

## **Uta Frith**

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Uta Frith (born Aurnhammer on May 25, 1941) is a German psychologist best known for her work on autism. After graduating in experimental psychology from the University of Saarland, she pursued her PhD at the Institute of Psychiatry at the King's College London, UK. It was during a course in abnormal psychology when she first encountered children diagnosed with autism. Experimental studies by Neil O'Connor and Beate Hermelin intrigued her, especially for applying an experimental perspective to the study of developmental disorders. Based on these experiences, Frith designed experiments that sought to shed light on atypical cognitive processes. Upon obtaining her PhD, she joined the scientific staff at the Medical Research Council, UK, after which she became professor at the University College London.

Autism is a pervasive developmental disorder, characterized by deficits in communication and social interactions, as well as by the presence of restricted interests and repetitive patterns of activities. In the early 1960s, autism was thought to be caused by "refrigerator parents", parent who lack warmth towards their children. Frith challenged this view and proposed instead that autism has a genetic and cognitive component. In 1968, she completed her PhD, *Pattern detection in normal and autistic children*, a first attempt to understand the disorder in the context of cognitive processing. She has been influential in the field ever since.

In her studies of autism, Frith first joined Simon Baron-Cohen and Alan Leslie to investigate the metacognitive competence of *theory of mind*. This competence, studied extensively with a well-known puppet-play paradigm, pertains to the ability to distinguish between one's own knowledge and that of others. Children with autism were found to lag behind typically developing children in their theory-of-mind competence: Rather than understanding that there is a difference between what they know themselves and what others know, children with autism tend to assume that their knowledge is shared by anybody else. Therefore, the argument was put forward that autism is the result of an underdeveloped metacognition related to understanding others' beliefs and desires correctly.

Building on her theory-of-mind research, Frith further developed her argument that autism is a cognitive-neurological disorder, not the result of parenting. In 1989, she published her book *Autism: Explaining the Enigma*, a first account of autism that applies the cognitive-processing lens to the disorder. It was written informally and accessible for public consumption, quickly becoming a best-seller. Translated into multiple languages, and updated to include current psychological theory and practical implications, her book remains one of the leading contributions to autism research.

In understanding autism, Frith's main theoretical contribution was the concept of *weak central coherence*. The idea is that typical development is characterized by a tendency to integrate perceptual bits into a coherent whole. The peculiar attentional and perceptual abnormalities present in autism might have their source in a difficulty with integrating information coherently. Indeed, anecdotal and empirical evidence supports this claim: Children

diagnosed with autism tend to focus on seemingly irrelevant details, to the expense of the gist of information. Neuropsychological findings further confirmed that brain connectivity is at issue for children with autism. This theory advanced the field tremendously. At the minimum, it confirmed that autism is a brain condition and not a result of early socialization.

Frith's career has been instrumental in developing theories towards cognitive processing not only in autism, but in dyslexia as well. She has strived to make her research relevant to the education of people with these disorders and to link cognitive causes of dyslexia and autism to the behavioral symptoms across the life span. For example, Frith's PET study of dyslexia in English, French, and Italian speakers found that reduced activity in the left hemisphere. Frith helped solidify the idea that there is a biological basis to dyslexia.

In addition to her research, Frith has advocated for the advancement of women in science with her support network Science and Shopping, which encourages women to share their ideas and promote women's careers in science. The website is a collection of ideas from women, including links to news articles on gender and science issues. In addition, Frith has created blog posts to give advice to women who are experiencing hardship in their careers.

Frith was elected to the Fellow of the Royal Society in 2005, and she is an Honorary Fellow of the British Psychological Society since 2005. Among other numerous awards, Frith was named the President of the Experimental Psychology Society. Frith is a Foreign Associate of the National Academy of Sciences and a Fellow of the American Medical Sciences. In 2009, she and her husband jointly received the European Latsis Prize for their contributions to

understanding the human mind and brain. In 2014, they were awarded the Jean Nicod Prize for their combined work on social cognition. Currently, Frith is Emeritus Professor of Cognitive Development at University College London and Research Foundation Professor at the Faculties of Humanities and Health Sciences, University of Aarhus, Denmark.

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