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10017. *Information Theory and Melody: Zero and First Order Markov Models.*

This work explores the application of information theory to the description of melody in music. The model incorporates both pitch and duration into a characterization of the predictability of composers' works. This study uses zero and first order Markov models to describe the melodic voice line of Franz Schubert's song cycle, "Die Schöne Müllerin," and Gustav Mahler's "Des Knaben Wunderhorn." Using a first order model rather than a zero order greatly improved code lengths and provided greater predictability of the data. In the zero order Markov model, there was a significant difference in predictability between the two composers. In the second order model, the difference in predictability between the two composers decreased substantially. (Received September 17, 2006)