

Hypothesis Journal II

- Question: Why do some people tend to be more emotionally attached to music in general than the others?
 - Conjecture: people who have more empathy in general are more likely to feel the emotion of the music.
 - Theory: Empathy facilitates music perception and music perception cultivates empathy among people in reward.
 - Empathy shares a similar neurological activity based on the same operation mechanism as with music perception
 - Hypothesis:
Measuring music perception:
Participants with the same amount of music knowledge go to do a music listening test. They will be assessed on their music perception that's evaluated with following metrics: identifying the type of a chord(major, minor, dim, aug), key(major, minor), meter(duple, triple), dynamic changes (range, frequency), form of the piece (recognizing repetition, variation).
Measuring empathy:
Empathy can be measured by how good a person can detect the nuance of a human's emotion expressed with one's behavior. Have participants rate a number of paired-pictures of facial expression. Pictures of each pair are from the same person with a little difference in facial expression that makes one picture looks more positive relative to the other.
Assumption:
Participants with higher music perception (as assessed by the music listening test) will most likely identify which picture is brighter than the other in that pair.
- Question: what affects people's choices on the tempo of music to play at work or study?
 - Conjecture: people listen to fast music when performing hard intellectual tasks as it improves persistent concentration and as such improves efficiency. It's similar to the way in which fast-tempo-music

are often used to keep people going with doing aerobic exercise.

- Question: How does different tempos of music affect our perception of time?
 - Conjecture: fast tempo slows the perception of time and so were judged longer than those with a slower tempo.
- Question: Why does tonal music though subjectively sound more pleasant than atonal music?
 - Conjecture: When people listen to music, they need at least to have expectation generated towards ongoing music in order to follow along. Atonal music, such as 12 tone techniques, trying to avoid repetition of pitch within a musical structure unit, therefore, it generates no musical expectation.
 - Atonal music, though could have structural repetitions on relatively larger levels compared to tonal music (i.e., sequence), is still much less predictable in local music passage than tonal music.
- Question: Why can timbre influence perceptions of affectional valence?
 - Conjecture: spectral distribution and envelop both act on perception of emotion in music.