

## A MODEL OF MELODIC EXPECTATION

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### Background

Leonard Meyer (1956), Eugene Narmour (1990, 1992), Steve Larson (1993), and Fred Lerdahl (2001) have published theories of melodic expectation. Experimental inquiries by James Carlsen (1981), William Lake (1987), Mark Schmuckler (1989), Lola Cuddy and Carole Lunny (1995), E. Glenn Schellenberg (1997), Paul von Hippel (2000), and others have suggested paths for the improvement of existing models.

### Aims

The paper aims to present an improved model of melodic expectation, usable in analysis and experiments, and capable of providing a basis for inquiry into the affective consequences of expectation violation.

### Main Contribution

The study presents a model of melodic expectation based on the interaction of five factors: stability, proximity, direction, temporal position, and hierarchic position. The formulation of each parameter, and the method of their overall combination, addresses issues concerning existing models, including those of hierarchy and temporality, transparency of notational system, real-time realization, and correlation with experimental results.

The model assigns a degree of expectedness to each melodic event, resulting in an easily comprehensible graph of expectational peaks and valleys across a melody's course. An adaptation of Lerdahl and Jackendoff's time-span reduction selects events that influence expectations not only about the immediately subsequent event, but also about more distant ones perhaps three, five, or sixteen notes into the future. A factor informed by Mari Riess Jones' notion of dynamic attending specifies the temporal target of expectations.

Analyses of different scales identify variations in their expectational profiles as a partial determiner of variations in their perceived qualities. Analyses of excerpts by Bach, Mozart and Chopin link expectational occurrences to experienced affect.

### Implications

The paper suggests possible directions for empirical investigation. It offers possible links between expectation violation and affect.