

The Psychology of Music

Haverford College Psychology 303

Instructor: Marilyn Boltz

Office: Sharpless 407

Contact Info: 610-896-1235 or mboltz@haverford.edu

Office Hours: before class and by appointment

Course Description

Music is a human universal that has been found throughout history and across different cultures of the world. Why, then, is music so ubiquitous and what functions does it serve? The intent of this course is to examine this question from multiple psychological perspectives. Within a biological framework, it is useful to consider the evolutionary origins of music, its neural substrates, and the development of music processing. The field of cognitive psychology raises questions concerning the relationship between music and language, and music's ability to communicate emotive meaning that may influence visual processing and body movement. From the perspectives of social and personality psychology, music can be argued to serve a number of social functions that, on a more individual level, contribute to a sense of self and identity. Lastly, musical behavior will be considered in a number of applied contexts that include consumer behavior, music therapy, and the medical environment. Prerequisites: Psychology 100, 200, and at least one advanced 200-level course.

Biological Perspectives

A. Evolutionary Origins of Music

When did music evolve in the overall evolutionary scheme of events and why? Does music serve any adaptive purposes or is it, as some have argued, merely "auditory cheesecake"? What types of evidence allows us to make inferences about the origins of music?

Reading:

Thompson, W.F. (2009). Origins of Music. In W.F. Thompson, *Music, thought, and feeling: Understanding the psychology of music*. Oxford University Press.

Fitch, W.T. (2006). The biology and evolution of music: A comparative perspective. *Cognition*, 100, 173-215. **Student presentation on animal song (pp. 181-195).**

McDermott, J. (2009). What can experiments reveal about the origins of music? *Current Directions in Psychological Science*, 18(3), 164-168.

B. Insights from Developmental Psychology & Music Acquisition

One means in which to examine the evolutionary and biological bases of music is to consider whether newborn infants display any innate processing capabilities for musical events.

Reading:

Trehub, S.E. (2009). Music lessons from infants. In S. Hallam, I. Cross & M. Thaut (Eds.), *The Oxford handbook of music psychology*. Oxford University Press.

Trehub, S.E. (2006). Musical predispositions in infancy. *Annals of New York Academy of Sciences*, 930, 1-27.

Trehub, S.E. & Hannon, E.E. (2006). Infant music perception: Domain-general or domain-specific mechanisms? *Cognition*, 100, 73-99.

Two student paper presentations on musical predispositions (synthesized from two above papers) - one on pitch/melodic and temporal processing – another on maternal music

➤ **Topic Presentation: Music in the Womb**

Suggested Reading:

Lecanuet, J.P. (1996). Prenatal auditory experience. In I. Deliège & J.A. Sloboda (Eds.), *Origins and development of musical competence*. (pp. 3-34). Oxford University Press.

Parncutt, R. (2009). Prenatal development and the phylogeny and ontogeny of music. In S. Hallam, I. Cross & M. Thaut (Eds.), *The Oxford handbook of music psychology*. Oxford University Press.

Parncutt, R. (2006). Prenatal development. In G. McPherson (Ed.), *The child as musician: A handbook of musical development*. Oxford University Press.

C. Neural Substrates of Music Processing

What are the neural substrates of musical behavior and how is musical listening and performance mediated by the brain? How might this research be informed by individuals displaying different types of disorders in musical processing?

Reading:

Thompson, W.F. (2009). Music and the brain. In W.F. Thompson, *Music, thought, and feeling: Understanding the psychology of music*. Oxford University Press.

Levitan, D.J. & Tirovolas, A. (2009). Current advances in the cognitive neuroscience of music. *Annals of the New York Academy of Sciences*, 1159, 211-231.

Barrett, K.C., Ashley, R., Strait, D.L. & Kraus, N. (2013). Art and science: How musical training shapes the brain. *Frontiers in Psychology*, 4, 1-13. **(Student presentation)**

➤ **Topic Presentation: Musical Disorders Beyond Amusia & Synesthesia**

Suggested Reading:

Stewart, L., et. al. (2009). Disorders of musical cognition. In S. Hallam, I. Cross & M. Thaut (Eds.), *The Oxford handbook of music psychology*. Oxford University Press.

Stewart, L., von Kriegstein, K., Warren, J.D., & Griffiths, T.D. (2006) Music and the brain: Disorders of music listening. *Brain*, 129, 2533-2553.

Sacks, O. (2006). The power of music. *Brain*, 129, 2528-2532.

Sacks, O. (2007). *Musicophilia: Tales of Music and the Brain*. New York: Knopf Books.

D. Relationship Between Music and Language?

As we will discover, several theorists have argued that music and language evolved in parallel to one another. Indeed, music and language display a remarkable number of similarities in their structure and syntax and, at a neural level, appear to be mediated by similar structures within the brain. Given this, how can we conceptualize the relationship between music and language?

Reading:

Mithin, S. (2009). The music instinct: The evolutionary basis of musicality. *Annals of the New York Academy of Sciences*, 1169, 3-12.

Mithin, S. (2006). Imitating nature. From S. Mithin (Au.), *The singing Neanderthals: The origins of music, language, mind, and body*. Harvard University Press.

Patel, A. (2009). Music and the brain: Three links to language. In S. Hallam, I. Cross & M. Thaut (Eds.), *The Oxford handbook of music psychology*. Oxford University Press.
(Student presentation)

Patel, A., Iversen, J., Bregman, M. & Schulz, I. (2009). Studying synchronization to a musical beat in nonhuman animals. *Annals of the New York Academy of Sciences*, 1169, 459-469. **(Student presentation)**

Cognitive Perspectives

A. Music and Emotion

Does music have meaning? One way in which this question has been addressed is to consider music's ability to communicate and instill emotional experiences within listeners.

Readings:

Hunter, P. & Schellenberg, E.G. (2010). Music and emotion. In M.R. Jones, et. al. (Eds.) *Music perception: Springer handbook of auditory research*. pp. 129-163.

Juslin, P.N. & Vastfjall, D. (2008). Emotional responses to music: The need to consider underlying mechanisms. *Behavioral and Brain Sciences*, 31, 559-621. **(Student presentation on the six mechanisms that induce emotion)**

Juslin, P.N. & Laukka, P. (2003). Communication of emotion in vocal expression and music performance: Different channels, same code? *Psychological Bulletin*, 129, 770-814.

B. Music and Motion

People move as music moves. But are the gestures and body movements of a listener in any way lawfully related to musical structure and meaning? What about the movements of musical performers? What functions might these serve, not only to a listening audience but to other members of a performing ensemble?

Reading:

Boltz, M.G. (2013). Music videos and visual influences on music perception and appreciation. Should you want your MTV? In S. Tan, A.J. Cohen, R. Kendall & S. Lipscomb (Eds.), *Psychology of music in multimedia*. Oxford University Press.

Dahl, S. & Friberg, A. (2007). Visual perception of expressiveness in musicians' body movements. *Music Perception*, 24, 433-454.

Eitan, Z. & Granot, R. (2006). How music moves: Musical parameters and listeners' images of motion. *Music Perception*, 23, 221-247. **(Student presentation)**

➤ **Topic Presentation: Music and Synesthesia**

Suggested Reading:

Martino, G. & Marks, L.E. (2001). Synesthesia: strong and weak. *Current Directions in Psychological Science*, 10 (2), 61-65.

Ward, J. (2013). Synesthesia. *Annual Review of Psychology*, 64, 49-75.

Sacks, O. (2007). The Key of Clear Green: Synesthesia and Music. *Musicophilia: Tales of Music and the Brain*. New York: Knopf Books.

C. Music and Dance

Dance is medium that reflects both the emotive power of music as well as the relationship between music and motion.

Reading:

C. Krumhansl, C. L. & Schenck, D.L. (1997). Can dance reflect the structural and expressive qualities of music? A perceptual experiment on Balanchine's choreography of Mozart's Divertimento No. 15. *Musicae Scientiae*, 1, 63-85. **(Student presentation)**

Camurri, A., Lagerlof, I. & Volpe, G. (2003). Recognizing emotion from dance movement: Comparison of spectator recognition and automated techniques. *International Journal of Human-Computer Studies*, 59, 213-225.

➤ **Topic Presentation: Musical Performance**

Suggested Reading:

Hodges, D. & Sebald, D. (2011). Chapter 13: Musical performance. *Music in the human experience*. Routledge Press.

Tan, S., Pfordresher, P. & Harre, R. (2010). Chapter 11: The psychology of musical performance. *Psychology of music: From sound to significance*. Psychology Press.

D. Music/Film Interactions

One way in which both the motive and emotive influence of music has been used for artistic purposes is as an accompanying soundtrack to a visual story (i.e., film). Certainly, music can be used as a means in which to enhance the emotional impact of a scene but what are some other effects that music may exert upon story comprehension, interpretation, and appreciation?

Reading:

Bordwell, D. & Thompson, S. (2003). Sound in the cinema. From *Film Art: An Introduction*. McGraw Hill.

Cohen, A.J. (2009). Music as a source of emotion in film. In P.N. Juslin & J.A. Sloboda (Eds.), *Music and Emotion*, Oxford University Press. **(student presentation of CAM model)**

Boltz, M. (2001). Musical soundtracks as a schematic influence on the cognitive processing of filmed events. *Music Perception*, 18, 427-454.

Cohen, A.J. (2009). Music in performance art: Film, theatre, and dance. In S. Hallam, I. Cross & M. Thaut (Eds.), *The Oxford handbook of music psychology*. Oxford University Press.

E. Cognitive Benefits from Music Training?

Does learning to play a musical instrument, and musical training more generally, serve to enhance certain cognitive skills that are used in different domains of life?

Reading:

Thompson, W.F. (2009). Music and other abilities. In W.F. Thompson, *Music, thought, and feeling: Understanding the psychology of music*. Oxford University Press.

Rauscher, F.H. (2009). The impact of music instruction on other skills. In S. Hallam, I. Cross & M. Thaut (Eds.), *The Oxford handbook of music psychology*. Oxford University Press.

Trainor, L.J. & Corrigan, K.A. (2010). Music acquisition and effects of musical experience. Pages 113-119. In M.R. Jones, R. Fay & A. Popper (Eds.), *Music Perception: Springer Handbook of Auditory Research*. Springer Press.

Social and Personality Perspectives

A. Social Functions of Music

Some theorists have argued that music emerged as a means in which to bring people together and promote social cooperation. In this section, we'll consider some different ways in which this occurs and some ways this may exert an influence at the individual level.

Reading:

Mithin, S. (2006). Making music together. From S. Mithin (Au.), *The singing Neanderthals: The origins of music, language, mind, and body*. Harvard University Press.

Gregory, A. (1997). The roles of music in society: The ethnomusicological perspective. In A. North & D. Hargreaves (Eds.), *The social psychology of music*. Oxford University Press. **(Student presentation)**

➤ Topic Presentation: Cross-Cultural Differences in Music

Suggested Reading:

Tan, S.L., Pfordresher, P. & Harre, R. (2010). Chapter 15: Culture and Music. From *Psychology of Music: From Sound to Significance*. Psychology Press.

B. Musical Tastes and Preferences

What set of factors determine the types of music we most prefer? Do people who share musical preferences also share certain attributes and, if so, then on what dimensions? Lastly, are some musical tastes and preferences influenced by the culture in which we live?

Reading:

Rentfrow, P.J. & Gosling, S.D. (2003). The do re mi's of everyday life: The structure and personality correlates of music preferences. *Journal of Personality and Social Psychology*, 84, 1236-1256.

Rentfrow, P.J., Goldberg, L.R. & Levitan, D.J. (2011). The structure of musical preferences: A five-factor model. *Journal of Personality and Social Psychology*, 100, 1139-1157.

Chamorro-Premuzic, T. & Furnham, A. (2007). Personality and music: Can traits explain how people use music in everyday life? *British Journal of Psychology*, 98, 175-185.
(Student presentation)

Schafer, T. & Sedlmeier, P. (2009). From the functions of music to music preference. *Psychology of Music*, 37, 279-300.

Rentfrow, P.J., McDonald, J.A. & Oldmeadow, J.A. (2009). You are what you listen to: Young people's stereotypes about music fans. *Group Processes & Intergroup Relations*, 12, 329-344. **(Student presentation)**

Rentfrow, P.J., Goldberg, L.R. & Zilca, R. (2011). Listening, watching, and reading: The structure and correlates of entertainment preferences. *Journal of Personality*, 79, 223-258. **(student presentation)**

➤ **Topic Presentation: Music and Political Thought**

C. Music in Adolescents and the Developing Sense of Self and Identity

As noted by Erickson and other theorists, adolescence is a key period in which our sense of self and identity emerges and takes shape. How might music influence this process?

Reading:

Zillman, D. & Gan, S. (1997). Musical taste in adolescence. In A. North & D. Hargreaves (Eds.), *The social psychology of music*. Oxford University Press.

Delsing, M., Ter Bogt, T., Engels, R. & Meeus, W. (2008). Adolescents' music preferences and personality characteristics. *European Journal of Personality*, 22, 109-130.

➤ **Topic Presentation: Music and Autobiographical Memory**

Suggested Reading:

Bartlett, J.C. & Snelus, P. (1980). Lifespan memory for popular songs. *American Journal of Psychology*, 93, 551-560.

Schulkind, M., Hennis, L. & Rubin, D. (1999). Music, emotion, and autobiographical memory: They're playing your song. *Memory & Cognition*, 27, 948-955.

Music in Applied Contexts

A. Some General Uses of Music

As the poet William Congreve noted, "Music hath charms to soothe a savage beast". Indeed, music is used in a number of applied settings for a variety of purposes. This final section of the course considers a selected sample of these applications in the contexts of marketing and consumer behavior, psychotherapy, and the medical environment.

Reading:

North, A. & Hargreaves, D. (2008). Music, business, and health. In A. North & D. Hargreaves (Eds.), *The social and applied psychology of music*. Oxford University Press.

Sloboda, J., Lamont, A. & Greasley, A. (2009). Choosing to hear music: Motivation, process, and effect. In S. Hallam, I. Cross & M. Thaut (Eds.), *The Oxford handbook of music psychology*. Oxford University Press.

B. Consumer and Environmental Atmospherics

Reading:

North, A. & Hargreaves, D. (1997). Music and consumer behavior. In A. North & D. Hargreaves (Eds.), *The social psychology of music*. Oxford University Press.

North, A. & Hargreaves, D. (2009). Consumer behavior and music. In S. Hallam, I. Cross & M. Thaut (Eds.), *The Oxford handbook of music psychology*. Oxford University Press.

Bruner, G. (1990). Music, mood, and marketing. *Journal of Marketing*, 54, 94-104.

C. Music in the Clinical and Medical Environments

Reading:

Bunt, L. (1997). Clinical and therapeutic uses of music. In A. North & D. Hargreaves (Eds.), *The social psychology of music*. Oxford University Press.

Leins, A.K., Spintge, R. & Thaut, M. (2009). Music therapy in medical and neurological rehabilitation settings. In S. Hallam, I. Cross & M. Thaut (Eds.), *The Oxford handbook of music psychology*. Oxford University Press.

Student presentation on music therapy synthesized from two above papers.

Chandra, M.L. & Levitan, D.J. (2013). The neurochemistry of music. *Trends in Cognitive Science*, 17, 179-193. **(Student presentation)**

➤ Topic Presentation: Music in Sports and Exercise

Suggested Reading:

Karageorghis, C.I. & Terry, P.C. (1997). The psychophysical effects of music in sport and exercise: A review. *Journal of Sport Behavior*, 20, 54-68.

Grading Scheme

Discussion and Participation	10%
Paper Presentation	20%
Topic Presentation	20%
Synthesis Paper	25%
Research Proposal	25%

I. Discussion and Participation

This is a seminar course and so you are expected to contribute to classroom discussions on a regular basis. To do so effectively, you need to read the assigned papers for each class meeting.

II. Paper Presentation

During the semester, each student will be responsible for presenting a 20-30 minute review of a paper that has been assigned for a given topic, and then leading a subsequent discussion session. Your presentation should consist of a set of Powerpoint slides that outline the main ideas within the paper, as well as any key research that is discussed.

Before your presentation, you should develop a set of 5-6 discussion questions (from which we'll select 3-4) which represent thoughts, clarifications, or related questions that come to mind and which help to promote dialogue during the class (i.e., it gives us stuff to talk about). Please submit your questions to me via e-mail (mboltz@haverford.edu) at least 3 days prior to your presentation, and I will then post them on the Moodle course page. **All students should bring the discussion questions for that week to class.**

III. Topic Presentation

Working in groups of two, each of you will be required to give an in-class presentation on a topic designed to provide greater breadth to an area discussed in class. You should plan on speaking for 30 min. and rely on a Powerpoint presentation (which I will then post on Moodle so that it is available to everyone). I've provided a set of presentation topics on the syllabus and will try to ensure that everyone receives a topic that is acceptable to them. Each presentation will be followed by a discussion session led by both students and focused upon a set of readings that have been assigned in advance. On the syllabus, you will notice that I've provided some suggested readings for several of the topics but these are only suggestions which may or may not be useful. You should certainly search for and rely on other papers/book chapters, and it is possible you'll want to assign some of these instead of the ones I've suggested.

VI. Synthesis Paper

In addition to the presentation, you will also be required to write a paper for the course. You are free to choose any topic that interests you as long as it involves some aspect of psychomusicology. It could be a topic that was never discussed (e.g., music performance; composition and improvisation; learning musical skills; music creativity) or a topic that was addressed in class but explored from a different perspective. In either case, the paper should be around 15-20 pages and rely on the APA style of referencing. Most of the paper should serve as a review of the relevant literature but the last 2-3 pages should provide your own thoughts and evaluation (e.g. critiques of the literature; ideas for future research). Your paper will be due on **November 3**.

VII. Research Proposal

The final requirement of the course is to develop an original research project that addresses some aspect of music cognition and satisfies the following criteria: a) represents a novel study that, to the best of your knowledge, has not previously been done; b) relies on the experimental method (vs. correlation, multiple regression, or other nonexperimental techniques); and c) could feasibly be done at Haverford. This final paper should contain the following sections: an Introduction that reviews the relevant literature and the particular question(s) you are posing; a Methods section (along with its appropriate sub-sections) that describes *how* you would do the study; a section relating the predicted pattern of results; and, of course, a Reference section. Your proposal is due on **December 3**.

Some General Resources in Psychomusicology

Godoy, R.I. & Leman, M. (2010). *Musical gestures: Sound, movement, and meaning*. Routledge Press.

Hallam, S., Cross, I. & Thaut, M. (2009). *The Oxford handbook of music psychology*. Oxford University Press.

Hodges, D.A. & Sebald, D.C. (2011). *Music in the human experience*. Routledge Press.

Jones, M.R., Fay, R. & Popper, A. (2010). *Music Perception: Springer Handbook of Auditory Research*. Springer Press.

- Juslin, P.N. & Sloboda, J.A. (2009). *Music and emotion*. Oxford University Press.
- Levitan, D.J. (2006). *This is your brain on music: The science of a human obsession*. Dutton Publishing.
- Malloch, S. & Trevarthen, C. (2009). *Communicative musicality: Exploring the basis of human companionship*. Oxford University Press.
- Mithin, S. (2006). *The Singing Neanderthals: The origins of music, language, mind, and body*. Harvard University Press.
- North, A. & Hargreaves, D. (1997). *The social psychology of music*. Oxford University Press.
- North, A. & Hargreaves, D. (2008). *The social and applied psychology of music*. Oxford University Press.
- Patel, A.D. (2008). *Music, language, and the brain*. Oxford University Press.
- Sacks, O. (2007). *Musicophilia: Tales of music and the brain*. Alfred Knopf Publishing.
- Tan, S., Pfordresher, P. & Harre, R. (2010). *Psychology of music: From sound to significance*. Psychology Press.
- Tan, S., Cohen, A.J., Kendall, R. & Lipscomb, S. (2013). *Psychology of music in multimedia*. Oxford University Press.
- Thaut, M.H. (2008). *Rhythm, music, and the brain: Scientific foundations and clinical applications*. Routledge Press.
- Thompson, W.F. (2009). *Music, thought, and feeling: Understanding the psychology of music*. Oxford University Press.
- Zatorre, R.J. & Peretz, I. (2001). *The biological foundations of music*. Annals of the New York Academy of Sciences.

Topic and Presentation Schedule

Psy 303
Psychology of Music
Fall 2014

Wed – Sept. 3 – Overview and Introduction
Mon - Sept. 8 – Origins of Music
Wed - Sept. 10 – Origins of Music
Mon - Sept. 15 – Music Acquisition
Wed – Sept. 17 - Music Acquisition
Mon - Sept. 22 - Music Acquisition; **Presentation on Music in the Womb**
Wed - Sept. 24 – Neural Substrates
Mon - Sept. 29 – Neural Substrates; **Presentation on Music Disorders**
Wed – Oct. 1 – Neural Substrates
Mon – Oct. 6 – Music and Language
Wed – Oct. 8 – Music and Language
Mon - Oct. 13 – **Fall Break**
Wed – Oct. 15 – **Fall Break**
Mon – Oct. 20 – Music and Emotion
Wed – Oct. 22 – Music and Emotion
Mon - Oct. 27 – Music and Emotion; Music and Motion
Wed – Oct. 29 – Music and Motion – **Presentation on Synesthesia**
Mon - Nov. 3 – **Synthesis Paper Due**; Music and Motion – **Presentation on Music Performance**
Wed - Nov. 5 – Music and Film
Mon - Nov. 10 – Music and Film
Wed – Nov. 12 – Cognitive Benefits
Mon - Nov. 17 – Social Functions – **Presentation on Cross-Cultural Differences**
Wed - Nov. 19 – Musical Preferences
Mon - Nov. 24 – Musical Preferences – **Presentation on Music and Political Thought**
Wed – Nov. 26 – Musical Preferences
Mon - Dec. 1 – Musical Preferences – **Presentation on Music and Autobiographical Memory**
Wed - Dec. 3 – **Research Proposal Due** – Applied Psychomusicology
Mon - Dec. 8 – Applied Psychomusicology
Wed – Dec. 10 – Applied Psychomusicology – **Presentation on Music and Exercise**