Web-Based Radio Show

Redefining the Standards of Care for Children with Autistic Spectrum Disorders and Other Problems Relating and Communicating:

Introducing our DIR Model and the reasons for it; the reasons for having an approach that can be tailored to each and every child and family; and also the way to do it.

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January 5, 2005

Good morning. Welcome to our Web-Based Radio Show. Also, I want to wish everybody a very, very happy and healthy New Year. Just introduce myself for those who are tuning in for the first time, this is Stanley Greenspan and this is our weekly Web-Based Radio Show where we focus on issues related to children with developmental challenges and learning challenges, as well as issues that are important to all children and families.

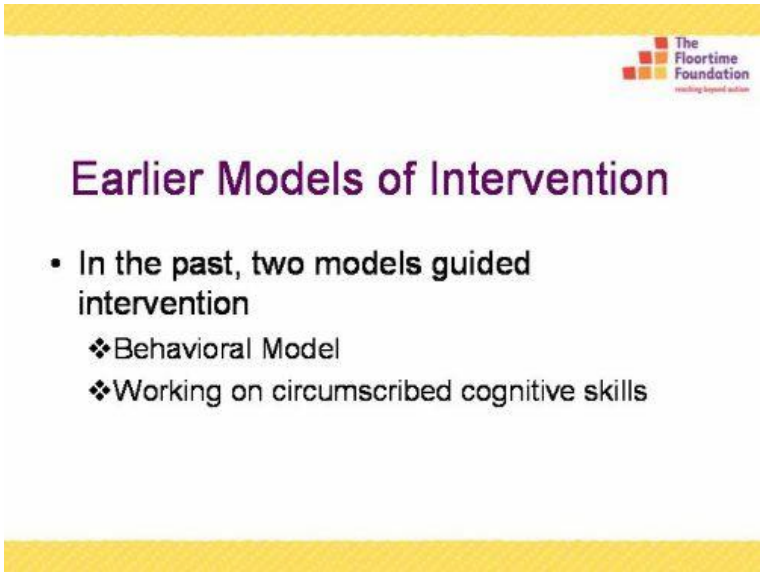
Today we have a real special treat because we are going to start off the new year with a kind of review or reintroduction about the fundamentals. That will start off our series for 2005. As you know, we have been talking over the last many, many shows about what we call our DIR Floortime Model. Also we have also been trying to answer your questions about how best to create a program that is tailored to each and every child's unique qualities. There has been a real challenge in the field over the years, whether we tailor a child to the approach or tailor the approach to the child. As you know, I'm a strong advocate to for tailoring the approach to the child. Every individual and every family is unique and special and has their special strengths, but also their special challenges and for each and every child and family, then, we have to have an approach that will meet the needs and challenges that help that child and family work together on learning to relate, to communicate, and to think.

So today we are going to begin with introducing our DIR Model and the reasons for it, and the reasons for having an approach that can be tailored to each and every child and family and also the way to do it. It's one thing to have the goal; it's another to have a model and framework instead of techniques and strategies that enable us to actually tailor the approach to each individual child and family.

What I'm going to do today that is going to be a little unique and special is take you through a slide show that is going to enable you to look as well as listen as we cover the essentials of our DIR Floortime Model. Now the first slide, as you will see, states:

That is literally what we are doing. We are redefining the standards of care. Historically, we've tended to try to fit children to the models that we had, but now by tailoring the approach to each and every child, and involving families much more intensively, and having family members be co-leaders with the educators and other professionals involved in the care of the child, we can literally redefine the standards of care.

Now the earlier models that have guided us, as you'll see on slide #2:



We have had a number of different qualities. One of the most popular models that is still widely used that can be called the Behavioral Model. The most widely used version of that is ABA or Discrete Trial which is a form of intensive behavioral work, was based on a concept that we could modify the surface behaviors or symptoms of children with autistic spectrum disorders and other developmental problems by systematically reinforcing appropriate behaviors while systematically extinguishing the less appropriate ones. In its time when it started, this model revolutionized care for children because it was intensive, it was individualized to the child, and did offer hope for many children who otherwise were involved in behaviors that could be self injurious or could be very self absorbing and where it was difficult for those children to learn. However, the behavioral model did not take into account the individual ways in which children processed information and the way they responded to and comprehended sounds or sights or touch. For example, we know some children are overreactive to touch or overreactive to sounds. We know some children are better at remembering what they see than what they hear. Other children on the autistic spectrum, surprisingly, are better with their auditory memories – they remember better what they hear than

what they see. Children differ in terms of their abstract thinking – some children are better abstract thinkers with sights than sounds, but again surprisingly here, we find some children on the autistic spectrum who can be a little more abstract with certain words than they can with certain sights.

So we have to understand each child's nervous system and what we have discovered is that the biological side of autism is expressed not in some global autistic pattern but through the individual ways children react to and comprehend the various sights and sounds and touches and movement patterns in their environment, and the way they plan their actions. So we have to understand that component of it, and that is relatively newer and that's why we need to build beyond the earlier behavioral models.

Also what is newer is that we now understand the core deficits in autism and also the core capacities that all children need to relate, communicate, and think effectively. So instead of working just on surface symptoms and on surface behaviors, we can now work on building the foundations to healthy relating, communicating, and thinking. What this does is enables the children to generalize much more and enables the children to accomplish goals that we thought were unattainable in the past such as the ability, at least for some children, to become insightful and make inferences and be truly abstract in their thinking patterns and be socially skillful. In the past we thought this was beyond their reach and the best we could do was just change surface behaviors. So, understanding how the mind and brain grow and building approaches that go beyond the older behavioral models now opens up new doors and really does redefine the standards of care.

Now the other older model is working on circumscribed cognitive skills. Many schools, understandably in the early days, took models of older children and applied them to younger children. So if you had a 3 or 4 year old with an autistic spectrum disorder, the approach was to say, "What skills do we typically want with our 4 or 5 year olds or 8 year olds who are developing without challenges?" They need to be able to line up their blocks in a certain way or put different shaped blocks in different

holes or be able to count or be able to identify letters. So there was a series of skill building tasks that were done in repetitive ways because it was felt that this was how children with autism and other developmental problems could best learn: through repetition. But children were taught in what I call, these memory-based ways, where they were "drilled" to memorize certain sequences like, "This is a square, this is a circle." Now this looked like education, and in fact it's what happens in education not infrequently. But, a child without developmental challenges is able, often, on his or her own to generalize and may figure truly what a square or circle is by applying that concept to many different squares and circles, and then eventually to geometry.

A child with developmental problems often needs help in developing the concept. If we just do it in a memory-based, repetitive, drill-oriented way, often children are left simply with memory drill-oriented knowledge. This means they can reproduce this shape or reproduce the number or the letter in a certain structured situation, but don't really have a full understanding of the letter or the word or the shape and what it means.

So working on circumscribed cognitive skills, also an older model, is something that had an important advance in it's time in the sense that it showed that we could provide some educational experiences for children with autistic spectrum disorders and other disorders. But now, for the same reasons we can go beyond the behavioral approaches, we can now go beyond the older circumscribed skill-building approaches. The reason why we can go beyond it is because we can build the foundations for healthy relating, communicating, and thinking. The key word here in terms of education, is thinking. In order to understand what words mean, you have to be able to think about those words. To understand how to use shapes in math and eventually be an architect, you have to be able to think with shapes. Now we can actually build those building blocks.

So the field is now ready, as we see in slide #3 to move beyond these older models and employ a truly developmental framework to guide assessment and guide intervention.

Now in slide 4 you can see that this new approach is fueled by our new insights.

These new insights are that language, cognition, as well as

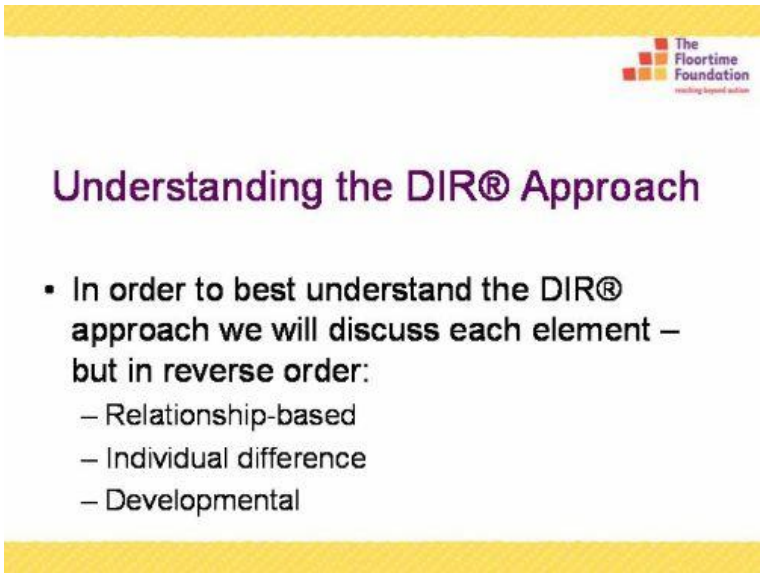
emotional and social skills are learned through interactive relationships. In other words, it is a dynamic learning process where infants and children and even teenagers and young adults learn through interaction; learn by doing. Piaget pointed this out many years ago, but he was concerned more with the "doing" with the physical environment – experimenting with shapes, for example. We found that it's the "doing" with other people – it's the dynamic emotional interactions that actually leads to concept formation and new learning.

Also, another new insight is that variations exist in underlying motor and sensory processing, as I mentioned before. So each child, because they each have a unique biology, has a unique way of responding to and understanding sights and sounds and touch and movement.

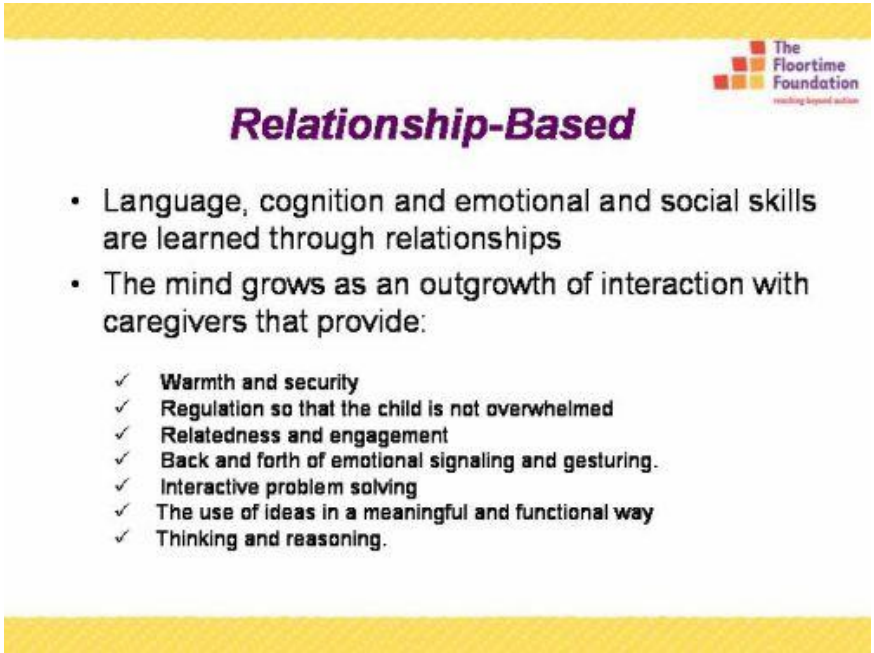
The third insight is that we now have a new roadmap of development. It's called the Functional Emotional Developmental Capacities. These Functional Emotional Developmental Capacities can be thought of as your mental team. In the old days we thought of motor development or language development each having it's own sequence. We looked at a child's age in terms of motor skills or language skills or social and emotional skills. Now we can put all these skills together into one framework that we call Functional Emotional Developmental Capacities and look at the roadmap for Functional Emotional Developmental Capacities.

Now the DIR approach that you have all heard about is simply an overview set of initials standing for Developmental Individual-difference Relationship-based approach. What it means is we look at the "D" – the Functional Emotional Developmental Capacities. We look at the "I" – the individual differences; the ways in which the child processes information in their unique way. And we look at the "R" – the relationships. These are the learning relationships and the family and in school and in other settings. These learning relationships in the DIR Model need to be tailored to the child's unique way of taking in information; his unique processing profile. They need to also be tailored to meet the child at his or her developmental level; his functional level of capacities and help the child climb the ladder to higher functional developmental levels.

So in order to understand the DIR approach, let's look at it in a little more detail at the different elements. We are going to take it in the reverse order, as you'll see in the next slide, starting with Relationship-based, then going to Individual differences, and then going to our Functional Emotional Developmental Capacities.



As indicated, relationships and emotions are critical to learning. Now why is that the case? Why are relationships in the family, between the caregiver and the child, between teachers and children, and between therapists and children so critical?



Why is the relationship element the real foundation piece in the DIR Model? Think of a new baby who is learning the first task of life, simply to look at Mommy's face and to pay attention; something we need all of our children to be able to do. When 1-month old little Susie looks to the right to Mommy's voice, why is Susie looking right? She is hearing a sound, but if that sound is shrill or aversive, Susie won't look at her. She may even look in the other direction. If there is overwhelming noise, she may look all around and start crying. On the other hand, if Mommy's voice is sweet and pleasurable and awakens positive emotions in Susie, and it's "Susie, here's your mommy, here I am (spoken in a quiet, calm voice)," little Susie will move her sweet little face an inch or two to the right, an inch more, an inch more, until she spots Mommy, and we may even get a little grin, even at 1 month. Out of the corner of her eyes, she sees Mommy's smiling face at her. So Susie will turn to the sight of Mommy and to the sound of Mommy because it is associated with pleasure and positive affect. When we did a study of multi-problem families that weren't providing this positive affect, we saw children not learning this first lesson in life.

So you have all heard the term "sensory motor pattern." The child takes in a sensation like a sound and then turns, i.e., a little motor pattern. But it's not really a sensory motor pattern as has been previously thought. It's a sensory affect motor pattern. We call it the "SAM" – the affect is in the middle between the sensory experience and the motor pattern, i.e., the doing. So the listening and the doing or the seeing and the doing has a step in between which is the affect.

It's the same thing with a 15-month old. When a 15-month old is going to solve a problem like figuring out how to get the toy, first the 15-month old has to want that toy. Then if they need to get Mommy or Daddy's help to lift them up to reach up to the shelf to get the toy, where they are going to combine many sensory motor patterns together into a complex social interaction to solve a problem, they are going to have to have positive and trusting feelings towards Mommy or Daddy as a possible helper. Then the combination of the positive emotion: wanting the toy, and the positive feelings with Mommy and Daddy helps them

organize that complex sensory motor pattern which has many, many back-and-forth interactions as a part of it, to problem solving – get the toy.

Let's project this up a little further when a child learns to say, "Hello." Do they learn to say "hello" because they've memorized that you say "hello" to everyone who lives within a quarter mile radius of your house and everybody who is a first degree relative? Or do they say "hello" because they have a warm, fuzzy, friendly feeling in their tummy and somebody has a nice, smiling face and they say "hello"? What mediates the word "hello"? Well, it's the warm, fuzzy feeling in your tummy. How do they know what an apple is? Is an apple something that they have memorized that is red and round? Or is it something that tastes good and that you throw at your brother or sister, etc., etc. So words have meaning because of their associated emotional context that we have used them in. We found that even grammar – the rhythm of words and the placement of words; the placement of verbs and nouns all occur because of the emotional context within which language is learned. We've written about this in our new book, *The First Idea,* how symbols, language, and intelligence evolved from our primate ancestors to modern humans.

So affect and emotion is at the center of how we learn to think, how we learn to communicate, our language skills, our complex motor skills, and even our ability to modulate our moods and sensations – are learned through back-and-forth interaction with soothing caregivers who teach us to regulate and teach us to modulate. So if affect is so important, then relationships have to be viably important as well because the only place we get our affect is through interactive relationships. For those who aren't familiar with the term "affect," affect and emotion are the same thing. We are talking about emotions here. Positive, pleasurable emotions that are the mediators and the leading force that enables us to learn.

Now also, one of the big questions for children with autistic spectrum disorders has been, "How do children learn abstract thinking? How do they learn to make inferences; reach new conclusions?" Even

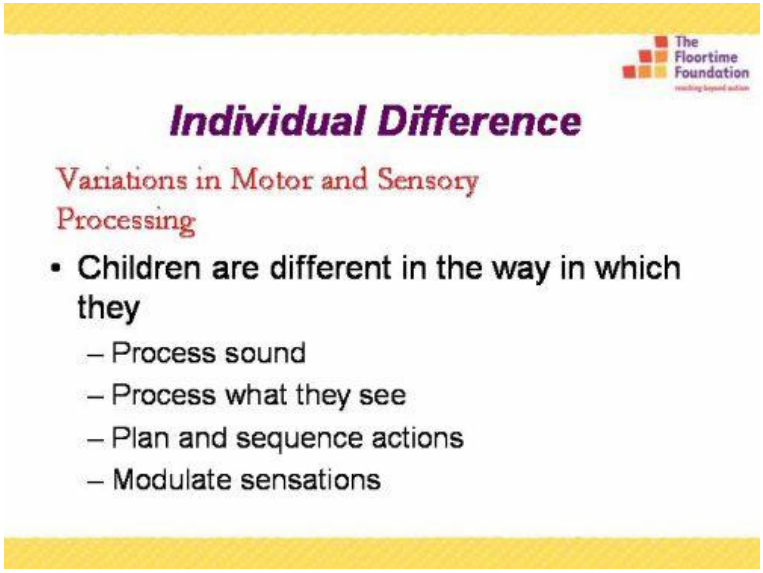
children who were thought to be "high functioning" on the autistic spectrum with either Asperger's Syndrome or just high functioning autism are often believed to be unable to learn the truly abstract thinking capacities that are required in today's complex society. We have found that when we work with children off of their emotions, they can learn to be abstract thinkers. We've shown that a subgroup of children with autistic spectrum disorders were able to achieve very high levels. Many of them are now in their teen years and some of them are going off to college and they are very good abstract, inferential thinkers. But the key was teaching them though interactive, dynamic, learning relationships that had a strong emotional component.

I like to tell the story about asking children about an emotionally meaningful subject like being bossed around. With one group of children we asked them to tell me about bosses. They said that teachers are bosses, parents are bosses, policemen are bosses, and they gave us a list of bosses. Another group of children, when we asked them to tell us about bosses, they said that they didn't like to be bossed, sometimes they needed to be bossed and sometimes they didn't. I asked them who tended to boss them and they replied that parents bossed them but they didn't always know when they needed it and when they didn't, but when they did it was ok but when they didn't it wasn't ok. That was a truly abstract answer – the second one. We found that we could help children with autistic spectrum disorders achieve that degree of abstraction and reflective thinking, even though at first they would answer questions in a more rote way, if we involved them in a lot of emotional experiences where they figured out bosses from it's emotional context. So everything has to be taught through interactive, dynamic, emotional relationships.

Opening the door, the word "open" is not memorized from a picture, it is memorized because you take Mommy by the hand, you have to figure out the word "open" to get the door open to go outside and play. When you teach the word "open" you teach it by saying, "What do I do? Open or close that door? Do I open or close?" When you want to teach a child to answer a "why" question, it's "Why do you want to go out and play?" It's not a memorized script, they have to give you a good

reason. You might give them multiple choice. "Do you want to go out and play because you want to throw the ball or go on the slide or go to sleep?" If the child says, "Go to sleep" then you say, "Ok, let's go to sleep." Pretty soon the child will say, "No, No! Go on slide! Go on slide!" That's a child who is learning by solving an emotionally relative and meaningful problem. That child learns to abstract. That's why learning relationships are so important.

Now the second component is Individual differences. As we've talked, individual differences are critical to understand because they are the way in which the child's biology expresses itself.

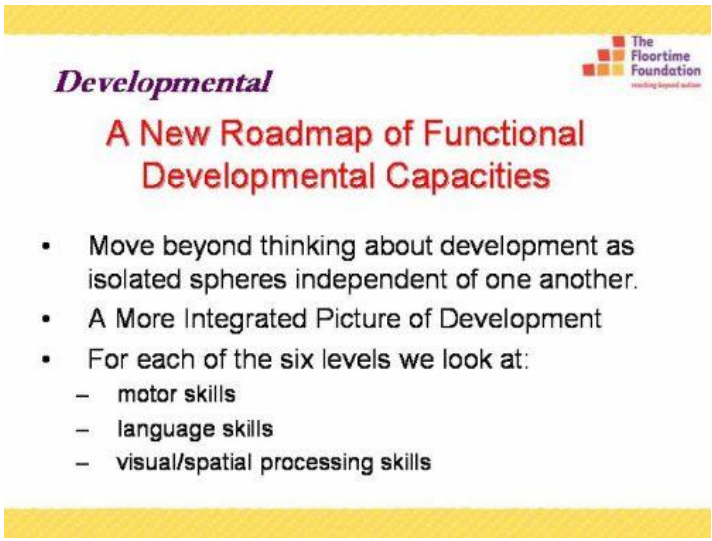


We put a lot of effort into understanding the biology of autistic spectrum disorders and in trying to figure out the genetic path that might be operable here. This is very worthwhile effort and it continues to this day. It's more complicated than we originally thought. We see that when we do family studies for many developmental and mental challenges, there is no one pattern that seems to predominate. We may see genetic differences but it may be different in different families. So it's a complex set of issues. We may be dealing, actually, with multiple

pathways here and multiple genetic patterns. The commonality may be just like a fever is a common reaction to stress on the body, or an inflammatory response is a common reaction of the body, but it may have many different causes. Similarly, some of the behaviors we associate with autism may be the result of many different pathways and many different causes and many different genetic patterns. While we're searching to solve this difficult biological puzzle of what makes it hard for some children to learn to relate, communicate, and think, we need to understand how the biology expresses itself in the child. It doesn't express itself simply as an end product, i.e., and autistic spectrum disorder. It expresses itself through differences in the way the nervous system works. Those differences are: How does my child respond to sound? Is he overreactive or underreactive? How does he comprehend sounds and words? Does he have a strong memory or a weak memory? How does he respond to sights? Do bright lights bother him? Do bright colors bother him? Does he crave sights, staring at moving fans and staring at bright lights? How about movement – can he plan and sequence movement? Can he carry out a 10-step problem solving task such as solving an obstacle course? Does he tend to just repeat one or two actions in a row – motor planning and sequencing.

So basically, our children process sound, they process sights, they plan and sequence actions, they modulate sensations, and all of these are governed in part by their unique biologies. But to understand these biologies we have to see how the biologies play out functionally in their daily lives because then we can tailor the environment to work with their biologies so they can learn. A child who is overreactive to sound is overwhelmed in a busy classroom, but in a corner of a classroom with one other child they may be able to learn quite well. So we have to tailor, but at the same time we have exercises that different therapists who work with children, such as occupational therapists and speech pathologists; we have exercises that can strengthen these processing capacities directly. For the child who is overreactive to touch or sound, he can learn to modulate and regulate better. For the child who doesn't comprehend sounds or words well can be helped to comprehend sounds and words more effectively.

Now the third element in our DIR Model is our new roadmap of Functional Developmental Capacities, which you see in the next slide.



As I mentioned before, in this new roadmap we've moved beyond seeing development as isolated spheres, independent of one another with motor or language or cognitive or social/emotional – each thing a separate line in development, each with its own timetable. No child can separate this out in their own mind. A child is a speaking, feeling, socializing, moving, sensation-responding child. They are putting all their different components of development to work together as a mental team. So we ask the question, "How does this mental team operate? Can we create a roadmap with expectable milestones for the whole team, just as we did for motor development or cognitive development or social development or language development?" And we did it. We formulated that in terms of what we call, "Functional Emotional Developmental Capacities" or milestones. We now have, actually, a validated, reliable, parent questionnaire called the "Greenspan Social/Emotional Growth Chart" available through the Psychological Corporation and Harcourt Assessment Incorporated, that can do this for the first three to four years of life, for infants and young children. But we also have these described in our book on the Functional Emotional Assessment Scale and in many of our other publications, like *The Child with Special Needs* book that provides a broad clinical picture of these

milestones. There are basically six levels that we look at in the first three to four years of life and then there are more advanced levels that we see after that. I'm going to walk you through these first six levels and then just briefly mention the more advanced levels.

The first level has to do with the child's ability to be interested in the world and calm and regulated at the same time.

Often, by 3 or 4 months of age, babies have accomplished this, but for children with developmental problems, this can be something they are working on at age 3, 4 or 5.

The second level has to do with the ability to engage in relationships; to be warm and trusting; to enjoy being with people. Here what is critical is just looking at people doesn't suggest you can relate or engage. It has to do with the quality of warmth. I have seen many children who won't look at a face because it is too overstimulating because they are so sensory overreactive, the human face with the smiles and twinkling eyes is too stimulating for them, but they are very warm and related children who love to cuddle and love to sit and lean with Mommy

together or with Daddy together. So we want to distinguish the ability to relate and engage from simply the ability to look. The mechanical look is not trusting and relating, and trusting and relating may not always involve looking. It may involve touching, it can involve other forms of closeness and trust. Although often what we find is when we follow the child's lead and play to the child's pleasure and build on activities that they want to do, such as put their favorite toy on our head, often they look at us and they love looking at us. They look at us because they want to, not because they are forced to.

The third capacity in our Functional Developmental Capacity Milestone list is the ability to engage in two-way communication. This is simply the ability to be intentional; to be purposeful. The child reaching for the block in Mommy's hand, the child who is making a vocal gesture because they want you to come but they haven't got the word for it, the child who is pointing. It's the back-and-forth gesturing with sounds and facial expressions and little movement patterns that constitutes two-way, purposeful communication. That's an essential building block for words and thinking skills. It involves all parts of the nervous system – the motor system, emotions, the social interaction, as well as emerging language in terms of sounds.

The fourth level is the ability to now create many circles of communication in a row and have what we call a continuous flow of back-and-forth interaction as part of trying to solve problems together with other people like taking Mommy by the hand, walking her to the refrigerator, pointing to the food they want, taking Daddy to pick you up to find that toy – all those are examples of complex social problem solving.

What has been called joint attention, where the child goes back-and-forth between the toy and Mommy and Daddy, looking, pointing, showing – is also part of shared social problem solving. But shared social problem solving involves many joint intentional frames or episodes in a row. So we have a continuous flow. In other words, a child who is a real shared social problem solver is joint attentioning all the time as part of that social interaction and social relationships.

Reading the intentions of others – the ability for what has been called "mind reading" or theory of mind skills is also part of shared social problem solving. It originates during this stage because you can't understand the intentions of others unless you are part of these complex back-and-forth social interaction involving a continuous flow of social signal reading. When you are taking Daddy by the hand and pointing to the door to get him to open it for you, you've got to be able to gesture to Daddy, but then if he shakes his head, "No" you've got to understand he's saying, "No, I'm not going to that door" and then you've got to up the stakes and threaten to throw a tantrum with your gesture, but not throw the tantrum, to get him to change his mind. So you've got to read his signal and then he's got to read your signal, and then you've got to

read his signal and he maybe compromises and says, "In two minutes I'll open the door" and puts his two fingers up and gives you a sign for "Wait a little bit until I'm finished with talking on the telephone." Through those kinds of interactions with signs and signals for "wait" and "be patient" and "I'll do it in a second" or "you're getting me too angry, you better not be so naggy and so intrusive" – all of that is what leads to social signal reading and that's part of these back-and-forth complex social problem solving that leads to understanding the intentions of others. But, more importantly, eventually it leads to Level 5, the ability to create ideas. When we create ideas, we're actually now using symbols or images to not create something new, but actually to represent and symbolize and picture in our mind, so to speak, but it's a multi-sensory picture, all the things we've been talking about. These complex interactions and problem solving interactions we've just had, we can now picture in a mental form, and then find the words to convey it. So instead of having to drag Daddy to the door and signal and gesture "out" we can say, "Daddy, I want to go outside!" or "Daddy, out! Open door." And Daddy, instead of gesturing can now say, "Wait" etc., etc. So Level 5 is the ability to create ideas. We see this in pretend play and we see it also in just regular conversations. But it's conversations that are not scripted and not memorized words, but in meaningful conversations, "Daddy, love you" or "Daddy, apple now." They are from the heart. They are with intent. That is the key. True ideas are ideas that are invested with emotional meaning and that comes from complex social problem solving which is the stage before that.

We also have a new theory about how ideas form, which we write about in our book, *The First Idea*, which is it is the ability for complex social signaling and problem solving that enables the child to separate their perceptions – what they see and hear – from their actions – what they do, and free-standing perceptions are images, and then these images become invested with emotional meaning, and that gives rise to symbols. So it is a new theory about how symbols form, through the separation of perceptions from actions via complex co-regulated interactive signaling. In other words, little babies go from "seeing" right to "doing." But by Level 4, a toddler, through complex social signaling, doesn't have to go from

"seeing" to "doing." They can "see," negotiate through affective interactions, and then "do." But that ability to separate through social signaling the "seeing" or the "hearing" from the "doing" enables you to have a free-standing image and that becomes the basis for the symbol, according to our new model. That's critical for language development and critical for higher level thinking skills.

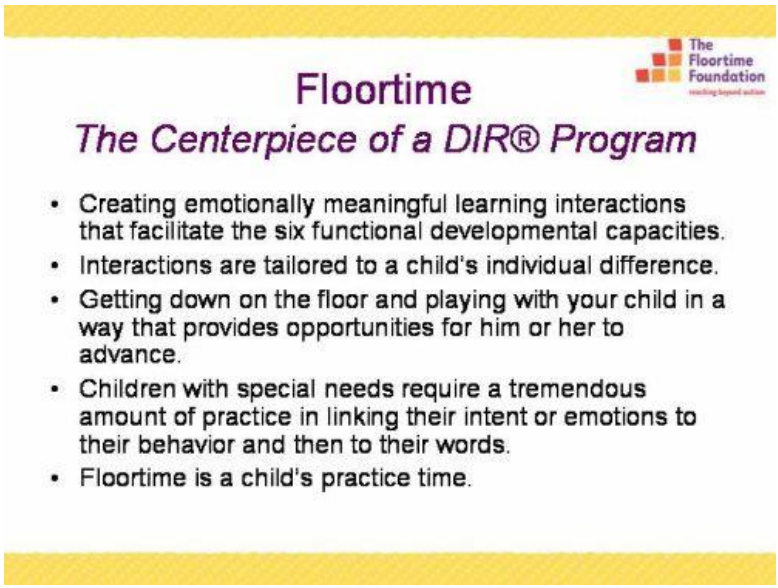
Now Level 6 is the ability to build bridges between our ideas. That means we can now not simply have ideas, but connect ideas together. For example, a child can answer a "why" questions. "I want to go outside." "Why?" "Because I want to play." This ability, eventually, goes through higher levels. We've identified, in addition to Level 6, Levels 7, 8, and 9 where a child can learn what we call, "Multi-Causal Thinking" – give you many reasons for why he wants to go outside. Eventually he can get to what we call "Gray Area Thinking" – Level 8, where he can tell you how much he wants to go outside. "I want to go outside an awful lot – more than yesterday." Eventually he can get to Level 9 where he can think about thinking. He can tell you, "Gee, I want to go outside more than I usually do, and I'm more grumpy today than I usually am so you better let me go outside or else." That's a child that can reflect on himself, who can think about his own thoughts.

So we have to help the children climb the developmental ladder and master each of these Functional Emotional Developmental Levels. The way we do that is by tailoring our learning interactions to the child's individual differences and create a comprehensive program based on that fundamental concept of tailoring the interactions to their individual differences, and to help them climb their Functional Emotional Developmental ladder. We don't do it ourselves. We have an active home program, but we also have professionals involved and we have educators involved in the comprehensive program.

That gets to our next slide, the DIR-Based Comprehensive Program.

Now it starts with always an assessment and evaluation where we assess all the things we've been talking about. But then it leads into a program that often has the following elements in it. Floortime, which is spontaneous play opportunities. Semi-structured problem solving, where we are teaching new words and concepts by setting up problems to be solved like teaching a child to say "open" while they are trying to open the door to go outside, or "up" vs. "down" as they are searching for a toy that is up on a shelf or down below. It often involves speech therapy and occupational therapy and four or more peer play opportunities per week. It involves educational programs that involve access to other peers who are interactive and verbal so children learn to interact with peers. These are all critical elements of a DIR-Based Comprehensive Program. All the elements work together, following the basic principles of tailoring learning interactions to the child's individual differences to help them climb the Functional Emotional Developmental ladder.

Now one of the centerpieces of our DIR program, at home and at school, that you'll see in the next slide, is called Floortime.



Floortime is the centerpiece because we do Floortime-type activities and the Floortime philosophy in all elements of the DIR program, whether it's during occupational or speech therapy, or during the home Floortime play opportunities. What Floortime means, in the little sense, getting down on the floor, following the child's lead, building circles of communication, tailoring those communications to the child's individual differences, and helping the child climb the developmental ladder. So from the child's point of view, it's just having fun. From the adult's point of view, it's exercising all their six Functional Emotional Developmental Levels by tailoring to individual differences and helping the child master each and every one of them in sequence, up to the highest level the child is capable of, and then moving yet to one level higher.

There are many elements to Floortime. It can be done, again, at school, at home, in the supermarket, in the bathtub, and in the swimming pool, and it needs to start off with following the child's lead. It doesn't mean only doing what the child is doing. You then need to challenge the child to interact with you. So for some children, that means helping them do what they want to do. They want to get to a toy, and you might make it a little closer and they have to reach for it in your hand or reach for it on

top of your head, which helps them look at you. With another child, it may mean being playfully obstructive – hiding the toy in your hand and they have to take your little fingers and move them away from the toy and then get the toy, and they've made a discovery. Sometimes you may fool them and hide it in your shirt and they have to search for it in three or four different places. So Floortime means not just following the child's lead, but starting with that and then challenging the child to interact and climb the developmental ladder.

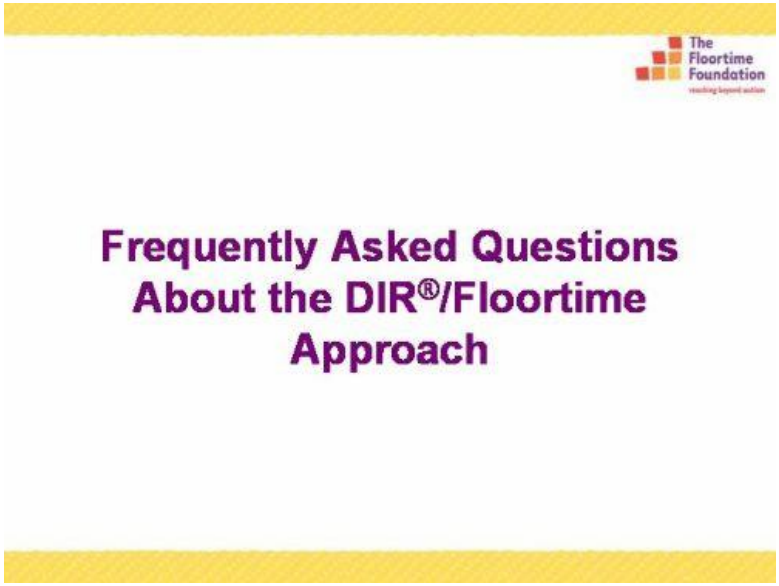
Now in the next slide, you see some recommended resources.

There are a number of books and articles and we also have training videotapes that we have made, and *The Child with Special Needs* is a very good book for parents and professionals in terms of outlining out approach. Our *Clinical Practice Guidelines* from our Interdisciplinary Council for Developmental and Learning Disorders is very systematic in detail, and it can be downloaded, free of charge, from our ICDL website

(www.icdl.com). We have our ICDL Training Videotapes where Dr. Serena Wieder and myself have 20 hours of training tapes, demonstrating working with different children and families, illustrating the different DIR Floortime approaches.

Now this is a quick overview of our DIR Model; our approach to working with children with special needs and related developmental challenges. It summarizes and repeats much of what we talked about over the many sessions we have had before, but it is a good way to start the New Year to give you both a quick overview of our basic model, and to have the added treat, I want to thank our Floortime Foundation leader, David Raphael and also our other Floortime Foundation colleagues, for making these slides available and for getting access to a software program that will make it very easy for you to access this information.

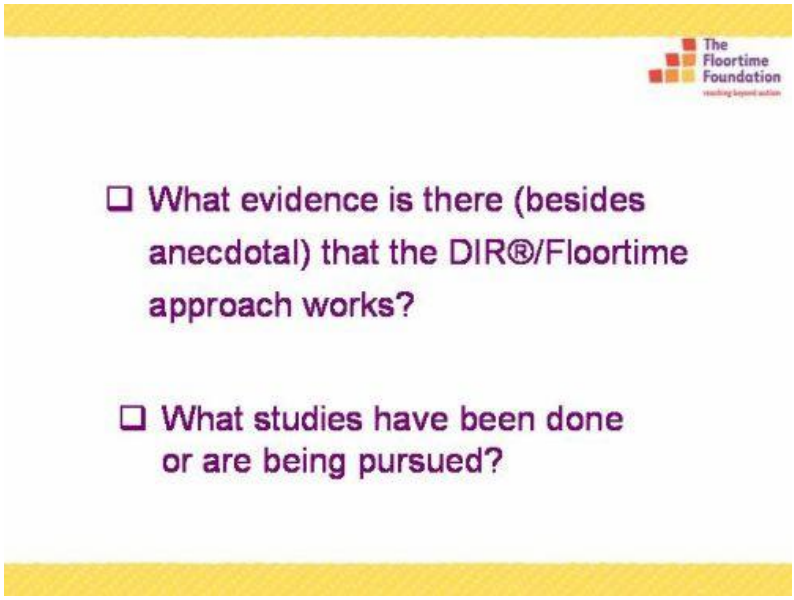
Now what I want to do is turn our attention to Part 2 of today's show. We also have some slides to help with this part of our show today.



This is also part of our post-New Year's treat, and it's the most frequently asked questions about the DIR Floortime approach. Over the many, many months that we have done this show, many of you have

called in with excellent questions. In addition to the various seminars and meetings and in conversations with many of you on the telephone or in person, I receive many of the same questions and many different ones. Each one is a very special question. What we thought we would do is take the most frequently asked ones and answer them systematically in a little slide presentation. So you'll have access to them and can refer back to them. Obviously there will be more questions and I hope these stimulate more for the coming weeks and months and for additional shows.

One of the first questions and the more frequently asked ones, is "What evidence is there that the DIR Floortime approach works?" and "What studies have been done or are being pursued?"



Basically, we have a number of sources of evidence. There is a big emphasis being based on evidence-based treatments. We have to realize with evidence-based treatments, however, is we have to assess the state of evidence in terms of a whole field – where a field is. We always want more evidence. But what we know so far is that case by

case we have seen many children do very, very well. Case studies are a very important foundation for any new and growing field. Unless you are encouraged by individual in-depth studies, you don't want to go on to very expensive clinical trials because you don't have reason to believe that your clinical trials are going to turn out positive. So first you want to see evidence in detailed case studies. The other benefit of case studies is it helps you fine tune and develop the ingredients of the approach better. You need detailed case studies to know how to improve your strategies and techniques; how to work with each type of child because every child is a little different. Every child is special. So we have lots of case studies built up over the years. Many of those are published in *The Child with Special Needs* book and in an earlier book I wrote called, *Infancy and Early Childhood* from International Universities Press in 1992, and in articles that myself and colleagues have published. And we have a number of detailed parent reports. Patricia Stacey, who has used the DIR approach has written a wonderful book called, *The Boy Who Loved Windows.* She did an Atlantic Monthly article before that, so that is available on our Floortime Foundation website, as is the reference for her book, published by Perseus Press.

Besides the individual case studies, we also did a review of 200 cases a number of years ago. We looked systematically at 200 children who had basically come to see me personally over the years, and we systemized their cases. We looked at their original diagnoses and their progress in many years of work. What we found was, in that systematic review of 200 cases, was a number of very important findings. One that over 50% of the children did better than we ever would have imagined children with autistic spectrum diagnoses could do. These were all children who were not only diagnosed by us, but diagnosed by two or three other evaluation teams, in many leading medical centers, with an autistic spectrum diagnoses. Over 50% got to the point where they were warm, interactive, had trusting relationships, high levels of language, high levels of thinking skills with creative and inferential abstract thinking capacities, and were within 3-4 years of their program in regular classes. Most of these children now are older – they are teenagers, and some of them are in college. We just did a follow-up and a presentation of them

at our last ICDL meeting of some of the teenagers, and they not only held onto their gains, but they continued to make gains. Some of them are popular, warm kids who have great peer relationships and have unique talents. Others are just typical teenagers in every sense of the word – giving their parents troubles about limit setting and all kinds of things. Of the kids who started doing well, who developed strong language and thinking and creative abilities and good peer relationships, they continued to nurture those along. The challenges that they have now, for those who have challenges, are in the garden variety range for all teenagers. Many of them are, again, outstanding kids. So we have systematic evidence that a subgroup of children can do quite well. Even though it was over 50% in our sample of 200, that's not a representative sample. That was a sample of people who were very motivated and who came to see me. But it did represent the full range of the continuum. Some had the more severe end of the autistic spectrum continuum and some had the more mild end. So it did involve the full range but was not a representative population. Also, it was not a clinical trial study, there was no randomized putting children in an intervention group and a non-intervention group, but as a first level study, it was very important because it gave us a picture that children could do better than ever expected before.

We also found that children who didn't quite do as well as the children who did better than we ever imagined children could do with autistic spectrum diagnoses, and children who made slower and more gradual progress, which is a little over 30% of the children, they all went on to develop language. They could talk in phrases. Many of them got to the point where they could answer "why" questions. They became very warm and loving also, but with less language development and less sophisticated or abstract thinking skills. Some of those children had more involved neurological challenges to begin with. What was interesting to us was how warm and loving they became. The first thing that they changed was their relatedness and their warmth and their ability to show affection and how important that was to parents and family members, as well as to the children. It made us believe that one of the first things that could change was the warmth and relatedness. That was even quicker

and easier to change than the language or the cognitive or some of the motor skills, which took a little longer to make progress on. That's very important because once they became warm and loving and interactive, a lot of the negative behaviors – self-stimulatory behaviors, perseverative behaviors, self-injurious behaviors – basically ceased. So a lot of the problematic symptoms got significantly better as the children became warm, interactive, and loving.

Then there was a third group of about 12% of the children who made very slow progress. They had the most complicated neurological pictures. Some of them had other neurological disorders as well such as seizure disorders. However, even in the group that made the slowest progress, they too became warm, loving and very sweet. In this group also, negative behaviors such as self-injurious behaviors decreased enormously. Most of these children went on to learn how to communicate with gestures and many of them with simple words and short phrases so there was more progress here than we would have typically expected from children who had more neurological challenges to begin with.

So we are very pleased with this systematic study of 200 cases in the sense that all the groups did better than we expected with an approach that worked with their individual differences, and that harnessed the families involvement as well as the educators and professional therapists.

In addition, we have done some additional studies. We took 20 of the children who were in the group that surprised us, that did better than expected, and studied them in great detail. We analyzed videotapes and compared them to children who had no challenges at all. We found that the children who never had challenges and the children who made this better than expected progress were indistinguishable using our FEAS (Functional Emotional Assessment Scale), which was done by reliable blind raters from a peer group who never had challenges at all. That was also something that we are very encouraged with.

Now we are going to do a bigger follow-up study that we are just starting of all the children who have done very well who are now

teenagers, and we have hundreds and hundreds, and to get more information about their profiles. The additional study we have done also, is we have analyzed videotapes of children in short intervals, and also over 2-3 years with raters rating the videotapes using our FEAS, again in a reliable manner, and we found that there were statistically significant gains on the short term and over 2-3 years in the pre-post evaluation of a number of individual cases. We looked at ten cases in detail with raters rating the videotapes, showing significant gains in the short term and even more gains over 2-3 years. Interestingly, we even saw gains within the first session between the first part of the session and second part of the session as we had the families working, following the child's lead, harnessing the child's positive emotion, and facilitating interaction, suggesting that in many of the children, this capacity was there to begin with. It wasn't something new that was created through therapy, but just wasn't being worked with and wasn't being brought out. This was shown by the differences between the first part and the second part of the session once the families began, though some coaching, engaging the children in different ways.

Also, Rick Solomon completed a study recently of a community-based application of the DIR Floortime approach in his Michigan Play Project. He did this with a large sample and showed statistically significantly results in the pre-post and in comparison to other children. That is available through Rick Solomon directly, and the reference for that can be found on our website.

In addition, there are other studies on our Relationship-based approaches that are using elements of the DIR Model that are referenced in our article called, Research Support for the DIR Floortime Model that is available on the ICDL website and on the Floortime Foundation website that summarizes these additional studies.

One important review that we have showing additional research evidence for the DIR Floortime Model is where we have analyzed the research of all the components of the model. The DIR Model is a framework that involves occupational therapy, speech therapy, as well as Floortime, family support, social relationship work, etc. So what we did

was we analyzed each of these components as much as you would if you were looking at heart disease and looking at the effects of exercise, diet, nutrition, medication, etc., and we figure that if each of the components shows positive results, then the whole package suggests that it would be a positive overall program package. In our Clinical Practice Guidelines is an article by Elizabeth Tsakiris, M.Ed., M.A., that you can find and download on the website that reviews the research support for the different component parts of the DIR Model. There is overwhelming research support for each of the components of the DIR Model – the social support part, the speech and language part, etc. So that is some of the current research supporting the DIR Floortime approach.

What is needed for the future and what is being planned and what we have a protocol for is a definitive clinical trial study where we can randomize children into two groups and have definitive evidence that is considered to be the gold standard for an intervention approach. What is important to recognize, however, when you're looking at the whole field is that there is no approach that has shown definitive evidence for high levels of success in a true clinical trial study. The most widely studied approach in the intervention field for children with special needs and autistic spectrum disorders has been the behavioral model, but the only clinical trial study of the intensive ABA Discrete Trial Model, which was done by Tristram Smith, Ph.D., a close colleague of Ivar Lovaas', published in 2001 in the American Journal of Mental Retardation. Smith and his colleagues showed in a clinical trial study, I mentioned it's the only one done on behavioral approaches, that the gains that children showed were very, very modest. There were modest educational gains, and there was little or no gains in social/emotional functioning compared to a control group. In addition, children who were at the more severe end of the autistic spectrum did not show significant gains in the Tristram Smith, Ph.D. study. Now this was very different from the original studies of Ivar Lovaas, M.D. of only 18-20 children done years ago which suggested large gains. So the field is in a place now where the most widely studied approaches, behavioral approaches, have shown that the gains with behavioral approaches are only modest at best, and very questionable in social/emotional functioning, and may not be very helpful at the more

severe end of the continuum. It leaves the door open for the newer approaches, which we call the Developmental Relationship Approaches, which are showing more and more evidence for strong gains because they harness the newer insights by how the mind and the brain develop and grow. In fact, in the National Academy of Sciences report called "Educating Children with Autism," they stated explicitly that there was no definitive evidence for any one approach, that there were no comparative studies between approaches, and that there was some evidence for a number of approaches – the Developmental Relationship-based approaches, of which they cited the DIR as one of the more important ones, as well as the behavioral approaches. But they did point out, interestingly, that even the behavioral approaches were moving more in the direction of the developmental or relationship-based approaches – using more spontaneous types of learning situations. So I think what we are seeing is a movement right now towards developmentally based relationship approaches, DIR is a very systematic version of such an approach, and there is strong emerging evidence for the DIR approach. The state of the field is we need clinical trial studies for all the approaches, particularly comparative clinical trial studies, but a very fair and honest and unbiased statement would be that there is a lot of promise for relationship developmentally based approaches, but we do need more studies. There is no one approach that has definitive studies behind it at the moment.

How can parents find DIR Floortime practitioners? Our Floortime Foundation website will be listing some of the practitioners around the country and, hopefully, parents will be able to find one near them. We're training more and more Floortime practitioners all the time.

That's our show for this week. Have a great week, and we'll be back again next Thursday at the same time.