

Web-Based Radio Show

Creativity and Vision:


How we facilitate creativity and vision and innovative thinking in our children with special needs and adults with special needs, and also for all children and all adults

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Good morning, this is Dr. Greenspan welcoming you to our Web-based Radio Show. Today we have a very interesting topic and one really that goes to the heart of the goals many of us have for children with special needs as well as for all children and all adults, for that matter. The topic for today is creativity and vision. How do we facilitate creativity and vision and innovative thinking in our children and in our adults? How do we do this for children with special needs and adults with special needs, and also for all children and all adults?

One of the most important goals many of us have is to be “more creative.” I rarely come across an adult who doesn’t moan a little bit and say, “Gee I wish I could be creative like so-and-so” or “I wish I could be more creative - I wish I could come up with that new idea.” Also, it’s long been thought that children with autistic spectrum disorders and children with related special needs conditions are going to be limited in their creativity and their vision and their innovative thinking. This is a myth that needs to be corrected. To be sure, some children with special needs and autistic spectrum disorders have significant language and cognitive challenges and that will make creative and logical thinking much, much harder. There may be progress, but not to the extent that we all wish, and we are working on better and better strategies to improve that progress. But, as I mentioned before, we have worked with other children with special needs and autistic spectrum disorders who have made remarkable progress to such an extent that they become even more creative and more innovative in their thinking and more abstract and logical than their same-age peers, or at least are as creative and reflective as their same-age peers. Therefore, we have to rethink the generalizations that we have made, especially about children with special needs, but about all of us. If we assume a ceiling related to a particular label, often it can become a prophecy-come-true. But to raise the ceiling; raise the bar, so to speak, to lift it and say each child will



define his or her own potential by their own progress; by their own learning, this doesn't mean that every child is going to be a creative, innovative thinker like Edison or like Benjamin Franklin. It does mean, however, that we shouldn't try to predict. We should let each child's progress determine the level they achieve. You don't try to limit children without special needs, let's not try to limit children with special needs because we have now discovered that individually, children are capable of much more than we ever anticipated. Now the reason for assuming children with special needs can't be creative or have vision or be innovative, is because often we see patterns of more concrete or repetitive or rote or perseverative thinking where children repeat scripts or memorize specific answers to questions. They don't have the flair or the creativity we would like to see. What I will be suggesting today, however, is that that largely may be due to the way we teach children with special needs, not due to inherent limitations. Then again while there are different degrees of progress capable in language and cognition and emotional and social growth for children, the way we teach them can determine whether at each level of social, emotional, cognitive, and language development, we are getting the maximum amount of innovative and creative thinking. And again, I keep emphasizing this, but it is important and bears repeating, each child must be defined by his or her own growth curve, and that includes the growth curve for intellectual and social and language development, not just simply the growth curve for physical development.


When we look at children without special needs, the same goals are there. We want our children to be more innovative and more creative. As I mentioned before, adults always want to be like that CEO who develops a new product and a new way of marketing it; or like the artist who comes up with not just an innovative and creative artistic creation but breaks the mold and creates a new paradigm; a new way of picturing or perceiving the world and representing the world or representing, more importantly their vision of the world. We all want to be like that novelist who is gifted and creates stories or adventures that fascinate us. We all want to be the mathematician or physicist who develops new understanding of how the universe works. Not all of us will necessarily have the ability to create a paradigm shift; to break new ground totally. But most of us have the ability to be more creative and more innovative and have more vision than we do now. It has a lot to do with the way we look at the world; the way we ask ourselves questions; and the way in which we have been taught and the way in which we learn.



As adults, some of us may feel it's too late for us now, the die is cast. But I would suggest that, not really, that development continues with increasing wisdom and increasing reflectiveness until our elderly years. So it's never too late. But if we can start at the beginning with children and develop educational and family relationships and interactions and learning experiences that promote creativity and vision, we would have a much better chance for all children – those with special needs and those without – to become innovative, creative thinkers; the kind of adults that we all admire.

Therefore, let's go back and start at the beginning and look at how to promote creative and innovative thinking from infancy on upward. Let's look at how to do this with children with special needs and children without special needs. During this discussion, we'll also bring in the most common interferences with creative thinking; the most common ways all of us in educating our children dig a hole for them where we teach them uncreative ways of perceiving the world; where we teach them in rote or repetitive or perseverative ways. So we'll try to cover some of the do's and some of the don'ts as we develop a roadmap for creative thinking and vision and innovation.


Back at the beginning, our newborn baby, as we have talked about before, begins taking in sights and sounds. In the first stage of development that we call regulation and interest in the world, our baby is just looking and listening and turning and learning to calm down. But how they take an interest in the world and how they learn to calm down can be learned in different ways. Let's take a simple example. The baby is beginning to learn to turn towards mommy's voice or look at daddy's interesting face and use that voice and face to calm down. Well, do we begin controlling the baby where mommy stands a little to the left of the baby and rather rigidly and mechanically says, "look at me look at me" and the baby turns a little and then daddy goes to the other side of baby and says, "look at me look at me" and then the baby turns to look at him when we practice looking and listening in a sort of rigid and mechanical way? Or do we, from the first day, begin tuning in to the baby's natural interests? Their own creative innovations in the way they look and the way they listen? For example, we may notice that little Susie likes to turn towards a high-pitched voice and not a low-pitched voice. Whenever she hears her little sister squeaking off to the right, we see her turn and kind of look. We notice that little sister has a certain high-pitched voice. We notice that when mommy imitates little sister's voice, little Susie looks a little more. She'll look at daddy too, but not as readily. Now do we take advantage of that natural inclination, the first expression of creativity in a few days to a month of life, when little Susie is



preferring certain sounds to other sounds? And do we kind of use that to help her look and explore new territory? So she looks at sister so we bring sister in and we say, “Ohhh, I bet you can’t make little Susie look at you over here.” And all of a sudden Susie is looking left and right because she loves looking at little sister. Then we discover also that she likes a certain color on the mobile over her bed that she seems to stare at. Do we let her stare perseveratively at that? Or do we take advantage of that as a novel interest? Mommy all of a sudden puts a little hat on with that same red color and looks off to Susie’s left a little bit and says, “Oh look. I have another little red for you.” And now Susie is looking at mommy’s head with that same red color.


In other words, even from day one, we can begin fostering the focus on sights and sounds in a way that tunes into the baby’s natural interests in a way that brings the baby pleasure and excitement. This is the beginning of creativity. But there are two components happening here that are important to highlight. One is we are focusing on the baby’s natural inclinations – things that they are born with or things they may have inherited. Or who knows – things that may have occurred through just chance occurrences in the first moments and days of life. It doesn’t make a difference how it occurs or why it occurs. But by tuning into that, the baby feels at some deep level, before they can even express it in words or any other way, that their individual unique capacities are being responded to. They are not being treated like a machine; they are being treated like a unique little individual. And then we help them develop that capacity. We use their interest to broaden; to look left, to look right, to look to this sound and then that sound. This helps them calm, focus, and take a broader interest in the world.

Now the other component that’s happening, in addition to tuning into their unique features, is that we are harnessing pleasurable, joyful emotions. By tuning into what they enjoy and what they like and what they find fascinating about the world, we are helping them experience the world in a pleasurable, joyful way. So we are tuning into their emotions. What they are doing is by looking left or looking right or by calming to this voice or to that voice, they are actually connecting their emotion – that pleasure they feel, the excitement, the joy, the curiosity they feel – they are attaching that to the behavior they are doing, to the motor pattern, to the looking. So now looking isn’t just simply a rigid, mechanical thing. It’s a labor of love. It’s a delightful thing. They are looking because it brings them joy and happiness, so we get a link between the pleasurable affect; the pleasurable emotion and the motor behavior – the looking.



Eventually, this same link will occur between the emotion, the pleasure and more complicated behaviors like taking daddy by the hand and walking to the refrigerator and showing him the food that you want. Later on, this same pleasurable emotion will link to words, “Daddy, can I have juice?” “Oh, I love you daddy, thank you.” So we are going to get emotion linking to complicated motor patterns, to problem solving interactions, and eventually to symbols and words. Why is this important for creativity? Because what is creativity? Creativity, as we’ll see, is thinking off your emotions. It is thinking from your inner desires; having an inspiration; having the flashlight go on or the light bulb go on from the inside. In other words, when we just respond to the external world in predictable ways, we are not being creative. We may be organized and we may be orderly and we may be efficient, but we are not necessarily being creative. But when the light bulb goes on inside, the flash of insight, the flash of inspiration for a new story or for a new business venture - that is creativity; that is vision. Well, that happens from our emotions. That inner light is our emotions expressing themselves in complicated forms and complicated actions and complicated business plans or scientific discoveries. Einstein talked about this when he said as a preschooler he was taking imaginative trips, but not just imaginative trips to the playground or to the schoolyard or to some make-believe kingdom in Never-Never Land. He was taking imaginary trips into the galaxies, into space. He was fooling around with spatial concepts in his imagination even as a very young child, at least as he tells it in his biographies. So it’s that inspiration of emotion that leads to the light bulb going off and leads to insight and creative vision. It begins right there in the way we help a baby tune into sights and sounds.


Now then the next stage where baby falls in love and is beginning their long relationships with the world, preferring their caregivers to other humans, for example, and responding with more joy and pleasure to mommy’s face or daddy’s face, here too do we tune into the baby’s natural inclinations and focus on their joy and happiness. For example we know that they delight especially when daddy tickles them on their tummy and then makes a funny face and a certain funny sound. Well, if we know that brings them delight and we start our dialog with them and our relating with that and then expand it into other sounds and other kinds of tickles and other kinds of rhythmic activities, again we are building on the baby’s natural interests. We are showing that baby that the first relationship is a creative relationship. It’s the interaction, the back-and-forth synchronous vocalizations where you make sounds together, where you move together, where you look together, explore interesting little toys together – is that following the baby’s lead, taking advantage of the baby’s natural interest or is it



something we impose on the baby? You know, the old debate about feeding the baby according to our schedule or the baby's schedule and having the baby sleep according to their schedule or our schedule – those are all interesting questions and we have had changes in those from the 1940's when it was very much fixed to the 1950's and 1960's where we became more “follow the baby's lead” and now there is more of a balance between the two between providing some structure that gives the baby organization and some relaxation and flexibility, to let the baby express their individual differences. That's fine for the big things like sleeping and eating. But that really begs the question. The really important issue is what you do in the micro chasm, in the microscopic moments of every day, every minute, every second. How creative are you there? And if you are too rigid and fixed in those little interactions, not in when you go to sleep or when you eat, but those two little interactions you undermine creativity. On the other hand, if you foster the baby's natural interests, if you tune into the baby's unique characteristics and build that engagement and that warmth and that loving relationship from that, you are fostering creativity from the very beginning; from the get-go.

Now some degree of structure is necessary because a calm, well-fed baby is a baby who is going to be more creative and more innovative. This doesn't mean that you don't set up the larger structures; the larger rhythms of life – helping your baby get into good sleep/wake cycles and good eating cycles. You do, and that requires some structure. But it means in the micro chasm of the conversations, in the little moments, you are very creative and very innovative in tuning into your baby's unique features.


Now let's go to our next stage: two-way purposeful communication. This is where our baby becomes not just a person who is in love with you and moving rhythmically with you and smiling with you and vocalizing with you, but now a baby who is purposefully interacting, who is reaching out to tweak your nose so they get a toot-toot sound; who is reaching to your head to take the hat off your head. Here, too, we want innovation and we want creativity. So the same basic principle: tune into your baby's interests. Is he more enticed by reaching for the little rattle in your hand or reaching for the necklace around your neck? If he likes that necklace around your neck and you are down on the floor face-to-face and he is reaching for it, take it off and put it in your hand, hide it and see if he'll touch your hand to get you to open your hand. Move it around. Use that natural interest. Focus on his joy. Also, at this stage, there is a real choice between getting your baby to be a reactor; a baby who responds to you where you take the lead and you are constantly stimulating your baby and the baby is



reacting so you may be holding up a necklace and he reaches for it. You may make a noise and he may repeat it. Or you may tickle him and he may giggle and laugh. But it's all done under your initiative. This is now, in the second half of the first year of life from ages 6-7 months old up to 10-12 months, it's the opportunity for changing that around – for letting your baby be the initiator. Here again, you watch what your baby is interested in. He's looking for that necklace, so you go with the necklace and say, "Oh, do you want it?" and then he reaches for it and takes it in his hand and then you offer him something else and say, "Oh, I'll trade you" and you offer him an even shinier necklace. He then takes that and you look to him for "what next?" He may throw it on the floor and you may then take your necklace and throw it on the floor with him as you are both lying on the floor together and both see what it feels like as it hits the floor, then see which one he'll reach for. Then make a little game around that one. But again, you are challenging him to take the initiative rather than yourself.


Now to give an adult example of this, when you have a debate in international relationships, often there is great caretaking for who decides the shape of the table, who decides who is going to sit where. Who decides the agenda? Who decides the questions that are going to be asked? Deciding the agenda and the questions is more important, sometimes, than the actual answers. Because that person is actually controlling the debate. They decide the table, where people sit, and what questions are going to be asked. When your child is taking the initiative – deciding whether to play with the necklace or the rattle, and you are challenging your child to extend that interest in a back-and-forth conversation with you through exchanging motor gestures and the like, you are teaching your child to set the shape of the table. You are teaching your child to be the kind of adult who is going to set the agenda because you are teaching the child to take the initiative to be that creative person who is proud to come up with a new idea as opposed to just being a reactor and a responder.

There's nowhere that this is more important than in children with special needs and children with autistic spectrum disorders because often we are starting our work with the child with autism, for example, and he may be 3 or 4 where he is just beginning to master the stages of that 8-10 month old level of taking initiative and two-way communication and getting what we call many circles of communication open and closed in a back-and-forth way. Again, here with our 3 year old or 4 year old who is just beginning to interact and learn to interact, we can structure it and teach the child to respond to this sound or copy this noise or respond to a tickle or respond to a particular



card when held up in a rote way, or we can tune into the child's natural interests. If the child likes jumping, then we begin jumping with them. When the child jumps away from us, we put our arms around him without holding him but build a little fence around him. And say, "Oh, if you want to jump away, you have to jump out of my little fence." And the child then puts up your hand and eventually learns to say, "Up, up" or "Open" to get your hands open so he can jump out of your space. That is an innovative interaction where the child is taking the initiative. The child is doing the same thing our 8 month old is doing – learning to initiate conversation. Then when your child is a little more verbal, you have a child who is initiating with their words, not a child who is just reacting. When you want your child to have a conversation, as we all do for our children with special needs, you have a child once they have mastered enough vocabulary, has that initiative; has that pleasure in communicating; has that sense of taking the lead in communicating, and then begins initiating much, much more and you have much more back-and-forth communication, which we'll come to in just a second. The key thing is to create that initiative where the child is determining the shape of the table. The child is determining the questions. The child is determining the agenda. It starts in infancy, but can be learned at any age by challenging the child to take more initiative, not to just be a reactor.


Now we get to the next level which we call shared social problem solving. Between about 10-12 and 18 months, children are learning to open and close many circles of communication to solve problems together. And with children with special needs, here too we are often mastering this stage for the first time in a 3 year old or a 4 year old, or sometimes an 8 or 9 year old where the child is learning to open and close 50 or 60 circles in a row while they are taking the initiative. The example I often give is taking daddy by the hand and walking him to the toy area and pointing to the toy you want and getting daddy to pick you up to get it. That's a complicated social interaction, having many back-and-forth communications with gestures often, and sometimes with words thrown in as well but mostly with gestures, all towards solving a problem. The questions is here, how much do we challenge the child to do this under their initiative, under their interests? If we do, we see what the child is interested in. What kind of food? What kind of toy? What kind of play activities or games? We follow their lead. Whenever there is a breakdown and the child seems to get passive, we don't take over the rhythm of the interaction because the child is getting self-absorbed for a second, but we watch what they do for a split second. We then move in with their interests. If it seems perseverative or self-stimulatory with the child with special needs, we'll use that



as a purposeful action. So the child is staring at a fan, we take that fan and we get in front of it and we say, “Are you looking at me or the fan?” Now the child pushes us away gently to look at the fan and we say, “Oh, can I look at the fan with you?” and then we mosey back in front of it again and we have a peek-a-boo game, using the self-stimulatory fan as an object of our peek-a-boo game. Now we have a creative endeavor where the child is taking the initiative. The same thing if the child wants to rub a spot on the floor. We may get our hand stuck in that spot and the child has to take our hand off. We have an innovative activity now where the child is taking the initiative. So go with the child’s natural interests when you can, and get the child to take initiative. There is a difference between structuring it for the child and challenging the child. It takes much more creativity on our part and often I hear my parents tell me, “But I’m not creative enough to figure out how to do this!” And my answer to this is, “Yes you are! You don’t realize you are, but all you have to do is relax a little bit, be a little patient, watch what your child is doing – don’t try to come up with a bag of tricks. Watch what your little guy is doing and take your lead from your child and then build on it.” Once you do that, you discover the rhythm of creating these assertive, innovative kinds of interactions. The key in this fourth stage is a continuous flow of back-and-forth communication – opening and closing circles of communication, solving problems together where the child is taking more and more of the initiative. That’s the key.

That is missing in many children with special needs and then it holds back future creativity. And it is not sufficiently developed in most children, I find, even children who have no special challenges. So it is an aspect of development we can foster in all our children that will further creative thinking and the way to do it is to challenge the child to take the initiative. Challenge the child to have their own ideas. And do it as part of a back-and-forth flow of conversation between you and the child. In other words, many circles of communication in a row whether it’s a verbal child talking in abstract language, or whether it’s a child just beginning to master basic gestures and heading into symbols and words.


Now this gets us to the next stage of development, which is using ideas. Our fifth stage, ordinarily happening between 18 months and 30 months, children begin using words and ideas in pretend play. They start it earlier, but now it comes into it’s “heyday” so to speak. And in children with special needs, we may see this ability arise later. Here too, we have the same basic theme. Are we going to give our children rote language; scripts? “Johnny, say hello Mrs. Jones.” Or are we going to focus on the



creative use of language through pretend play and through the natural use of words? For example, when we teach a child to say hello, this can be done in a creative way or this can be done in a rote way. The same basic words, the same basic goal, whether this is a 4 year old child with special needs or with a child without challenges at age 19 months, if we say to the child, “when you see someone new” or we train the child and reward them with M&M’s or something else every time they see a new person and say, “Hello Mr. So-and-so” or “Hello Mrs. So-and-so” we have a rote training.

On the other hand, if we give the child lots of experiences with delightful individuals – their mommy, their daddy, their brother or sister, or a favorite friend or teacher, and have lots of play around greetings and we watch how the child gives a flirtatious glance, waves his hands high or imitates what mommy says on his own, “Hi” or and the game could be “Hi Sweetie” or “Hi Susie, what are you going to say to me?” And if Susie goes, “Goo goo,” that’s her greeting. Because that will be with a little flirtatious glance and gleam in her eye. Eventually, I can promise you, little Susie will go “Goo goo” and then go “Gaa gaa” and then go “Bye” instead of “Hi” but eventually she’ll get to say “Hello” or “Hi” but it will be from the inside. It will be part of a whole greeting pattern that she has mastered through natural spontaneous interactions. With kids who don’t have special needs we don’t try to teach them in a rote way how to say “hi.” They usually learn it on their own in the way that little Susie does with many approximations as part of a flirtatious interaction with lots of fun greeting. Well, this is exactly the same way we want to teach children with special needs. Lots of interactions around greetings where they see lots of greetings, and as they are learning their words, they will come up with their own favorite way. Initially you may not approve of it, but they will get there through the back door and it will be far more spontaneous and far more natural, and it will be theirs and it will be from the inside. That’s the creative way of learning greetings, not the rote or structured way.


Similarly, in pretend play we can show the child how to have the dolls kissing or how to have the car go to grandma’s house and have them copy it – that’s pretty rote and structured. Or we can put the car out and the child is moving the car and we have the policeman blocking the car. We say, “Oh, stop!” and the child gets a mischievous grin and goes around the policeman right into the house. “Oh, where are you going, Mr. Car? Where are you going? You’re running away from Mr. Policeman.” Now that’s a creative interaction. Or if the child throws the car down or kicks the car, you talk for the car. “Oh, you hurt me, you hurt me! Why did you do that? What are you doing?” The



child may not respond the first time. The child may kick the car again. “Oh, you hurt me again, help I need a doctor, I need a doctor!” etc. The idea is to challenge the child to interact with you, using their own creative ways of doing it. The child will see what you are doing but will connect it with what they want to do. If you get the circles of communication opened and closed if you have a continuous flow of back-and-forth interaction, the child will get more creative and also be learning more organized ways of communicating. The two will happen together.

Now this doesn’t mean that you can’t work on specific words or specific concepts, particularly with children with special needs or children without special needs when children are learning words. But even there, when you want to work on a word such as “open” or “up” or “down” you create learning situations where the child is motivated to use that term. You take his favorite toy and put it outside the door and say, “Should I open or close the door? Open? Op, op, op or close?” And the child will eventually learn “Op, op” to open the door and get his toy. He is connecting it then with the underlying emotion or affect. Similarly, “up” versus “down.” If his favorite toy is up on the shelf, he can learn “up” while reaching for his favorite toy and “down” while reaching for the favorite toy and it’s connected to affect as opposed to just rote memorization. But that should be done part of the time and the other part of the time do truly creative interaction with words that gets that part of the learning cooking in a truly creative way.

Now then we get to the next stage which is using ideas logically where the child is learning to answer the “W” questions such as “where,” “what,” and eventually “why” – “Why do you want to go outside?” “Because I want to play.” And here it is especially important to build on the child’s natural interests and the child’s natural desire. If the child wants to go outside, have a dialog about it. “Well, why? What are you going to do out there? Oh, you want to run and jump and throw balls? Which one will be the most fun? Which one should we do first?” Now you are having a dialog practicing language all while the child is negotiating going outside, which is his desire. Let’s say it’s raining and the child can’t go outside. “Well, what do you want to do outside? Why do you want to go?” “Throw the ball.” “Well, look, it’s raining. What do you think?” “I’ll put on my rain hat.” “Oh, that’s terrific. Can I put on my rain hat too?” And it’s a warm summer day and you both put on your rain hats. That was a creative answer you hadn’t expected – put on the rain hat. But it was such a great answer, why not go out and play in the rain if it’s a warm summer day, as long as it’s not thundering. On the other hand,




if it's a cold winter day and you can't go outside. The child says to put on our boots. "Well, can we do that later?" "No, we can't." "Oh, well, how about if we throw the ball inside." You have a discussion about a compromise but you know what the child wants and why they want it. Then you can work out a compromise better, but if you don't inquire and find out what is on the child's mind, you can't work out a compromise. More importantly, you have squashed the creativity.

Now, as we go up the ladder, we get to more advanced kinds of thinking, all of which here too require creativity. We had talked before about gray area thinking and comparative why-level thinking where you are asking the child why they like A better than B and he can tell you not only that he likes A better than B because it tastes better or because it looks better, but he can tell you the degree to which – well it's much better than this, etc. The child can give you multiple reasons for things, not just tell you he wants to go outside and play but that he wants to play, run, and besides it's a nice day outside and it's got the sunshining. And he can tell you which reason is the most important reason and so forth and so on.

Now as the child is getting into more advanced thinking, here too, the way that is promoted is in natural conversations off the child's interests, because then the child is generating the idea. The idea is coming from the child. It's not coming from you, so it's not a structured question about what did you read in this paragraph or what did you read in this book. It's now, what did you like best about this paragraph? What did you like best about this book? Let's get the child's opinions, not right or wrong answers. Now this is where with children with special needs, we often resort to the rote training. We teach reading comprehension by having a child memorize answers in the paragraphs they read, rather than reason or think about the information in the paragraph. We'll have them memorize math facts like $2+2=4$; $4+4=8$ rather than learn what quantity is all about; rather than having them manipulate blocks and showing us two blocks and then four blocks and showing us how you can stack the blocks up one through four and get four, but also lie them on the ground next to each other like a little snake and also get four blocks. So we get one, two, three, four. So the child is now learning what we call one-to-one correspondence, learning that quantity equals a number and gets a feel for what that is. That is a very different way of learning math than just rote memorizing of facts.

In children with special needs, we tend to over-favor, unfortunately, the rote learning, which only digs the hole deeper because the children with special needs often




have had a harder time learning to be creative, so we have to get them extra practice in the creative way of doing it, the way you truly understand it where you play with the blocks and get a sense of quantity. You learn that the four blocks lying on the ground are the same as the four blocks in the tower. Then you can learn to add and subtract – add on and take away, etc. But if you don't learn it properly, you'll be more and more memorized and more and more a rote learner which is antithetical to creative thinking and vision.


But even in children who don't have any challenges or special needs, we tend to teach too much to the test, too much to the answer, and not enough on the building blocks of conceptual thinking and reasoning. We need to emphasize that more in education. Unfortunately, our national education efforts are encouraging through the over-focus on testing to the expense of innovative thinking and creative teaching, we're over-focusing on the rote teaching methods. Now you can test and evaluate children and still get creative thinking if you evaluate and test in the right way. So we need to revise the way we test and revise the way we evaluate so that it fosters creative and innovative thinking. If you think about America and its place in the world, what separates us historically is our innovative thinking; our opportunities for discovery. We have to treasure that in our national education efforts and not try to move too much in terms of structured rote learning. The harder it is for children to learn, the more learning disabilities there are, the more special needs conditions there are, the more important it is to foster that creative, innovative way of learning. Instead we tend to do the opposite. We assume that children can't learn that way and we foster more uncreative ways of learning, more rote learning, which only digs a hold deeper for children who already have learning challenges. In a sense, the axiom is the more the challenges, the more creative we have to be in the way we teach the children; the more we have to tailor the educational methods to the child's unique characteristics.

Then we get to even higher levels of thinking. This is the last level I'll talk about for now. This is where children are learning to think off an internal standard, off what I call an internal sense of self. In other words, they are learning to be evaluators of their own thoughts. They are learning to say things like, "Gee, I'm happier than I usually am" or "I'm more angry than I usually am in this situation" or "I agree with Mark Twain but I disagree with Tolstoy for the following reasons" etc.

Now to help a child evaluate himself and compare himself and his thoughts to other people's thoughts is a high level of reflective thinking. This requires lots of



opinion-oriented discussions. “What do you think” and “Why do you think it” and “How do you compare your thoughts to the way you were two days ago or a year ago or the way you might think about it in the future, the way daddy thinks about it or the way Tolstoy thinks about it?” That kind of comparative, reflective thinking helps the child evaluate their own thoughts and gets to this higher level of creativity where you not only have creative thoughts, but you can assess, “This is a real good creative thought, boy this is a novel game I just invented on the computer, this is a great one” or “Yes, I just invented this game but it’s kind of boring and I don’t like it very much and my friends won’t like it.” It’s the difference between an innovative game maker and one who’s a “boring” game maker might be how well they can evaluate their own games, their own products, their own creativity. So the great creative thinkers of the world not only have the ability for creative insight, but they can evaluate their own thinking. They could be both creative and analytical. What we found is, very interestingly, when we did a study of children with special needs and severe learning disabilities, and children without it, and we asked them questions, we found that the children with severe learning problems and special needs, tended to be more structured and rote and the kids without it tended to be more creative and reflective. So we asked questions that we all thought they’d be interested like “What do you think about bosses?” and I’ve mentioned this example before in many of the books, and children with special needs tended to say things like “Parents are bosses, teachers are bosses, policemen are bosses” etc. More of a rote list. Children without special needs tended to say, “Gee, I don’t like being bossed, but sometimes I guess I need to be bossed if I’m being mean to my brother or sister and therefore it’s ok. So there are good bosses and bad bosses depending on how well they know when I need to be bossed.” Now that second answer is clearly the more innovative and creative one. The first one is more rote and structured. It would have been easy to conclude that children with special needs have processing problems and therefore they are only capable of this more rote, structured type of learning which has been assumed for children with autistic spectrum disorders. But, that would have been a mistake because then we went ahead and reasoned, what was it that the children without the processing problems were doing? They were having two steps to their thinking. They were generating a fresh idea, i.e., my personal experiences with bosses. That fresh idea was generated off this personal experience, this emotional experience of how my parents boss or don’t boss me. From that they created an innovative thought, which is that there are good bosses and bad bosses; that it depends on the situation. Then they put that in a reflective context, in an analytical




context by saying that there were different categories of bosses. Now when we asked the same question of older children and graduate students, they gave analogies from Shakespeare and literature and had more categories of bosses or more categories of autocratic behavior. But it's the same basic process. It's a generative process where their own personal emotional experience generated the idea and made the light bulb go off – their experience with bosses – and then a reflective and analytical process when you put that into a logical framework.

Now thinking requires both. If we just get the analytical without the generative – without the light bulb going off, if we just get the reflective part, we tend to get rote lists. It's a very low level of reflection. On the other hand, if we get the generative part and the reflective part, we tend to get good thoughts. When a child is writing an essay or analyzing a book, or comparing two times in history, they have to do that generative part and the reflective, analytical part.

Then what we did when we realized that, is we went back and started working with children with special needs in a different way. We worked off their emotions. We worked off their personal experience. We made all teaching emotionally based. That helped us refine our Floortime techniques – following the child's lead. We did the things that I just described to you at each stage of development – fostering the child's unique individual processing patterns, focusing on their initiative, getting that light bulb to go off from the time they were babies up through the time they were later in age. Then when we were playing catch-up, we started from the beginning but in an older child and worked through the stages. What we found was that children with special needs could become just as creative and just as innovative and just as reflective and many more so than their peers without special needs. As I mentioned before, we have a subgroup of children who are now as reflective and innovative and empathetic as any child one could imagine. So it doesn't seem to be a limitation of the special needs condition. It may be more difficult for children with certain processing problems and not all children, as I mentioned before are capable of the same degree of advanced thinking capacities, but that has to do more with language and cognitive and social and emotional capacities in general. And within each level of intellectual development, children appear to be capable of innovative, creative thinking if we work with them in the proper way.

So what I want to do is conclude the formal part of my talk. We went a little longer before taking questions today because this is such a challenging topic to discuss.



But both for children with special needs and children without special needs, we can promote creative innovative thinking by focusing on the child's unique individual differences, by focusing on the child's initiative, and by helping the child generate ideas off their own emotions and emotional experiences and then be reflective with those ideas. And there is a developmental pathway to creative thinking that we outlined today, and we need to pay attention to that both for children with special needs and children without special needs, and with adults too. For those who are already older and want to be more creative thinkers, keep asking yourself the question in a creative way. "What do I really feel about this?" "What do I believe about this?" "What are my deep personal opinions?" If you start with that reflection, it doesn't mean you are right or that your personal opinions are accurate, but then you evaluate your personal opinions against logic; against other people's opinions. But don't ignore the personal opinions. Get it going first and then evaluate it and compare it with others.

Now let's go to our first question. Let me put on my headphones. Thank you very much for listening to this and hold on for just one second while I get my headphones on. Ok, now our first question please.

Caller: Hi. Thank you very much. I have a son who is doing very well. He's about 13 years old now. Because of Floortime, he has a wonderful imagination. With us, he makes up stories, he plays games, he is very funny, but he still has some processing issues. So with his peers he is much more insecure and he would rather be by himself because he doesn't trust himself as much in the peer settings. How do I promote him demonstrating his creativity with his peers?


SG: This is a very good question. This is a child who does well, it sounds like, at school and with adults, but less well with peers. How many peer play dates a week would you say he is having now?

Caller: Two or three.

SG: Have you ever had him having four?

Caller: On occasion, yes. It's interesting, we have lots of play dates. He generally gets revved up in a good way.

SG: Can you describe that?



Caller: Well, in general he seems more connected and his processing seems streamlined, almost.

SG: What makes it hard to have four or more peer play dates a week?

Caller: Busy schedules. And I guess the other is that because he is a little different, still, sometimes peers are reluctant to be with him. He goes to a mainstream school and he has never been the most popular kid in the class.

SG: Where is peer play in your own priorities compared to other priorities like for getting a good grade or mastering academics? Where is peer play in terms of your own priorities for him?

Caller: Well, it is very important to us. We are not that concerned about his grades. We know that will work itself out. I think the issue with peer play is just the logistics of daily life and then just finding the kids. We also live in a...I'll just stop there.


SG: No, go ahead. We also live in a what?

Caller: I think we live in a world where, by in large, parents are more interested in sending their kids to gymnastics class or sports teams than just getting together with their friends.

SG: So it's harder to find friends to play with.

Caller: Right. This one is at a softball game, this one is at gymnastics, this one is at computer class...

SG: I think you are putting your finger on a very tough problem. The reason why I was emphasizing the four or more play dates a week is because with all children with special needs, you get what you practice. If a particular skill is hard like peer play, you have to do more of it, not less of it. Especially with a child who is doing very well – has good language and good abstract thinking and good sense of humor, as you have described for your child. We have to then put the peer play to the top of our priority list and try to work it out. So it may mean having two play dates on a weekend on Saturday and Sunday when you pick up another child and bring them to your house, feed him, do an arts and crafts project, take them somewhere interesting, then bring him home, so it's easier for the other parent. Often, you can get the kids together doing another activity. They could have gymnastics class together or drama class together or music




together, and before the class you have a half hour or 45 minutes of one-on-one play or afterwards, or in the car driving there so you have that one-on-one interaction. But there is no substitute for practicing. Now what generally happens is that children, when they are anxious and when they are nervous, will fall back on their old habits. So if they tend to be a little more self absorbed or a little more contained, because that has worked well for them in the past, they kind of shut out stimulation, when they get anxious, they want to do that a little bit more. They want to kind of huddle up in their secure cocoon, so to speak, and play video games or maybe read a book. There is nothing wrong with that, there are many adults who love that kind of sedentary activity. For kids we want to give them that flexibility and range too, but we want to make sure they have mastered the capacities and are doing it by free choice, not by the fact that it's the only option available to them where they can feel calm. And until they get really good at peer play, just like getting good at math or reading, you don't know if they are avoiding the anxiety of it or just showing a preference. I would suggest that when it comes to something as important as peers, most of the time it is the source of avoiding anxiety rather than a preference because your life is fuller one you have mastered it. Once you have fully mastered it, then you can choose your own balance. Many adults spend more time alone, which is fine, but if they are comfortable socially then at least they have that option. Now so the anxiety leads to a little regression, and the anxiety you tend to be a little more over sensory over-sensitive, you tend to have a harder time with your motor planning and sequencing which means it's harder to work the crowd, it's harder to read the emotional cues of others, so it is much easier, for example, for children with adults, to read the emotional signals, to be funny, to be amusing. We have many children with special needs who are great with adults – very funny, enjoyable, warm – and get very tense with their peers. In part because we didn't start quite early enough, age 3 and 4, with four or more peer play dates a week, and we haven't emphasized it enough during the course of their upbringing. But it is never too late, and the adolescent years are a good time to expand those peer relationships. But recognize that the anxiety is what leads to everything else appearing more difficult, and to reduce the anxiety we gradually increase the child's practice and participation with the peers. Also, it is a good exercise to do what I call anticipatory problem solving. You picture tomorrow. Picture the good things and the bad things that will happen with a verbal child, and picture different peer situations. Let the child kind of brainstorm with you. Don't give him rote scripts like say, "Do this." The worst thing in the world is rote social scripts where children learn how to greet other children and learn how to say

things. Nothing ties the hands more with peers than having these rote scripts like “Hello my name is So-and-so, what is your interest?” Because this goes for only two sentences, and then the other peers feel awkward and they feel awkward, whereas if they learn to tell jokes, to be humorous, to share their favorite TV show – but it’s got to be done spontaneously and it can’t be done in a rote way. So I hope this is helpful. The key thing is to get in there, and more and more peer play. Ok?

Caller: Thank you.

SG: Thank you very much. Alright, next caller please. Ok. We have a call here that came in earlier and I’m going to read the question because we lost the caller. This is a very good question, and it really relates to the question we just heard. *“I have a boy who is three years old and one month. I have been doing a combination of Floortime and ABA since he was 20 months old. He is “autistic,” not PDDNOS. He has a lot of sensory issues loves to swing. We have been able to teach him a lot of language in the swing and during Floortime and through ABA. We are not making any progress with appropriate play except he can play tag with his twin brother, he can play Simon Says with his twin, he has no imaginative play after all my efforts. He really just wants to watch videos and reenact them. He’ll make dolls dance in imitation. He likes rhyming books. Once he has the book memorized, he doesn’t want me to read it to him anymore. He can understand three scene sequence cards and can answer simple “why” and “because” questions if he is has learned the answers, but not innovative ones. How can I help him? I would love for him to be able to have a conversation and to follow a plot on a video. Am I asking too much? He understands that a fireman can put out a fire but he doesn’t have the slightest interest in reading about firemen. He knows about pilot flicks and airplanes but doesn’t want to learn anything more about that. Are the “experts” right – is he never going to think logically and be conversational? I refuse to believe that. He spontaneously says things all the time. We just can’t get past the narrating phrase. He’ll say about his twin Sean, for example. “Sean is jumping on the trampoline” or “Sean is happy.” Occasionally he asks his brother Sean to jump on the trampoline when he wants him to play. His brother is very much into Batman and getting the bad guys, but he can only label and say “Batman is a superhero and Joker is a bad guy.” How can I get him to see the whole picture? Will getting him to follow plots in videos and books help? How can I get him interested in plots?”*

This is an excellent question because this mom is so detailed in what she describes. In the question itself, there are clues to the answer. These are important



clues. At one point mother says that he can not only say that Sean is jumping on the trampoline, but occasionally asks his brother, “Sean jump on the trampoline?” which means he wants to play. Now when he is saying “Sean jump on the trampoline?” with a question mark, he is talking directly from the heart, off of his affect. That is where the key is. Can we help the children talk more from their affect, more from their emotion? Can we help the children generate the ideas more? That is where we need to practice. So here is what we need to do with the child like the one you are describing in this question, is focus on his natural interest, when he wants something. Create those situations; create those opportunities to generate language that is purposeful, as opposed to scripted. Don’t worry about the scripted language, let him do that. That shows that he has a good memory and that he can hold things in mind. Then get him to use it in a purposeful way and don’t worry if the language is clumsy or even overly structured. Create situations where he needs to ask his brother for something; situations where he needs to ask you for something, where he needs to take the initiative. Basically the entire discussion earlier today about the stages of innovative and creative thinking apply to this question. It couldn’t have been a more perfect question for today’s talk. So listen to the entire talk today about creative thinking and vision and also read *The Child with Special Needs* book which has lots of examples of how to challenge the child to use their language more and more off of their own emotions. Now the missing piece with the child who is still very rote and has this much memorized language is they often haven’t mastered that stage what I call a continuous flow of back-and-forth communication. So help the child get involved in back-and-forth communication with gesturing. Constantly expand those back-and-forth islands of communication so there is 50-60 circles in a row and this means that you have to do at least 6 or 8 Floortime sessions a day with 20 minutes or more at a clip. You can’t just do 5 minutes here and there. The structured work you do with him should always be done in a problem solving way like we described in the *Affect Based Language Curriculum* book. So read that book and see if you can convert the ABA type curriculum to the Affect Based Language curriculum which will basically give you the same types of exercises but with more affect and more emotion built in. So the key thing is to generate emotion, generate need, help him use language to express that need like when you say, “Sean, will you play with me or jump with me?” And get back-and-forth long chains of communication and follow the guidelines issued earlier.

Now we have one more question that is coming in live. Hold on one second.
Hello?

Caller: Hi Dr. Greenspan.

SG: Yes.

Caller: Hi, how are you doing?

SG: Fine.

Caller: I have a 5 year old son who really does well when he is very engaged and he is very intent on wanting to play. We get a good rapport going back-and-forth. But when it diverts to something that I want him to do, whether it's part of the game or just throughout the day such as we need to get dressed now or we need to have breakfast, his reaction is he will show the emotion of "I don't want to do this" with obstinance or he will begin to argue. But it is through screaming or through rote language. How can I help him begin to break through that and to begin the negotiation of "I don't want to do this" or "I want to do it this way." I know what he wants, he is expressing it, but he is not using the language.

SG: Give me an example of what he might say.

Caller: Let's say we were playing a game and it was my turn. I would say, "Well, it's my turn now." If he didn't want to give me the turn, he would yell. He would either just scream or he might say, "YOUR TURN" very loudly and become disruptive.

SG: If he wasn't disruptive, what else might he do when he was upset and annoyed?


Caller: He might start singing a song that he knows.

SG: Like, for example?

Caller: The Wheels on the Bus Go Round and Round or something like that.

SG: What you are seeing is that when he gets upset and then he gets anxious because he is upset, he regresses to the more rote or impulsive patterns. This is a little like the question that came in earlier about the child who is a teenager now and doing very well in all areas, but with peers he doesn't do as well because he gets anxious.

Caller: Yes.




SG: Same idea. Whenever there is anxiety, you see a regression back to an earlier level. So the idea is to help the child begin negotiating without so much anxiety.

Caller: Right.

SG: So what you've got to do is go back to your home life and say, "Do we make negotiation hard? Are we kind of tough parents who made him a little more fearful confronting us so when he wants to confront us he gets anxious or regress? Or are we the kind of family that it's a piece of cake to kind of confront us and negotiate?" So it's the basic atmosphere in the family, how do you deal with other children in the family, how do the spouses deal with each other – flexible, easygoing, relaxed, more rigid, uptight about following certain rules – because that would make a child more tense. Let's say the answer is no, we're pretty relaxed, it has nothing to do with us, then it may just have to do with the child's own emotion. He gets angry and when he gets angry, that's an intense feeling and he then he regresses a little bit. So then what you do is you work on the whole issue of titrating up the angry feeling or the anxious feeling or the no feeling so he can learn to master that emotion. So for example, you might create situations where there is a little bit of frustration. You're playing nicely and rather than saying, "We've got to stop and get dressed now" it could be, "Wait a second, wait a second," you deliberately invoke something in the pretend, "My guy doesn't want to do what you want right now. Sorry buddy. He wants to go out and walk in the woods. He doesn't want to have a fight with the swords." Look at how he deals with that. Can he deal with that? Then you up the stakes a little more until you work up to, "Oh, you need to stop and get dressed." So even when you tell him he needs to stop and get dressed, you can say, "Gee, could we stop for a little bit, there might be something else we might need to do?" and see what he does with that. So you titrating the frustration so it just a little bit so he can use his language and his more innovative thinking for it until you work up to more major disappointments.

Caller: Right. We do find it very useful to remain calm while he is having these outbursts so we don't escalate up with him and start a yelling match back-and-forth.

SG: That's critical – to be calm with the child and to never put fuel on the fire. Whenever a child is having a meltdown, always calm him down first before you set any limits or do anything else.



Caller: So when we are playing a game and it's not his turn and he wants to have a turn, we say, "Well, I'm not going to play anymore." Then he'll want to play and be willing to give me a turn.

SG: Right. Titrate the frustration and the anger with little experiences of it and work up to the more major disappointments so he gets used to the, what I call the angry or uncomfortable, anxious feelings. Ok?

Caller: Ok. Well, thank you very much.

SG: Good luck. Well, thank you for your attention. Now as you can see, I want to announce a new feature of the show. We are now able to take live calls during the show and before you had to email your questions in advance because we didn't have the technology set up to take live calls and we selected a few calls. Now we are going to do both. Please continue to email your questions in advance, we will select some for scheduled on-air discussions, but we will also have the flexibility for spontaneous call-ins during the show because we can now hold your calls and so feel free to call in during the show itself, but when you can, email your call in ahead of time and I'm happy to announce our new technology. Also, we hope you will tune in next week and we are going to continue our series on looking at different facets of development that are so important for children; children with special needs and children without special needs. Check your website and we'll have a topic for next week's discussion. I'm still debating between two or three possibilities so we'll have it up on the website in the next day or two. We look forward to speaking with you next week and again, thank you for tuning in. Bye bye.