

Creating a bidirectional model of research and practice has been a constant in the work of Jack Bates for 51 years, ever since he became a member of the PBS Clinical Science Program, studying and treating children's behavior problems. During his long, highly influential career, Bates' work in the clinic inspired ideas for research as much as his wide-ranging knowledge of research shaped his clinical practice.

Where do children's behavior problems come from? In science. he says, "we talk about clinical psychopathology a lot. It doesn't just come from nowhere." Speculation about the etiology of psychopathology at the time Bates was beginning his career focused primarily on how parents shape their kids. Bates' work in the clinic, however, led him to another conclusion: that kids themselves play a role in the system of influences that shapes their behavior. Their own temperament helps shape the family dynamics. As Bates explains, "I was coming into the field when we were starting to think about systems of influence. I saw this wave starting to form and I started surfing that wave.

Beginning in the 1990s Bates began to focus on sleep and self-regulation. The topic caught his attention both in his clinical work and his experience as a parent and he credits fellow PBS Professor Rick Viken with helping him to get started. He and Viken were consulting at a Head Start Program in Bloomington when they developed the hypothesis that sleep deficits

contribute to behavior problems. Eventually, this line of work became the Toddler Development Project, an expansive project with locations at three universities.

Viken gives us a unique glimpse into Bates' interactions with the kids at Head Start: "We would go into a classroom, observe the kids for a while, and write a report on any kids who we thought should be followed up. Back then Head Start was an environment almost completely staffed by women. Most of the kids had never seen a man in a school setting before, and they found it a bit shocking, particularly when the man was very tall, bearded, and perched uncomfortably on a tiny toddler stool.

"And what was this world-famous senior faculty member doing perched on a tiny toddler stool? Well, he was doing a clinical assessment, but he was also formulating ideas about individual differences in temperament, sleep, regulatory processes and the effect of socioeconomic burdens on development. His clinical work supported his long-term research goals, and his research supported his long-term clinical expertise. For fifty years he stuck with this plan, and it sure has paid off."

In a lifetime of work, Bates and his collaborators collected volumes of longitudinal data, unraveling the complex ways behavior problems arise in the context of family dynamics, child temperament, as well as social and economic conditions.



A B O U T BENNETT I. BERTENTHAL

RETIRING FACULTY

It wasn't until he became a teacher at an elementary school and then at a high school that James H. Rudy Professor of Psychological and Brain Sciences Bennett Bertenthal decided to pursue a career studying children's development. As he became more and more committed to learning about teaching, he realized "there was an awful lot we didn't know."

From this point on, he pursued a career as a developmental scientist, completing a Ph.D. in developmental psychology at the University of Denver and a postdoc in neuroscience at UCLA. He then became a professor at the University of Virginia, where he remained for close to 20 years.

Bertenthal's early career focused on the development of infants' and adults' perception of biological motion. Subsequent work sought to identify some of the neural correlates and computational processes for processing biological motion, as well as the coupling between perception and action. This work was an important precursor to a shift in the field toward studying social perception and social cognition, a primary focus today.

In 1996 Bertenthal was recruited to Washington D.C. as the assistant director of the National Science Foundation's Directorate on Social, Behavioral and

Economic Sciences. This turned out to be "the chance of a lifetime to do things that are not part of a typical academician's portfolio and an opportunity to truly see the world, learn about how science is conducted in other places and represent the United States."

In 2000 he returned to academia at the University of Chicago. His research there focused on how individuals understand other's actions, in particular through automatic imitation of others' behaviors and the prediction of others' actions.

From 2007-2010 Bertenthal served as executive dean of the IU College of Arts and Sciences before becoming a fulltime member of PBS, where he established the prolific Developmental Cognitive Neuroscience Lab. He resumed his work on the development of action understanding and social attention by infants, children and adults. He also formed new collaborations that led him into cutting-edge fields: with IU computer scientist Apu Kapadia, as well as PBS professors Kurt Hugenberg and Dorainne Green, on privacy and security issues of online photo-sharing. He teamed up with PBS Professor Aina Puce to edit a book, published in 2015, on The Many Faces of Social Attention and collaborated with IU biophysicist Rob de Ruyter with whom he shares an interest in motion perception.



A B O U T GEOFFREY BINGHAM

RETIRING FACULTY

Born in 1954, Bingham writes, "I spent my boomer childhood in Northampton, MA, and surrounding Berkshire hills. My college years were at Trinity College in Hartford, CT and Smith College, interrupted by a year working at the Nantucket Cottage Hospital. After two years working as a computer programmer, I entered graduate school studying perception with M. T. Turvey and R. E. Shaw at the University of Connecticut. I did my dissertation on a Fulbright with G. Johansson in Uppsala, Sweden, then a fellowship with M. A. Arbib at the University of Massachusetts, followed by a postdoc studying action with J. A. S. Kelso at Haskins Laboratories in New Haven. In 1989, I joined the faculty in Psychological and Brain Sciences and Cognitive Science at Indiana University."

Bingham's field of expertise is perception/action, studying human visual and haptic perception and motor behavior, including perceptuo-motor learning. Specific topics of investigation include visually guided reachesto-grasp, space perception, visual event perception, shape perception, nonlinear dynamical models of rhythmic coordination, long distance throwing, embodied memory, and Developmental Coordination Disorder in children. His work has been funded by the National Science Foundation, the National Institutes of Health including the National Eye Institute and the National Institute for Child Health and Development, the Swedish Defense Department, General Motors, Smith and Wesson, and the Royal Society.

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ABOUT

AMY HOLTZWORTH-MUNROE

RETIRING FACULTY

With her characteristic determination to follow the evidence wherever it may lead, Amy Holtzworth-Munroe began her research on intimate partner violence as a University of Washington graduate student in 1982. Her growing interest in feminism and women's health was also a critical factor in her decision to pursue this topic.

When Holtzworth-Munroe began working in the UW marital therapy lab, virtually no one talked about violence. The first social science study on the topic had just been published in 1980. Yet, in one of her first studies, Holtzworth-Munroe started asking about marital violence, to find that 50 percent of the marital therapy clients had experienced it in the past year. "We now know this is common," she says. "But back then, nobody knew this. We realized it was something we were ignoring, and which turns out to be a pretty prevalent issue."

Beginning her first faculty job in the IU Department of Psychological and Brain Sciences in 1988, Holtzworth-Munroe soon became one of the foremost researchers of intimate partner violence. Her 1994 landmark paper, "Typologies of Male Batterers," had a major impact on this emerging field by differentiating between various possible causes and types of violence, each of which might call for different interventions and treatment. That pioneering work laid the groundwork for future research in the field.

Holtzworth-Munroe's work has always crossed disciplinary boundaries. As a researcher she sought to reach the police officers, therapists, domestic violence advocates and policy experts who encounter domestic violence in their work. In 2006 and 2007, her research took a turn when she began work with IU Clinical Professor of Law Amy Applegate in the field of family law where knowledge of intimate partner violence was greatly needed. Indeed, one of their early efforts was the development of an intimate partner violence screening tool for use in family law settings, a measure widely used by family mediators.

With Applegate, Holtzworth-Munroe studied existing programs in family law, such as parenting programs for divorcing families and forms of family mediation designed to offer safer mediation to parents reporting intimate partner violence. In 2017 the two Amy's received the IU Outstanding Faculty Collaborative Research Award in recognition of their impactful work.

In addition to this groundbreaking research, Holtzworth-Munroe was laser-focused on students. She served as Director of Graduate Studies from 2006-2022, ensuring students' interests remain at the forefront and promoting equity and diversity. Holtzworth-Munroe's pioneering research, dedicated teaching and service have been a critical force in shaping and distinguishing both the Clinical Science Program and the department.