Music genre perception of non-musicians and musicians

Theory & Hypothesis

Theory

- Musicians have a deeper knowledge of music genres
  - when they play a genre they think more about this genre and how it is different from other ones
  - spend more time in analyzing the way a piece of music is played/ structure of a piece of music (timing, sequencing, spatial organization of movement)
  - invent own music: think of possibilities in music

Hypothesis

- Musicians will have different patterns in their RDMs than non-musicians
  - greater distances between different genres in musicians
  - greater distances between different subgenres in musicians

Definition of Musician

Minimum of 10 years of musical training

Currently practicing more than 1 hour/ week

Musical training = playing an instrument or singing in a choir

Definition of Non-Musician

Less than 2 years of musical training

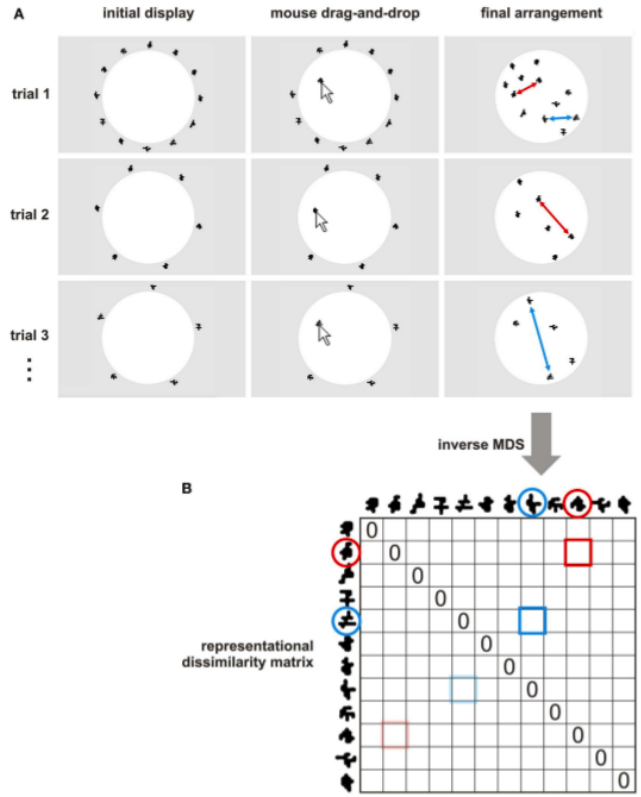
Currently not practicing at all

Only listening to music

Music genre perception

- music genre is a conventional category that identifies some pieces of music as belonging to a shared tradition or set of convention
- automatic music genre classification
  - based on music features
  - objective?
    - no: algorithm needs assumptions and those are chosen by human theories
- music genre classification by theories
  - subjective
- there will always be a discussion about the different music genres and how they should be defined and which pieces of music belong to them

Design


A
initial display
mouse drag-and-drop
final arrangement
trial 1
trial 2
trial 3
inverse MDS
B
representational
dissimilarity matrix

Material

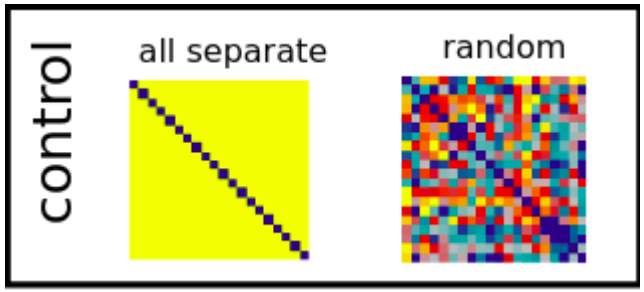
- in sum 20 music stimuli
  - validated by other people
- 4 main categories and 5 subcategories
- Rock: Alternative, rock‘n‘roll, heavy metal, psychedelic, punk
- Classic: Baroque, classic, modern classic, rennaissance, romantic
- African-American: funk, hip hop, reggae, r‘n‘b, soul
- Electro: Techno, deephouse, drum‘n‘bass, dubstep, trance

Our description of the music genres

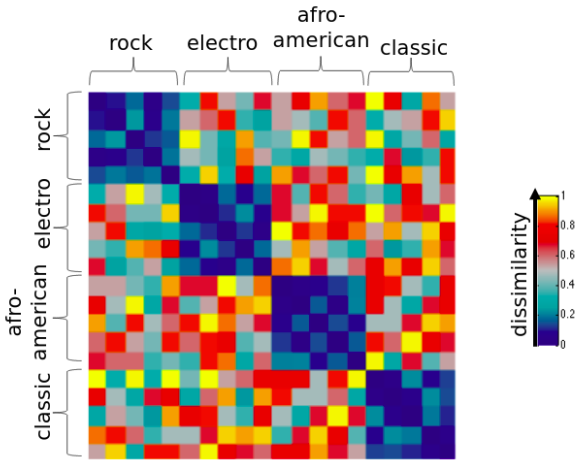
Procedure

- person is sitting in a calm room in front of a pc with headphones
- behavioral experiment
- 2 questionnaires asking for music preferences
  - ,,Music Preference Questionnaire” (MPQ-R; Nater et al. 2005)
  - ,,Short Test of Music Preferences” (STOMP; Rentfrow & Gosling 2003)
- 2 auditory tests to test understanding of music/ musical competence
  - Montreal Battery of Evaluation of Amusia (MBEA; Peretz et al. 2003)
  - Musical Ear Test (MET; Wallentin et al. 2010)

Optimal result models



- control models:
  - to make a differentiation between systematic arrangement, random arrangement or all seperate arrangement



- this pattern should be different between musicians and non-musicians
- musicians: more dissimilarities in the main genres and more dissimilarities between the subgenres
- non-musicians: less dissimilarities in the main genres and less dissimilarities between the subgenres
- threshold is not defined yet

What will be tested against each other?

- random model vs. assessed model
- all seperate model vs. assessed model
- musicians model vs. assessed model
- non-musicians model vs. assessed model

Expectancies of results

- people defined as musicians should be the most equal to musician-model
- people defined as non-musicians should be the most equal to non-musician-model
- assessed models of musicians shouldn’t be equal to assessed models of non-musicians
- all assessed models shouldn’t be equal to control models
  - random
  - all seperate