**Effects of Music Training and Familiarity on the Time Course of Responses to Modulations in Classical Music**

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**BACKGROUND**

Previous investigations show that:

(a) People form mental representations of tonal hierarchies of a musical scale at a very young age.

(b) Age and musical experience have little effect on the formation of mental representations of tonal hierarchies; mere exposure to an individual’s culture leads to the formation of such representations, whereas training enhances it.

(c) Nonmusicians have a relatively sophisticated implicit understanding of tonal hierarchy and expectations of music.

(d) Listeners across their mental representations of the hierarchy of notes in musical scales of their own culture when listening to culturally familiar and unfamiliar melodies.

(e) Musicians can track modulations successfully, whether with schematic chord sequences, continuously modulating melodies, or excerpts of real music.

**PARTICIPANTS**

**UTD Orchestra Members**

- N = 12; age = 18 to 27 years; musical training = 6 to 18 years

- Average of 9.8 for sessions 1, 2, and 3.

**Nonmusicians**

- N = 12; age = 18 to 27 years; musical training = 0 to 2 years

**MUSIC MAJORS AND MUSICIANS**

- N = 12; age = 18 to 27 years; musical training = 6 to 18 years

**Results**

- Resulted in significant differences in their perception of tonal hierarchy profiles for orchestra members, who rated the piece familiarly strongly for orchestra members, who rated the piece familiarly strongly.

**CORRELATIONS OF PROFILES OF ORCHESTRA MEMBERS**

**RESULTS**

- The patterns established in Sessions 1, 2, and 3. That is, the patterns established in Session 1 did not change sufficiently across sessions to register a significant interaction of session with period and key.

**TABLE**

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<th>EFFECT</th>
<th>SESSION PERIOD KEY</th>
<th>SESSION x KEY PERIOD x KEY</th>
<th>SESSION x KEY PERIOD</th>
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**REFERENCES**


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