

TOPICS

Nature of the autism spectrum

Deciding: Where is this person on the spectrum?
Beyond DSM-IV

Treatment: behavioral and pharmacological

An Official Notice...

I do not have a significant relationship to
any pharmaceutical manufacturer

Some of the medications which I will be
discussing are ones which are not
approved for use with children.

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**PREVALENCE OF AUTISM SPECTRUM
DISORDER**

**ONE IN ONE HUNDRED
AND TEN PERSONS!!**



www.cdc.gov

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***FIRST , SOME
BACKGROUND
D...***

***DOES THIS 45-YEAR-OLD
MAN HAVE “HIGH
FUNCTIONING AUTISM”?***

His psychiatrist says he does

TONY ATWOOD SPEAKS

Atwood.mpg

***45-YEAR OLD MAN
WHO HAS AUTISM IS
CURED!!***

Rm-acad-awd.mpg

***AUTISTIC DISORDER
(DSM-IV)***

The essential features of Autistic Disorder are the presence of **markedly abnormal development of social interaction and communication** and a **markedly restricted repertoire of activity and interests.**

BEYOND DSM-IV

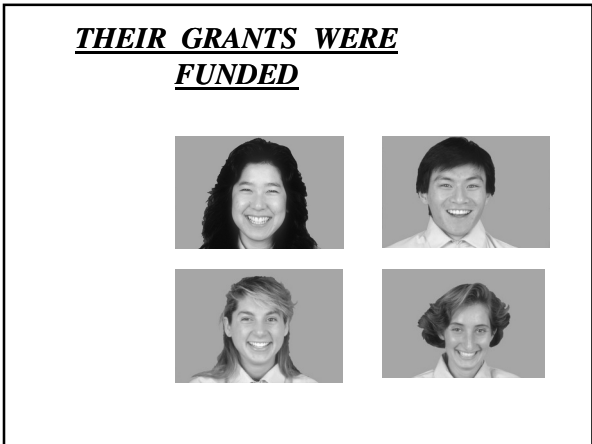
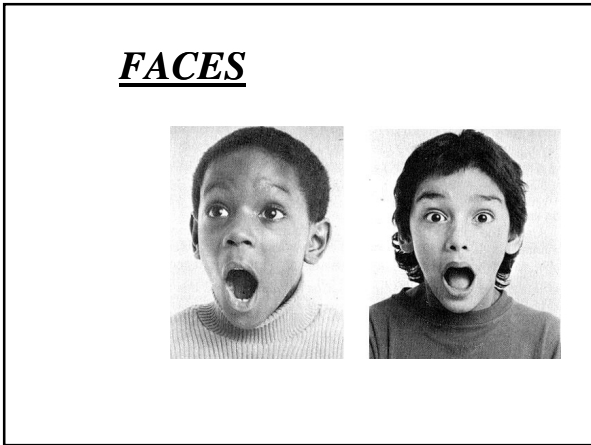
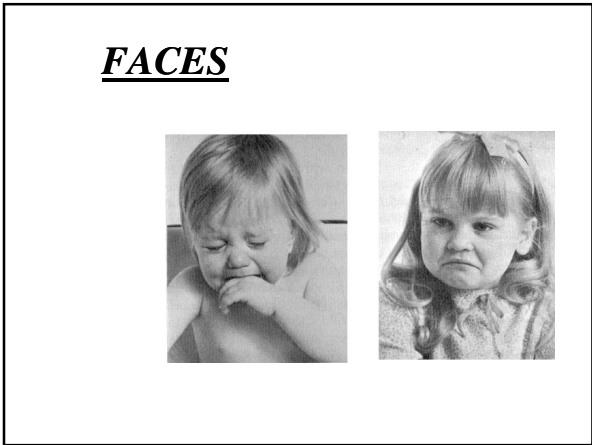
- FROM A **CATEGORICAL** TO A **CONTINUOUS** FORM OF CLASSIFICATION

A SPECTRUM DISORDER

A Spectrum of

Social Communication

- DOMAINS OF SOCIAL COMMUNICATION**
- Facial Expression
 - Prosody
 - Gesture
 - instrumental
 - social
 - emotional
 - Pragmatics and ‘Theory of Mind’



THIS DOG IS NOT
SMILING

ONCE MORE:

What is social communication?

- Social communication refers to the communication of cognitive and emotional information through:
 - facial expression
 - gestures: instrumental and emotional
 - prosody

ONCE MORE:

What is social communication?

Pragmatics:

- knowledge of the social rules of communication, and
- implicit ability to deduce the thoughts and motives of others
- also known as Theory of Mind
- deficits are not unique to autism
- earliest indicator seems to be pretend or symbolic play

DEVELOPMENT OF SOCIAL COMMUNICATION - ONE WEEK

- Recognizes mother's voice
- Recognizes mother's face
- Looks at complex visual stimuli
- Mimics facial movements

Development of Social Communication: 0-6 months

- Eye contact, social smile
- Driven to interact intersubjectively especially when caretaker uses motherese:
 - exaggerated tone of voice
 - exaggerated gestures
 - exaggerated facial expressions

AFFECTIVE RECIPROCITY

Development of Social Communication: 12-24 months

- Pragmatics and 'theory of mind'
 - theory of mind involves explicit awareness that others have thoughts and feelings different from our own that can be used to enhance our interpersonal relationships
 - pretend play skills are hypothesized to be the earliest indicators for this capacity

**EARLIEST EXAMPLES
OF THEORY OF MIND**

The 'Visual Cliff'
Experiments

**TASKS ASSESSING MIND READING
SKILLS AND SOCIAL IMAGINATION**

- Imaginative play alone
- Imaginative play with peers

THE FUNCTION OF PLAY

- Improve fine and gross motor skills
- Seek mastery of social games
- Re-enactment of traumatic events
- Pretend social roles and interactions

"Bumping into Mr. Ravioli"

The extraordinary tale of Adam
Gopnik's three-year-old daughter,
as told in the September 30th, 2002,
issue of the New Yorker Magazine

**Evaluation of persons for
social communication
spectrum disorder**

**Screening of Infants for
social communication
spectrum disorder**

**SCREENING FOR AUTISM
AT 18 MONTHS OF AGE**

The CHAT

(Checklist for Autism in Toddlers)

Baron,CS, Allen,J, Gillberg,C (1992), Can autism be detected at 18 months?
The needle, the haystack, and the CHAT. *Br.J.Psychiatry* 161:839-843

THE CHAT

- Asking caretaker about child’s specific social behaviors
- Observation of child’s social behaviors

ASK:

Does Your Child: (Yes/No)

- Enjoy being bounced and swung?
- Take an interest in other children?
- Enjoy peek-a-boo, hide-and-seek?
- Ever pretend?
- Use index finger to point to ask?
- Use index finger to point to show interest?
- Play properly with small toys?
- Brings things to show you?

OBSERVE: (Yes/No)

- Does child make eye contact with you?
- Does child follow point (“Oh look at the..”)
- Can the child pretend to feed the doll with make-believe milk?
- Look at an object, then at child, and ask “Show me the....”

**CHAT
KEY ITEMS**

- Pretend Play
- Protodeclarative pointing
- Follow a point
- Pretend play with doll and cup
- Points to show examiner an object

**ADDITIONAL IMPORTANT
DIAGNOSTIC ISSUES**

- Language development
- Intellectual capacity
- Sensory: auditory, tactile, visual hypersensitivities
- Motor: fine and gross
- Co-morbid conditions: anxiety, depression, OCD

Genetic Structure of Reciprocal Social Behavior

- **Social Reciprocity Scale**
65-item parent or teacher questionnaire asking about skills in reciprocal social behavior.
The scale generates a summary score that serves as an index of skill or deficit in each person

Constantino, John and Todd, Richard (2000) Am J. Psychiatry, 157: 2043-2045

Genetic Structure of Reciprocal Social Behavior

- Parents of 232 male twin pairs age 7-15 randomly selected from a twin registry.
- Interclass correlations:
 - 0.73 for identical twins
 - 0.37 for fraternal twins

Constantino, John and Todd, Richard (2000) Am J. Psychiatry, 157: 2043-2045

Genetic Structure of Reciprocal Social Behavior

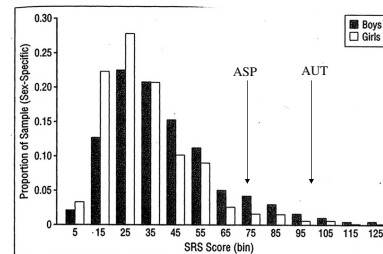
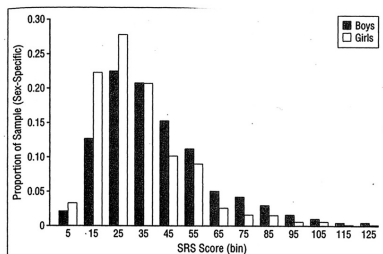
- 788 twin pairs, 7 to 15 years of age, randomly selected from the Missouri Twin Registry
- Autistic traits as measured by the Social Responsiveness Scale are continuously distributed in the general population

Constantino, J N & Todd, R D (2003). Autistic traits in the general population: a twin study. *Archives of General Psychiatry*, 60, 524-530.

Genetic Structure of Reciprocal Social Behavior

- Twins aged 18 years (n = 370) and their siblings (n = 94); parents of twins (128 couples)
- Autism-Spectrum Quotient (AQ) scores
- Autistic traits were continuously distributed in the population. Twins and siblings did not significantly differ in AQ scores

Hoekstra, R A, et al. (2007). Heritability of autistic traits in the general population. *Archives of Pediatrics & Adolescent Medicine*, 161, 372-377.



BEYOND DSM-IV

**THE TREATMENT OF
SOCIAL COMMUNICATION
SPECTRUM DISORDERS**

Four leading institutions (AAP, AACAP, Surgeon General, NAS) have called for early intervention, including one-on-one therapy, for children with autism. A panel of experts convened by the Academy recommended a minimum of 25 hours a week, 12 months a year

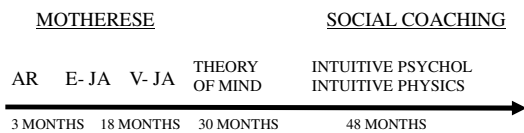
New York Times, October 22, 2002

Fewer than ten percent of children are getting the recommended level of therapy. Almost everywhere schools will say kids are getting services, but what they are getting varies enormously.

Catherine Lord
New York Times, Oct 22, 2002

- Our problem is not that we lack effective methods of treatment but that we lack the public (Federal and State Government) interest to train therapists (including teachers and parents), and to pay for adequate delivery of services to all children with developmental disabilities, from infancy to adulthood.

**FUNDAMENTAL APPROACHES TO
TREATMENT**



**PRINCIPALS OF TREATMENT:
AFFECTIVE RECIPROCITY**

- Intense 'motherese'
 - exaggerated social signals
 - identify what motivates
 - repetition (songs, games, activities)
 - move to more complex materials
 - groups of one and two children

PRINCIPALS OF TREATMENT:
SOCIAL KNOWLEDGE

- **Social coaching**
 - classroom
 - playground
 - small groups
 - best friends

PEER MEDIATION

Less effective:

- Board games about friendship
- Observations of others interacting
- Stories about friendships

PEER MEDIATION

More effective

- Peer mentors (maturity, empathy, motivation, patience)
- Social groups (with both typical and autistic children)
- Initiation of social interaction by the child

PEER MEDIATION

Role playing and behavioral rehearsal

- “Conversation in lunch room”
- “On the playground”
- “Another child comes to house your to play”

VIDEO PRESENTATION

**ARE THIS MAN AND THIS
WOMAN
COMMUNICATING
SOCIALY?**

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