


Communication Issues in Autism
and Asperger Syndrome:
Do we speak the same Language?

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Impairments of social communication

- Delay in, or total lack of spoken language, not accompanied by attempt to compensate through alternative modes of communication, due to the lack of appreciation of the social uses of communication
- Lack of understanding that language is a tool for communication.
- Lack of reciprocity in conversational interchange, e.g., the inability to initiate or maintain a conversation with others. They may be able to ask for their own needs but have a great difficulty in talking about/ understanding emotions, feelings, thoughts, beliefs of their own and those of other people.

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- Lack of use and understanding of gesture, miming, facial expression, vocal intonation, etc. as tools of conveying information.
 - Inadequate emotional reaction to verbal and non-verbal approaches by others
 - Idiosyncratic language

Specific peculiarities of ‘autistic verbal language’

- ‘Autistic muteness’
- Echolalia
- Pronoun reversal
- Extreme literalness
- Metaphorical language
- Neologisms
- Affirmation by repetition
- Repetitive questioning
- Demanding the same verbal scenario
- Autistic discourse style
- Poor control of prosody



On the basis of these ‘symptoms’ we describe communication in autism as ‘impaired’.

But is it a correct conclusion?



Communication and Language: Where is the priority?

- Do individuals with autism communicate?
- What language do they use?
- What should we do to establish meaningful communication with them?




Communication

Communication is the transmission and


reception of information.

The elements necessary for communication
to take place:

- *A sender*
- *A receiver*
- *Something to communicate about*
- *Communicative intent*
- *A shared medium of transmission*
- *(Shared experiences and shared knowledge)*



The impairments of communication in autism are better described as qualitatively different ways to interact, communicate, and process information which do not coincide with conventional ones.



“It takes more work to communicate with someone whose native language isn’t the same as yours. And autism goes deeper than language and culture; autistic people are ‘foreigners’ in any society. You’re going to have to give up your assumptions about shared meanings... You’re going to have to give up the certainty that comes of being on your own familiar territory, of knowing you’re in charge, and let your child teach you a little of her language, guide you a little way into his world” *Jim Sinclair*



Communication in Autism

“[Non-autistics] can be ignorant of the autistic’s struggles to communicate. In this case, more care must be taken to learn how to interpret autistic languages... Communication in Autism is not a ‘failure’. It is not non-existent. It’s simply different, in some way eccentric in an interesting way, and in some cases dormant” (O’Neill)



Q: What was Lucy communicating?

“I was sitting on the potty on [her minder’s] kitchen floor because I wanted ...[?]”

...something to eat.”

Her baby-sitter started minding her at the time of her toilet training, so she bribed Lucy to sit there with food. So sitting on the potty in the kitchen became Lucy’s communication strategy when she wanted to ask for food.



In order to communicate successfully
we need

- **Shared experiences**
- Shared tool of communication
(language)



Shared knowledge makes communication
possible

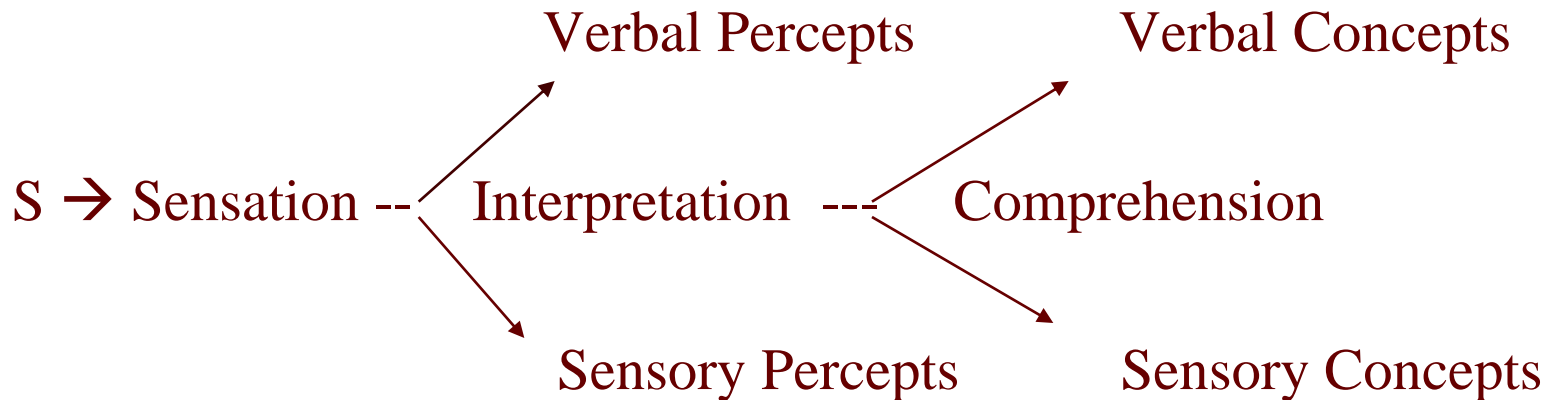


Communication is impossible as there is no
shared knowledge

Where does the shared knowledge come from?

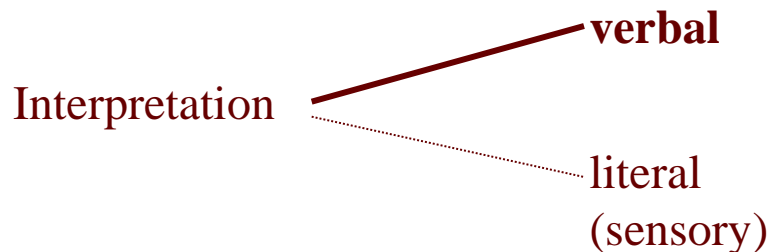
Stimulus → Sensation → Interpretation → Comprehension
(Percept) (Concept)

From Sensations to Concepts via Different Routes:

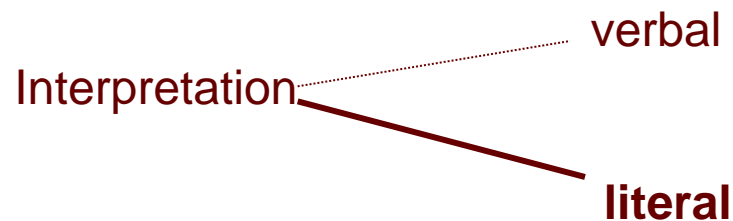


Though we possess both capacities of interpretation and comprehension all our lives, one of them becomes dominant in very early childhood.

In NT development the dominant side of interpretation is a verbal one:



In autism sensory interpretation may be dominant:

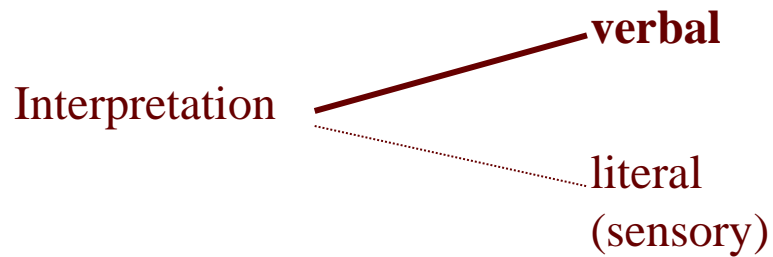




NT development (Williams 2003):

“As babies, non-autistic people keep up with the rate of incoming information (people’s words and actions) and this makes them form concepts. The concepts close off their minds to all the stuff that isn’t about the concepts. They stop experiencing sensory flooding and as a result get more comfortable with being given attention and shown new things.”

In NT development the dominant side of interpretation is a verbal one:

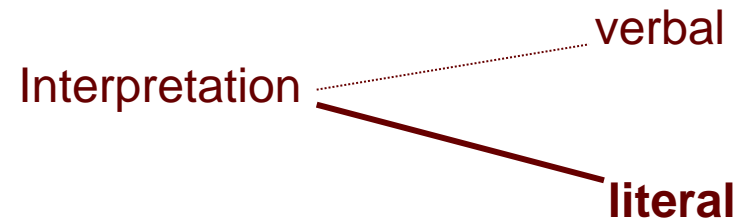


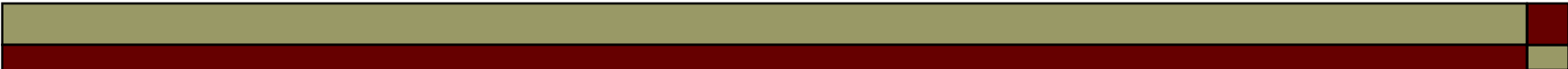


In autism:

“As babies or later infants, people with autism...can’t keep up with the rate of incoming information (people’s words and actions) and this means they can’t integrate information cohesively [that makes it] hard to form concepts. If you can’t form concepts, you don’t learn to filter out all the stuff coming in” (Williams)

In autism sensory interpretation
may be dominant:






“When I enter a new room... the first time, and look at a door, I recognize it as a door, only after a few stages. The first thing I see is its [yellow] color... [Then] I move to the shape of the door... and wonder about the function of that yellow, large rectangular object with a hinge... My labeling is complete. [It’s a door.]

And I move on to the next object in the room to find its characteristics, then define and label that object.” *(Tito)*

For those who are at the stage of literal perception verbal words have no meaning. They are meaningless sound-patterns and may serve as 'auditory toys' to play with:

“All these words with their timber... got so much of my silent appreciation that I tried to make my own little word game with them... Most of the meanings of all those words, I could not tell because I never bothered to find out. In fact, I did not even have the faintest idea, that the words should mean anything. They were just patterns of sounds to me. Wonderful sounds” *(Tito)*



“When I was a kid, words were sound, like
the TV, like crumpled paper, like water,
like gravel.

Words were a sensory material. They
didn't have a use. They were just there”
(Williams)



Literal perception → Literal interpretation → ‘Sensory Words’

“Most words do not relate in any direct way to sensory experiences. The word ‘cat’ says nothing of the sound that comes from the thing when stroked, the noise it makes or the tactile sensation felt when stroking it. I had developed two words for the sensory experience of ‘cat’. One was ‘foosh’ which defined it by the sound made by your hand over the fur when stroking the creature. The other was ‘brook’... which defined it by the noise which came out of the creature when it was stroked” (*Williams*)



Literalness

- ‘Perceptual words’ (‘sensory concepts’)
- Everything is ‘the’ something



Verbal vs. Sensory Percepts



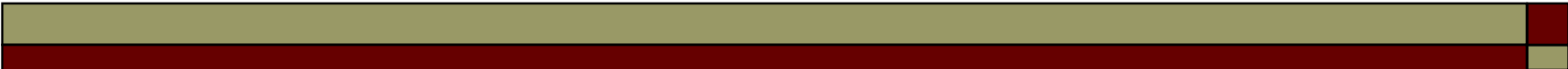
Everything is ‘the’ something

If a child remembers a ‘dog’ as a small white Pekinese in a blue collar, any other canine (even a Pekinese in a red collar) cannot be identified as a dog, it is so different!



One word – one object

- ‘Sensory synonyms’ [categorisation of things and events by their ‘sensory feel’ – perceptually-based generalisations]



Later transition of dominance from sensory to symbolic plane of comprehension (Very few individuals remain ‘fluent’ in both ‘languages’):

“In my case, I remember this transition from the system of sensing into the system of interpretation began to happen not in the first days or weeks of life as usual but at around 3 years old. It was not until around the age of 10 that the system of interpretation... eventually came to be relied upon... Even then, it was taken on, not as a first and primary ‘language’ but as a secondary one and much later as one of two equal but different ‘primary’ systems” (*Williams*)



On the cognitive level: *Snyder et al., 2004*

Autism is the state of delayed acquisition of concepts.

The main arguments are:


- We are not conscious of the details of percepts. Instead, we often see what we expect to see or what is closer to our mental representations.




Difficulty to form concepts: *A cat or a dog?*

“I had... problems just trying to figure out things like why a really small dog isn't a cat. All dogs I knew were pretty big, and I used to sort them by size.

Then the neighbors bought a dachshund, and I was totally confused... How can it be a dog? I studied and studied that dachshund trying to figure it out.



Finally I realized that the dachshund had the same kind of nose my golden retriever did, and I got it. Dogs have dog noses” (*Temple Grandin*)

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- “For the person with autism to understand the concept of *street*, they have to see more than one street. Autistic thinking is specific to general. To learn a concept of *dog* or *street*, I had to see many specific dogs or streets before the general concept could be formed.” (*Grandin*)
 - “When I am used to situations, and have labeled the objects... many times, I do not need to follow [several steps – from color to shape to function] Practice, exposure and experience with objects and around objects matter a great deal.” (*Tito*)



Memory

- Conceptual memory
- Perceptual memory



Perceptual memory

The main characteristics of ‘autistic memory’
are:

- Gestalt
- Literalness




Gestalt memory

Gestalt memory

“If a mental replay of a ... memory relating to a certain time or place is triggered,.. I will re-experience the placement of people in different parts of the room and replay a kind of mental audiotape of what was said as it related to where people were in relation to the objects around them when they said things” *(Williams)*

Literalness:

- ‘Perceptions’ are stored in the memory as unprocessed, uninterpreted images in preferred sensory modality (depending which sense is most reliable): Visual, auditory, tactile, etc.
- While remembering, they actually experience the sensations they had when they first remembered the object/event/situation, i.e. they see, hear, feel, smell or taste (in their mind)



If their memory is very good, why can't they answer the simplest questions? E.g.: 'What did you do at school today?'

- Gestalt
- The 'right triggers'



The importance of the ‘right triggers’:

“By having a key point... triggered, I can ‘let the scene run’ and I might find a string of things said in a certain order in relation to the order of other things done. I may even be able to repeat these strings, even if I hadn’t processed them for meaning... I have also been able to trigger serial memories by mentally replaying a physical movement or physical impact on me” *(Donna Williams)*



A Gestalt strategy in language acquisition

- Echolalia
- Insistence on certain verbal routines
(Demanding the same verbal scenario)



Insistence on certain verbal routines (Kanner, 1943):

“A great part of the day was spent in demanding not only the sameness of the wording of a request but also the sameness of the sequence of events. Donald would not leave his bed after his nap until after he had said, ‘Boo, say “Don, do you want to get down?”’ And the mother had complied. But this was not all.



The act was still not considered completed.

Donald would continue, ‘Now say “All right”’. Again the mother had to comply, or there was screaming until the performance was completed. All of these rituals was an indispensable part of the act of getting up after a nap’ (*Kanner 1943*)


What we can do to help:

- Identify the preferred channel which will be our ‘gate’ to reach the person
- Create ‘daily diaries’ describing the day events, with key words representing ‘mental images’ in the preferred modality that can trigger remembering and help discuss what has happened during the day. These diaries may become weekly/ monthly magazines, and then ‘annals’ which can be used to go through from time to time in order to create the connection between stored memories and perceptual experiences
- Teach them a range of strategies for memorizing and retrieving information, such as making stronger connections between ‘sensory words’ and ‘verbal labels’




Perceptual thinking

- Visual
- Auditory
- Tactile
- Kinaesthetic
- Olfactory



“To understand the mind of a child or adult who is completely nonverbal,.. you must leave the world of thinking in words. This can be quite challenging for many people... For the majority of people, words are their “native language.” It is difficult for them to step outside this very basic way of relating and imagine something else.”

“Try to imagine a land of sensory-based thoughts... What would thinking in touch be like? How might I function if I could only relate to my world through my sense of smell?..” (*Grandin*)



“When a nonverbal person thinks, there are no words going through his head. There are only sensory impressions such as images, sounds, smells, touch, and taste sensations coming into his consciousness.”

If the person has severe problems with both visual and auditory processing, his brain may rely on his other senses to make sense of his world. His thoughts may be only in touch, taste, or smell sensations. These forms of data input may be the only way he obtains accurate information about his environment.” *(Grandin)*



A glimpse into the autistic mind



E.g., ‘Visual thinking – visual inner language’

- “When I talk to other people I translate my pictures into stock phrases or sentences I have ‘on tape’ in my head”
(Temple Grandin)

Not all autistic people think in pictures!

“I learned sound pattern and the feel of words in my mouth and sound pattern in my ears... but without gestural signing to link experiences to the blah-blah... the interpretation was lost. Unlike Temple, I do NOT think in pictures. I imagine primarily in feel, movement, kinaesthetic and via acoustics made by the object when struck. I ‘visualise’ like a blind person.” *(Donna Williams)*



Kinaesthetic thoughts seem to be quite common:

“I mentally built my own staircases, on which I tried climbing mentally... The sensation is *a totally physical experience* of feeling my legs better as it works against gravity. Perhaps that feeling got stabilized in my memory and lead me to do the climbing in my own mind” (*Tito*)



Obsessive thoughts

“Frustrations. And more frustrations. I did not know how to stop climbing although the monotonous climbing made me mentally tired. I did not know how to suppress my frustrations. It is a problem which I face even today. And I knew nothing other than scream” (*Tito*)



Perceptual thinking

- It is literal, in whatever modality it realizes: Thoughts bring real sensations
- It is spatial
- It moves from specific images to generalizations and concepts
- Spatial thinking

What we can do to help:

- They learn better with concrete information
(visual, auditory, tactile, etc.)
- Let them use their ways to explore the world. In many ways ‘autistic perception’ is superior to that of non-autistics.
- In the case of obsessive thoughts’, it is important to distract them from their ‘internal mental exercises’ by external activities
- Choose the methods of instruction to match the person’s ‘inner language’. Not all autistic individuals are visual thinkers!



In order to communicate successfully
we need

- Shared experiences
- **Shared tool of communication (language)**

Definitions

Language is a system of symbols (words) and methods (rules) of combination of these symbols used by a section or group of people

Main functions:


- Communicative
- Cognitive



Language is a tool of communication

In order to communicate successfully

- We have to speak the same language
- Sometimes we have to adjust our language in accordance with peculiarities of each of our communicative partners


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- A blind person
 - A child
 - A French person who
has just started learning
English




Strange as it seems, we do not bother to do the same when communicating with autistic people.

We know they have difficulties (differences?) in certain areas, but do we always adjust our communication style to theirs?


And do we speak the same language?



“You are trying to relate as parent to child, using your own understanding of normal children, your own feelings about parenthood, your own experiences and intuitions about relationships. And the child doesn’t respond in any way you can recognize as being a part of that system. That does not mean the child is incapable of relating *at all*. It only means you’re assuming a shared understanding of signals and meanings, that the child in fact does not share.



It's as if you try to have an intimate conversation with someone who has no comprehension of your language. Of course the person won't understand what you are talking about, won't respond in the way you expect, and may well find the whole interaction confusing and unpleasant.” (Jim Sinclair)



When the child starts to talk, his speech is characterized with specific ‘autistic’ features as if the child was speaking a foreign language. They seem to acquire language intellectually as an adult would have to learn, say, Russian or Japanese.

“[Verbal] language has a different usage for an autistic person than it has for a non-autistic person” (*O’Neill*)

Specific peculiarities of ‘autistic verbal language’

- ‘Autistic muteness’
- Echolalia
- Pronoun reversal
- Extreme literalness
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- Neologisms
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- Repetitive questioning
- Demanding the same verbal scenario
- Autistic discourse style
- Poor control of prosody

‘Autistic muteness’

- They do not understand speech (sensory – especially, auditory – processing problems)

“I was about 3 when I realised that I was given instructions, but the individual words were blurring into the fluctuations around me, and sometimes being overtaken by following or preceding sounds. As I came to accept that auditory differences were part of my life, I became confused that others did not understand that this was one of my problems” (Lucy Blackman)

‘Autistic muteness’

“I can remember the frustration of not being able to talk to age three. This caused me to throw many a tantrum. I could understand what people said to me, but I could not get my words out. It was like a big stutter, and starting words was difficult... I can remember logically thinking to myself that I would have to scream because I had no other way to communicate” (*Temple Grandin*)

Stress and anxiety

“I had ‘forgotten’ the natural sequence of connections needed to make consistently comprehensible language. Articulation was happening without vocal connection. My lungs and diaphragm were responding to intention to speak but either my jaw, lips, and tongue weren’t on speaking terms or my voice box walked out on the job” (Williams)



Echolalia

- Immediate echolalia
- Delayed echolalia

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- Non-communicative
 - Communicative

Non-communicative echolalia (the ‘sensory’ use of words)

“Imagine that you simply love the sound of the words ‘purple fur’. Don’t consider what the words’ actual definitions are. Only pretend you feel vocal intonation. Pretend it makes you shiver in glee, as well as feeling relaxed... Repeated in sequence, it makes calmness settle over you, ‘Purple fur, purple fur’. Also words can sound funny and make you giggle” (*O’Neill*)

Communicative functions of echolalia:


□ ‘I don’t understand’:

“As an echolalic child, I did not understand the use of words... When I later repeated phrases, it was simply because I sensed that some sort of response with sounds was required. Mirroring... was my way of saying: ‘Look, I can relate. I can make that noise too’”
(Williams)

□ To aid processing

□ Means to ‘win time’

□ A request

- 
- Pronoun reversal

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What language are they speaking?



Non-verbal languages

- Visual language
- Auditory language
- Tactile language
- Kinaesthetic language
- Smell language
- Taste language



‘Visual language’



‘Auditory language’



‘Tactile language’



‘Kinaesthetic language’



‘Smell/taste language’

Translation


“The linking of words with sensory experience means that if I hear the word ‘shoe’, I link this with the sound it makes being thwacked on the floor... If I hear ‘picture’, I re-experience running my fingers around its frame, the cold of its glass and the sound it makes being tapped... If I hear the word ‘biscuit’, I re-experience the crunch and the feeling of it as I ate it...” (*Williams*)

Translation problems

In order to communicate their thoughts


- They have to ‘select’ particular images and place them in order
- Then they have to ‘translate’ these images
- To be able to hold the images together in the memory while verbalising them

The same is true the other way round, i.e. when they have to respond to verbal instructions




Perceptual thinkers have trouble with words that cannot be constructed into a mental picture:

“The words ‘know’ and ‘feel’ were like ‘it’ and ‘of’ and ‘by’ – you couldn’t see them or touch them, so the meaning wasn’t significant. People cannot show you a ‘know’ and you cannot see what ‘feel’ looks like. I learned to use the words ‘know’ and ‘feel’ like a blind person uses the word ‘see’ and a deaf person uses the word ‘hear. Sometimes I could grasp these unseeable, untouchable concepts, but without inner pictures they would drift away again like wispy clouds”
(Williams)



Social experiences present even greater challenge as they cannot be represented with ‘sensory-based mental images’.

How can you ‘translate’ social experiences into ‘sensory concepts’?



Now that we know that autistic individuals have problems with information presented verbally, there is a great emphasis on using pictures to help them comprehend information. However, not all autistic people are 'visual thinkers'. That is why, it is important to choose the methods of instruction to match the child's mental language.

Sensory-perceptual assessment for Communication Profile

- ❑ To adjust the environment to the needs of the individual in order to protect the person from painful stimuli and reduce the confusion caused by possible distortions
- ❑ To identify the optimum rate of incoming information the person can cope with
- ❑ To identify the interaction style to be used with the person
- ❑ To identify the preferred communication channel used by the person

Sensory-perceptual assessment for Communication Profile

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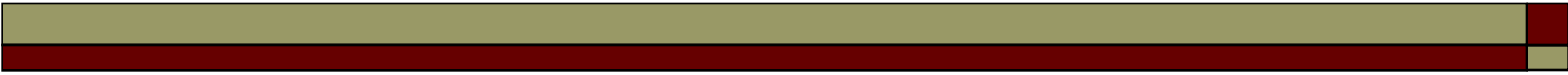
“It is impossible for children to learn if they are bombarded with confusing, irritating stimuli they are unable to screen out” (Temple Grandin)

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- To identify the optimum rate of incoming information the person can cope with

A minimal speech approach

is beneficial for the children who have no or little understanding of verbal language.

- This strategy is used in combination with other non-verbal communication systems (objects, photos, etc.) depending on the child's 'inner language'.
- The consistent use of only one or two concrete words that are strictly relevant to the situation



□ Connecting words exactly with the
situation at the time the child attends to it

“When I was very little, I remember forming wrong associations between words and objects. For instance, when I heard the word banana while I was looking at a cloud, I labeled the cloud “banana”. Then I’d get very confused when in another instance, I looked at the cloud and someone said the word table. I would wonder whether some clouds were called bananas and some tables.” (Tito)

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- To identify the interaction style to be used with the person:

Direct vs. indirect communication

Directly confrontational approach

“The teachers... knew how much to intrude into my world to snap me out of my dreams and make me pay attention. Too much intrusion would cause tantrums, but without intervention there would be no progress. Autistic children will remain in their own little worlds if let to their own devices. I would tune out, shut off my ears, and daydream... I would also become completely absorbed in spinning a penny or studying the wood-grain on my desktop. During these times the rest of the world disappeared, but then my speech teacher would gently grab my chin to pull me back into the real world” (*Grandin*)



Indirectly-confrontational approach

“The best way I could have been able to listen to someone was for them to speak to themselves about me loud or about someone like me, which would have inspired me to show I could relate to what was being said. In doing so, indirect contact, such as looking out of a window whilst talking, would have been best.” *(Williams)*



The transition from indirectly-confrontational to direct communication should be gradual:

□ Start from minimal speech


to

□ Speaking aloud to oneself (or to the wall)
occasionally mentioning the child's name


to

□ Speaking in the direction of the child
and only then to

□ Talking face to face

- 
- To identify the preferred sensory channel used by the person and to select the communication system
-

“I couldn’t interpret words, just...get feel for them. Unlike many HF people with Autism, pictures couldn’t help me because they were flat and still and my world of meaning relied on a spatial experience, on tactile sense, on movement, smell or the sound something made when tapped.”




A flat picture didn't do this and was never the size or physical feelable form of the real thing... I learned to see the picture for each word, translate it into gesture for the real life experience and link it to the word. Meaning was finally born" (Williams)



Selecting communication systems

Decisions for selection of a particular communication system should be based on a child's inner language, his sensory perceptual profile and the communicative means the child already uses to express communicative functions.




It is important to find out ‘what language the child speaks’. If we use one system for all children in the classroom, for some it might work, for others it might not.

Visual Systems:

Visual systems are very helpful for autistic visual thinkers both to understand and to express themselves.

- E.g., PECS
- Visual timetables
- Photos, pictures, drawings, picture diagram-cards, written words

Decision which visual system to use depends on the child's level of understanding of a symbolic/verbal language




Whatever visual system is used, it is important to combine it with a written word, to develop the child's understanding of written language.

Visual systems do not work with people who are not visual thinkers:

“At around the age of 9, I began to recognize pictures far more, although not line drawings because that’s all they looked like – lines. I didn’t interpret them and when I finally did it usually wasn’t what they were trying to represent. The PECS symbol for play that involves 2 figures with hands throwing a ball between them was, to me, a spider... The picture for dinner looks like a face with a black eye” (*Williams*)

Communication via objects



Communication via objects may cover several ‘languages’ as it is not only visual but also tactile (when touched), kinaesthetic (when moved), auditory (when tapped), olfactory (when smelt).

- If you teach the child the names of some objects, give him these objects to feel (or smell, or tap to produce a sound). They can learn the meaning of objects through texture, colour, sound, smell



It is important to remember:

- ❑ Objects can be communicatively loaded, and the child might get the wrong message from the ‘written language of objects’;
- ❑ Objects may have different meaning for autistic children;
- ❑ The use of objects should reflect the level of literalness the child has;
- ❑ There are synonyms in the language of objects in autism which can be different to those in our understanding



Kinaesthetic language


Sign language

vs.

Mime-signing

If the child ‘speaks kinaesthetic’:

- Label the mime with the word, so that the child can connect the experience of the movement with its verbal label – if you teach a child the word ‘jump’, make him jump, etc.;
- If you give the child the directions or instructions, help him to translate them into the body language, e.g., you say ‘go to the left’, then turn him to the left; or you say ‘pick up your things and put them on the chair’, then let him imitate you;

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- Talk to the child about what you are doing. Encourage her to imitate (to ‘translate into kinaesthetic’). If the child has problems with imitation, help her to form the movement. (Some autistic children were taught to draw and to write by someone holding their hands and guiding them to draw shapes, figures, letters.)

Tactile language

For some children touch is the most reliable sense. They often find it easier to recognize objects through ‘feel’:

- Children can be taught to read by giving them plastic or wooden letters to feel.
- They can learn about many activities by feeling objects in these activities
- To make their life more predictable, you may give them some objects to feel in advance to prepare them for future events; e.g., a spoon or a plate before a meal, a towel before bath time, etc.



Written Communication



Creating ‘envelopes’

- Use appropriate system (pictures, objects, etc.)
- Use written word alongside the chosen system
- Comment on what the child is doing at the moment, in order to help interpret inner experiences into words
- Avoid ‘empty’ or irrelevant language



Things to remember:

- Emotional aspect of the word
- Triggered responses
- ‘Challenging behaviours’ may be caused by ‘past’ antecedents



Teaching communication

- *Social skills approach*
- *Social stories*

Rules

Introducing rules of behaviours in different situations:

Autistic individuals find following the rules very useful as the rules help them ‘act’ in situations they might not fully understand

“I have rules for everything. If there are no rules specified... then I invent my own rules. I do this so that I have guidelines enabling me to navigate my way through the process of daily living” (Wendy Lawson)




Rules

“Since people with autism and Asperger’s are emotionally immature, they must have basic morality pounded into their heads when they are small children... Some Asperger’s children and adults have done some bad deeds because the basic rules were not taught to them”
(Temple Grandin)



Teaching 'accessories' of communication

- Eye contact,
- Gestures,
- Emotions,
- Facial expressions,
- Body language,
- Use of interpersonal space



“The role of professionals should be to help people use their natural processes to learn and grow. This might mean helping people develop strategies for dealing with sensory oversensitivities... It might mean teaching self-monitoring and self-management of behavior and emotions. Probably it always means learning and teaching translation skills to enable people with different communication systems to communicate with each other” (*Jim Sinclair*)

