

IN MEMORIAM

Esther Thelen, President of SRCD 2003-2005

1941-2004

Esther Stillman Thelen died on December 29, 2004 of cancer, at the age of 63. She had successfully battled the same cancer into remission 25 years earlier at the start of her career. Esther changed the face of developmental psychology by introducing researchers to a dynamic systems approach to development and reinvigorating the moribund field of motor development. She was a highly respected colleague, a cherished mentor and friend, and a licensed movement therapist. She was a loving wife of 42 years, a proud mother, and a delighted grandmother.

Esther had a remarkable sense of style, both personally and intellectually. Her clothes, her homes, her hobbies, her papers, and her talks—all bore her personal, creative touch: A colorful scarf to cap off an outfit, the perfect turn of phrase to capture an idea. As a researcher, she loved both the minute details of the data and the big ideas that build an overarching theory. Unparalleled by other infancy researchers, Esther conducted dozens of detailed microgenetic longitudinal studies. She illustrated how the use of high-speed motion capture systems and electromyographic recordings with infants provided new insights into the processes of change over multiple nested time scales. She painstakingly observed infants' movements with the confidence that individual patterns of stepping and reaching would reveal larger patterns of learning and development.

Esther was an extraordinary observer of behavioral development. Like McGraw and Piaget before her, she discerned patterns of behavior that had previously gone unnoticed and she

changed prior conceptions of previously noted phenomena. Like her great predecessors, she aimed to establish a grand theory of development with general principles that could apply across varied phenomena and traditionally disparate content domains.

After receiving her undergraduate degree in zoology from the University of Wisconsin in 1963, Esther chose the traditional path of supporting her husband's career and starting a family.



Only partially tongue-in-cheek, she credited her children with starting her on an academic career. To “expand her interests beyond jello cubes and Sesame Street,” Esther took a graduate course in animal behavior. She was instantly hooked. The ethological perspective stressed the importance of detailed observations of animals' natural behavioral patterns and raised fundamental questions about their developmental origins.

Based on a study of grooming behavior in wasps, Esther received her Masters degree in 1973 from the University of Missouri. The repetitive, stereotyped grooming movements of the wasps seemed reminiscent of Piaget's notion of circular reactions described in her developmental psychology classes on human infants. Esther's dissertation was the first in a series of heroic longitudinal studies that were to become her trademark. In a tour-de-force descriptive

study, she collected biweekly observations of 49 different types of repetitive stereotyped movements in infants' arms, legs, trunks, heads, face, and fingers. In 1977, she received her doctoral degree in biological sciences.

Esther's career soon sky-rocketed despite her late and unconventional start in academia. In 1977, Esther took a part-time faculty position in the Psychology Department at the University of Missouri. Her first lab was a former morgue, carpeted and covered in posters to make it welcoming for infants. Every modern textbook contains images from the work that she began there: Infants performing alternating leg movements while lying on their backs, held upright by an experimenter, with tiny weights around their ankles, submerged chest-deep in a tank of water, on a motorized treadmill, and with one foot on a fast-moving treadmill belt and one foot on a slow-moving belt. One of her best-known findings was that developmental changes in the ratio of leg fat to muscle over infants' first year of life were responsible for the famous U-shaped developmental trajectory in infants' upright stepping movements. The notion that leg fat, not neural maturation, might be responsible for aspects of motor development flew in the face of a century-long tradition of stressing the primary role of brain maturation in motor development. Esther's proposal that no single factor, not even the brain, is necessarily responsible for the course of development would prove to be an enduring theme of her work.

Moreover, the seemingly simple patterns of movement kinematics and muscle forces in infants' leg movements provided the basis for addressing central questions in motor control and child development. Can patterns emerge without a pattern generator to guide them? What are the developmental origins of new behavioral forms? How might researchers understand the

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