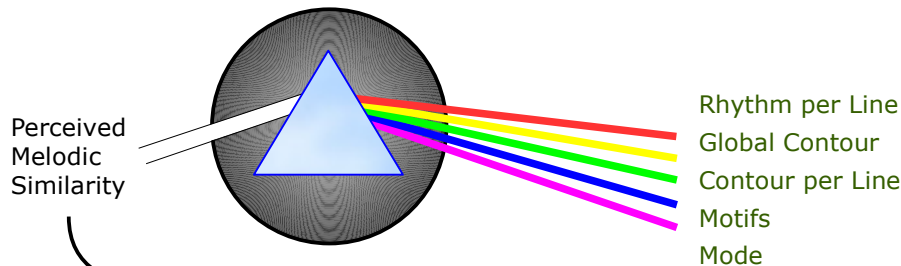


A Manual Annotation Method for Melodic Similarity and the Study of Melody Feature Sets

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Human Rated Dimensions

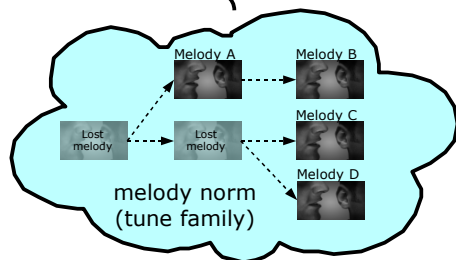


Experimental result

Three musicological experts rate these dimensions consistently.

Manual rating of pairs of melodies:
0 dissimilar
1 somewhat similar
2 similar

For each dimension criteria for rating have been formulated.



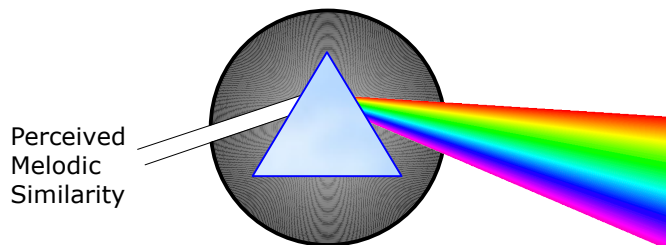
Experimental results

- The importance of the different musical dimensions varies between the melody norms.
- Motifs and rhythm are in general the most important dimensions.

Used Data

- Total size of corpus for this study: 1198 folk song melodies.
- 4 manually rated melody norms containing 11-16 melodies each.

Computational Features

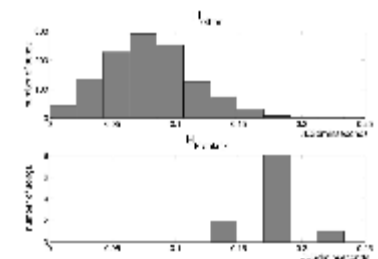


These features are considered 'global' because each song is represented by only one value.

- 12 from Steinbeck (folk song features)
- 40 from Jesser (folk song features)
- 40 from jSymbolic (general purpose)

Experimental result

Only one feature is discriminative, and only for one particular melody norm. The other features are not discriminative for any melody norm. The discriminative power of a feature was measured by the histogram intersection between the melody norm and the rest of the corpus.



General conclusions

- No single feature or dimension is discriminative in all cases.
- In addition to global features, local model-based features should be taken into account.
- There are no clear links between human rated dimensions and the computational features used thus far.

Future work

- Evaluate subsets instead of single features.
- Use the human ratings for evaluation of melodic similarity measures.
- Analyse 26 newly-annotated melody norms (~350 songs).



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