




From First Words to First Friends:
Pivotal Response Treatment Strategies for Parents and Professionals

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Outline 

- Introduction to Pivotal areas
- Focus on Motivation

- Research support for PRT to improve early language skills
- Applications across age ranges

- Increasing social initiations and peer interaction

- Application across target behaviors
- Resources

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Effective treatment involves... 

- Early intervention
- Family participation
- Natural environments
- Functional skills
- Meaningful outcomes



 |  | National Research Council (2001). *Educating Children with Autism*. Washington, DC: National Academy of Sciences.

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Motivation 

How can we apply learning principles to improve the lives of individuals with autism and their families?


- Evidence-based approach
- Choosing critical skills
- HOW we teach
- How can I make learning **FAST...**
- FUNCTIONAL...**
- and FUN...?**





Children learn better when motivated


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Autism Intervention: Models 

Adult directed	Who is the LEADER?	Child directed
Structured settings	WHERE does teaching occur?	Daily routines
Skill-building	What is the GOAL?	Relationship-building



 

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Pivotal Response Treatment (PRT) 

- Naturalistic Developmental Behavioral Interventions (NDBI)
 - ▣ Uses principles of Applied Behavior Analysis (ABA)
 - ▣ Incorporates a developmental perspective
 - ▣ Implemented in the natural environment
- Evidence-based and manualized
 - * 1 of 10 comprehensive models (National Research Council, 2001)
 - * 1 of 11 established treatments (National Autism Center's National Standard's Project, 2009)
- "Pivotal": Results in improvements in untargeted areas

Target pivotal areas
Address core deficits in social motivation


 

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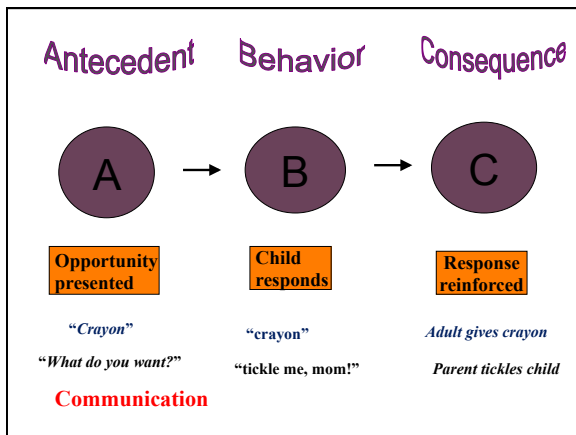
The A-B-C's of PRT 

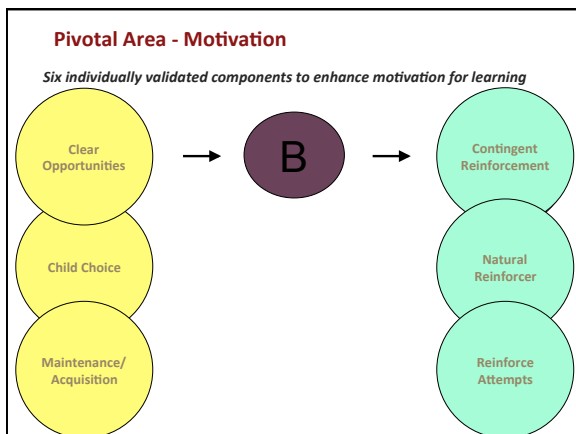
• WITHIN natural interactions:

- **A**ntecedent: Provide an opportunity to respond
- **B**ehavior: The child responds
- **C**onsequence: Provide a reinforcer contingent upon the child's response

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Randomized Controlled Trial of PRT Group Treatment
(Funded by Autism Speaks; PI: Hardan)



- Fifty-three children with autism
- Age range from 2 to 6 years; Both boys and girls
- Well-characterized with standardized measures of autism symptoms, language, behavior, adaptive functioning, etc.
- PRT group versus psychoeducation group for 12 weeks
- **PRT Group (PRTG)**
 - Focused on teaching PRT
 - Group sessions: didactics, standardized video teaching examples, and video feedback of in-home parent-child interactions
 - Individual sessions are in vivo with parent and child
- **Psychoeducation Group (PEG)**
 - All group and individual sessions are focused on general topics related to autism intervention
 - No child-specific feedback provided

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LENA (Language Environment Analysis):
Record up to 16 hours of continuous speech data
Automatically analyze child vocalizations, adult words, and conversational turns






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Pivotal Response Techniques: Creating Motivating Opportunities




- Child Attention and Clear Prompts
 - Use simple language
 - Get attention before prompt
- Task Variation
 - Ok to give free access to establish interest
 - Mix easy and hard demands
 - Difficulty can be based on type of prompt, utterance length, vocabulary, etc.
- Shared Control (Child Choice)
 - Notice what child is doing and follow lead
 - Provide choices
 - Allow child to accept or reject an offer





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**Pivotal Response Techniques:
Responding in a Reinforcing Way**



- **Direct and Natural Reinforcers**
 - Directly related to the child's interest and to his response
 - Make sure the natural consequence is rewarding
- **Contingent & Immediate Reinforcement**
 - Dependent on child's behavior
 - Provides child with clear feedback
 - Needs to be consistent
- **Reinforce Attempts**
 - Make sure the child is really trying
 - Pronunciation does not have to be perfect

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Improving Reciprocal Peer Interactions



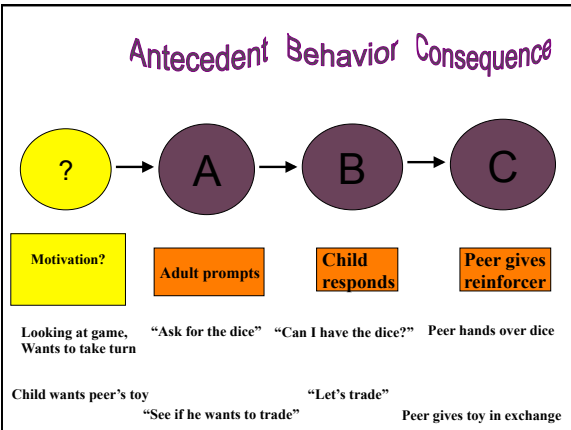
Motivational behavioral strategies


- Mutually reinforcing activities (Carter, 2001)
- Initiation training (Fredeen, 2005)
- Social conversation training (Boettcher, 2003)
- Cooperative arrangements (Kennedy & Itkonen, 1995)
- Priming (Gengoux, 2008)




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How do we teach initiations? 

- *Step 1:
 - Select a game with multiple pieces
- *Step 2:
 - Collect pieces and give them to peer
- *Step 3:
 - Prompt child to initiate a request
- *Step 4:
 - Prompt peer to respond and reinforce request
- *Step 5:
 - Give pieces to child and prompt peer initiation
 - REPEAT (steps 2-5) ...


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Cooperative Arrangements 

- Each person has only some components necessary for completing the activity
- Interaction between children is necessary and reinforcing


- Initial Cooperative Arrangements: Children begin activity with shared control of materials/reinforcers/skills
 - Object the child brings to activity
 - Internal ability or skill
 - Inherent in the rules of the game (e.g., buddy freeze tag, treasure hunt)
- Ongoing Cooperative Arrangements: Facilitator ensures that ongoing cooperative arrangements are in place during play between peers
 - Predict which items child will want next and give them to the peer
 - Repeatedly redistribute materials or reinforcers

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Pivotal Response Techniques:
Creating Motivating Opportunities for Interaction 

- **Child Attention and Clear Prompts**
 - Use simple language; prompt from behind and use gesture if necessary
 - Teach peers to be persistent with target child
- **Task Variation**
 - Peer interaction is already hard, use tons of EASY demands
- **Shared Control (Child Choice)**
 - Use MUTUALLY REINFORCING activities
 - Time prompts for social communication when motivation is highest
—(e.g., before child's turn)


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Pivotal Response Techniques:
Responding in a Reinforcing Way to Promote Interaction




- **Direct and Natural Reinforcers**
 - Prompt primarily requesting from peers
- **Contingent & Immediate Reinforcement**
 - Make sure peers reinforce as quickly as possible
 - If peers are reluctant to take turns, set up activities involving trading
- **Reinforce Attempts**
 - Make sure reinforcer is delivered after reasonable attempts
 –(prompt or help if necessary)






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Ideas for Practicing



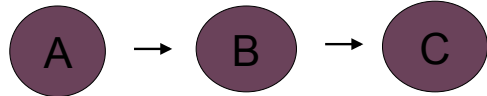
- Choose activities with multiple pieces
- Distribute pieces between children
- Prompt initiations and responses
- Maintain ongoing shared control of reinforcers

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Antecedent Behavior Consequence



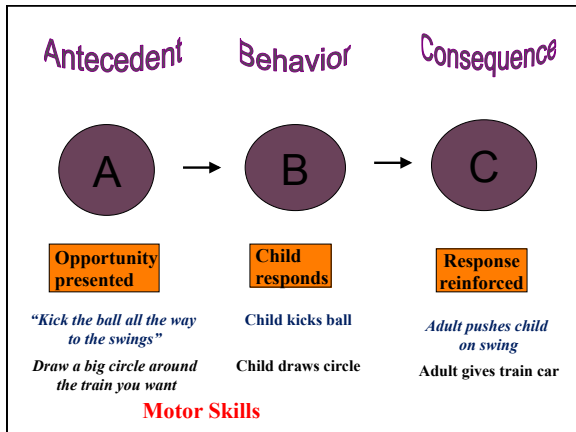
A → **B** → **C**

Opportunity presented **Child responds** **Response reinforced**

“What letter is this?” *“p!”* *Adult gives child playdoh*

“Let’s count your grapes?” *“1, 2, 3, 4, 5!”* *Adult gives child 5 grapes for snack*

Pre-Academic Skills




Ongoing Research Interests 


- Supporting Parents
Understanding parenting experiences and improving quality of life
- Intervention for Infants At-risk
Improving social communication and preventing or reducing the severity of developing symptoms
- Building Friendships
Obtaining and measuring socially valid outcomes
- Evidence-based, naturalistic behavioral approaches to treatment
- Multi-disciplinary collaboration
Can response to intervention tell us about which symptoms are flexible or transient?

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PRT Resources 

- **Training Manuals:**
 - <http://education.ucsb.edu/autism/behaviormanuals.html>
- **UCSB Koegel Autism Center**
 - <http://education.ucsb.edu/autism/index.html>
- **Koegel PRT**
 - <http://www.koegelautism.com/index.html>

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Key Stanford Resources 


- **Early Support Program for Autism (ESPA)**
- *Provides parent education and assistance with local resources for families of young children diagnosed with ASD*
 autismsupport@stanford.edu
 650-723-ESPA (3772)
 http://espa.stanford.edu
- **Pivotal Response Treatment Package Research Study**
- *Randomized controlled trial for children 2-5yrs of age with ASD. Qualifying families will be assigned to either a waiting list control group or the PRT package including clinic-based and in-home PRT treatment.*
 Call 650-736-1235 for more information

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For More Information or Referrals 

- **Stanford Autism Center at Packard Children's Hospital**
 - Evaluation, treatment, parent education and support
<http://www.stanfordchildrens.org/en/service/autism>
 Clinical Intakes: (650) 723-7704
- **Autism and Developmental Disabilities Research Program**
 - Clinical trials and basic science
<http://autism.stanford.edu>
 Coordinator, Robin Libove: 650-736-1235

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