

# Autism and the Operants

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## Overview of the Week



- Sunday "Autism and the Operants"
- Monday "Managing Problem Behavior"
- Tuesday "Putting the Analysis in Applied Behavior Analysis"
- Wednesday "Intensive Table Teaching"
- Thursday "Natural Environment Teaching"

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## This Evening ...



- Autism - the diagnosis
  - Signs and symptoms
  - Prevalence
  - The spectrum
- Empirically supported instruction, therapies and treatments
- Applied Behavior Analysis
  - Early work by Ivar Lovaas
  - The operants
  - "He can name it but he can't describe it":  
Not an autism problem, a teaching problem!
  - How instruction based on verbal Behavior can change things
  - Getting VB-based instruction to happen in the home
    - Have high expectations
    - 411 Training for Professionals on having a child on the spectrum

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## Autism - the Diagnoses

- Disorders usually first diagnosed in infancy, childhood, or adolescence
  - Pervasive developmental disorders
    - Autistic disorder
    - Asperger's disorder
    - Pervasive developmental disorder not otherwise specified
- A spectrum - not just one diagnosis



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## Who can Diagnose Autism?

- A party appropriately licensed to diagnose who is acting within the scope of her or his professional competence
  - Licensure by the Board of Health Professions



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## Autism Spectrum - Common Features

- Significant differences in
  - Communication skills
  - Reciprocal social interaction skills
- Consistent pattern of
  - Restricted behaviors
  - Repetitive behaviors
  - Stereotyped behaviors



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## Autism Spectrum - Age at Diagnosis



- Autism - often before 3 years of age
  - Delays in reaching developmental milestones
  - Loss of attained milestones
  - Insistence on sameness
  - Limited range of interests
  - Repetitive, nonfunctional behaviors
- Asperger's and PDD-NOS - often after 3 years
  - Social differences from other children

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## Autism Spectrum Disorders



- From the practitioner's standpoint, a disorder of teaching
- The learner is always right

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## Diagnosing Autism At least six before 3 years of age



- Impairment in social interaction (at least two)
  - Impaired nonverbals (i.e., eye gaze, facial expression, body posture, gestures)
  - Failure to develop developmentally-appropriate peer relationships
  - Lack of spontaneous sharing enjoyment, interests, or achievements with others
  - Lack of social or emotional reciprocity
- Impairment in communication (at least one)
  - Delay /lack of speech
  - Impairment in initiating / sustaining conversation
  - Stereotyped / repetitive speech
  - Lack of varied, spontaneous play
- Restricted, repetitive, stereotyped behavior, interests, & activities (at least one)
  - Atypical focus/intensity on activity or on parts of objects
  - Nonfunctional rituals
  - Stereotyped, repetitive movements

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## Autism

- May or may not include mental retardation
  - A feature of the autism, or a reflection of formal and informal teaching practices?



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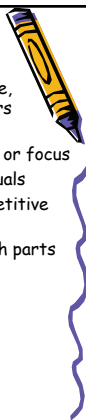
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## Diagnosing Asperger's Disorder

- Qualitative impairment in social interaction (at least two)
  - Impairment in nonverbals (i.e., eye contact, facial expression, posture, gestures)
  - Failure to develop age appropriate relationships
  - Lack of spontaneous sharing enjoyment, interests, or achievements with others
  - Lack of social or emotional reciprocity
- Restricted, repetitive, stereotyped behaviors (at least 1)
  - Atypical intensity or focus
  - Nonfunctional rituals
  - Stereotyped, repetitive motor behaviors
  - Preoccupation with parts of objects



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## Diagnosing Asperger's Disorder (Continued)

- Impairment in social, occupational, or other functional areas
- No delay in language acquisition or use
- No cognitive delays
- No delays in age-appropriate self-help behaviors
- No delays in adaptive behaviors (other than social)
- No delays in curiosity about environment

Why would this not be suspected as early as Autism?



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## Asperger's Disorder

- Does not include mental retardation
  - Is, nonetheless, a problem requiring appropriately developed and implemented teaching procedures



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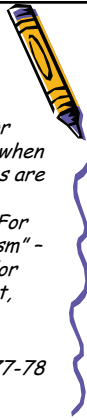
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## Diagnosing PDD-NOS

- *This category should be used when there is a severe and pervasive impairment in the development of reciprocal social interaction or verbal and nonverbal communication skills, or when stereotyped behavior, interests, and activities are present, but the criteria are not met for a specific Pervasive Developmental Disorder ... For example, this category includes "atypical autism" - presentations that do not meet the criteria for Autistic Disorder because of late age at onset, atypical symptomatology, or subthreshold symptomatology, or all of these.*

*DSM-IV, 1994, pp. 77-78*



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There is not just one autism.



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## Prevalence of Autism Spectrum Disorders



- 1994 - 2-5 individuals out of every 10,000 are diagnosed with Autism (DSM-IV, p. 69)
- 2002 - 1 out of every 150 children in the US diagnosed with an Autism Spectrum Disorder ([http://www.cdc.gov/ncbddd/autism/faq\\_prevalence.htm#whatisprevalence](http://www.cdc.gov/ncbddd/autism/faq_prevalence.htm#whatisprevalence))
  - Varies from state to state
  - Why?
  - What to do?
    - Teach, and teach well!

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## Empirically Supported Instructions, Treatments, and Therapies



- Demonstrated through well-conducted, methodologically sound studies to be:
  - Superior to other procedures or to no procedure
  - As effective as other, empirically-well-supported treatments
- Procedures in studies are described fully, and all variables operationally defined so procedures can be replicated
- Subject characteristics clearly specified
- Replication by independent parties at multiple locations and affiliations

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Parents who love their children will do whatever they can and whatever they believe necessary to help them.



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## Sources of information on instruction, treatments, and therapies for children with autism



- Jacobson, J.W., Foxx, R.M., & Mulick, J.A. (2005). *Controversial therapies for developmental disabilities: Fad, fashion, and science in professional practice*. Mahwah, NJ: Lawrence Erlbaum Associates. ISBN 0-8058-4192-X
- Autism Watch at <http://www.autism-watch.org/>
- Lockshin, S.B., Gillis, J.M., & Romanczyk, R.G. (2005). *Helping your child with Autism Spectrum Disorder: A step-by-step workbook for families*. Oakland, CA: New Harbinger. ISBN 1-57224-384-
- Cambridge Center for Behavioral Studies at [www.behavior.org](http://www.behavior.org)
- Association for Behavior Analysis store at <https://apps.abainternational.org/store/>

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## Lovaas Study



- 1987 study
- First experimental study of the effects of comprehensive, intensive, long-duration ABA programming for young children with ASD
- 19 children who received 40 hours of home based services for 2 years, all under the age of 4
- 40 kids in two control groups
  - 1 group received 10 hours of ABA treatment per week
  - 1 group received no services
- 90% of children substantially improved when using this method
  - 9 out of the 19 children, resulting in normal-range IQ scores and allowing them to be placed into age-appropriate classes with their peers. ([www.lovaasinstitute.org](http://www.lovaasinstitute.org))
- This study has been replicated many times and continues to be the method that is used today in classrooms and in home therapy

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## Verbal Behavior (VB)



- Originates from B.F. Skinner "Verbal Behavior"
- Analyzing words based off their function rather than their definition
- Its not what you are saying, it is why you are saying it

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## Verbal Behavior (VB) (Continued)



- Differs from Speech Therapy (looks at syntax, grammar, pragmatics, mean length of utterances)
- Leaders of the field are Jack Michael, Mark Sunberg, Vincent Carbone

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## Verbal Operants



- Mand
- Echoic
- Imitation (with respect to sign language)
- Tact
- Intraverbal

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## What is a Mand?



- Mand is a request based on learner's motivation (MO)
    - You can request a toy, food, drink, item, activity, action, or person
- Ex.  
"Car", "I want a hug", "I am thirsty",  
"Where is the dog?", "I need scissors",  
"Sing loud", "Can you give me paper?"

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## What is the Echoic?



- Repeating exact words/phrases that was said to the learner

- Ex.

Parent says:

"Juice"

"I want pizza"

Learner says:

"Juice"

"I want pizza"

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## What is Imitation?



- Imitation is used to teach sign language by copying motor movements to communicate their needs/wants

Parent:

Signs apple

Signs play

Learner:

Signs apple

Signs play

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## What is a Tact?



- A tact is a label used to describe stimuli in the environment
  - You can tact items, actions, people, places, features, functions, class, adjectives, prepositions, and pronouns

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## What is an Intraverbal?

- Intraverbal is a response to question, word fill-in, statement without the stimulus being present

- is not point to point



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## Intraverbal (Continued)

	Parent says:	Learner says:
Fill in:	"ready, set ____"	"gol"
	"A, B ____"	"C, D"
	"SpongeBob ____"	"Square Pants"
Statement:	"Tell me some animals"	"cat, dog, pig"
	"I like Spiderman"	"I like wonder woman"
Question:	"What do you want to eat for dinner?"	"Cookies"
	"What is your favorite video game?"	"Wii Rock Band"



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## The Impact of Autism on a Family

- Have high expectations for your child
- You can be your child's best teacher however it will take time and practice!
- Celebrate the small success!



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Question and Answers



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