - Mo.: Untreated Anxiety D/O
    - Family has no social supports
    - Child is on homebound instruction
    - Spends hrs/day playing violent video games
    - Threatens to “kill” the examiner during evaluation when E. interrupts game play

### Family Function: Resources

- The American Association of Marriage and Family Therapy
  - <http://www.aamft.org/iMIS15/AAMFT/>
- The Bowen Center
  - <http://www.thebowencenter.org/>

### (c) - Basic Science

- ADHD
- ASD
- Bipolar D/O (BPD)
- Generalized Anxiety Disorder (GAD)
- Major Depressive D/O (MDD)
- Schizophrenia (SCZ)

### Genetic relationship between five psychiatric disorders estimated from genome-wide SNPs

Cross-Disorder Group of the Psychiatric Genomics Consortium  
Nature Genetics: v. 45, pp 984–994(2013)

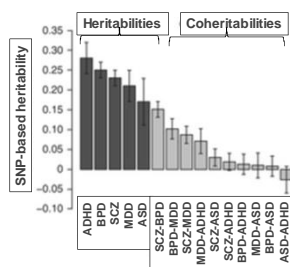
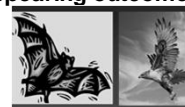


Fig. 1. Evidence for genome-wide pleiotropy between psychiatric d/o.

### Two more terms

- **Pleiotropy: Similar genetic mechanisms → Different-appearing outcomes**
- **Phenocopy: Different genetic mechanisms → Similar-appearing outcomes**





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

| Deletion      | 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>18</sup>

Table 1: Variable expressivity in selected microdeletion syndromes. Lancet Neurology 2013; 12: 406-414

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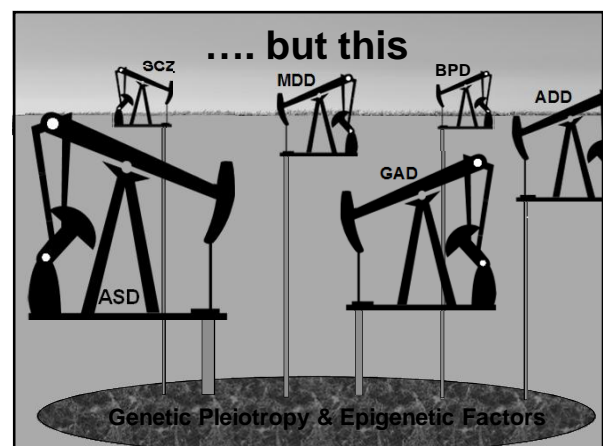
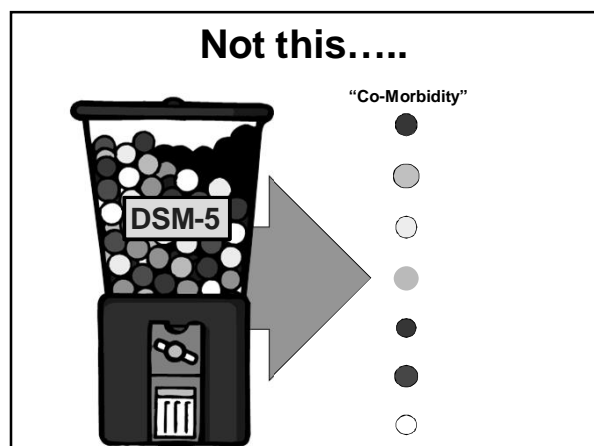
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Table 1: Variable expressivity in selected microdeletion syndromes. Lancet Neurology 2013; 12: 406-414

Revisiting the Relationship Between Autism and Schizophrenia: Toward an Integrated Neurobiology  
deLacy N. & King, B  
Ann Rev Clin Psychol Vol. 9: 555-587 March 2013

“There appears to be no question that a phenotypic continuum links the schizophrenia and autism spectra; moreover, it incorporates neuropsychiatric deficits associated with all of the classic neurodevelopmental disorders [ID...DD... ASD...ADHD, and SCZ]. Affected persons display some subset of symptoms from this neurodevelopmental superset, in individually varying phenotypes likely molded by pleiotropy, different types of genetic defects, and epigenetic mechanisms.... [I]n “idiopathic” ASD and SCZ, an underlying genomic continuum has also been uncovered.”



## Outline

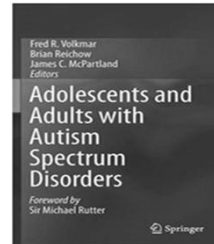
- 1) Statement of the Problem
- 2) Show me the data
- 3) **ASD, Mental Illness, and Violence**
  - 1) What do the data show?
  - 2) Newtown – Part 2
- 4) Where do we go from here ?



## Unlawful Behaviors in Adolescents and Adults with Autism Spectrum Disorders

Woodbury-Smith, Marc

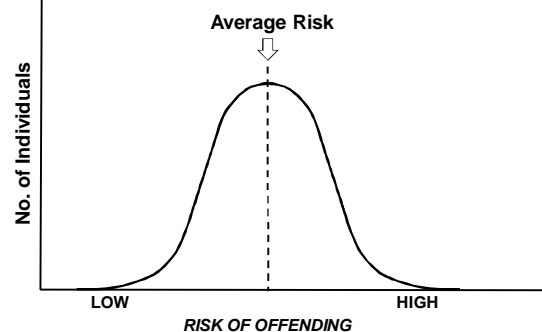
2014, Adolescents and Adults with Autism Spectrum Disorders, 269-281



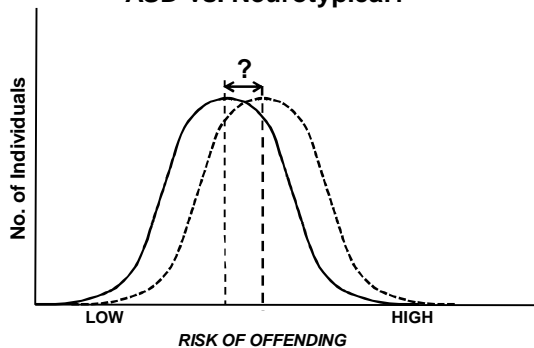
## Woodbury-Smith 2014

- “There are...no epidemiological community studies of unlawful behavior in ASD
- Small sample size and bias in ascertainment...limit the extent to which [the available] data can be... extrapolated to the wider ... ASD population
- Nonetheless, these data do suggest that small numbers of adults with ASD may be predisposed to violent unlawful behavior.”

## Everyone is at some risk for committing crime



## ASD vs. Neurotypical?



## Cohort Studies

Start with **an entire population** and follow all of them: Hard to do:\*

| ASD? | VIOLENT CRIME? |    | Risk of violence |
|------|----------------|----|------------------|
|      | YES            | NO |                  |
| YES  | A              | B  | $A / (A + B)$    |
| NO   | C              | D  | $C / (C + D)$    |

Relative Risk (NO DATA)

“ASD-Yes” needs to be big enough to capture some children who commit crime. For example: If crime rate = 1%, we need **at least 100 children with ASD** to be reasonably sure of capturing at least one who commits crime (ignoring sampling error):  $A=1$ ,  $B=99$ . If we assume a prevalence of ASD of 1 in 48, then  $(C+D) = 4,700$  (Total sample size: 4,800)

## Case Control Studies

Start with individuals who have **already committed crime**.

|                    | VIOLENT CRIME? |       |  |
|--------------------|----------------|-------|--|
| ASD?               | YES            | NO    |  |
| YES                | A              | B     |  |
| NO                 | C              | D     |  |
| ODDS of having ASD | (A/C)          | (b/d) |  |

↓  
"Cases"  
"Controls": Drawn from non-criminal population (but not all of B and D)

Odds Ratio:  
"Convenience Samples"  
• Clinical  
• Criminal Justice

(A/C): ODDS that offender has ASD

(b/d): Odds that non-offender has ASD

(A/C) / (b/d) = **ODDS RATIO**: Are the odds of having ASD increased among offenders compared to non-offenders?

## Asperger's syndrome in forensic settings

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

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

#### Charges:

- Arson: 1 (serial fire-setting x 11 episodes)
- Sexual assault: 4
- Attempted murder: 1

## Asperger's syndrome in forensic settings

Murrie DC, Warren JL, 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
- Interpersonal Naiveté: A naïve and often impoverished understanding of human relationships... leaves AS patients vulnerable to mistreatment by others (and) may lead them to seek interpersonal contact in misguided ways

## Asperger's syndrome in forensic settings

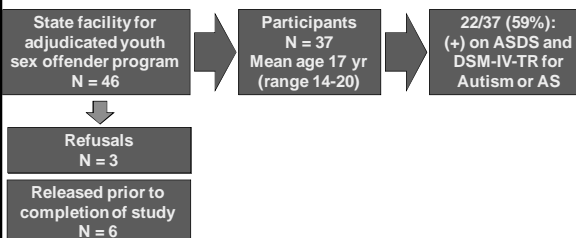
Murrie DC, Warren JL, and Kristiansson M  
Int J Forensic Ment Health 1:59–70, 2002

#### Common Themes

- Immediate Confession: 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.
- Sexual Frustration: social impairments combined with a desire for attachment or sexual experience could lead to illegal behavior...The use of pornography was one socially tolerated ways by which several of the men in our sample pursued an impersonal sexual outlet....

## Identifying Individuals with Autism in a State Facility for Adolescents Adjudicated as Sexual Offenders: A Pilot Study

Sutton et. AL. Focus on Autism and Other Developmental Disabilities v 28 (3) 9/2013



## Woodbury-Smith 2014

"A small yet significant number of primarily higher functioning people with ASD will engage in unlawful behavior. The etiology of their behavior may be understood as arising from a combination of *generic forensic risk factors* along with *factors more specific to the autism phenotype*. To most appropriately inform rehabilitation,\* a comprehensive assessment will consider all of these factors."

- \* and primary prevention! jc

### Generic Childhood Risk Factors for Adult Criminality

Reavis 2013

- Parental substance abuse
- Parental Mental Illness
- Parental criminal behavior
- Loss of parent (foster care; parental death or divorce)
- Witness domestic violence
- Childhood abuse (physical, sexual, psychological)

60:00

Factors specific to autism phenotype....

### Lorna Wing

7 October 1928 – 6 June 2014



"Asperger Syndrome" - 1981

Image © Tina Norris, www.tinanorris.co.uk

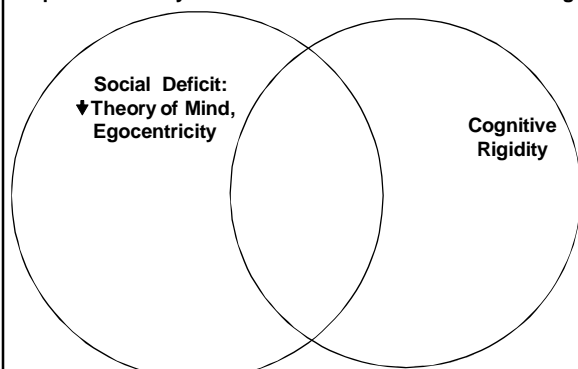
Factors specific to autism phenotype....

### Wing 1997

(Wing, L. Asperger's syndrome: Management requires diagnosis.  
Journal of Forensic Psychiatry, 8(2), 253-257)

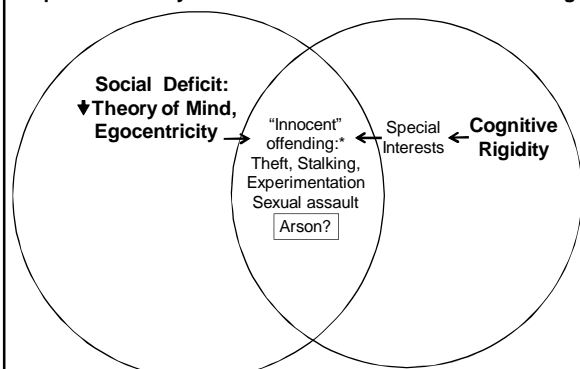
- Assumption that own needs supersede all other considerations
- Lack of awareness of wrongdoing
- Intellectual interest (Asperger: "Autistic acts of malice")
- Pursuit of "special" interests (objects, people)
- Hostility towards family
- Hyperarousal
- Vulnerability
- Cry for help
- Revenge

### Proposed Pathways from Core Features of ASD to Offending



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### Proposed Pathways from Core Features of ASD to Offending



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\*No awareness of, or intent to do harm

## Social Skills Deficit + Cognitive Rigidity

**“With his teachers, L. is defiant, argumentative and refuses to complete tasks. He manipulates all situations and has much difficulty with the teacher/pupil hierarchy. He is very comfortable telling adults what to do and why... He has great difficulty seeing the consequences of his actions and views punishment or consequences as personal attacks....”**

9 y.o. boy with superior IQ & AS  
MRN 10-0660



Gary McKinnon is a Scottish systems administrator and hacker who was accused in 2002 of perpetrating the "biggest military computer hack of all time," although McKinnon himself – who has a diagnosis of Asperger's Syndrome – states that he was merely looking for evidence of free energy suppression and a cover-up of UFO activity and other technologies potentially useful to the public.

On 16 October 2012, after a series of legal proceedings in Britain, Home Secretary Theresa May withdrew her extradition order to the United States.

[http://en.wikipedia.org/wiki/Gary\\_McKinnon](http://en.wikipedia.org/wiki/Gary_McKinnon)

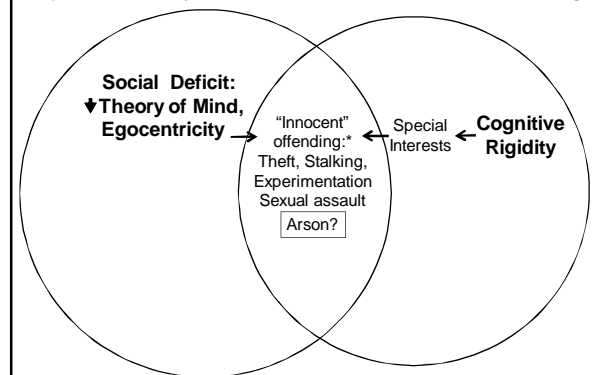
*Education and Training in Autism and Developmental Disabilities, 2014, 49(1), 102–110*  
© Division on Autism and Developmental Disabilities Post, M., Storey, K., Haymes, L., et al

### Stalking Behaviors by Individuals with Autism Spectrum Disorders in Employment Settings: Understanding Stalking Behavior and Developing Appropriate Supports

#### Characteristics of stalkers

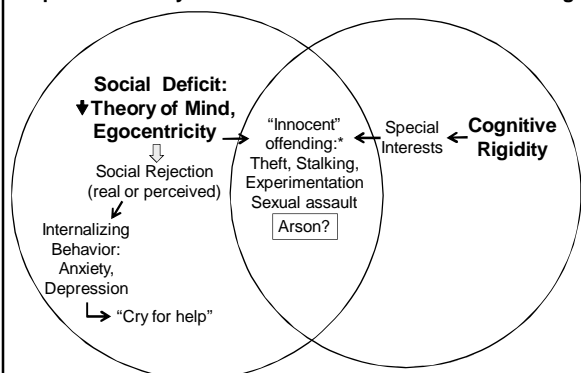
1. Unaware that the victim is not interested in them.
2. Have an obsessive personality.
3. Have above average intelligence.
4. Don't have meaningful relationships outside of the one they are trying to establish.
5. Don't have discomfort or anxiety about their stalking behavior.
6. Not aware that their behaviors are hurting others.
7. May become violent. (Snow, 1998).

### Proposed Pathways from Core Features of ASD to Offending



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### Proposed Pathways from Core Features of ASD to Offending



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## THE LANCET Psychiatry

Suicidal ideation and suicide plans or attempts in adults with Asperger's syndrome attending a specialist diagnostic clinic: a clinical cohort study 25 June 2014

Dr Sarah Cassidy PhD <sup>1</sup>, Paul Bradley MRCPsych <sup>2</sup>, Janine Robinson DClinPsy <sup>3</sup>, Carrie Allison PhD <sup>4</sup>, Stephen McHugh BSc <sup>5</sup>, Prof Simon Baron-Cohen PhD <sup>6</sup> & <sup>7</sup>

### Subjects

- 374 adults newly diagnosed with Asperger Syndrome
  - Men: 256
  - Women: 118
- Mean age at Dx: 31.5 yr (range 17-67 yr)
- 87 (23%) in full-time education at the time of study

### Methods:

- Self-Report Questionnaire, lifetime experience of:
  - Suicidal thoughts
  - Suicidal plans or attempts
  - Depression

[http://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(14\)70248-2/fulltext](http://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(14)70248-2/fulltext)

**THE LANCET Psychiatry**

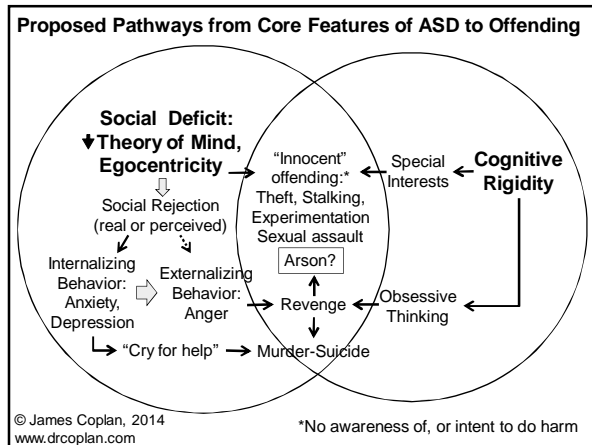
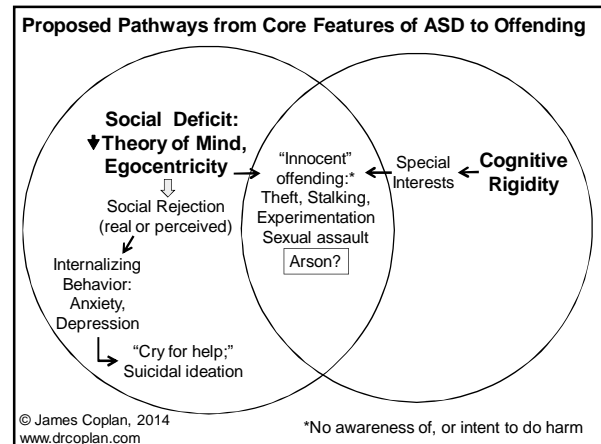
Suicidal ideation and suicide plans or attempts in adults with Asperger's syndrome attending a specialist diagnostic clinic: a clinical cohort study 25 June 2014

Dr Sarah Cassidy PhD <sup>1</sup>, Paul Bradley MRCPsych B, Janine Robinson DClinPsy B, Carrie Allison PhD B, Meghan McHugh BSc B, Prof Simon Baron-Cohen PhD B

**Results (98% response rate):**

- Suicidal ideation: 66%
- Plans or attempts at suicide: 35%
- Depression: 31%
- Adults with AS were ~ 10x more likely to report lifetime experience of suicidal ideation than individuals from the general UK population (OR 9.6,  $p<0.0001$ ), people with 1, 2, or more medical illnesses ( $p<0.0001$ ), or people with psychotic illness ( $p=0.019$ )

[http://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(14\)70248-2/fulltext](http://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(14)70248-2/fulltext)



OFFICE OF THE  
**CHILD ADVOCATE**  
STATE OF CONNECTICUT

SHOOTING AT SANDY HOOK ELEMENTARY SCHOOL  
REPORT OF THE OFFICE OF THE CHILD ADVOCATE

<http://www.ct.gov/oca/lib/oca/sandyhook11212014.pdf>

**Statutory Obligations and Authority of the Child Fatality Review Panel and the CT Office of the Child Advocate**

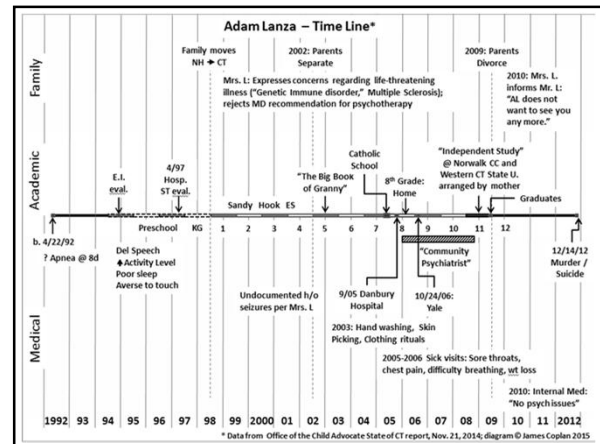
CFRP "shall review the circumstance of the death of a child placed in out-of-home care or whose death was due to unexpected or unexplained causes to facilitate development of prevention strategies to address identified trends and patterns of risk and to improve coordination of services for children and families in the state."

**Records Reviewed**

- AL:
  - Medical Records
  - Educational record
  - Emails, On-line materials (AL)
  - Police Interviews & evidence
- Mrs. L:
  - Medical records (partial)
  - Emails (partial)
- Invited interviews
  - Mr. L
  - Former classmates, School personnel, Healthcare providers

### Statutory Obligations and Authority of the Child Fatality Review Panel and the CT Office of the Child Advocate

Some information contained in this report may typically be considered confidential. OCA has deep respect for the laws and practice of confidentiality, but pursuant to Connecticut General Statute Sec. 46a-13k et seq., OCA has the authority to disclose confidential information where the interest of a child or the public is affected



### Adam Lanza

- 0-3: Extremely active, poor sleeper, avoided touch, delayed speech; invented own language
- EI Eval (~ 32 mo): "Fell well below expectations in social-personal development"
- Neurodevelopmental Eval (age 5)
  - Rituals; odd repetitive behavior
  - Sensory aversions (touch, texture)
  - SIB, Tantrums
- Danbury Hosp. (age 13); Yale Child Study Ctr (age 14): PDD-NOS, OCD, Anorexia
- Progressive social isolation

### Mrs. Lanza

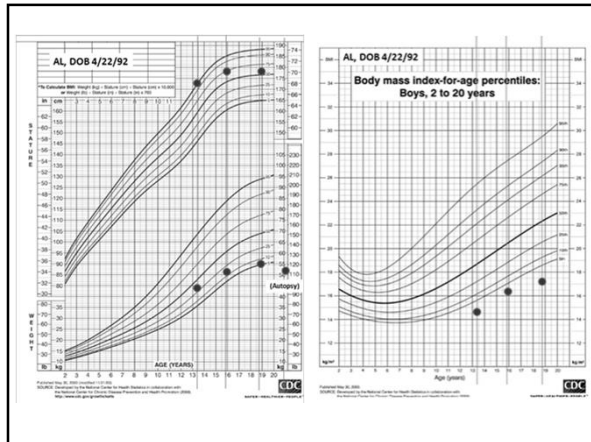
- "Frequently preoccupied with what she felt were her potentially serious and possibly terminal health issues" (Immune d/o; MS; normal exam & autopsy)
  - Refused psychiatric treatment for herself
- Authors cannot conclude what may have been at the root of Mrs. Lanza's real or imagined health conditions.....A review of Mrs. Lanza's correspondence however...paints a picture of a woman who seemed preoccupied with anxieties, either about AL or herself. This is a dynamic that continues to be seen as AL moves through adolescence

### Mrs. Lanza

- "A pattern of attempts to bend or manage the environment for AL"
  - "I would like his emphasis to be on learning rather than coping"
- Rejects medical advice for medication and appropriate psychotherapy and academic placement for AL
- "A dynamic of mutual dependency" between Mrs. L and AL, accompanied by progressive isolation of AL from outside contact (school, Mr. L)

### Care that did not follow best practices

- **Primary Care**
  - No f/u of weight loss
  - No f/u of OCD
- **Psychiatric Care**
  - Community psychiatrist: facilitated mother's agenda rather than treating AL
- **Educational services**
  - Did not evaluate in timely or complete manner
  - Did not address Mental Health / Social issues



## “Siloed Service Systems”

- Primary Care Pediatrician
- Yale Child Study Center
- Public Schools

## Outline

- 1) Statement of the Problem
- 2) Show me the data
- 3) ASD, Mental Illness, and Violence
- 4) Where do we go from here ?
  - 1) Individual & family care
  - 2) Systems Change

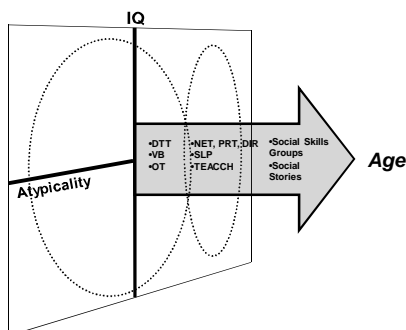


## Individual Care

- Not “Co-Morbidity,” but Continuum and Metamorphosis
- “Losing the diagnosis” does not = “cure”
- Shift from Developmental Disability model to Mental Health model
- Need for adult services

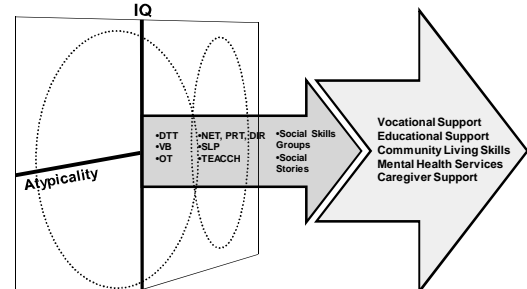
[www.drcoplan.com](http://www.drcoplan.com)

## Progression of Interventions (DD Model)



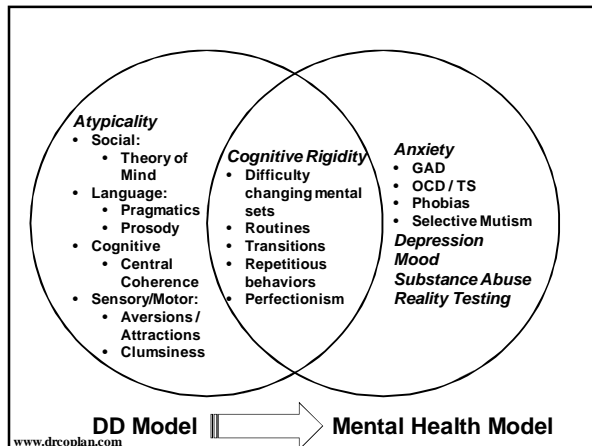
Coplan, J. Making Sense of Autistic Spectrum Disorders  
Random House, 2010

## Adult Services for long-term “survivors” of childhood ASD



© James Coplan, MD  
[www.drcoplan.com](http://www.drcoplan.com)





## School-Based MH Services

- **Proactively monitor student mental health**
  - Don't wait for academic failure or disruptive behavior
  - Positive Behavior Support for Internalizing Behavior
  - Embed MH services within schools?

## Family Care

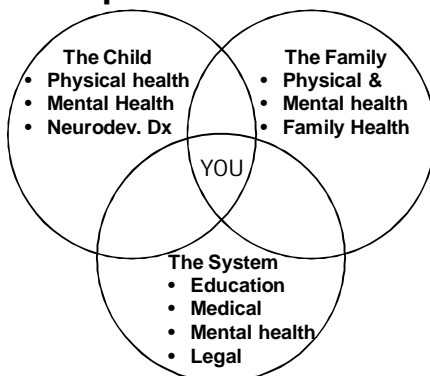
- Recognize that ascertaining a child with ASD means strong possibility that one or both parents have Mental Health issues and/or family dysfunction that need to be addressed
  - *This may be the single biggest element of the problem available for intervention*
  - *Addressing this issue will take a lot of people out of their comfort zone*

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## Systems Change

- ASD community needs to make common cause with MH community in advocating for child and adult MH services
  - Distinction between ASD and "psychiatric disorder" not scientifically tenable
  - Not financially viable
  - Not in the best interests of persons with ASD
- **Barriers**
  - Hard to shift mental sets
  - Fear, Stigma
  - Institutional inertia / turf

## Comprehensive Care



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

***Thank you***