Training VPT2 through socio-cognitive conflict
VPT2 refers to the understanding that people will see an object differently depending on physical positioning. For example, the boy and the girl can both see the statue of the man, but they see it differently because they are standing in different places.
Training VPT2

• Laboratory demonstrations show that VPT2 develops between 4-5 years although it can be difficult even for adults during naturalistic interactions (Gzesh & Surber, 1985; Hamilton et al., 2009; Keysar et al., 2003)

• For persons with social learning challenges, VPT2 can be trained using activities designed to increase socio-cognitive conflict (Peterson & Peterson, 1990)
Socio-cognitive conflict

- Social cognitive conflict refers to the conflict that occurs between people of opposing views during social interaction (Elmer & Valiant, 1982)
- Training often (but not always) involves peer-pairs
- Training VPT2 through social cognitive conflict may have collateral benefits for social perspective-taking and even literacy development (Cannella & Viruru, 1995)
Recommendations for Peer Pairs

Children are more likely to engage in collaborative problem-solving and experience socio-cognitive conflict when paired with a peer:

• **who is familiar** (Cannella & Viruru, 1995; Emler & Valiant, 1982).

• **who challenges a peer’s thinking** (Doise & Mugny, 1979, 1981; Peterson & Peterson, 1990).

• **who has a similar level of assertiveness and a similar (or lower) level of expertise** (Emler & Valiant, 1982; Peterson & Peterson, 1990).

• **who brings a different problem-solving strategy to the interaction.**

  – For example, gender differences in language and spatial reasoning are well-established so clinicians might also consider creating mixed gender pairs (Cannella & Viruru, 1995; Mugny & Doise, 1978).
What You Need: “SEERS”

Two different (small) human or animal figurines that stand upright.
What You Need: **Objects Seen**

- All objects must have identical pairs (one for the model and one for the recreation)
- There are five object levels.
- As level increases, so does the visual complexity of the objects (and the ecological validity of the task).
- The smaller the objects, the better.
Symmetrical objects that are all the same color (e.g., Cheerios, Hershey’s Kisses, checkers, monopoly houses)
Level 2 Objects

Symmetrical objects that are different colors (e.g., Fruit Loops, Hershey’s Kisses, checkers, monopoly houses/hotels)
Level 3 Objects

Asymmetrical objects that are all the same color (e.g., Goldfish, Gummy Bears, mini chess pieces, mini animal figures)
Level 4 Objects

Asymmetrical objects that are different colors (e.g., Goldfish, Gummy Bears, mini chess pieces, mini animal figures)
Level 5 Objects

Mix and match of level 4 objects (e.g., mini animal figures, craft trees of different sizes)
What you Need: A Scene

- Choose a scene from the following slides. You’ll need two color copies of the one(s) you select.
Instructions for Clinicians
(adapted from Elmer & Valiant, 1982)

- Arrange two tables so their corners touch.
- Place two copies of your scene so that they have the same physical orientation as illustrated below.
Instructions for Clinicians

• On one scene, build your model with one half of your object pairs.

Here we are using 6 Cheerios (level 1 objects) to represent life preservers.
Instructions for Clinicians

- Now seat your peer-partners at positions A and B.
Instructions for Clinicians

• Have the children select two “seers” and ask them to “pretend they can see like you and me”.

Name each “seer” and place one on the model in a position where all of the objects would be visible to that seer.
Instructions for Clinicians

• Place the other ‘seer’ in the corresponding position on the other board and ask the children to consider each person’s visual perspective.

For example, “This is ‘Ben’. Ben is standing on the beach and looking out at the ocean. Ben sees 6 life preservers. Now here is ‘Jane’. Imagine that Jane is on the same beach standing exactly where Ben is. Here are more life preservers (give each of the children exactly 3 cheerios). Take turns putting these on the board so that Jane sees exactly what Ben sees.”
Instructions for Children

- Children should be instructed to “work together to find the correct answer”. The ‘rules’ for the activity are as follows:
  - 1: Do not touch or move the first (model) board.
  - 2: Stay seated until you both agree on the answer.
  - 3: Once you agree, swap seats and look again. Do you still agree that your answer is correct? If not, take turns making changes to any of the pieces.
  - 4: Keep doing this until you both agree from both seats.
What if it’s too difficult?

• Try a warm up activity where each child works independently. Rotate the child’s board systematically to increase the degree of the visual angle from 0 (shown below), to 90°, to 180°.
What if it’s too easy?

- Increase object level
- Increase the number of objects
- Rotate one of the boards $90^\circ$ (note, this will make it easier for one child and more difficult for the other):
Final Considerations

• Early research suggested that child verbalizing during interaction was important for learning through socio-cognitive conflict (Mugny & Doise, 1978) but subsequent research suggests that it can be established without verbalizing or explanations of answers (Elmer & Valiant, 1982; Peterson & Peterson, 1990)

• Working with individuals (not peer pairs) can be effective by asking a child who works alone, to examine her solutions from the opposing perspective to create ‘intra-individual conflict’ (Elmer & Valiant, 1982).

• Some children may adopt a spatial (rather than embodied) strategy to solve the task. Remind children that even though there are different ways to solve the problem, they should be thinking about where the characters are and how things look to each of them.
For more information about VPT2, visit the Theory of Mind Atlas at theoryofmindinventory.com

The ToM Atlas describes the nature and development of VPT2 and how it is affected in ASD, ADHD, and children with hearing loss.


