Objectives

- What is Social Thinking?
- What is Theory of Mind (ToM)?
- How are the 2 related?
- What skills must be in place so ToM can develop?
- List and describe various social communicators
- Select appropriate therapeutic interventions

Social Thinking

- Considering the perspective of others even if alone
- Related social skills: Changing our behavior depending on what information we have about a situation

(Garcia Winner, 2012)
Theory of Mind: Background

- Social Thinking
  - Theory of Mind
    - Located in temporoparietal junction
    - Need functioning mirror neurons
    - Those on autism spectrum have “broken” mirror neurons
  (Westby, 2012)

ToM Definition

- 3 Levels
  - First Order: Knowing what someone else is thinking
    - A believes X (Ex. Tim is going to eat the last cookie.)
    - In the early elementary years, what SLPs frequently target
    - The ability to “think with your eyes”
  (Westby, 2012)

ToM Definition: Second Order

- Second Order
  - Predicting what one person thinks another person thinks.
  - 3 people involved.
    - A believes that B believes X.
    - Ex. I think that Tim believes that Mark will eat the last cookie.
  (Westby, 2012)

ToM Definition: Third Order

- Ex. He knows that they think he will lie.
  - 3 or more people involved.
  (Westby, 2012)
Social Thinking Framework: ILAUGH

- Acronym for the pieces of communication and problem solving
- I=Initiation
- L=Listening with eyes and brain
- Abstracting and Referencing (“I hear you’re in the choir.” “No, I’m in your house!”)
- U=Understanding Perspective
  - Theory of Mind
- G=Getting the big picture (Conceptual thinking vs. a focus on details)
- H=Humor and relationships
  (Garcia Winner, 2011)

Development toward ToM

- Birth: Primary intersubjectivity
- 8 months: Secondary intersubjectivity
- 17 months: Symbolic/representational skills
  - Pretend Play
  - Awareness of Self
  - Language
- 3 yrs: Narrative skills
- 4 yrs: Theory of Mind (1st Order)
- 6 yrs: Theory of Mind (2nd Order)
- 7+ yrs: Theory of Mind (3rd Order)
  (Westby, 2012)

Primary Intersubjectivity

- Intersubjectivity- sharing feelings, thoughts, perceptions, linguistic meanings
- Primary intersubjectivity- infants and caregivers sharing feelings/emotions via gestures and expressions
- Affect attunement- emotions are nonverbally communicated between infants and caregivers via the affective sharing device
- Affective sharing device related to mirror neurons; they are faulty in individuals on autism spectrum

Mirror Neurons

- When watching another person, the same neurons in my brain fire as the neurons in your brain that allow you to feel happiness, anger, etc. Mirror neurons help us to “tune in” to other people’s feelings (empathy).
- Ex. When a person sees a picture of a happy face, the areas of the brain associated with “happy” are activated.
  (Westby, 2012)
Secondary Intersubjectivity

- Using other’s reactions as a reference point to resolve how to respond to a particular situation. Ex. Baby near a cliff and looks at mom to determine what her response should be
- Determining your reaction’s affects on others
- By 8-12 months infants have both primary and secondary subjectivity
(Westby, 2012)

Symbolic/Representational Skills: Pretend Play

- Allowing one object to represent another
  - Pretend play demonstrates that children have symbolic/representational skills (17-19 months)
    - Ex. A block represents a cookie.
(Westby, 2012)

Symbolic/Representational Skills: Awareness of Self

- Individual has unique thoughts/feelings
(Westby, 2012)

Symbolic/Representational Skills: Language

- Joint attention
- Recognize intentionality in others by their choice in words
- Delayed language development → fewer opportunities for interaction → fewer opportunities to learn about ToM
(Miller, 2006)
Development Toward ToM: Narrative Skills

- Between 2-3 years of age typically developing child can understand and tell short stories
- **Episodic Memory** (Memory for subjective experiences throughout time) **important**
  - “Ability to perceive the present moment as both continuation of the past and as a precursor to the future”
- Episodic memory enables predicting/inferencing skills
  
  *(Tulving, E., 2005)*

How do we help with the aforementioned skills?

- Assess what type of social communicator the child is
- Implement tx techniques for that type of social communicator
- **The speech therapist’s goal**: Lay the *foundation* for social communication skills

Treatment

- Based on functioning levels and NOT diagnostic labels!
- How do we decide each students’ level?
- How do we decide what to treat?
- Discussing prognosis

Social Thinking- Social Communication Scale

- Significantly Challenged Social Communicator (SCSC)
- Challenged Social Communicator (CSC)
- Emerging Social Communicator (ESC)
- Nuance Challenged Social Communicator (NCSC)
  - Weak Interactive Social Communicator (WISC)
  - Socially Anxious Social Communicator (SASC)
- Resistant Social Communicator (RSC)
- Neurotypical Social Communicator (NCS)
Caution from Michelle Garcia Winner:

- Student must be 8-9 years old to consider the prognoses in the ST-SCP
- DO NOT prognosticate on younger children!
- “Research has yet to be done, but it appears that students by 3rd grade are fairly locked into these global functioning levels” (by 9 years old)

Severely Challenged Social Communicator (SCSC)

- Severely impaired language development
- Not naturally attentive to others (but they like people)
- Weak sensory systems
- Communication primarily to get wants and needs met or discuss perseverations
- Require very close assistance from adults
- Talent in certain areas
- Neurologically based language and cognitive challenges
- Very literal with severely weak auditory processing skills
- Low reading comprehension and written expression
- Social group wants to mentor this group

SCSC Assessment

- Joint attention- do they regard you?
  - Basic turn taking, monitoring eyes and body WITHOUT verbal cues (mastered by 9-12 mos)
- Basic functional communication:
  - Requests for desired objects
- Can they say Yes and No? Comprehension and use of photos for AAC
- Apply basic academic knowledge
  - Can they locate objects related to what they are reading?—Factual comprehension
- Basic language (first, then)

SCSC Treatment

- Joint attention!
- Functional communication of student’s wants (PECS, AAC signs, verbal)
- Routine and structure crucial
- Academics should focus on FUNCTIONAL outcomes
- Behavior self-regulation and sensory integration
- Programs should be vocationally based as early as possible. Classroom work schedules (e.g. TEACCH)
SCSC Prognosis

• Will improve communication and functional, adaptive skills compared to themselves
• Will require some level of supervision across the day, even as adults
• Cannot teach Social Thinking

Emerging Social Communicators (ESC)

• Usually mild-moderate language problems
• Early language development showed pronoun confusion
• Limited emotional vocabulary
• Aloof, poor self awareness
  • E.g. Having to “hurry” for someone else; someone else tries to read their intentions
• Weak attention span in a group, but like to be in a structured, supportive group
• Slow to process different thoughts and understand motive of others
• Limited stranger danger
• Anxiety about how the world words (e.g. what is coming next) is more prevalent than social anxiety (how others perceive them)

Emerging Social Communicators (ESC) Cont.

• Poor inferencing and narrative language (impacts reading comprehension and storytelling/written language)
• Very literal, do not understand humor/sarcasm well
• Most have significant sensory issues (OT assessment)
• Poor learners of social expectations (parents have to teach everything outside of technical information their brain learns easily)
• Peer group wants to be mentors

ESC Assessments

• Joint Attention/Perspective taking
  • Follow eye gaze/thinking with eyes
  • Block tower building- only put a block when I look at you, and have to follow point to know where to put it
  • Go fish/card games- does he cheat in front of you?
ESC Assessment

- Language based perspective taking
  - “Who knows what you had for breakfast?”
  - Narrating a picture to someone who cannot see it
  - Happe Strange stories
  - Sally and Anne test (http://www.asperger-advice.com/sally-and-anne.html)
- Wordless picture books
  - Just describing pictures or story cohesion? Emotional inferencing?
  - Reading comprehension/written expression
  - Emotional regulation/mental health- triggers and coping

Happe Strange Example:

- Ann’s mother has spent a long time cooking Ann’s favorite meal; fish and chips. But when she brings it to Ann, she is watching TV, and doesn’t even look up, or say thank you.

- Ann’s mother is cross and says, “Well, that’s very nice, isn’t it! That is what I call politeness!”
  - Is it true what Ann’s mother says?
  - Why does Ann’s mother say this?

ESC Treatment

- “A little of everything, but NOT all of one thing”
- Establishing predictable joint attention, individual and group (functional ABA)
- Clear visual and environmental structure
- Core social skills prior to teaching social knowledge
- Relational development-relational play
- Introduce language based ToM concepts (think with eyes, body, brain, Superflex, think/know, smart guess, reading plans)
- Inferencing, sequencing, predicting, pronouns
- Headband game- have to describe the picture on my head and I have to find it (providing sufficient info)
- Plan lessons to take years, not months
ESC Treatment

- TEACCH
- Functional ABA
- Relatedness treatment: Floortime, RDI, play ABA
- Integrated Play (Wolfberg)
- Speech Language Therapy

ESC Prognosis

- Likely can live with guided independence opportunities to live and work independently (usually after intensive training)
- Will likely need help with future critical thinking tasks from a support person or family members

Weak Interactive Social Communicators (WISC)

- Solid technical language skills, but not “normal” language
- May have awareness of others but not at the deeper intuitive analytical level
- May be able to discuss how others feel when they are outside of a spontaneous interaction, but cannot track/respond to another’s perspective while actively interacting
- Perspective taking can be looked at as executive functioning
- Have “invisible disability”
- Likely to have social anxiety and related depressions
- May likely be bullied or seen as the “suck up”

WISC Assessment

- Avoid assumptions!
- Peers think they are strange
- Self reports: understand they are being perceived differently but don’t understand what they are doing to cause it
- Pass most of our social language tests and other social problem solving tests
- May have organizational issues
- May be comfortable sitting around a table with adult
- Observe in natural settings or ask specific questions about socialization
WISC Assessment

- Language based perspective taking
- Double interview
- Dealing with different opinions
- Problem solving
- Written expression
- Rule out sensory integration issues

WISC Treatment

- Increase social perception and social thought, before trying to enhance social skills
- Broaden definition of social thought
- Observe others to help define and determine personal social preferences
- Understand their own emotions and emotional responses to others
- Establish social awareness of why other people’s perceptions exist (positive and negative)
  - Behavior mapping

WISC Treatment

- Language use and interpretation
- Develop self-awareness, self-monitoring and self-control social systems
- Teach 4 steps of communication and perspective taking (socialthinking.com)
- Classroom participation in large and small group
- Emotional regulation, understanding, regulation, coping
- Treatments for anxiety and depression w/social thinking
- Non verbal cues of self and others –understanding “nuance”

WISC Prognosis

- Best chance to live fully independent lives
- Given the “invisible disability,” they have more chances of not making it
- Poor organizational skills and balancing life
- Few have safety nets and support systems
- Do not receive state or federal funding
Neurotypical Social Communicator (NSC)
- Developmentally "on track" with social development
- May have receptive/expressive language impairments, but social abilities are a strength
- May make social errors (not always being sensitive, sticking foot in mouth), but that is "being human"
- Learn from their mistakes and become more socially adept
- Some still may need counseling or a trusted friend/family to get through life

Think Social!: A Social Thinking Curriculum for School-Age Students
- Teaches how to "share space" with others effectively and how to follow the unwritten social rules of the environment
- 6 Sections
  - Being Part of a Group and Recognizing Expectations
  - Our Whole Body and Mind Help Us be Part of a Group
  - Self-awareness of and Self-monitoring Our Behavior in a Group
  - Starting the Detective Agency: Learning More About Observing Others
  - The Super Detective Agency: Figuring Out What People Mean by What They Say
  - Adjusting our Participation and Language Based on What Other People are Thinking, Imagining, or Wondering

Lesson Example
- Expected and Unexpected Behaviors in a Group
  - Give students free time and videotape group
  - Encourage students to join together in a group
  - Clinician demonstrates unexpected behaviors while introducing yourself to the group
  - Ask students about your behavior
    - How did it make them feel?
    - What were you doing wrong?
    - Praise them for figuring out unexpected behaviors
  - Make a list on board of expected/unexpected behaviors
  - Talk about what students should do with eyes, hands, head, legs, etc.
**Behavior Mapping**

- Choose a behavior (ex. Working in a small group)
- Explain expected/unexpected behaviors, how they make others feel, consequences of behavior, and how student will feel
- Use pictures and video modeling to discuss the behaviors
- Provide parents with behavior maps related to target behaviors
- Ex. Expected & Unexpected behaviors for Initiating Play with Others (p.16)

**Social Behavior Mapping**

- Comic book with 3 sections to teach:
  - School Smarts/Social Smarts & Expected Behavior-p.1
  - Unexpected Behavior-p.18
  - Being a Social Detective-p.32
- Emphasizes using our eyes, ears, and brains to figure out what someone is going to do next
*Corresponds with Section 4 in the Social Thinking book*
You are a Social Detective!

![Image of You are a Social Detective! book cover]

Treatment: Superflex

- Strategies for teaching young children (approx 2nd-5th grade) how to regulate their behaviors
- Develop “flexible thinking” strategies
- Provides a fun, motivating, and non-threatening way for students to explore social thinking and increase knowledge of social expectations and awareness of their own behavior and how to modify behaviors with Superflex strategies
- Team of “Unthinkables”
  - Rock Brain, Glassman, Brain Eater, Body Snatcher, etc
  - Now coming out with new Unthinkables

- 13 lessons
- Can be used with children K-5 and some up
- Also good for typically developing children
- Important to stress that the Unthinkables are not “evil villains;” implies that if a child is working on defeating one that there is something wrong
Social Thinking Website

- www.socialthinking.com

- Tons of information on the website!
  - “What is Social Thinking” tab
  - Core Facts and Theories
  - Related Diagnoses
  - Four Steps of Communication
  - Four Steps of Perspective Taking
  - Research

Thinking About You, Thinking About Me

- Great resource for SLPs and professionals

More info on:
  - 4 Steps of Communication
  - Perspective taking
  - Establishing a Physical Presence
  - Thinking with your eyes
  - Using language- relationships, organization
  - Social Behavior Mapping
  - Social Thinking Assessment Protocol (informal assessments)

Video Modeling

- A therapeutic technique used to demonstrate targeted responses in a specific situation through the use of videos.
- Can be used as a correction procedure (Sturmey, 2003)
- http://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/VideoModeling_Steps_0.pdf

Video Modeling, Cont.

- Basic video modeling- recording someone besides the learner engaging in desired skill/behavior. Viewed by the learner at a later time
- Video self-modeling- recording the learner displaying target skill/behavior and showing later
- Point- of-view video modeling is when the target behavior or skill is recorded from the perspective of the learner.
- Video prompting involves breaking the behavior skill into steps and recording each step with incorporated pauses during which the learner may attempt the step before viewing subsequent steps.
More CEUs

- Social Thinking- February 12-14, 2013 in Dallas

Questions??

Visit us at bilinguistics.com

For more great resources visit our resource library at SpeechPathologyCEUs.net
Thank you!