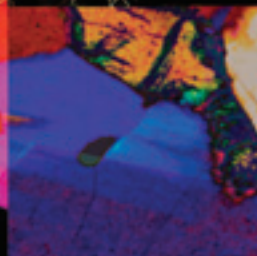


# medicine

at M I C H I G A N

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## The Changing Face of Medicine

The Medical School's new curriculum



Inside: Autism and the PLAY Project • Are the Bugs Winning? • Research in a Land in Conflict





Natalie and Don





by Whitley Hill

photos by Paul Thacker

# pushing PLAY

Richard Solomon's groundbreaking work  
is changing the lives of autistic children

**I**n his darkened office in the University of Michigan Health System, Richard Solomon, M.D., pops a videocassette tape into the VCR and pushes “play.” Instantly, the screen is alive with the colors of American childhood. Bare feet running through backyard grass, little fingers clutching plastic toys, faces dancing with the boundless smiles of youth. Swimming pools, sandboxes, tricycles.

It takes more than a few moments to see past the iconic familiarity of these scenes and into the heart of a different reality. These kids' language is odd, if they speak at all. They look only fleetingly at their parents, if they look at all. And at times, they get stuck on some repetitive task: spinning a saucer, flapping their hands. Something is “not right” with these beautiful, seemingly normal kids. Each of them has a place along the spectrum of autism.

“You can't imagine how devastating it is for a child not to respond to you as a parent,” says Solomon, a developmental and behavioral pediatrician and director of the U-M's PLAY Project (Play and Language for Autistic Youngsters), a treatment program that is changing the lives of autistic children. “You call their name and they don't turn to you. You dream of the day when they will say, ‘I love you, Mommy,’ and it never happens.

Kids with autism don't seem to value human relationship. They avoid it because it's too scary, too complicated. Their brains are designed in such a ➤

Right: Ready, set, go! Paul, Dominic, Lisa and Natalie Ventimiglia line up at the start for a playful family race.

Far right: Rick Solomon and Katie Goren



way that they are oriented toward things. They like to look at doors, the way doors close. The child with autism is a linear thinker. They like to line objects up. They love trains. And this line of thinking eliminates people.”

Most children with autism are also highly sensitive to sound and touch. Even a mother’s caress, or the sound and feel of the wind through a car window can be sensorily overwhelming to them.

Though this little-understood, uniquely isolating developmental disorder has been around as long as humans, it wasn’t until 1943 that Baltimore researcher Leo Kanner, M.D., published accounts of “early infantile autism” and its symptoms of social withdrawal, delayed or absent language, and repetitive behaviors. A year later, unaware of Kanner’s work, Viennese researcher Hans Asperger,

rates soaring worldwide, for reasons that remain maddeningly elusive, there is a huge demand for new knowledge. Recent articles in *Time Magazine* and the *New York Times* have greatly broadened the dialogue. Available treatments run the gamut — from behavior modification to homeopathy to gluten- and casein-free diets — but at least for now, it’s clear that there’s simply no magic pill to take it all away.

Solomon is the first to admit this. He can’t “cure” an autistic child and isn’t sure anyone can, completely, but the PLAY Project is showing that the bond between parent and child can be used to bring children through a once-hidden doorway and into the warmth of a relationship. Half of the children who undergo the treatment improve significantly, 25 percent exhibit moderate improvement, and 25 percent (usually

## Half of the children who undergo the treatment improve significantly and 25 percent exhibit moderate improvement.

M.D., described similar cases. Today, autism is recognized as a complex continuum, with manifestations as individual as each patient. A person with autism is often said to have autism spectrum disorder. Higher-functioning autistic children with language and sometimes near-genius intelligence, are said to have Asperger’s Syndrome.

There’s a bit of a Wild West feel to the culture of families affected by the disorder. Run an Internet search on “autism” and you’ll be swamped with information, some science-based, some anecdotal, all gilded with hope. With no clear-cut causes to point to — genetics, vaccines, prematurity, birth trauma, diet and environmental factors are all noted as possible triggers — parents struggle daily with the “why.” And with autism

children with other physical or developmental problems) see little improvement.

The logic is almost exquisitely simple: rather than forcing a child to join the world, parents are taught to enter the child’s world and, over time, to become a trusted guide to the outside. Rather than trying to manage or control their child’s behaviors through coaxing, punishment or treats, parents are trained to follow the child’s lead, whether that means sitting quietly side by side waiting for a tiny flash of eye contact, exploring a light switch, or lying on the floor kicking the wall over and over. The key is that they are *together* in a place where the child feels most comfortable.

Says Solomon, “Autistic kids see our world as alien. They don’t speak the lan-

guage or understand the social stuff. They’re thinking, ‘What am I *doing* here?’ So they retreat to what I call their ‘neurologic comfort zone.’ But if somebody comes out of the ‘alien chaos’ and says, ‘Hello, young child! Let’s play!’ and if you play in a way that is engaging, you can eventually turn the play into a game, and then you can add language to the game: ‘Let’s do that *again*. Do you want to do that *again*?’ or ‘one...two...three...GO!’ And before you know it, you’re in a relationship. But you have to start in their comfort zone, meet them where they’re at.”

The PLAY Project is rooted in the pioneering work of Stanley Greenspan, M.D., a nationally recognized child psychiatrist, researcher and author. Greenspan’s approach, called “Floor-time,” offers a developmental, individualized and relationship-oriented model designed to engage even the most isolated children through intensive, child-led play. A 2001 National Academy of Sciences report backs this premise, recommending that young children with autism receive at least 25 hours per week of intensive socialization, language and academic work, in a low adult-child ratio. But Solomon takes the concept to a new level: rather than hiring trained





professionals to work one-on-one with children 20-40 hours a week, the parents themselves are trained by Solomon and his consultants. The result is an affordable treatment that blends well with each family's particular dynamics. The affordability is a critical factor because treatments for autism and many other developmental disorders are rarely covered by insurance.

Only children ages one-and-a-half to five years are admitted to the PLAY Project; there is a critical window of opportunity during which the treatment is most effective. The first step is an evaluation by Solomon. If a diagnosis of autism is made, the parents begin immediate training. The family is matched with one of three PLAY Project consultants who come to the home every month to six weeks and "model" this new way of interacting and playing with the child. Then the parents take over and the consultant coaches them. Much of every session is videotaped for later review by Solomon himself. Some parents take to the approach almost immediately and run with it, reveling in the freedom to follow the child's lead. For other parents, the process is much more difficult.

Solomon fast-forwards the tape he's viewing. A little boy plays with Legos.

His mother sits beside him and holds up a block: "Honey, what color is this?" The child ignores her, intent as he fashions a line of red blocks, a line of white. She persists, "What color? Can you tell me?" There is no response.

Katie Goren, the child's PLAY consultant, stops the tape and turns to Solomon. They are in the midst of a weekly review of challenging cases.

"This kid can read!" she says. "He can do math formulas. He's really smart and asking him what color something is... well, it's just not interesting. And his mom said, 'Well I don't know what to say to him!' I told her, 'Let *him* start the conversation. See where his interest is. Your boy has a lot to say.' You know, this is such a leap of faith for her. If she lets go of 'teaching,' her child may ultimately learn more. It's a paradox."

Solomon agrees. "What makes this so challenging is that you're working with the grief process all the time. Parents, in their grief, wish for a normal child. As a result, they try to force the child to become normal by getting rid of the abnormal. In the PLAY approach, we accept the child's world view as their norm. I compare it to a Chinese finger trap. The more you pull on it, the tighter

it grips you. As soon as you learn to let go, you can slip your fingers out."

Solomon suggests that from now on when Goren visits this family, she should tape the mom interacting with the child and then carefully review the tape with her, offering suggestions and praise. Most important, the mother needs to be encouraged to let her son lead the play.

Central to the PLAY Project is Greenspan's concept of "opening and closing circles." When you greet someone, you open a circle. When that person responds to you, the circle is closed. Human life is a veritable universe of circles of communication, opening and closing in a complex, never-ending dance. Speech, gesture, action, facial expression, laughter — these are the tools of Greenspan's circles, tools that are often lacking in autistic children. Once trained, PLAY Project parents become adept at recognizing when their child "opens a circle" and welcomes them in. A glance, a sound, a word, a touch — all these signal an opening through which learning and growth can emerge. Once an initial trust is established, parents can take extraordinary steps to engage their children.

Solomon shows another video clip, this one from the seminars that he presents almost every month throughout the midwest, educating doctors, parents, teachers and school system administrators, many of whom are only familiar with rigid "behaviorist" approaches to autism. First we see a small boy playing on the floor with his mom. They are side by side, playing with blocks and a triangle, but he never looks at her; then abruptly he runs away. Cut to the next video clip: the boy is lying on the couch when the mom does an unexpected thing. She sits down, right on top of his feet. A circle is opened. The boy looks at his mother, eye to eye, with a big grin. The circle closes. The mother stands and looks at her son. A circle opens. He scooches down the couch so that she can sit on his legs. He cries, "Again!" A circle closes. This simple game continues until he has traversed the length of the couch, being playfully sat upon all the way to his chest. When they are done, the boy yells out, "We made it!"

Solomon turns off the VCR. "That's how dramatic the difference is when you know how to find the comfort zone of the child, to find the joy of being ➤



Alex Ham-Kucharski with his dad, Rich

with them. You have to have skills and you have to know drills, but the single most important thing that I would want to have for my child is joy.”

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Four-year-old Alex Ham-Kucharski greets a visitor at the door of his Canton home and leads the way to the living room. His eyes, big and blue, lock easily with those of a stranger. His smile is wide and generous. It wasn't always so.

“He was born eight weeks premature,” says his mother, Dawn Ham-Kucharski, “so we were always watching him for anything different. The first inkling was that at age one, he didn't respond to things the way other kids did. He could be on his own for three or four hours a day in a bouncy seat. I could sit next to him and he would show no interest in me or in socializing at all. He'd just stare at the ceiling fans.”

In the fall of 2000, when Alex was two-and-a-half years old, the family took him to Rick Solomon. “We assumed he would just look at Alex and say, ‘You are wasting my time, this kid's going to be fine!’ But Dr. Solomon looked at him, played with him a little bit and said, ‘It's not the end of the world. There are things we can do to help your son, but he has moderate-to-severe autism.’

**A glance, a sound, a word, a touch—all these signal an opening through which learning and growth can emerge. Once an initial trust is established, parents can take extraordinary steps to engage their children.**

“I cried. My mother cried. To me, it meant that he would just sit in a corner and never be interested in hugging us, kissing us, having friends, socializing. That he would never talk. That same day, Dr. Solomon introduced us to the PLAY Project. When he told us it meant 20 hours a week of play, I thought, ‘Dr. Solomon must have no kids. This is impossible!’ But we don't count the hours any more...”

Dawn and husband Rich, with help from doting grandmother Dorothy Ham, made a commitment to enter — and, in many ways, to accept and celebrate — Alex's world. Dawn quit teaching at Eastern Michigan University. Rich's company let him work at home. And they played with Alex. They spun salt shakers on a plate with Alex. They clicked light switches with Alex. They jumped on beds with Alex. They lay on the floor and kicked blocks with Alex. And little by little, Alex noticed.

Today, Alex is a strapping four-year-old with a vocabulary of over 450 words,

who urges his mom to “Get the *phone*,” talks to kids on the playground, and snuggles up to his mom and dad for regular hugs and kisses. He has many hurdles yet to cross, but the road is no longer such a lonely place to be.

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After a year and a half of PLAY therapy, four-year-old twins Dominic and Natalie Ventimiglia have made similarly significant progress. As with Alex, these strikingly beautiful kids appear fairly typical, greeting a visitor at the door, playing peek-a-boo, giving a hug when prompted, playing on the huge blow-up slide/trampoline that dominates the living room of their lakefront home. But, as with Alex, it wasn't always so.

“At 18 months, their language wasn't developing — at all,” recalls mother Lisa Ventimiglia. “Our pediatrician recommended Dr. Solomon.” Husband Paul jumps in. “He told us we'd have to get in 20 hours a week and we just said, ‘Well, we're going to do it *all* the time!’”





Far left: Alex's grandmother Dorothy Ham

Left: Alex Ham-Kucharski with his mom, Dawn

The couple began to see results after three months, particularly with Dominic, the more severely affected of the twins. His “stimming” (self-stimulating) behaviors — opening and closing the sliding glass doors, turning the faucets on and off — decreased as his interaction with his parents and sister grew more complex and satisfying. The family cites their PLAY Project consultant, Christy Pratt, who visits once a month, as a valued member of their team.

“The suggestions she makes are always great,” says Paul. “For instance, one time Dominic was really stuck on the ABCs. He just wanted to read them over and over: ‘A...B...C...’ touching each letter. But then Christy showed us that we could do it with him this way.”

Paul circles his arm way over his head and presses his finger firmly onto the table. “A!” His arm circles again. “B! So we’re following his lead, but now it becomes a sensory-motor thing too. And then she would skip from ‘A!’ to ‘J!’ and Dominic would laugh...” Circles opening. Circles closing.

Says Solomon, “Autism most likely starts off with the stunting of neurons that don’t get used. Certain areas of the brain are stunted — it’s visible on autopsy. But what makes autism fascinating to me is that those neurons seem to have the latent capacity to branch and grow. We don’t know exactly how that happens, but it’s clear that if you do the right therapy, it’s almost like watering a plant that’s dying. If you nurture the child in the right way, I suspect — and this hasn’t been proven yet — that those neurons start to branch and grow in ways that have potential, but wouldn’t otherwise be used.”


Since its inception in 1998, about 150 families have participated in the PLAY

Project and 2,000 have been trained in it. When not working directly with families, Solomon spreads the word about its success in drawing out autistic children. His seminars at hospitals, schools and community centers are often parents’ and educators’ first exposure to this approach to autism treatment. The program can be easily duplicated in preschool classrooms with educators trained in the model. A CD-ROM, in the midst of production, will enable parents, teachers and health professionals from all over the world to be trained in PLAY Project concepts and techniques.

“I feel like I have a pocketful of penicillin in a roomful of people with strep throat. I wake up every day thinking of ways to meet this need. We’re trying to reach out to everybody,” says Solomon, “not just the wealthy. I could have created a ‘Cadillac’ model, charged families

\$30,000 a year, trained all their people, set up their program. I’m not going to do that. The PLAY Project is set up so that any family can get the help they need.”

And on the receiving end of that work are the people all over Michigan who happen to love a child with autism. Alex’s grandmother says, “I used to pray every night that when I woke up, Alex wouldn’t be autistic anymore. But now, I just love him. There was a little boy in there who just wanted to talk to us, just wanted to get out. It was heartbreaking. But there has been such incredible growth. It’s a journey Alex has taken us on. How the U-M and Dr. Solomon have helped Alex is just a miracle, and I will always love them for that.”

Across the room, Alex’s mom squeezes her son and says softly, “Go Blue.” 

## “THE PLAY PROJECT IS A WONDERFUL MODEL...”

Says Stanley Greenspan, M.D., chair of the Interdisciplinary Council for Development and Learning Disorders and clinical professor of psychiatry and pediatrics at George Washington University Medical School, “The PLAY Project is a wonderful model for understanding, assessing and intervening with complex developmental problems.

“For example, we’ve found — and Dr. Solomon’s excellent work demonstrates — that emotional interactions tailored to children’s individual differences can enable children with a variety of special-needs conditions, including autism spectrum disorders, to make significant progress in their ability to relate with warmth and intimacy to others, initiate preverbal and often verbal communication, and, for a subgroup of children, learn to use language creatively, logically and abstractly.

“I’ve known Rick Solomon for many years and he’s not only a pioneer and leader in Michigan, but also one of a small group of clinicians and researchers who are transforming the way we care for infants and young children and families with various challenges throughout the world.”