

Moddle Ideas:

- Why pieces like Mozart's Duet  
'Der Spiegel' Work
- Studying compositions <sup>from</sup> ~~of~~ <sup>1</sup> ~~1~~ <sup>lanus</sup>  
(the computer)
- 3D printing & instruments  
how far can it go?

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Great Symposium otherwise! ;)

Sophie Tan

Live music in lectures

It would be interesting to cover the dynamics of ensemble timing (C.J. Wood - wing).

The workings of the inner ear are quite interesting: ~~They~~ It performs a frequency analysis mechanically.

A study of ~~studies~~ ~~of~~ sound in sound boxes. Some simplified model of the body of a guitar, violin, speaker cabinet etc might be appropriate. Standing waves in boxes where the boundary is allowed to vibrate with a certain resonance.

Analysis of the sounds used in speech.

The missing fundamental phenomenon.

Advanced models of a vibrating string, solved for example by a bow. What factors affect the harmonics generated?

Comments on even temperament, ratio approximations etc.

ELECTRONIC MUSIC!

HOW IT IS CREATED (PRODUCERS SPEND HOURS PERFECTING A SINGLE SOUND)

HOW IT IS MIXED - THE ART

SPEAKERS - ELECTRONIC ENGINEERING PERSPECTIVE

RESONANCE/ECHO/DAMPENING EFFECTS OF A ROOM

EVOLUTION OF MUSIC AS AN ART FORM

FROM EVOLUTIONARY BIOLOGY PERSPECTIVE

FROM SOUNDS USED AS COMMUNICATION

→ ART

COMPARISON WITH OTHER SPECIES?

HOW SOUNDS TRAVELS - HOW FAR, HOW DOES

IT CHANGE, EG PITCH CHANGE OF

AMBULANCE

WHAT ABOUT CLASSICAL CONDITIONING

PSYCHOLOGY OF MUSIC. EMOTIVE RESPONSE (ALSO EVOLUTIONARY EG STARTLED BY LOUD NOISES)

## Ideas

- Link with Computer Science; algorithms for generating music (similar to, random paper generators' for mathematics for example)

- Dissection of a sound: by waveform analysis: decomposing and rebuilding a tone with a synthesizer or computer by adding harmonics + creating difference between sine and sawtooth wave for example.

- psychology: cognitive bias in music. (attended a talk where a sequence of tones was played and some people thought it was going down, others that it was going up, depending on what is

they heard before.

- Physics (experimental) - exploring in lab how shape (...) influences

tone.