

## Web-Based Radio Show

### Summary of Developmental and Behavioral Approaches

Stanley I. Greenspan, M.D.


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Good morning. Welcome to our Web-Based Radio Show. Thank you for joining us today. Today, we're going to continue on the discussion of comparing developmental and behavioral approaches and really just summarize in a succinct way what we talked about last time.

Behavioral approaches originate in a rather long history of looking at human behavior from the point of view of behavior in isolated units separate from the "black box" or separate from the mind or brain which reportedly motivates the behavior or organizes the behavior or causes the behavior. At the turn of the century, Thorndike and later B.F. Skinner developed these principles. There are many other investigators, as well, who are part of a long and rich tradition. Ivar Lovaas then applied these principles to children with autistic spectrum disorders and developed very specific approaches to shape the behavior not of pigeons or other animals which were the subjects of the original experiments, but of human beings.

The goal of behavioral approaches is to look at behavior in relationship to the conditions that precede the behavior and the conditions that follow the behavior, or the stimuli that precede and follow the behavior. Those that precede it are called discriminative stimuli – they set the occasion for reinforcing a particular behavior and the events that follow the behavior are often called the reinforcement so the reinforcing stimuli and depending on the schedule of reinforcement, they can increase the frequency of the behaviors and make them more or less resistant to being extinguished or stopping once the reinforcements cease or stop.

Shaping involves a gradual learning of a new behavior like in Skinner's experiments, he taught pigeons to stand on their head by reinforcing the pigeon bending their head down and then down a little more and then down a little more and down a little more until they were literally standing on their head and that was called the shaping procedure. There are many other complex concepts involved in behavioral approaches but this gives a quick sense of the rich history and background.




When applied to human beings, particularly those with special needs and doubly especially those with autistic spectrum disorders, behavioral approaches have been used for a wide variety of purposes – to help children sit, to look, to be compliant, to reduce aggression, or to reduce self-injurious behaviors. But the key is that it works on units of behavior somewhat separate from the mind or brain which many would believe are the motivators or the organizers or the cause of the behavior. Behavioral approaches have prided themselves on the fact that they can control behavior by controlling the external circumstances which, in a sense, they believe influence the appearance of the behavior and then the frequency by which this behavior appears.

The strength of behavioral approaches is its attempt to make explicit the conditions under which behaviors occur and to modify specific behaviors. The weaknesses that behavioral approaches in and of themselves don't have a developmental model. They use what many behaviorists call the behavior's green thumb and often try to condition or reinforce behaviors that are similar to the behaviors they see in typical children. But, the question – is there a history to healthy functioning? In other words, does healthy functioning occur through a series of steps is not really answered by behavioral theory itself, nor does behavioral theory rely on any of the existing developmental theories in creating the curricula. It's being created through practice, through tradition, through experience and through, again, the behaviors "green thumb."

As we discussed last time, many studies on behavioral approaches have appeared in the literature. They tend to be individual case studies on small numbers of children. The larger studies have not done well in replicating Lovaas' original findings or claims of being able to help a large number of children or a large percentage of children, and the measurements for behavioral approaches have tended to focus on educational outcomes that can measure specific behaviors rather than overall healthy development.

Most compelling is the fact that the diagnosing criteria for autistic spectrum disorders, that is a failure of the child to really master reciprocal social interactions with back-and-forth social interaction, the ability to read and respond to social and emotional cues, and the ability to really engage with intimacy, and the ability to use language meaningful and creatively, and to understand the feelings of other people, are generally not in the outcome criteria used in most behavior studies. They may use education criteria and generally focus on the behaviors that they are trying to influence the most.

This is in stark contrast to developmental approaches or what we're calling developmental social interaction approaches. The basic premise of developmental approaches is that human functioning – emotional, social, and intellectual functioning – is based on a developmental sequence – that children from infancy onward master certain




steps. In our DIR Floortime Model, we have outlined these steps in six basic capacities and advanced capacities – the ability to share attention and focus and be calm, the ability to engage, the ability to enter into two-way communications with gestures and reading and responding to emotional signals, the ability to involve a caregiver and a toddler in shared social problem solving – get the toddler to take the initiative in shared social problem solving such as taking a mother by the hand to search for food in the refrigerator, the ability to use creative ideas – that is ideas that are meaningful and come from the child rather than the learned or scripted and rote way, and the ability to connect ideas together – answer all the “W” questions, including the "why" questions like, "Well, why do you want to go outside?" "Because it will be fun." And the three advanced capacities, what we call multi-causal thinking, gray area or comparative thinking, and finally reflective thinking – the ability to reflect on your own feelings and behaviors; be a self-evaluator.

These building blocks of healthy emotional, social, and intellectual functioning summarized in these nine milestones from the DIR Floortime Model is one example of a developmental approach. It is perhaps the most systematic of the developmental approaches but there are many developmental approaches now. What they all have in common is the central notion that social interaction is critical for building healthy foundations for social, emotional, and intellectual functioning. Starting with early infancy, to promote engagement and two-way communication and whether you call it shared social problem solving or joint attention or multiple frames of joint attention, it's critical to have social interaction between infants and caregivers, with the infant or toddler or preschooler taking more and more initiative in these interactions, to promote healthy functioning.

So, we have the notion of social interaction and the notion of the developmental sequence that leads to healthy functioning.

Also the goal of developmental social interaction approaches is not so much to change specific behaviors, although that is a benefit of it, it does result in that, but to build the foundations of healthy human functioning, of healthy social, emotional, and intellectual functioning, including with parents, as well as with peers, and including the mastery of academic abilities and specific motor and sensory abilities.

Some developmental approaches, like the DIR Floortime Model, also include the individual differences in the way the child processes sensations such as touch and sound and movement within the approach. So, in the DIR Floortime Model the "D" is for the developmental stages just to outline; the "I" is for these individual differences and the way experience is experienced in a sense, or processed – is a child under or over reactive



to touch or sound? Does a child crave touch or sound? How does a child process or comprehend what they hear and what they see? And how do they plan how they act? All these vary considerably, even among children who receive the same diagnosis. So for some children with autistic spectrum disorders may be under-reactive, others may be over-reactive to touch or sound. Some may be stronger with how they comprehend what they see, others with how they comprehend what they hear.


So we have all these differences and the "R" part of the DIR Model is developing learning relationships that create these social interactions that are geared to or tailored to the child's individual differences and the child's developmental capacities – what stages in this developmental sequence they have already mastered or not mastered. And the idea behind developmental social interaction approaches is to strengthen these developmental foundations.

Now, as you strengthen developmental foundations, by definition almost, one tends to reverse problem behaviors. So a child, for example, who's interacting socially and getting a continuous flow of back-and-forth communication going between themselves and their caregivers through gestures and sounds and maybe a few words, the beginning of their program tends to be less perseverative, i.e. repeat because they're being spontaneous in their interactions. They tend to be less self-stimulatory because they are interacting with someone else. If they are regulated because that's the first step in building these foundations for healthy development, they are less likely to be self-injurious or having tantrums or being out of control.

So, the basic premise of the developmental social interaction approaches is to build these healthy foundations. And some approaches will focus on a few of these developmental foundations, others like the DIR Floortime Model will try to focus on all these developmental foundations, but regardless, they have in common social interaction as a vehicle for strengthening healthy developmental foundations.

Just as behavioral approaches tend to group different approaches together when they look at the research data, so too, developmental approaches need to look at all the studies done on developmental social interaction approaches, to look at the common support for this new way of approaching human functioning, and particularly with children with special needs and children with autistic spectrum disorders.

Because behavioral approaches occurred much earlier in the history of working with children with special needs, they are more widely used and there has been much more research on it. The developmental approaches are based on the latest understanding of the mind and how it develops and also how the brain develops, and these findings are constantly evolving and the large body of data for them and on them really has occurred




in the last 20 years. So, as the field has come to understand how the mind develops and how the brain develops, developmental approaches have become more and more developed and now becomes another option in the way we work with children with special needs and children with autistic spectrum disorders.

The evidence for developmental social interaction approaches is mounting as new studies are done, particularly when we combine all the studies. It's also important to identify a few other common features of developmental social interaction approaches. The most important one I mentioned is the focus on building foundations for healthy development; building the developmental steps. A second feature I mentioned is the common focus on social interaction as a vehicle. A third feature that should be mentioned is fostering a child's initiative in these social interactions. The way this is done is by following the child's lead; following a child's natural interests; following the child's emotions or affects. In other words, a child is interested in the green ball or red ball so that becomes the vehicle for social interaction, playing with the ball together. As the child is interested in a car or truck, the car or truck become the vehicle. If the child is ready for pretend play because they mastered earlier steps in development, it might be something like the child moving the truck and mommy holding the little girl dolly and if the truck moves closer to the little girl dolly, the mommy is being very actively verbal and saying, "Oh, where is the truck going; where is the truck going?" and the child goes "beep, beep, beep" and mommy might say, "Oh, what should I do, what should I do?" The child, if he's verbal might say, "Out of the way!" and mommy might say, through her little dolly, "May I come for a ride in your truck?" and the child may say, "No, stay off the truck" or "Come, get on top of the truck."

If the child is non-verbal, you may just get an interaction between the child and the dolly where the child goes, "beep" and the dolly moves away and then the dolly moves back in front of the truck and the truck goes "beep" again or knocks the dolly down and the dolly gets up and the dolly gets on top of the truck and the child takes the dolly off the truck and hands it back to mommy, and we get an interaction going.

So whether you're working on back-and-forth interaction with gestures or just giving and taking, or whether you're working on pretend play with language, these developmentally based social interaction approaches tend to follow the child's natural interests or natural instincts as a vehicle not for just play or not for just having fun together but for building these healthy foundations for human development.

So, basically, we have two fundamental models now dominating work with special needs and work with autistic spectrum disorders – behavioral approaches which focus on altering behaviors or changing behaviors tend to relatively either ignore or place



the "black box" or the brain and mind while recognized in a position of non-importance because the focus is on the behavior, not the motivating factors or not the factors that organize the behavior.

In developmental approaches, on the other hand, look at what constitutes the building of a healthy mind or a healthy brain. What developmental experiences are necessary and how do we promote that for all children and how do we promote it even with children with special needs and autistic spectrum disorders. How do we create interactions that follow the child's natural interests and create the opportunity to master healthy developmental foundations?

So these are our two basic approaches. One is older and been around a longer time – the behavioral approaches. One is newer. The behavioral approaches have tended to develop a large research portfolio but within their own frame of reference, looking at behaviors as the outcome measures. The newer developmental approaches have tended to look at social, emotional, and intellectual functioning in a broad developmental framework in their outcome measures.

So for many of the studies, we have somewhat different goals, and different outcomes and different ways the research should be interpreted.