Web-Based Radio Show

Learning to Speak, Use Ideas, and Think

Stanley I. Greenspan, M.D.

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Good morning. This is Dr. Greenspan welcoming you to our web-based radio show. Today's topic is "Learning to Speak, Use Ideas, and Connect Ideas Together in Order To Think." This builds on the information we have been discussing in prior shows where we have discussed how children learn to attend, focus, engage with others, be purposeful in their communications with gestures, and learn to use gestures such as pointing and showing and facial expressions and emotional exchanges to solve problems with others and to get into a continuous flow of back-and-forth communication. These foundations that we have talked about in prior weeks lead the way to learning to speak, learning to use ideas, and learning to think.

How does this miraculous process happen, that enables a child to learn to use language? It's interesting; we've gotten insights about this and how this happens in the life of every infant and child and how it can happen for the vast majority of children with special needs, we have gotten insights into this process by studying human evolution, and studying how this process was first developed in our pre-human or early human ancestors, and how it has evolved to modern times.

Let's first talk about how speaking and using ideas actually develops, because that is exactly the way we help children with special needs master this ability, even when there are good biological reasons for them to have a difficult time with it. A number of components are necessary. One of the most important components is that children have to have ideas in their minds, because ideas enable them to have something to speak about.

How does a child learn to form an idea? Well, in the past we have talked about this a little bit, but our new theory and our new approach to this age-old question is as follows: In order to have an idea, the child has to separate their perception, in other words what they see or what they hear from what they do. In little babies, and many children with special needs, this is tied into what we call fixed perceptual motor patterns; that is, they see and they do almost automatically. This, for example, means that a child

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will see mommy and grab for her; or see mommy and cry for her; or see her and give her a hug; or see her and get frustrated and scratch. So there is a perception that you see or hear, there is the emotion of the moment, there is the desire, and then an immediate action to do something. The action of many children with special needs might be avoidance or withdrawa. They hear a sound, it's unpleasant because of the sensory over-reactivity and there is a shut-down or withdrawal. Or they see a fan and the fixed behavior of just staring at it in a self-stimulatory way is the reaction. So in all these cases, we are getting a perception and a fixed, almost predictable reaction. Or they may see a room and just wander aimlessly around it – again perception of a space and a fixed, not very purposeful even, reaction. So these reactions can be purposeful or seemingly unpurposeful, but it's this basic fixed pattern of seeing and doing. Usually there is some affect or emotion in the middle – it could be fear or anxiety or self-stimulatory pleasure – so we have a sensory perception, an affect or an emotion, and an action or reaction.

Now, when a child learns to engage and interact with their emotions, gradually through Floortime exercises, we teach that child to use emotions to signal. We get back-and-forth continuous flow of gestures, which we talked about last week. Here is where the child learns to take mommy by the hand, walk her to the refrigerator, and point to the food that he or she wants. This is a gradual process that comes from entering the child's world, bringing a child into your shared world, and beginning to emotionally signal and use gestures for back-and-forth communication with that child. So now what we are seeing is emotional signaling – the back-and-forth communication pre-verbally, take the place of these fixed actions and reactions. The child is no longer at the mercy of just these fixed patterns. The child can now signal and negotiate. The child can look at mommy wistfully and motion and gesture to "pick me up." The parent can say to the child without words – with just a hand gesture, "Wait a second" and the child nods their head and they have negotiated. Or if the child is angry, the parent might show the child different alternatives they may have from the cookie that they want. The child finally nods their head at one of the choices and a negotiation has taken the place of an explosive kind of rage. We are getting emotional interactions and social negotiations through back-and-forth signaling replacing these fixed actions. When this happens – when we get the back-and-forth interactions, we're actually separating what the child sees or hears and the image that creates in the child's mind from a fixed action like biting or hitting or aimlessly wandering around the room. Now we have, again, interaction instead.

By having this interaction, we are freeing up the child to have an image, for example his mother in his mind, because he sees and hears her, so it's an image of sound and sight, without it being tied to a fixed action. Now we have what we can call a "freestanding image" of mother. Now this freestanding image; this picture of mother; is

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now free to acquire meaning. How does it acquire meaning? Well, the child has millions of interactions with mother during the course of many weeks. Mother can be gratifying or frustrating or exciting or bring the child this toy or that toy or this food or that food. The child is now able to associate all kinds of experiences with mother and form an idea of "mother." So the child is able to form an idea of mother because the child is associating all these experiences of mother with the image of mother. Now the child has not only a free-standing picture in his mind, but a picture that has meaning for him as mother, over time, is beginning to take on all these characteristics: the frustrater, the gratifier, the person who the child feels dependent on, and the person who the child has fun with. Daddy is also taking on all these meanings, as well as something as simple as an apple. An apple isn't just red and round. And apple has a certain taste to it and a certain texture. It feels a certain way when you roll it or throw it. This is the way all of the objects in the child's life take on meaning. The child has an image of the object, and through experiences with that object, it takes on meaning for the child. This is a critical development in the child forming ideas. This is how ideas are, in essence, given birth to – through first having lots of back-and-forth interaction. That's why we recommend in Floortime to have interaction, interaction, interaction. We recommend that the child get into a pattern where there is a continuous flow of back-and-forth interaction. As the child is involved in this continuous flow, we are able to see more and more freeing up of the child's capacity to picture something and give it meaning, because the child isn't at the mercy or isn't a victim of their fixed actions.

So what I've been saying, again I have observed that there may have been a slight technical glitch here, so I'm going to repeat what I just said very briefly, that as a child becomes a continuous flow interactor, he is freeing up what he sees or what he hears – the image from these fixed actions, and these images then can be associated with lots of experiences with mom or with dad or with an apple or with a chair. These objects then, and the human objects especially, take on meaning, and now we have the beginning of ideas. In just a second, I'm going to explain how that also leads to speaking.

Now this ability to have ideas allows the child to use pictures, to begin doing pretend play where they play out their ideas with dollies, for example – feeding the dollies or pretending a dolly is mommy. But how does it also help a child actually speak? We want to help our children not just simply have ideas but also be verbal with their ideas. We want to help them understand ideas of others by figuring out the sound pattern of others, and we want to help them express their ideas in actual words.

Here is where also we feel that what happened in human evolution and what happens in the life of each baby and child, and what can happen for most children with special needs is basically one in the same process. We've recently had some insights to

hypothesize at how all this happens and how this mysterious process comes about. We've written about this in our new book, called *The First Idea – How Symbols, Language, and Intelligence Evolve from our Primate Ancestors to Modern Humans.* What we feel happens is, as the child becomes a better and better interactor with a continuous flow of back-and-forth communications, they are also further developing their motor system. What we notice is, typically as a child is learning to interact with more circles of communication, there is more vocalizations; there is more control of the fine motor patterns involved in the oral/motor cavity in terms of tongue movements and in terms of control of the vocal chords so that we are seeing more and more fine grained sound patterns. Words don't come out of the blue all of a sudden as though a switch was turned on. In fact, there is much more complex babbling and sound production with more consonants and more vowels as a gradual process from the time the child in ordinary development is a few months old up to the time the child starts actually speaking.

Similarly, a child with special needs, we see at a later point often because of motor problems, gradually increase in their ability to make sounds. At the same time, again in typical development, we are seeing as part of back-and-forth interaction, exchanging vocalizations, the child is making sense of not just hand gestures and smiles and frowns, but also vocal patterns. So the child is learning to decode not just pointing or just showing or just big smiles versus frowns, but the child is decoding the sounds that go along with these facial expressions – a happy sound from a sad sound from an excited sound. They are decoding and learning to create patterns of sounds.

Now this occurs in part because the human nervous system – the child's brain – is a natural pattern recognizer. Obviously in children with some special needs conditions, this ability to recognize patterns is harder to learn. We find that in the vast majority of children, it is not impossible to learn – just harder. As we have talked about before, it is as though the main highways are a little bit blocked, but there are side pathways that can be developed, but this requires extra practice and sometimes enormous practice. Children will vary in terms of how easy it is for them to learn these capacities such as pattern recognition when some of their main highways are blocked because there are varying degrees of neurological challenge that children have. Every child is different. Often we won't know to what degree the child has challenges until we really start an optimal intervention program and see how quickly the child can make progress. So the proof is often in the pudding. We have some general ideas about how a child is doing and what kind of progress he will make when we see the child initially, but the best sign is watching the child's progress over time. The good news is that we have found that the

vast majority of children can make progress in this critical ability to recognize patterns of sounds and express more and more complex patterns of sounds.

So now we have a child who is recognizing more and more complex sound patterns; who is expressing more and more complex sound patterns; and at the same time is learning to separate what they see and hear from what they do so that they can have free standing images or ideas. So I want you to picture this now, we have ideas beginning to percolate in the child's mind, we have increasing ability to discriminate or decode or recognize sound patterns, and we have increasing ability to make different sounds and to control your vocal chords and to actually begin to imitate sounds that you are hearing from mommy and daddy. Now it's not a big leap for the child to start repeating words that they are hearing because they can understand these sound patterns and make up a word like, "open," they can begin to express it because they have control over their vocal chords and oral/motor cavity and they can make these sounds, so now the child wants to go outside and he's taking mommy by the hand, he's a complex interactive communicator, he's banging on the door, pointing "out" and mommy says, "Do you want to go OUT? OUT?" and all of a sudden the child is going "OU, OU, OU" and mommy says "OUT, OUT" and the child says, "OUT!" and mommy opens the door and he goes outside. Next time makes him say "Open." She says, "Do you want to op- open or close the door?" and the child repeats the word, "Open." Now the interesting thing is, as the child learns it in this way, which is the way our ancestors learned it during human evolution and the way in which all children learn language, it's just that for children who have biological challenges it takes longer to learn and we get varying degrees of progress in this capacity, as this is happening, the child is acquiring language, but acquiring language meaningfully in real situations. What is happening is the child is emotionally invested in communicating and has an idea, "I want that door open" or "I want to go out." Then we are helping the child use the word and understand the word that conveys that intent; that idea that the child already has. That is a far, far better way of teaching a child language and it's much more in keeping with what happened during human evolution and what happens in the life of every child, than trying to just memorize different sounds from pictures. Many ideas invested with emotion, and when the word is invested in emotion has meaning for the child right away, then it generalizes almost immediately. The child can then use the word "open" in a different setting – at school when there is a door to be opened. The child can begin to understand the meaning of ideas and words in different contexts. So this is very, very, very important.

Now during the course of human evolution, what we feel that happened is obviously there wasn't a mommy teaching a child to say "open" to open the door, but we feel that this capacity to use more complex sound patterns to communicate and the

capacity to create ideas kind of evolved gradually together and then we had the conditions that we see in each child now. Where we had ideas and we had the ability to understand and create sound patterns occurring around the same time, and as those joined together, we had the beginnings of different languages. But all the languages, we feel, started off with preverbal gestural communication leading to increasing vocal interactions. As those connected with emerging ideas, we began getting more formal languages. So we believe this was a gradual process during evolution, it's a gradual process in the life of each baby and child, and it's an even more gradual process for many children with special needs where we have to provide extra practice. So this is how ideas get cooking.

What it means for the parent or the professional, is to work on preverbal interaction – getting a child to be a continuous flow interactor, helping a child discriminate more and more patterns of sounds, express more and more patterns of sounds, and eventually imitate different words and eventually more word combinations. In this way, language gets learned naturally through extra practice.

Now once the child has the ability to use some words and use ideas, then the goal becomes to increase this capacity; to broaden it. Here is where we use our Floortime pretend play. We get down on the floor and get help the child express ideas through having the dollies or the toy animals express different ideas – hugging, kissing, eating. The child may initially just repeat things they see at home which is fine to do. But the child may also put their own creative twist on it, even from the beginning. They may start off feeding the dolly just like mommy is, but all of a sudden they may have the dolly push the food away and say "no" and all of sudden you say, "Where does that come from? I didn't show little Johnny or Susie how to do that!" Well, that is the child expressing a creative idea; their own twist on the plot. So initially start off with things that are familiar to children – hugging, kissing, feeding – let them copy some pretending. But be challenging them to come up with their own twist on it. You can do this by throwing in curve balls yourself. If the child is kissing your dolly and your dolly can run away and you say, "Your dolly has to find me to kiss me." Suddenly what was a routine for the child now becomes an exciting game where his dolly chases your dolly and then he captures your dolly and gives your dolly a kiss. That is going to encourage your child to do something creative in return.

So to elaborate pretend play, which is the first way of exercising ideas, we get into the child's world and we start pretending, we begin to talk for a dolly or a stuffed animal, and we get very, very playful starting off with simple things the child is familiar with and then getting into more creative endeavors. But we always challenge the child to take initiative and to be assertive and to counter what we do with what they do on their own.

If it's a very passive, laid-back, withdrawn child, we challenge the child more with affect. If it's a very distractible child, we have to be a little more organized and also highly energized to keep the child focused. So it's a little bit of a different challenge because with the very distracted child we may have to slow them down. We may have to help them talk and move with them or hold their hands and move their hands rhythmically with our voice so they can talk back to us, so they aren't so distracted by their own movements or their own different interests around the room.

So we reach in and energize up the passive, self-absorbed child. We help organize the very distracted, overly active child. But in both cases, we are trying to first get more imagination cooking and more use of ideas, and at the same time we are facilitating use of words because as we are playing, we are always talking to the child.

So now, in addition to gesturing, and before we were doing the same thing – we were always adding words in, "Ok, what is dolly saying?" or if your dolly is talking to his dolly, "I want a kiss, I am so hungry for a kiss" or "I need to be fed." But there is a constant verbal rhythm of back-and-forth interaction, inviting the child to respond verbally as well as imaginatively. So imaginative play on the floor where you use words and where you are in a constant flow of back-and-forth interaction with the child and you are engaged with the child, so in other words you are always bringing in the foundations of attending, relating, two-way communication and a continuous flow of back-and-forth communicating with a new stage of using ideas and we practice it in pretend play.

In addition to pretend play, however, we also practice it in daily life. So we challenge the child to use words in everything the child is doing, but we try to take advantage of natural situations. If the child wants to go out you say, "Do we open or close the door to go out?" The child is hungry: "What do you want? The juice or the milk or the apple?" We can use multiple choice to help the child learn new words. It's best when you can, not to just use memory or cue cards, it's best to give the child choices so the child is thinking about what they want. Now sometimes you are teaching a child a new word like "open" to open the door and you'll just say the word and open the door so the child understands what it means. But once the child has that and can say "open," then if they can't remember it, you don't want to just cue them up again, what you'll do is say "open or close?" Initially the child will respond "open or close" and just repeat what you are saying, kind of mindlessly. Then you have to show them: "Open, and this is close. Which do you want? Open or close?" If you slow it down like that and the child has to find the right one to get that door open if the child really wants to go outside, within 10 minutes he'll have the right word and be able to distinguish between two choices: open versus close. When you are using multiple choice, always give the child the good choice first and the weaker choice second. "So do you want to open the door or close the door?"

Or, “Do you want to go outside and play or go to sleep.” So the second choice should be a kind of silly choice so if the child is just repeating it and says, “Sleep” because it’s the last thing that they heard, you’ll say, “Ok let’s go to sleep.” The child will often say, “No, no!” Then you say, “Well, do you want to go out and play, play…or zzzz sleep, sleep?” Pretty soon, within 10 minutes, the child will be getting it.

So the key is to always mobilize the child’s emotions or affect. Challenge the child to think. Once they have ideas, they can think and we have to challenge that ability. This takes a lot of creativity on the parent’s part. But the rules are pretty simple, so it’s not as tough as one would think. Often, parents say that they don’t have enough ideas in their bag of tricks. They can’t figure out how to talk for the dolly or what to say for the dolly. Whenever a parent feels stuck or a professional feels stuck, the key is to simply observe the child for a few seconds, ask yourself what are they interested in, what are they trying to do – are they trying to go out the door? Are they trying to have the dolly hit another dolly? Are they trying to have the dolly hug and kiss? Are they simply going back to aimlessly wandering around the room or some other self-stimulatory game? What is the child trying to do? How do I build pretending and use of ideas into what they are trying to do?

Frequently, for example, I will see a parent trying to teach a child to give the dolly a hug or give the dolly a kiss and the child makes a bee-line for the door. Then the parents says, “No, you can’t go out. Come back here and play with the dolly.” Then we have a temper tantrum. Now instead of that, you’re trying to teach the dolly to hug another dolly or the child’s dolly to hug another dolly and the child makes a bee-line for the door, go with the flow. Your goal is to teach the child to use ideas, not whether to be by the door or to be with the dolly. You can teach ideas and language at the door or with the dolly. So if the child goes for the door, that tells you something. That tells you that his emotion is now with getting out the door. So you’ll say to the child, “Do you want to play with dolly or go out the door?” and the child points to the door. “Do you want to open or close?” and now you’re working on opening and closing the door. Ten minutes later, the child says, “Open door” and we say, “Ok, we’re going to open it. I’m starting to turn the knob. Oh, what about dolly? Dolly is going to be very sad. Can we leave dolly here or take dolly out with us?” The child, hopefully looks at dolly. If he doesn’t, then we’ll bring dolly and dolly starts knocking on the door saying, “Go door too, go door too.” And we’ll look at the child and say, “Can dolly come?” We’ll hold dolly or offer the dolly to the child and the child takes dolly and throws him down. “Dolly no come? No go out the door?” So now we have a game with dolly at the door, but dolly is hurt. “I’m going to give dolly a kiss, how about you?” Now we have dolly at the door negotiating whether dolly goes out the door too. Ten minutes later and a few words more

and maybe dolly and little Johnny or Susie go out the door together and they all go into the backyard to play some more, or maybe just go into another room.

The idea is that you go with the flow. But, in going with the flow, you are not giving in to the child's agenda. His agenda is just to go back to acting without talking; to be impulsive or self-stimulatory or to be aimless. Your goal is to keep him engaged, keep him interacting, keep a continuous flow going, and help him use more and more ideas and words. You will win your agenda, and therefore the child will win because he will learn to speak and he will learn to interact and he's going to find that far more fun that just being aimless or self-stimulatory or impulsive once he learns it, but like anything else, you can't enjoy it until you learn it. So he will be very appreciative that you helped him through this. You're not being mean-spirited to him when you are challenging him to learn these things. You are doing it in a fun way and again, he'll be forever grateful to you for doing this. But the key is to go where his interests are, which is not catering to him or giving in to him. It's simply creating favorable circumstances for you to teach him what you need to teach him. So you want to teach a child later on, when he is older, how to count. By counting cookies – something the child wants - is going to lead him to learn to count far more quickly than counting something the child doesn't care about. So here too, we use his interest in the door to become the new pretend play place. So it could be in the middle of the room, it could be at the door, it could be looking out the window, etc. Now if it's raining outside and you don't want him to go out, you could play with him at the door and then eventually show him that it's raining. You may wind up, 15 minutes later, with a little tantrum because he still wants to go outside and then you're teaching him something else that's important – that you can't always do what you want to do. Sometimes there's a good reason why you have to stay inside when you want to go outside. You may hold him tight and help him verbalize his tantrum – that he is disappointed or sad or angry. That, too, is part of growing up. All parents know that all toddlers and preschoolers will have their tantrums when they can't get their way and it's the only way they learn about limits.

So this is the way we expand the world of ideas. Now if this goes well and the child is beginning to pretend more and more elaborately, and is beginning to use more and more words in daily interactions, we can then begin working on the next step, which is connecting ideas together logically; helping a child make sense and be logical. But as we are doing that, we are always expanding the creativity. We are always expanding the range of ideas the child can use, because the more ideas a child has, the broader and more elaborate their conversations, and more important than that, the better thinkers they become because you need ideas – lots of ideas – to be able to think. So we want to help

our children broaden those ideas, and at the same time teach them to connect their ideas together.

This is the way it works. To help them broaden their ideas, we try to set aside 4-8 Floortime sessions a day where we do basically imaginative play. We get down on the floor with the child, follow the child's lead, and expand their use of ideas if they are at this stage, or expand their use of interactive gestures if they are at the prior stage. But we are always working on all the prior stages plus the new ones together. So we are always working on attention, engagement, purposeful communication, continuous flow of emotional gesturing, and using ideas all at the same time. We do that many times a day, and we do that in many different ways – using the dollies, sometimes we can dress up in costumes and we can pretend to be the zebra or the doggie, or we can be the horsy and the child can ride on our back and the child tells us to go or to stop. Or we can be an airplane, giving the child an airplane ride and he tells us whether to go up or down or slow.

Each child will have his or her own way of responding. Children who crave a lot of motion will enjoy playing the airplane game and give you the best language when they are being a rocket ship and you are helping them fly to the moon. Or, when they are on a swing and you are pretending the swing is a big balloon flying in the air and you are flying on this big balloon together. So you can have lots of fun and tailor to the child's nervous system. The child who is scared of action and likes more sedentary play, you can be little crawling worms together and you can practice your motor skills while talking about where you are going to crawl to. Are you going to crawl to grandma's house? Are you going to crawl to school? Or are you going to crawl to the supermarket and buy something? So you can be very slow on the ground and sedentary, coordinating the left and right sides of the body as you are crawling around, but chit chatting with each other. Or you can be pushing the cars and you're crawling together with the cars and the cars are having a race, but you are talking about it.

So you tailor to the child's nervous system, tailor to what is going to get them involved and give them pleasure. Each child's nervous system is a little different. The child who craves motion, you'll do more active-oriented imaginative interactive pretending and dialogs. The child who has a harder time with motion – we'll gradually increase the motion, but do it very, very slowly. The child who is overly active – we'll slow them down and go into slow motion mode and create a game where we go fast, slow, super slow and super-super slow. So each child will have a different way. The child who is over-sensitive – we'll talk more softly to him. The child who doesn't register sound, we'll be very, very energetic with. So we're always going to be tailoring to the child's nervous system, but the goal is expanding the ideas through entering the

child's world, through the world of dolls and toys and play objects, but through being yourself a pretend object in the child's life. Some children don't like to play with dolls or cars or toys and many parents will complain to me, "But Johnny doesn't want to play with that." I tell them that's fine. Then you be the pretend object in the child's life. You be the horsy or the doggy and the child can be superman or batman. Some of these children who don't like play objects love to play dress-up and can have all kinds of interesting costumes that they can wear and become make-believe characters from a TV show or from a story they have read.

So there are many ways to increase that range of creativity. But now as we are doing this, we are also helping the child begin to connect ideas together because as the ideas are broadening, we are trying to make sure they make sense. So if the child is moving around the room and you're pretending to be an airplane, you can say, "But where are we going?" If the child doesn't answer, you say, "Are we going to go to school or to the park? Are we going to go to grandma's house or to the store?" So now we are choosing the "where" and the child answers or points, the child is now connecting ideas together because they are telling you where they want to go in the pretend play. If you even ask the simple question, "What is that?" and the child gives an answer, "That is an apple" or "That is grandma," that is also a logical answer and the child is connecting their idea to your idea. So we are helping the child connect their own ideas together so they can string together more than one idea, it's not just apple and car and then outside; it's "Go outside" or "Eat apple" or "Move car" or "Daddy, pick up, pick up." So the child is stringing together ideas logically themselves and the child is connecting their ideas to your ideas. "Where?", "What?", and eventually we are going to ask the child, "Why? Why do you want to go outside?" "Because I want to play." Now when a child reaches the "why" level, then we have a rather advanced level of connecting ideas together. But initially it will be just simple "what" and "where" and maybe some "who" and even when there's no question, you just make a comment, your comment might be "I'm going to be a horsy" and the child says, "Ok, giddy-up, giddy-up, go!" Now the child is connecting their ideas to your ideas because you said you were going to be a horsy and he's telling you what to do. It need not be a question, it may just be a statement.

But as you are expanding the world of ideas, you are simultaneously challenging the child to make sense. So if you say, "I'm going to be a horsy" and the child says, "Big tree" and looks outside, it doesn't connect his ideas to your idea. Then you challenge the child to make that connection. You'll say, "Horsy, horsy, horsy or tree? Horsy or tree?" You'll point to the tree outside and you'll point to yourself, "Horsy" and the child might look at you and make a "no, no" to the horsy like I don't want horsy and gesture "tree" and we'll say, "Climb tree or look at tree?" and the child may give you a big smile and

say, “Climb tree, climb tree” and start banging on the window as though they want to go outside and climb the tree. Now the child is beginning to make sense. The child is connecting ideas together.

The example I gave made it sound easier than it happens in real life – it may take more steps to make it happen, but the idea is you are always trying to help the child make sense. Anytime the child is random in his use of ideas – jumps from one idea to another – you try to bring in logic, but not do it for the child. So many parents and so many professionals in their effort to help a child learn quickly, feel that the child can learn by just copying rather than by having to kind of think it through for themselves. Your goal is to challenge the child, not to memorize scripts. If you memorize scripts, then a year later you may have a child with lots of scripts, but they still can’t have a conversation; they still can’t think creatively or logically; and is still very limited. There have been those who believed that children with autistic spectrum disorders are only capable of memorizing scripts, so they teach children this way. Nothing in my experience can be further from the truth. In fact, children with special needs and especially children with autistic spectrum disorders need more creative and more logical thinking challenges than the average child, again because they need more practice because we are developing side pathways rather than some of the main highways. So we have to do more than what we do during ordinary development. If we relinquish that and give way to scripts to do something quickly, it comes back to undermining the child’s progress in the future. It may give the illusion of a child who is saying some things – they may say, “Mommy, I want the apple” or “Mommy, go sleep now” because that is a memorized phrase. But then the child, a year later, just has a series of memorized phrases and when they can’t play with peers or when they can’t have a conversation with a new teacher, it’s because they haven’t learned to use ideas creatively in a thinking way.

So we’ve got to build the building blocks. That doesn’t mean the child won’t take whole phrases at times and use them in a memorized and appropriate way. That’s what we all do when we have certain colloquial uses of language. That’s fine, as long as it’s used in a logical manner. The problem is that if it is just scripted, the child doesn’t really know why and what he is saying and it’s not logically tied to other things. So sure, the child may learn a whole phrase at a time and not just a word at a time – that’s fine as long as it’s used meaningfully and logically to express needs.

So we want to help the child connect ideas together by simply challenging the child to respond to what we say, not just to what he or she is saying. So when the child says something, we respond with words of our own. If the child says, “Move car” and we say, “Where?” and if the child just says something random at that point like “Green balloon” we’ll say, “Where’s the green balloon? I don’t see a green balloon. Where can

we move the car?" And the child says, "Red apple" but there's no red apple in the room, we'll say, "Can we move the car to a red apple? Where's the red apple?" We keep emphasizing, "Where move the car?" and we can give the child choices. Or we can say, "Should we make this into a red apple or this into a make-believe balloon?" Then move the car to that apple or that balloon. But, we have to constantly challenge the child to connect ideas together. In this way, again the vast majority of children, even with rather substantial language problems as part of special needs conditions, learn to use ideas logically. A lot of children stay very fragmented – just jumping around from one idea to another idea. They are creative, but little islands of creative ideas that are not logically connected, so there is not cohesive or logical conversation. I see children who reach the level of using ideas, but don't get to the point of using ideas logically. Again, in the vast majority of cases, that is largely a problem with the learning environment. Sure, the child has good biological reasons for having a hard time learning this skill. But, that only means we have to challenge the child more to practice more in connecting ideas together.

Again, you can't learn to think unless you challenge the child to think. So what goes in is what comes out. Scripted in – scripted out. Memory in – memory out. Thinking in – thinking out. We are always challenging the child to connect ideas together so the child can answer "where," "who," and "what" questions, we can then work on the tougher ones like the "why" questions. "Why do you want to go out to play? Because it's fun? Or because you want to sleep?" Initially in multiple choice, the child may say "sleep" and you say, "ok, let's go to sleep" and then eventually the child may say "fun" or "run" or "go on slide." Then you say, "Oh, so that's why you want to go outside." That's the way the child will begin getting the hang of the "why" questions.

Just this week we saw a little boy in my office answer a "why" question for the first time ever, only because we spent a full hour interacting with him, getting his gestures going, getting back-and-forth continuous flow going, getting lots of imaginative and pretend play going. And he surprised all of us when we asked him why he wanted to go outside and he said, "To play." He'd never done that before and it wasn't a memorized script. He did it because we had gotten into the pattern of back-and-forth communication. Remember, when you are interacting with gestures, you are being logical with the child. The child is reading your gestures and responding to it. He is learning to respond to something outside him or herself. In connecting ideas together, he is going to have to learn to connect his ideas to your ideas, not just beat to his own drummer but connect his ideas to something outside himself. So that comes from relating to someone other than himself, it comes from interacting purposefully with someone other than himself, and it comes from having a continuous flow of back-and-forth communication with someone other than himself. Then as he starts using ideas

creatively, he is now using ideas with someone other than himself, i.e., processing what you are saying.

Now for many children, it's so hard for them to process what you are saying that it is difficult for them to connect ideas together and be logical in their use of ideas. So that is why we have to energize up, we have to challenge the child. We have to insist that they recognize what we are saying. Sometimes it means getting playfully obstructive. If the child is ignoring us, and we are saying, "Where is the car going" and he just moving the car and not telling us, so we become a policeman who says, "Oh, car can't move until I know where you are going. Mr. Policeman says he needs to know where you are going." Out of frustration, the child may point or say "there" or say "to the house" and now we are helping that child connect ideas together. So that is the absolute key to helping the child connect ideas together, is to challenge the child to always be aware of what you are saying, keep it simple, and that will help the child get their ideas cooking.

Now what I want to do with the few minutes remaining is take a few questions. The first one is:

My son is four and has been diagnosed with autism. He is in a pre-kindergarten autism class that began in August. He does not communicate or talk very much at all. While at school, he will not eat. He goes from 8 am to 3 pm with no food. He will drink very little but nothing else. Do you have any suggestions that can help his eating and communication skills. This is very new to myself, my husband, and family.

This is a very good question because you have a child who obviously in school, is not relating to the world to the same degree he is at home. I assume from the nature of the question that his child and other children like him are eating and communicating more in the home environment than in the school environment. I don't know this child, but what this usually tells me is that there is not enough one-on-one interaction. Whenever a child is not eating or talking in a social setting, it usually means the child is retreating in that setting and shutting down in that setting. It means somebody – an aide or one of the teachers or the mommy can come in the classroom – needs to interact with the child from the bottom up. Get his attention, get him engaged in a relationship that is fun and joyful, get two-way communication going whether even if it is just exchanging toys, get back-and-forth continuous flow going, and then introduce ideas. So whenever a child is shutting down, work from the bottom up. Now, I have seen countless children who wouldn't talk or eat at school, and if we get them in the corner with one other child and an aide or teacher and get this interaction going from the foundation on up to the higher levels, we often see improvements in all areas. Remember, eating and speaking all involve oral/motor activity. They all involve using the mouth and the muscles of the

mouth which may be hard for this child. So you have to get him engaged and motivated. Sometimes it's easier to have him adapt to school gradually – not try to do a full day from 8-3, but to do it from 8-10:30, then 8-11:30, and then until 1:00 and then to 2:00 and eventually to 3:00. But my recommendations about school is that the school environment for a child who needs that one-on-one interaction, has to provide that one-on-one interaction in a continuing way all day long or else the child withdraws. If a child is withdrawing or perseverating or self-stimulating, he is not learning to interact, communicate, or think. So the child learns to do what we practice to do. The environment, whether it is home or school, has to provide the ingredients to help the child practice the essentials. So there is nothing magical about the word "school." School can only be an educational setting for children with special needs when it is able to tailor the interactions to the needs of that individual child. So parents need to go observe in school and see if it is creating these foundations that we have been talking about.

I think we have time for one more question. *We have implemented a Floortime program for three years for our 3 year old son at home. I'm wondering if you could offer advice to me on how actively to engage both my son with PDDNOS and my typically developing 16 month old. I'm struggling with this the most. My son often runs off when my daughter begins to play with us.*

This is a very good question because we love to have family Floortime with siblings involved. The key is to, when the child is wandering off, create a setting where there are boundaries. So it can be a room with a door that is closed or a backyard that is fenced in. Each child is the Floortime leader for 20 minutes or 15 minutes. So when the older guy, in this case, is the leader, you try to bring in the 16 month old almost as a prop in the interaction; as a little helper. You try to create games where the older child will relate to the younger one. You have to supervise that and engineer it, in essence. You can be playing chase games or hide-and-go-seek games where you and the little one are hiding together and the older one has to find you. But then when it is the little one's turn to be the leader, and the older one tends to wander off, again you have to be constantly pulling the older one in as the mediator. So you try to follow the little one's lead and see if the older one will help you make the little one giggle or smile or if the older one is speaking, repeat some words, or moving a car back-and-forth. But you do the best you can, and if the space is contained, even if you lose the older one a little bit while you are focusing on the little one, so be it. But you are constantly trying, like a good orchestra leader, trying to pull in all members of your orchestra. It will take time to do. The key elements are to see yourself as an active mediator, creating games which create interaction where maybe both children are sitting on your tummy or jumping on your tummy, as much as possible if the child is capable of it playing games where they have to

cooperate in order to beat mommy or daddy at a game, but it's also important for a child who wanders off to have a defined space so you are operating in a narrower space. Sometimes you may have to have both adults involved in order to keep it going as a whole family Floortime enterprise.

Now next week, we are going to talk about a subject that many of you have written in about that you are interested in, which is the higher levels of thinking. We are going to talk about teaching children to be logical thinkers, but also teaching them to be more and more abstract in their thinking. The topic for next week is how we go from creative and logical thinking to reflective abstract thinking in children with special needs. That is the topic for next week. That journey from creative and logical thinking to reflective abstract thinking will take us through the various stages of more advanced thinking – what we call multi-causal thinking, gray area thinking, and thinking off an internal sense of self and internal standard. So that will be for next week. Many of you have been asking for how to work at the more advanced levels and that will be our focus for next week's show. So thank you for joining us.

4938 Hampden Lane • Suite 800 • Bethesda, Maryland 20814 • 301 656-2667
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