PERCEPTION AND COGNITION OF MUSIC
PSYCH 3AA3: Winter, 2004

Instructor: Dr. Laurel Trainor
Office: Psychology Building, Room 313
Phone: 23007
email: LJT@mcmaster.ca
Office Hours: TBA

Teaching Assistants Judy Plantinga (plantija@mcmaster.ca)
Jesse Husk (huskjs@mcmaster.ca)

Text: Custom Courseware, available at Titles McMaster Bookstore

Objectives

In this course we will examine perceptual, cognitive, emotional, and developmental aspects of music. The roles of evolution, biology, innate factors, and experience in human musical activity and ability will be considered. The class will be run as a seminar, and students are expected to read the assigned papers before class and to participate in class discussions. Students will work in groups, do presentations in class, read primary source materials, and learn to think critically.

Evaluation

Two quizzes 20%
One group presentation 20%
One 12-page essay 25%
Final Exam 35%

Note 1: My lecture notes will be posted on LearnLink. If you have not used LearnLink before, go to http://www.learnlink.mcmaster.ca/. Every student at McMaster automatically has an account, and instructions for how to download the software and log in are under “getting started”. Once you are logged in, click on “Courses”, then “Psychology Program”, then “Psychology 3AA3”. You can then click on “Course outline and assignments” or “3AA3 lecture notes”. If you are interested, you can also participate in the “Discussion Forum” or the “Music perception chat” room.

Note 2: Your group will get its own conference folder on LearnLink. You can upload and download text, powerpoint, sound, and image files in this conference folder as you create your presentation.

Note 3: Although your essay will be on a similar topic to your group presentation, each person is to write their own essay without collaboration.

Note 4: The quizzes will be open book and 30 minutes in length. The exam will also be open book.
McMaster's Grading Scale

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The instructor reserves the right to adjust the final marks up or down, on an individual basis, in the light of special circumstances and/or the individual's overall performance in the course.

**Academic Dishonesty Policy Reminder**

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g., the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at [http://www.mcmaster.ca/senate/academic/ac_integrity.htm](http://www.mcmaster.ca/senate/academic/ac_integrity.htm).

The following illustrates only three forms of academic dishonesty:
1. Plagiarism, e.g. submission of work that is not one's own or for which other credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations.

In this course we will be using a software package designed to reveal plagiarism. Students will be required to submit their work electronically and in hard copy so that it can be checked for academic dishonesty.
Tentative Schedule

January 6: Introduction and Evolutionary Perspectives on Music
Thompson, Chapter 2
Huron, D. Is Music an Evolutionary Adaptation?
Lewis, P.A. “Musical Minds”

January 13: Auditory scene analysis
Handel, S. Breaking the Acoustic Wave into Events: Stream Segregation.

January 20: Pitch Perception I
Thompson, Chapter 3
Krumhansl, C. L. Perceiving Tonal Structure in Music.

January 27: Pitch Perception II
Presentation 1: Pitch representation in the brain
Zhang, L. I., Bao, S., & Merzenich, M.M. Disruption of Primary Auditory Cortex by Synchronous Auditory Inputs During a Critical Period.
Presentation 2: Development of sensitivity to consonance and dissonance
Presentation 3: Absolute pitch

February 3: Melody and Harmony I
Quiz 1
Thompson, Chapters 4, 5
Schellenberg, E.G. Simplifying the Implication-Realization Model of Melodic Expectancy.

February 10: Melody and Harmony II
Presentation 4: Harmonic representation in the brain
Presentation 5: Development of sensitivity to scales and harmony
Trainor, L.J. & Trehub, S.E. Key Membership and Implied Harmony in Western Tonal Music: Developmental Perspectives.
February 24: Rhythm and Timing

Thompson, Chapter 6
Clarke, E.F. Rhythm and Timing in Music.

Presentation 6: Rhythmic universals.

March 2: Relations between tonal and rhythmic structure

Zatorre, R. Neural Specialization for Tonal Processing.

Presentation 7: Role of attention in processing musical structure

March 9: Musical talent and role of experience


Presentation 8: Effects of musical experience on auditory cortex.
Pantev, C. Timbre-Specific Enhancement of Auditory Cortical Representations in Musicians.

Presentation 9: Effects of early musical training

March 16: Relations between music and other cognitive variables

Thompson, Chapter 9

Presentation 10: Music and cognition
Schellenberg, E.G. Does exposure to Music have beneficial side effects?

Presentation 11: Music and language representation in the brain

March 23: Meaning and emotion in music I

Quiz 2
Thompson, Chapter 8

March 30: Meaning and emotion in music II

Presentation 12: Are musical emotions the same as other emotions?

Presentation 13: Are musical structure and musical emotion processed separately?
Peretz, I., & Gagnon, L. Dissociation Between Recognition and Emotional Judgements for Melodies.

April 6: Imagining, composing, performing, and improvising music

Thompson, Chapters 10, 11