

**Integrating Segmentation and Similarity in Melodic Analysis – Tillman Weyde**  
**Optimising Parameter Weights in Models for Melodic Segmentation –Weyde**

*Summary and comments by Amit Singh*

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These two papers by the same author discuss music segmentation and algorithms to perform this task. The author introduces a model called the Integrated Segmentation and Similarity Model for this purpose. This model is based on a neural-fuzzy system, where knowledge and learning are combined.

According to the author, the two most important factors governing musical structure are Segmentation and Similarity – segmentation being the melodic motifs and similarity being musical pattern repeated in new but similar ways. The author comes up with a rating scheme to segment the melody by analyzing it with a set of rules.

For segmentation, intervals within a motif are considered and for similarity, transposition, pitch difference and contour similarity are factors. The ratings for similarity and segmentation are combined to give an overall rating. This can be done by a linear or a fuzzy system.

In the second paper, the author shows the results of a few experiments with some test melodies, few of which are randomly generated. He plots a few graphs relating to the subjects reactions to these melodies, and has used the results to train his model. The model was tested using a linear adaptive method and the neural adaptive method. The neural system outperformed the linear system clearly.

It appears that this model has not been tested on a large data set. The author acknowledges this and also says that a Bayesian model will better interpret the results of training. This method seems to be fairly new, and it seems to me that conclusions about this methods effectiveness or accuracy should not be drawn until it has been better tested. Also, the author hasn't mentioned if he has tested this method with real melodies (as opposed to the formulaic and random ones used). This, I think, will be a better test of the robustness of this model.