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## Meeting Notes

THEORY407, Fall 2022

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**Humdrum Ch.1** It seems like a tool used for analyzing music similar to music21. With multiple functionalities, Humdrum can be used for counting specific notes, showing certain voice in a piece, and sometime even some specific analysis on harmonic/tonal functions. It is more like a library of tools on my idea of searching how similar two pieces are. We can conduct research with the same approach, but with different methods. Starting with these simple metrics:

- **Note Sequence:** How many notes are the same, how many are different?
  - Might be useful for comparing two pieces in the same work, such as *Gymnopédie*. But will yield a very low score if the key changed.
- **Note Sequence with Key:** How many notes are the same, given pieces in different key but represented in a  $\mathbb{Z}_7$  format.
  - Can address some very basic issues such as exact transposition, but not effective if the phrase changes.
  - Can use the technique mentioned in the proposal to solve the above problem. But what if the phrase was changed a lot?

We then shall do the analysis with more and more complex methods such as counting leading tones, and chords using current available tools. In this way I believe we can come up with various ways to compare two pieces, but not being too impractical to do. The ultimate goal is also simple: output a "similarity score" for two pieces.

#### Will Read:

- Temperley, *A Bayesian Approach to Key Finding*
- Lerdahl, *Tonal Pitch Space* **Chapters \***
- Tymoczko, *Geometry of Musical Chords* **Chapters \***