

NEWS

Rising star: Somer Bishop fine-tunes autism diagnosis

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The office of clinical psychologist **Somer Bishop** at the University of California, San Francisco (UCSF) isn't your typical stodgy academic hideaway. In addition to the requisite framed diplomas and awards, it is adorned with mementoes from her clients. One photo depicts adults who were

part of a social group Bishop worked with for years in Ann Arbor, Michigan. “You are a true friend!” and “You really care for everyone!” read messages handwritten on the red frame.

Another image shows a smiling young girl. Bishop remembers her as bright, having learned to read at the age of 3. But the girl’s rigid preferences complicated her family’s life. She would drink only white grape juice, and one particular brand at that. She was afraid of meeting new people and would melt down at the sound of the doorbell.

Newly diagnosed with autism, the girl arrived at a clinic for people with neurodevelopmental conditions at the University of Michigan in Ann Arbor. There, Bishop — then a graduate student about to join the lab of psychologist **Catherine Lord** — helped the girl better cope with the unexpected. Bishop and another student held tea parties to introduce the girl to new foods and drinks. They dressed up as storybook characters and visited her in the clinic, ringing an imaginary doorbell. And they devised a game in which the girl received a prize for each new person she greeted at the clinic.

Over the next several years, they watched the girl expand her culinary repertoire and learn to tolerate the doorbell. Bishop had planned to spend just one semester working with children who have neurodevelopmental conditions, but motivated by making a difference for this girl, among others, she decided to devote her career to diagnosing and dissecting these complex conditions.

“A child with autism can have so much intact, be this healthy, walking, talking miracle of a being, and still have so much difficulty,” says Bishop, now assistant professor of psychology and psychiatry at UCSF. “It’s impossible to not become inspired to study what this means and how we can do better for these families.”

Diagnostic diva:

In the years since she trained her focus on autism, Bishop has begun a minor revolution in autism diagnosis. She has developed a faster alternative to standard tests that now take up half a day. (Her mentor, Lord, created the two most widely used tools for diagnosing autism: the Autism Diagnostic Observation Schedule, a clinical assessment, and the Autism Diagnostic Interview, a parent questionnaire.) And she has pioneered strategies for separating people with autism into types, an effort essential for pinpointing the molecular roots of the disorder.



Mommy magic: Somer Bishop plays with her daughter Lila, 3, who does not have autism, at a table full of toys Bishop uses to evaluate children for autism.

“Somer is going to be the one in this generation to further refine the tools we have and to create new ones,” says clinical psychologist **Audrey Thurm** of the National Institute of Mental Health in Bethesda, Maryland, who has mentored and collaborated with Bishop.

Bishop also has a busy clinical practice at UCSF, conducting diagnostic assessments and leading therapy and social groups for children and adults with autism and other conditions. She has earned a reputation as a caring clinician, whose fun-loving nature puts people with autism and their families at ease.

“She is magical with children, and pretty magical with everyone else too,” says **Bennet Leventhal**, deputy director of child and adolescent psychiatry at UCSF. “We’ll see kids who people say can’t communicate or have no social skills, and Somer can relate to them in a way that allows them to show off what they can really do.”

“Somer knows as much about the various characteristics of children and adults with autism as anybody in the world.” Catherine Lord

Bishop displays a similar magic with colleagues. As a postdoctoral researcher at the University of Wisconsin-Madison, she started a lab bowling team. **Julie Lounds Taylor**, who had just finished her postdoc there, remembers cautiously signing up, worried about the 12-week commitment to play an unfamiliar sport. But the pair bonded over gutterballs and pizza. Now, almost a decade later, they collaborate on a project exploring how education and friendship support people with autism.

“Getting together every week in that funny situation let us develop a friendship,” says Taylor, assistant professor of pediatrics and special education at Vanderbilt University in Nashville, Tennessee.

Serious fun:

Bishop was raised in Ann Arbor, where she developed a lifelong love of games and sports; she attended her first Michigan football game when she was just 6 months old. Her parents, Nancy and Ray, owned a real estate business and had a reputation for being smart, hard-working and approachable. A longtime friend remembers that Nancy would take calls from clients outside of normal business hours, without any apparent irritation. Bishop shares these traits, along with the attitude that work should be fun, friends say.

“Somer is one of those rare people who doesn’t need to compartmentalize because she loves everything she does,” says **Katherine Gotham**, a psychologist at Vanderbilt University who has known Bishop since college.

When Bishop entered college at the University of Michigan, she assumed she’d follow in the footsteps of her father, who has a law degree. But she became inspired to work with children after joining a project led by **Albert Cain**, a psychologist who studies bereavement in childhood. In pursuit of her doctorate in psychology, she met Lord, who had been a leader in the field of autism diagnostics since 1989.

In 2002, Lord had just opened the University of Michigan Autism and Communication Disorders Center. Working at the center, Bishop became deeply engaged in understanding autism and in its diagnosis, which seemed at times to be more of an art than a science. It was there that she met the girl who would only drink white grape juice.

Precision tools:

Lord inspired Bishop to focus on how to capture clinical expertise with better diagnostic

instruments. The duo still collaborate today.

“Somer knows as much about the phenotype of autism — the various characteristics of children and adults with autism — as anybody in the world,” Lord says.

Bishop is now refining existing diagnostic tools to capture the full spectrum of autism symptoms. Many children with the condition still go undiagnosed, and others are misdiagnosed because their symptoms stem from an overlapping problem, such as language delay.

“A person can be socially awkward or inappropriate or unsuccessful because they have autism or because they have any number of other things,” Bishop says.

In January, Bishop and Lord reported that certain behaviors can distinguish children with autism from those with language delay, mood disorders or intellectual disability. They found that having problems with ‘basic’ social and communication skills, such as the ability to make eye contact, is a better predictor of autism than having trouble with ‘advanced’ skills, such as being able to sustain a conversation¹.

The findings highlight the importance of breaking down categories of characteristics that are supposed to define autism.

Screening support:

Bishop draws on her clinical experience to think of new ways to identify people with autism. She developed a screening tool that researchers can use to quickly find school-age children with autism symptoms. The tool, called the Autism Screening Interview, takes less than 20 minutes to administer by phone. When combined with clinical observation, it is almost as good at flagging children with autism as the two standard instruments, which together take up to four hours to administer.



Precision toys: Bishop advises researchers to match the diagnostic method to the topic of study.

“What ties all of my research interests and projects together is this issue of measurement, and what works for whom, and what works for what purpose, and in which situation,” says Bishop.

Making measurements more precise is becoming more urgent as policymakers demand better evidence in support of autism screening tools and the interventions that follow. In August, the U.S. Preventive Services Task Force **recommended against routine screening** of all young children, citing a paucity of evidence that early interventions for children flagged as having autism lead to “clinically important” improvements.

Bishop says the controversy underscores the need to make autism diagnosis more precise, and to better understand how factors such as intelligence, language proficiency and behavioral problems influence measurement of social and **repetitive behaviors**. She also says researchers need to match the diagnostic tool to the study. Some instruments may be better for unraveling biological mechanisms, whereas others may work best for assessing a child’s response to an intervention, or

predicting who will develop symptoms such as depression.

“If we become overly reliant on one type of measure to do it all, then we're really going to get stuck,” Bishop says. “Different measures have their place in this world.”

REFERENCES:

1. Bishop S.L. *et al. J. Child Psychol. Psychiatry* Epub ahead of print (2016) [PubMed](#)