INFANTS’ PERCEPTION OF
MUSICAL RHYTHM AND METER:
EARLY ABILITIES AND DEVELOPMENTAL CHANGE

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Perception of the temporal structure, or “meter”, of music enables a range of socially and culturally significant musical behaviors such as synchronized dancing and singing. This dissertation combines developmental and cross-cultural comparisons to examine the perception of musical meter and its development during infancy. The first chapter reports that 7-month-old infants can categorize simple rhythms according to a common underlying meter. Infants also detect contingencies between positions in the meter and individual pitches, an ability that may bootstrap acquisition of knowledge about musical pitch structure. Chapter II shows that Western adults’ knowledge of Western meter interferes with their ability to detect rhythmic disruptions in a foreign, Balkan meter. By contrast, adults exposed to both Western and Balkan music throughout childhood perform accurately in either context. Six-month-old infants, who have had relatively limited exposure to music, can detect metrical disruptions in either Western or Balkan contexts, which seems to indicate culture-general perception of meter. Chapter III reports a decline in 12-month-olds’ performance only in the foreign musical context, which is consistent with the emergence of culture-specific metrical biases by this age. After 12-month-old infants and adults receive one or two weeks of brief, daily exposure to foreign music, infants can detect the rhythmic disruptions in foreign metrical contexts, but adults cannot. Overall, the findings document early sensitivity to culture-general aspects of metrical structure but rapid developmental change in response to culture-specific musical experiences.
BIOGRAPHICAL SKETCH

Erin Eileen Hannon was born in August, Georgia on July 18, 1976. Throughout her childhood she lived in various places throughout the United States, such as Florida, Washington, California, and Nevada. She attended Reno High School from 1990-1994, and devoted most of her time and energy to literature, theater, foreign language study (German and Japanese), and classical piano performance. Erin graduated high school one semester early so she could participate in the Year Abroad Program through the American Field Service, which took her to Japan to attend high school and live with a Japanese host family. Her experience in Japan initiated a strong interest in academic study, and after returning to the United States Erin went to New College of Florida. There she enjoyed the flexibility and intellectual stimulation of a small liberal arts college that emphasized narrative evaluations and individualized contracts over grades and requirements. Erin continued to pursue her interest in music, but also became fascinated with links between music, psychology, and culture, which led her to pursue a double concentration in Psychology and Music. She became involved in many music-making activities, such as directing a vocal ensemble that performed Balkan folk music. Erin spent the spring of her fourth year in Nepal, where she completed a cognitive ethnomusicology project involving a community study of a remote mountain village, a collection of folk song recordings and transcriptions, and a music perception experiment. After finishing her B.A., Erin enrolled in the Ph.D. program in Psychology at Cornell University. Her interest in culture naturally led her to a developmental and cross-cultural approach to psychological research, and to multiple collaborations with faculty members at Cornell and University of Toronto. In the fall, Erin will be residing in Boston, MA with her husband Joel Snyder, and she will begin working as an assistant professor of Psychology at Harvard University.
To my wonderful husband Joel.
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