

What is musical prosody?

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This paper examines in depth the idea of musical prosody. Prosody is a term associated with language and is commonly defined as “the patterns of stress and intonation in a language”. The authors extend the idea of prosody from the domain of language to music and continuously draw insightful parallels between them. Throughout the course of the paper, they raise several questions about musical prosody. These questions are then answered using the results of previous work. This paper was very well organized and thought provoking. Because the amount of information contained in this paper is more than what I can cover in a summary, my review will exclude discussions of the link between music and language.

The introduction of the paper outlines the characteristics of musical prosody. It states that musical prosody is obligatory. There are many aspects of a musical performance that are not denoted in a score. Intensity, tempo, articulation, and timbre are factors that must be determined by the performer. Therefore, every musical performance represents a series of choices that *must* be made by a performer. These choices are not random though. Musical prosody only alters with intent. Performers often reproduce performances with the same expression. Some of the decisions performers make in regards to expression are individualistic decisions. But, there are also some guidelines. Some interpretations are more proffered than others. For example, music from Chopin’s era allows for more tempo change than music of J.S. Bach’s era.

A large portion of this paper focuses on the functions of musical prosody. The first function discussed is segmentation. This refers to how performers segment continuous signals into important events, their sources, and the relations among them. One musical unit that is often marked for segmentation is the phrase. A musical phrase is simply a unit of meaning. All published research suggests that phrases are marked prosodically. Also, even though prosodic cues may not be necessary for segmentation, they have a significant influence on how segmentation occurs when they are present. The second function discussed is prominence. Musical prosody may function to signal the relative prominence of events. Performers lengthen tones, increase the loudness, or change the articulation to mark metrically important events. The judgment as to which events are prominent is made by both the composition and by the performer. The third function discussed is coordination. Since most performances are collaborative, they require coordination between the performers. One study has shown that performers must keep their onsets within 30-50 ms of each other to maintain simultaneities. With coordination, the most important factor for performers to consider is tempo. The fourth function discussed is emotional response. Even though this area of research is not yet well developed, recent studies suggest that there are some commonalities in listeners’ responses to music that extend to infants and across cultures. The most successful emotions communicated with prosodic features are happy and sad. Happiness is associated with fast tempo, high sound level, and staccato articulation. Whereas sadness is associated with slow tempo, low sound level, and legato articulation. The link between music and emotion is dependent on many factors, including musical instruments, musical structure, and particular performances. I would add that it is also dependent on a listener’s state of mind and memory.

Another topic covered in this paper is rule based models of musical prosody. The authors discuss whether the relationship between musical structure and prosody is rule-governed. They review a series of rule-based systems that take musical scores as input, and generate prosodic manipulations of pitch, duration, and intensity as output. “The rules can be grouped into two classes: those that enhance segmentation by articulating group boundaries or

harmonically important events, and those that enhance the prominence of tones by exaggerating pitch or categorical duration differences". It was shown that listeners preferred rule-based performances to computer generated ones that contained no prosodic features. Variations on these rule-based systems have been proposed as well. They include rule-based models that incorporated individual composers' pulses, models that added a phrase-final lengthening, and models that have incorporated kinematic laws of physical motion.

Finally, the authors focus on what role prosody plays in learning. The most interesting results were those gained from studies of infants. It was found that different melodic contours often map to different behaviors that parents attempt to elicit in their infants. This suggests that intonation and prosody may aid parent-infant bonding and emotional communication.