

Subjectivity and the Research Question:

Quantitative and Qualitative Methodologies in the Context of Artistic Research

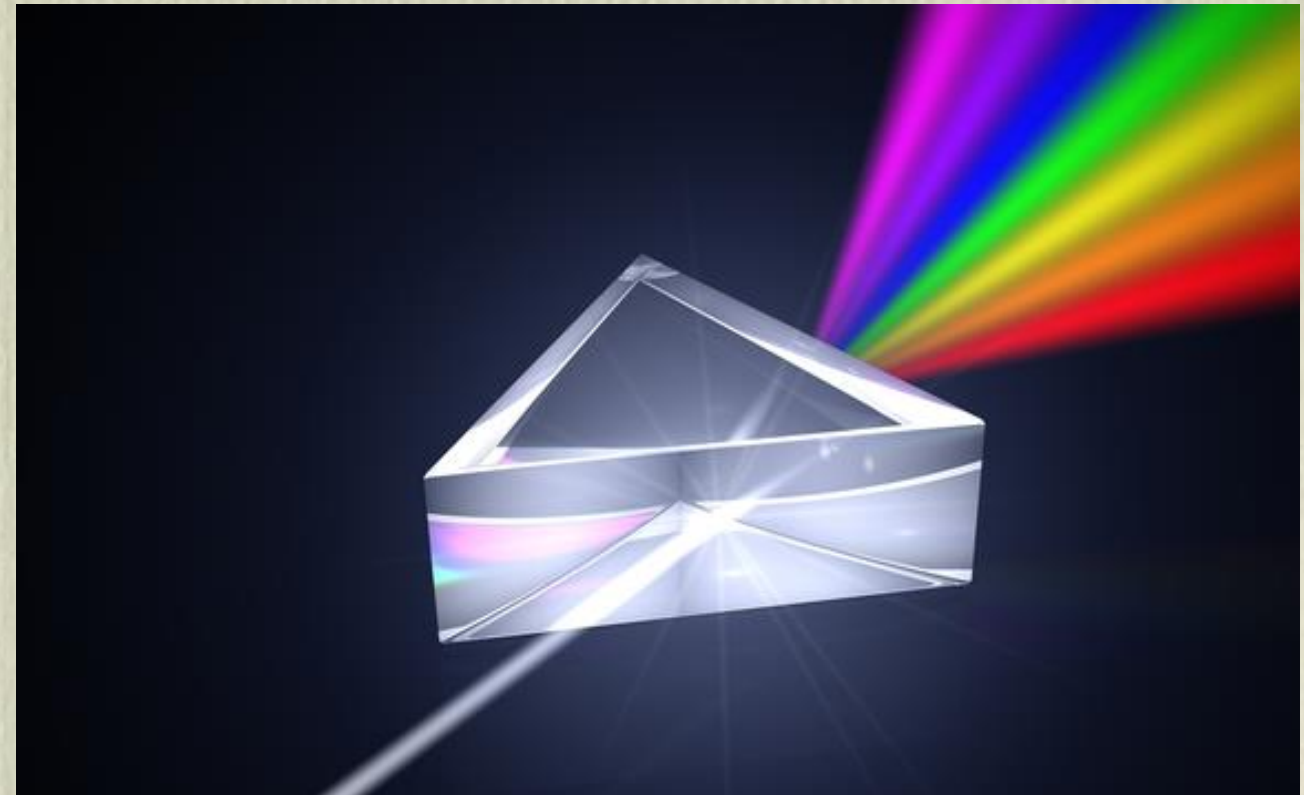
Joanna Marsden

Koninklijk Conservatorium, Den Haag

Research

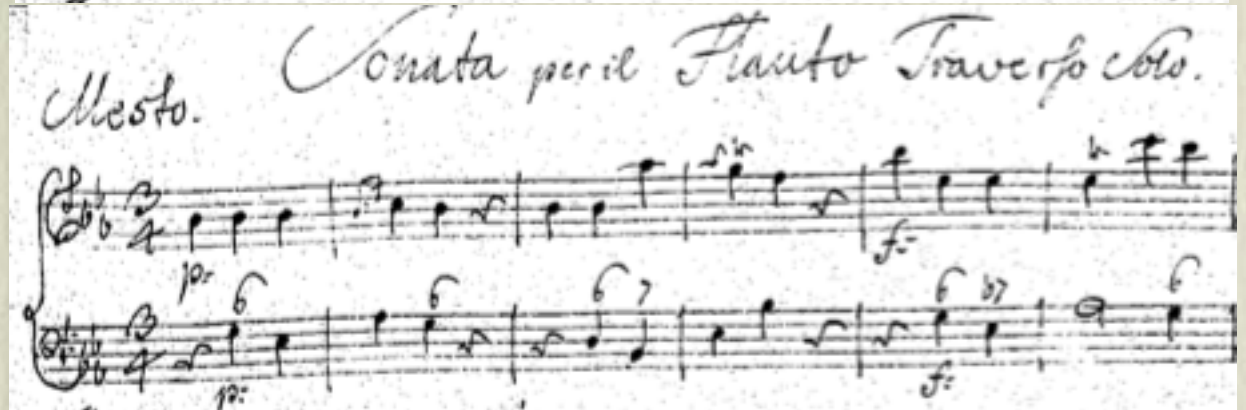
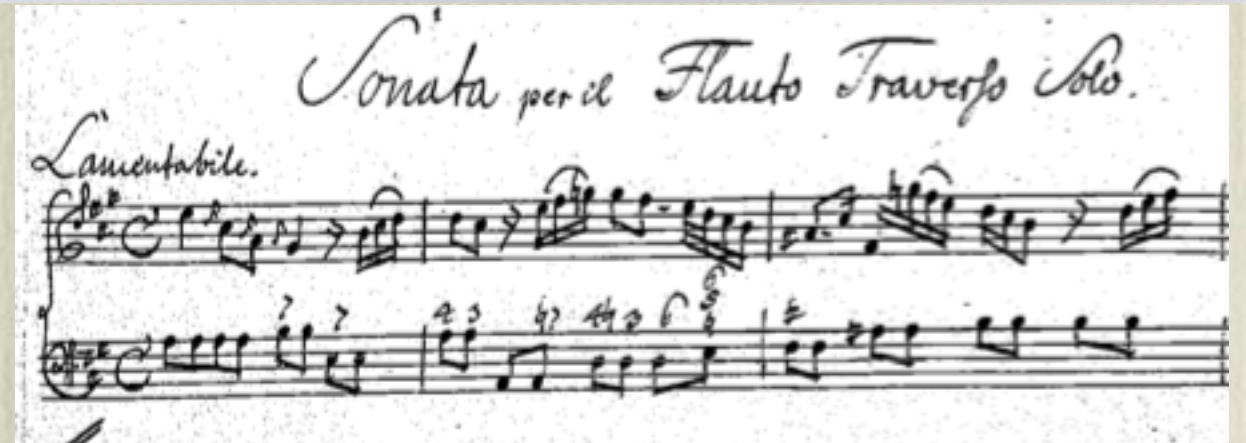
- 1. The act of searching carefully for or pursuing a specified thing or person
- 2a. Systematic investigation or inquiry aimed at contributing to knowledge of a theory, topic, etc., by careful consideration, observation, or study of a subject. In later use also: original critical or scientific investigation carried out under the auspices of an academic or other institution.

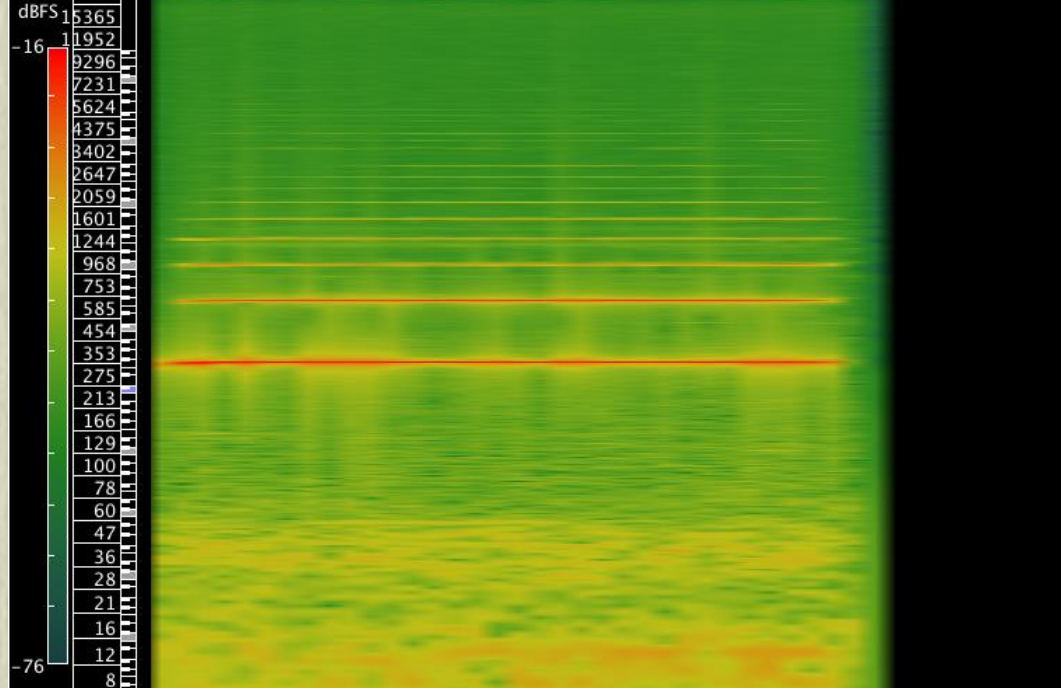
Artistic Research: Reflection versus Refraction



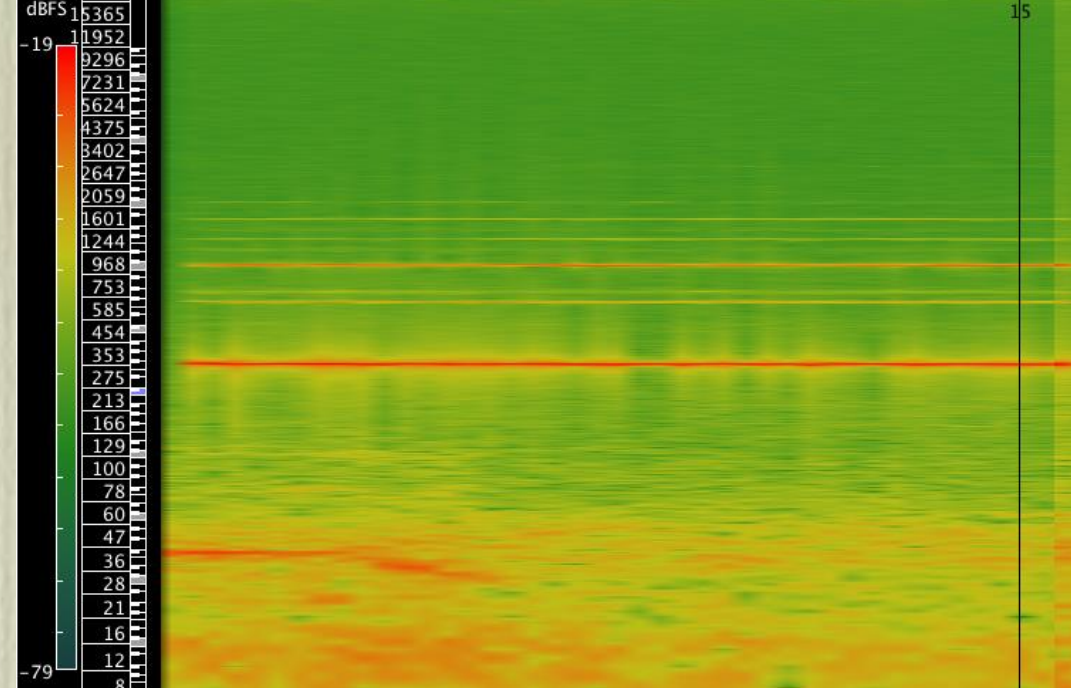
My own Methodologies

- Historical musicology: study of primary and secondary sources by and related to Quantz
- Analysis of Quantz's Dresden and Berlin sonatas
- Instrument construction based on historical models
- Study of flute tone and timbre linked to acoustic and psychoacoustic research
- Practice-based inquiry using Sonic Visualizer, Praat, Timbre Toolbox, and Matlab Toolbox For Music Information Retrieval

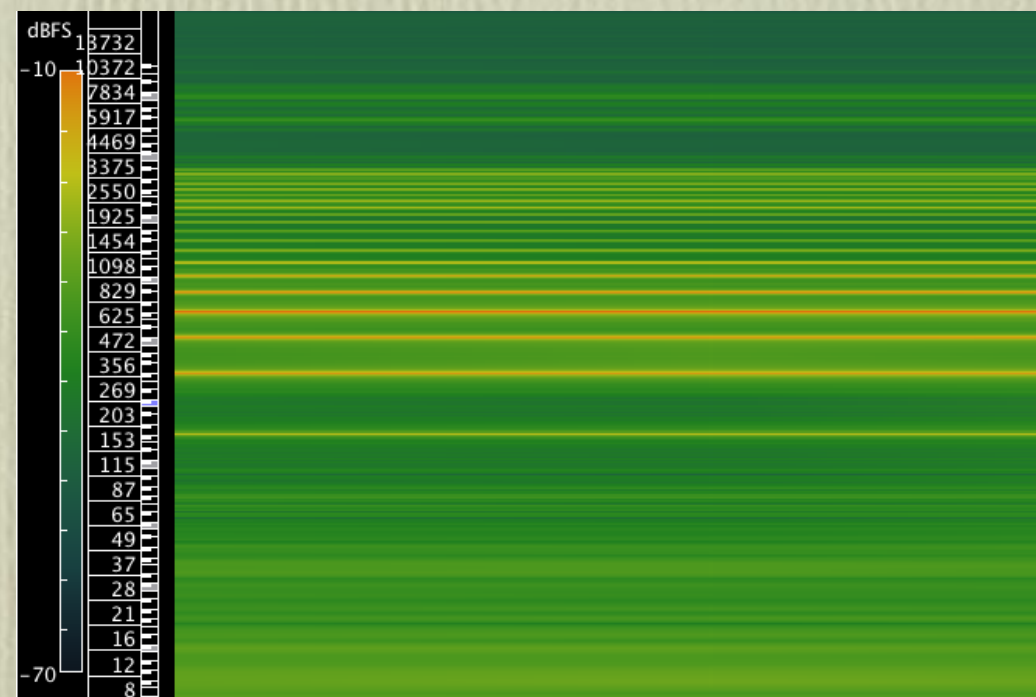




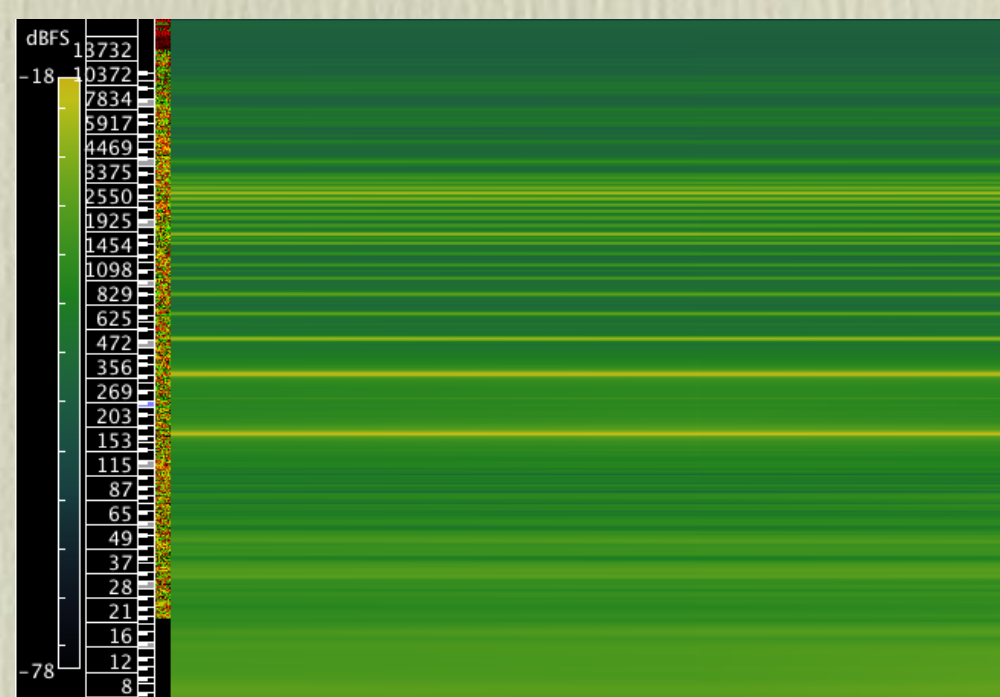
Flute
first octave A
(pitch shifted)



Flute
first octave Ab



Vocal
AAA



Vocal
EEE



Vocal
OOO



A spectral plot showing the frequency components of the Eb major scale. The plot features a series of horizontal lines representing the harmonics of each scale degree, with the fundamental frequencies being the most prominent. The lines are arranged in a stepped pattern across the frequency spectrum.

Eb major



A spectral plot showing the frequency components of the D# major scale. The plot features a series of horizontal lines representing the harmonics of each scale degree, with the fundamental frequencies being the most prominent. The lines are arranged in a stepped pattern across the frequency spectrum.

D# major



A spectral plot showing the frequency components of the E major scale. The plot features a series of horizontal lines representing the harmonics of each scale degree, with the fundamental frequencies being the most prominent. The lines are arranged in a stepped pattern across the frequency spectrum.

E major

Selected Resources

- Sonic Visualizer (Queen Mary, University of London)
- Praat (Paul Boersma and David Weeninck)
- Matlab Toolbox for Music Information Retrieval (Matlab by Brain Tuning Project, 2008)
- Timbre Toolbox (Matlab by CIRMMT, 2011)