
Peter C. Mundy, Ph.D.

Peter C. Mundy, Ph.D. Lisa Capps Chair for Neurodevelopmental Disorders and Education, and Director of Educational Research, UC Davis M.I.N.D. Institute, School of Education and Department of Psychiatry and Behavioral Sciences.

Biography

Peter Mundy, Ph.D. is a developmental and clinical psychologist who has been working on defining the nature of autism for the past 25 years. His work in this area began in 1981 at the UCLA Neuropsychiatric Institute. At that time little was known about the characteristics of the social deficits of autism. His studies with collaborator Marian Sigman contributed to the current understanding that joint attention impairments are part of the fundamental features of the early onset of social deficits of children with autism. This observation has contributed to improvements in the early identification and the diagnosis of autism. Indeed, many of the instruments commonly used for the diagnosis or early identification autism now include measures of joint attention, and early interventions often focus on improving joint attention development in children with autism. He currently is the Lisa Capps Professor of Neurodevelopmental Disorders and Education at the UC Davis School of Education and the UC Davis M.I.N.D. Institute. He is also the Director of Educational Research at the M.I.N.D. Institute. Prior to that Dr. Mundy was a Professor of Psychology at the University of Miami where he was the founding Director of the University of Miami Center for Autism and Related Disabilities, which serves over 3000 children and families. He is also the Founding Co-Director of the Marino Autism Research Institute at the University of Miami with Wendy Stone and Pat Levitt at Vanderbilt University. He is actively engaged in the study of the neurodevelopment of joint attention in young children with autism and typical development. He is also working on understanding and treating problems in the social and emotional development of higher functioning children and adolescents with autism. A National Institute of Mental Health grant currently funds his work on that topic with Dr. Heather Henderson. Dr. Mundy is currently working on a book titled, *Joint Attention and Our Sharing Minds: Attention and Social Cognition in Typical Development and Autism*” to be published by Guildford Publications in 2008-2009.

Publications

Mundy P. Lessons Learned from Autism: Attention, Joint Attention and Social Cognition. In D. Cicchetti and M Gunner (Eds.), *The Minnesota Symposium on Child Development (pp. 64 – 83), Vol. X, Translational Research*, Hoboken, NJ.: Wiley, (in press). *This paper provides an overview of the history of translational research on the nature of the social deficits of autism. It also proposes a new neural model theory designed to integrate behavioral, developmental, and neuroscience research on autism.*

Mundy P, Vaughan Van Hecke A. Neural Systems, Gaze Following and the Development of Joint Attention. In C Nelson & M Luciana (Eds.), *Handbook of Developmental Cognitive Neuroscience*, (pp. 172-198), New York, NY: Oxford University Press, 2008. *This paper provides a comprehensive synthesis of the neurodevelopment of joint attention. Joint attention impairments are a central factor in autisms and are specific to the social symptom described as a spontaneous lack of sharing experience with others.*

Mundy P, Block J, Vaughan Van Hecke A, Delgado C, Venezia Parlade M, Pomares Y. Individual differences and the development of infant joint attention. *Child Development* 78:938-954, 2007. *This paper provides a report of the largest longitudinal study of typical joint attention ever conducted. These results of this study suggest that joint attention is well developed in the first year of life and displays a spontaneous regression in the 12 to 15 month period. These data provide a necessary empirical foundation for interpreting the nature and significance of early social impairment in autism.*

Mundy P, Henderson H, Pradella Inge A, Coman D. The modifier model of autism and higher functioning children. *Research and Practice for Persons with Severe Disabilities, Special Autism Issue* 32: 1-16, 2007. *This paper presents a new model of phenotypic variability (individual differences) in autism. This model proposes that frontal cortical functions that are not specific to autism but are associated with behavioral activation and self monitoring may change the expression and course of autism in ways that effect diagnosis and treatment.*

Mundy P, Newell L. Attention, joint attention and social cognition. *Current Directions in Psychological Science* 16: 269-274, 2007. *This invited theoretical essay begins to develop a new way of thinking about joint attention, social cognition and autism. Currently most models of autism, social cognition and the social brain emphasize research on perceiving, responding to, and knowledge about others behavior. Alternatively a new perspective is proposed that suggests that joint attention impairment in autism suggests that research on processing information about one's own attention and behavior is equally if not more important in understand social cognition, the social brain and autism.*

Vaughan A, **Mundy P**, Acra CF, Block J, Delgado C, Parlade M, Meyer J, Neal R, Pomares Y. Infant joint attention, temperament, and social competence in preschool children. *Child Development* 78: 53-69, 2007. *This is the first large scale longitudinal study to indicate that individual differences in infant joint attention predict social outcomes and social competence in typically developing children. There results underscore the importance of joint attention in adequate social development.*

Fan Y, Jayakar P, Zhu H, Barbouth D, Sacharow S, Morales A, Carver V, Benke P, **Mundy P**, Elsas L. Detection of Pathogenic Gene Copy Number Variations in Patients with Mental Retardation by Genome-wide Oligo Array CGH. *Human Mutation* 28: 1124-1132, 2007. *This paper describes new, more efficient methods for copy number variant (CNV) array analysis. This has the potential to increase the quality and quantity of genomic CNV research on autism and other neurodevelopmental disorders.*

Presentations

Understanding the Social Deficits of Older Higher Functioning Children with Autism, Keynote address to the Promising Pathways Conference, Florida Gulf Coast University, April 2008.

Introduction to the Clinical and Behavioral Aspects of ASD, Opening paper presentation at the Marino Autism Research Institute Scientific Symposium on the Environment and Autism Etiology, Vanderbilt University, April 2008.

Attention, Joint Attention and Social Cognition: A translational perspective on developmental psychology and autism research, Minnesota Symposium on Child Development. University of Minnesota, Minneapolis, MN, October 2007.

Early Intervention in Autism: Theory and Progress, Paper presented as part of the Symposium in Honor of the Retirement of Professor Ina van Berckelaer-Onnes, Center for the Study of Developmental Disorders, University of Leiden, Leiden, Netherlands, June 2007.

Sources of phenotypic variability in children with higher functioning autism, Invited lecture for the Autism and Developmental Disorders Colloquium Series, Department of Brain and Cognitive Sciences, MIT, Boston, April 2007.

Modifiers of the expression of autism in higher functioning children, Invited lecture for the UCLA Center for Autism Research and Treatment, Semel Institute for Neuroscience, UCLA, Los Angeles, January 2007.

Research Funding

Co-Principal Investigator: Motivation, Self-Monitoring & Family Process in Autism, NIMH, 05/01/05 to 04/30/10, \$207,506 annual direct. *The major goal of this project is to examine the degree to which frontal cortical functions that are not necessarily specific to autism, but are associated with behavioral activation and self monitoring may change the expression and course of autism in ways that effect diagnosis and treatment.*

Co-Principal Investigator: National Center for Professional Development in Autism, IES (Institute for Educational Science), 7/01/07 to 6/30/12, \$231,010 annual direct. *This center will promote the use of evidence-based diagnostic, assessment and intervention/instructional practices in classrooms, homes and communities to improve outcomes for children and youth with ASD and their families. The PDA will provide training for district or state-level professional development providers, thereby increasing the number of personnel prepared to serve individuals with ASD.*

Community Service

Member of the National Advisory Committee to the NIH Collaborative Programs of Excellence in Autism (CPEA) and Studies to Advance Autism Research and Treatment (STAART) Network: May 2002 to 2007

Ad-hoc Member of the NIH Interagency Coordinating Committee (IACC) on Diagnostic Research for Autism

NIH Study Sections: Member, Biobehavioral & Behavioral Sciences Subcommittee, 2007-2011

Awards and Honors

Elected Vice President, International Society for Research on Autism (INSAR), 2007-2009