Learning to Move

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Locomotion is a central achievement of infancy, but after 100 years of study, researchers know surprisingly little about infant locomotion or how it develops. The traditional focus on motor milestones and improvements in gait patterns distracted researchers from the more interesting psychological issues concerning the ways that infants learn to move their bodies through the environment. Indeed, in our zeal to establish standard measures and norms, researchers have confused assays and lab preparations with natural locomotor activity. As a consequence, many of our accepted "findings" are irrelevant or simply wrong. In this talk, I offer several suggestions for new and perhaps more fruitful ways of studying the development of locomotion. Natural locomotion is omnidirectional: infants turn; they start and stop; their paths are twisted; and errors are commonplace. Infants must continually adapt their movements to changes in their bodies and variations in the environment. One of the most important things infants learn is to generate and use perceptual and social information to guide locomotion adaptively. The learning process is geared toward flexibility rather than rote performance: In other words, infants "learn to learn" rather than acquire fixed solutions. But what infants learn in an earlier developing posture does not transfer to a later developing posture. Finally, locomotion is not an endpoint in infant development. At the same time that infants learn to locomote, their new locomotor skills provide opportunities for learning in other psychological domains. The development of crawling and walking instigate a cascade of changes as to where infants go, what they see, how they interact with objects and people, and how caregivers respond to them.