

Module PS4083

Psychology of Music

2016/2017
1st Semester

Lecturer: Dr Ines Jentsch (email: ij7; room 2.04)

DRAFT

Aims and Objectives

This module will be based on seminars in which students will be expected to play an active part, contributing as much on the basis of their own reading as they receive from the course leader. This type of interactive teaching is designed to encourage acquisition of "deep" as opposed to "surface" knowledge. Emphasis will be placed on development of skills in the critical evaluation of research reports, and of understanding how current research will develop in the future.

The aim of this module is to introduce students to psychological processes underlying music perception, cognition, and performance. The relationship between musical phenomena and mental functions will be illustrated. The module will cover different aspects of music perception including psychoacoustics and sound perception, music cognition including music memory and emotion, skilled performance as well as abnormalities in music perception and performance. The module will be taught in the form of seminars including student presentations. Emphasis will be placed on the development of critical thinking and the ability to relate conceptual debates in psychology to issues in the real world.

Intended Learning outcomes

A) Knowledge & Understanding / Intellectual Skills:

On successful completion of this module students will be able to:

- (1) Demonstrate an understanding of psychological processes underlying music perception, cognition and performance
- (2) Communicate their acquired knowledge effectively, both orally and in writing
- (3) Effectively manage time
- (4) Demonstrate a critical appreciation of the published research on music psychology
- (5) Apply the acquired knowledge to real-life issues

B) Module Specific / Practical Skills; Transferable / Key Skills:

- (1) Teamwork; (2) Effective communication via oral presentations; (3) Practical skills of designing an experiment; (5) to think creatively and independently; (6) to handle complex bodies of information.

Assessment:

75% exam (2 essay questions chosen from 4 questions)

25% continuous assessment by one module essay (details see below)

Continuous Assessment Essay

Essay Title: *“Active engagement in music confers an evolutionary advantage. Design a study to empirically test this claim.”*

Clearly discuss the motivation for your study, discuss the hypotheses, the experimental design, and possible analysis strategies and statistical methods. Discuss also potential limitations of your study.

The essay should be presented as follows: a title page stating the title of the work, student's matriculation number, the module number, and the date; no more than 4 A4 size pages of text – there must be at least a 1" margin all round (top, bottom, right and left); the text must be in Arial font at 12 point, 1.5 spaced. References within the text should be in APA format. The reference list does not count towards the page limit. *Note that these guidelines are different from the ones given in the honours handbook.*

Deadline for continuous assessment submission via MMS: Mon, **31st October 2016, 9am**

Timetable

Location: Seminar Room, 1.00 (Psychology Building)

<u>Date</u>	<u>Topic</u>	<u>References for Group Presentations</u>
12.09.16	Introduction Lecture: The Origins of Music	
19.09.16	<u>Lecture</u> Introduction to the Perception of Music	
26.09.16	<u>Lecture + Group Pres.</u> Absolute Pitch Congenital Amusia	(G1) Absolute Pitch (G2) Congenital Amusia
03.10.16	<u>Lecture + Group Pres.</u> Music-Colour Synesthesia	(G3) Synesthesia – General Intro (G4) Sound-Colour Synesthesia
10.10.16	<u>Lecture + Group Pres.</u> Music and Cognitive Abilities	(G5) Effects of Music Listening: Mozart Effect (G6) Effects of Music Training
17.10.16	Independent Study Week: Work on CA Essay	
24.10.16	<u>Lecture + Group Pres.</u> Music Cognition: Memory	(G7) Music & Memory
31.10.16	<u>Lecture + Group Pres.</u> Music Cognition: Emotion	(G8) Music & Emotion
07.11.16	<u>Lecture</u> Attentional and Motor Control in Music Performance	
14.11.16	<u>Lecture + Group Pres.</u> Dysfunctions in Music Performance	(G9) Performance Anxiety (G10) Focal Dystonia
21.11.16	<u>Lecture</u> Music Therapy Revision	

Course Outline and Readings

General Reading: Diana Deutsch (2013). *The Psychology of Music* (3rd Edition). Academic Press.

Introduction Lecture: (12th September 2016)

Students will be introduced to the general course structure and topic ranges within this lecture series. Also, the origins of music and potential functions of music from an evolutionary perspective will be discussed.

Deutsch (2013). *The Psychology of Music* (Chapter 11.I; Chapter 17).

Huron (2001). *Annals of the New York Academy of Science*, 930, 43-61.

Levitin (2009). *Annals of the New York Academy of Science*, 1156, 211–231.

Sacks (2008). *Musicophilia*. Picador

Lecture 1 (19th September 2016): Introduction to the Perception of Music

This lecture will review the basic anatomy of the auditory system, introduce basic concepts of psychoacoustics and discuss several auditory illusions

Deutsch (2013). *The Psychology of Music*. (Chapters 1 and 7:IV,7:V)

Deutsch (2014). http://deutsch.ucsd.edu/pdf/Proceedings_Intl_Conf_MP_2014.pdf

Lecture 2 (26th September 2016): Absolute Pitch and Congenital Amusia

This lecture (+ student presentation, Group 1) will introduce the concept of absolute pitch and contrast the Learning Theory with the Hereditary Theory to explain why this ability is so rare. The lecture (+ student presentation, Group 2) will also use the example of Congenital Amusia to discuss whether music processing uses a specialized brain network.

Deutsch (2013). *The Psychology of Music*. (Chapters 5 and 13)

(G1) Levitin & Rogers (2005). *Trends in Cognitive Sciences*, 9, 26-33.

(G1) Deutsch (2002). *Current Directions in Psychological Science*, 11(6), 200-204.

(G1) Deutsch, Henthorn, & Dolson (2004). *Music Perception*, 21(3), 339-356.

(G1) Deutsch, Li, & Shen (2013). *J. Acoust. Soc. Am.* 134 (5), 3853-3859

Stewart (2011). *Quarterly Journal of Experimental Psychology*, 64(4), 625-638.

Vuvan et al. (2015). *Cortex*, 69, 186-200.

(G2) Ayotte, Peretz, & Hyde (2002). *Brain*, 125, 238-251.

(G2) Hyde & Peretz (2004). *Psychological Science*, 15(5), 356-360.

(G2) Peretz & Hyde (2003). *Trends in Cognitive Sciences*, 7(8), 362-367.

Lecture 3 (3rd October 2016): Synesthesia

This lecture (+ student presentations) will introduce the phenomenon of synaesthesia (Group 3) with a specific focus on colour-tone synaesthesia (Group 4) and use this example to demonstrate how psychologists can identify the genuineness of the effect using experimental and neuroimaging methods.

(G3) Grossenbacher & Lovelace (2001). *TICS*, 5(1), 36-41.

(G3) Ramachandran & Hubbard (2003). *Scientific American*, 288(5), 52-59.

(G3) Rich & Mattingley (2002). *Nature Reviews Neuroscience*, 3, 43-52.

(G4) Beeli, Esslen, & Jaencke (2005). *Nature*, 434, 38.

(G4) Harrison & Baron-Cohen (1994). *Leonardo*, 27(4), 343-346.

(G4) Saenz & Koch (2008). *Current Biology*, 18(15), R650-R651.

Marks (1974). *American Journal of Psychology*, 87(1-2), 173-188.

Loui et al. (2012). *ICMPC*, 2012:618-623.

Lecture 4 (10th October 2016): Music and Cognitive Abilities

This lecture (+ student presentations) will discuss possible links between musical experience (passive listening and active music-making) and non-musical abilities. Group 5 will discuss the controversial the Mozart effect. Group 6 will discuss links between musical training and various cognitive functions.

Deutsch (2013) *Psychology of Music* (Chapters 11.VI and 12)

(G5) Rauscher, Shaw, & Ky (1993). *Nature*, 356, 611.

(G5) Rauscher, Shaw, & Ky (1995). *Neuroscience Letters*, 185, 44-47.

(G5) Thompson, Schellenberg, & Husain (2001). *Psychological Science*, 12(3), 248-251.

(G5) Chabris (1999). *Nature*, 400, 826-828.

(G5) Pietschnig et al. (2010). *Intelligence*, 38,314-323.

(G6) Schellenberg (2004). *Psychological Science*, 15, 511-514.

(G6) Moreno et al. (2011). *Psychological Science*, 22, 1425-1433.

(G6) Moreno & Bideanman (2014). *Hearing Research*, 308, 84-97.

(G6) Dege et al. (2011). *Music Perception*, 29, 195-201.

Lecture 5 (24th October 2016): Music Cognition: Memory

This lecture will discuss how musical information is stored in our memory system, what strategies expert musicians use to memorize music, and how psychologists can measure memory for music using free recall procedures. Again, the modularity of music processing will be evaluated by discussing examples of selective damage or selective preservation of musical memory (student presentation, Group 7).

Deutsch (2013). The Psychology of Music (Chapter 7.IV)

(G7) Peretz (1996). Journal of Cognitive Neuroscience, 8, 481-496.

(G7) Peretz & Coltheart (2003). Nature Neuroscience, 6(7), 688-691.

(G7) Jacobsen et al. (2015). Brain, 138, 2438-2450.

(G7) Finke et al. (2012). Current Biology, 22(15), R591-R592

Bernardi et al. (2013). Music Perception, 30(3), 275-290.

Chaffin (2007). Music Perception, 24(4), 377-393

Highben & Palmer (2004). Bulletin of the Council for Research in Music Education, 159, 58-65.

Williamon & Valentine (2003). Cognitive Psychology, 44, 1-32.

Lecture 6 (31st October 2016): Music Cognition: Emotion

This lecture (+ student presentation, Group 8) will discuss the link between music and emotion. The focus will be on distinguishing between the Emotivist and the Cognitivist Approach to emotion processing. Also, the difficulty of studying emotional responses to music and measuring them will be discussed.

Deutsch (2013) Psychology of Music (Chapter 15).

(G8) Sloboda (1991). Psychology of Music, 19, 110-120.

(G8) Grewe, Nagel, Kopitz, & Altenmueller (2007). Emotion, 7(4), 774-788.

(G8) Lundqvist et al. (2009). Psychology of Music, 37(1), 61-90.

Panksepp & Bernatzky (2002). Behavioural Processes, 60, 133-155.

Nakahara et al. (2011). International Journal of Psychophysiology, 81, 152-158.

Scherer & Zentner (2001). Chapter 16. In Juslin, P.N. & Sloboda, J.A. (Ed.). Oxford University Press.

Lecture 7 (7th November 2016): Attentional and Motor Control in Music Performance

This lecture will provide a short general introduction to basic concepts in motor control and motor learning, including a discussion of effects of attentional focus (internal versus external) on the efficiency of motor learning.

Wulf (2007). http://www.sportwissenschaft.de/fileadmin/pdf/BuT/hossner_wulf.pdf

Duke, Cash & Allen (2011). Journal of Research in Music Education, 59, 44-55.

Shea & Morgan (1979). Journal of Experimental Psychology: Human Learning and Memory, 5, 179-187.

Zurbriggen, Fontenot & Meyer. (2006). Journal of Experimental Psychology: Human Perception & Performance, 32, 944-963.

Beilock et al., (2002). Journal of Experimental Psychology: Applied, 8(1), 6-16

Lecture 8 (14th November 2016): Focal Dystonia and Performance Anxiety in Musicians

This lecture (+ student presentations) will discuss two common dysfunctions that can strongly impair musical performance, Performance Anxiety (Group 9) and Focal Dystonia (Group 10) and.

(G9) Wan & Huon (2005). Psychology of Music, 33, 155-172.

(G9) Lewis & Linder (1997). Personality and Social Psychology Bulletin, 23, 937-944.

(G9) Patston (2014). British Journal of Music Education, 31(1), 85-98.

Langendoerfer et al. (2006). Journal of Individual Differences, 27, 162-171.

(G10) Altenmueller & Jabusch (2010). European Journal of Neurology, 17, 31-36.

(G10) Ioannou & Altenmueller (2014). Neuropsychologia, 61, 80-88.

(G10) Jabusch & Altenmueller (2006). Advances in Cognitive Psychology, 2, 207-220.

Lecture 9 (21st November 2016): Music Therapy

This lecture will discuss potential therapeutic effects of both passive and active engagement with music. Focus will be placed on evaluating the functions of music for affect regulation.

Deutsch (2013). Psychology of Music (Chapter 14)

Chan et al. (2011). Complementary Therapies in Medicine, 19, 332-348.

Erkkila et al. (2011). The British Journal of Psychiatry, 199, 132-139.

Koelsch (2009). Annals of the New York Academy of Science, 1169, 374-384.

Koelsch (2010). Music Perception, 27, 307-316.

Hillecke et al. (2005). Annals of the New York Academy of Science, 1060, 271-282.

Sarkamo et al. (2013). Wiley Interdisciplinary Reviews – Cognitive Science, 4, 441-451.

Van Goethem & Sloboda (2011). Musicae Scientiae, 15(2), 208-228.

Preparing and Delivering a Talk (Evaluation Sheet)

Group:

Date:

Title of Talk:

Evaluation Criteria
Content: <ul style="list-style-type: none">- Was sufficient breadth and depth of information presented?- Was all of the information relevant?- Was there an appropriate balance of information
Coherence: <ul style="list-style-type: none">- Was the content clear and comprehensible?- Were the key messages of the talk apparent?- Was the information presented in a coherent order?
Delivery: <ul style="list-style-type: none">- Was the speaker audible and articulate clearly?- Did the speaker show confidence?- Did the speaker keep the audience's attention?
Use of Media: <ul style="list-style-type: none">- Were the contents of the slides relevant to the talk?- Were the slides clear and uncluttered?
Timing: <ul style="list-style-type: none">- Was the talk well-paced?