

## CAS LX 120: Language and Music

Fall 2019

TR 12:30–1:45, STH B19

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**Course Website:** < on Blackboard Learn >

**Course Description:** Wherever you find people, music and language follow. Is the co-occurrence of music and language in human societies just a coincidence, or is it inevitable? This course explores the relationship between these two dimensions of the human experience, addressing several fundamental and interrelated questions. Why are human beings musical? Why are human beings linguistic? Why are music and language among the few universals of human cultures? Is your brain wired for sound? Is your brain wired for language and music? How does our brain influence how we learn language and experience music? Do music and language make us unique in the animal world? Does music have to be heard? Does music have a grammar? We will address these questions by defining what language and music are, exploring their structural similarities and differences, and surveying global diversity in musical and linguistic expression. We will also consider a number of approaches to the above questions, including ‘musical proto-language’ (i.e., the idea that language and music share an evolutionary history in the human species) and studies of neural and cognitive impairments (e.g., selective deafness, amusia, aphasia) that shed light on the modularity and connection between musical and linguistic capacities.

This course will include live musical performances and allow you to explore the following Hub areas: *Aesthetic Exploration*, *Scientific Inquiry I*, and *Research and Information Literacy*.

### **Learning Outcomes** (Students will...)

1. engage with various linguistic and musical representation systems from across the world (e.g., alphabetic, syllabic, iconic writing systems), be able to relate musical forms to the historical contexts from which they emerged, and analyze their ongoing significance and relevance.
2. be able to identify and describe points of convergence and divergence between features of music and features of language (human language in general and/or specific languages), including those which are fundamental to expressive potential in both domains.
3. analyze a live musical performance in terms of basic structural elements and their relationship to affective experience.
4. demonstrate an understanding of biological concepts central to the explanation of processes involved in the creation and interpretation of language and music (e.g., complex vocal motor control, neurobiological bases of auditory signal processing).
5. become comfortable with identifying, obtaining, engaging, and analyzing publicly available and discipline-specific information sources to address research questions.
6. participate in the practice of linguistic research, including the formulation of research questions and hypotheses, experimental design, and data collection, analysis, interpretation, and communication.

### **Instructional Format and Learning Environment**

The course will consist of a mix of interactive lectures, in-class exercises (both individual and group-based), live performances, and out-of-class activities. The course aims to create an active learning environment. This means that over the course of the semester you will be expected to solve problems collaboratively, practice self-assessment, and participate in a project-based learning experience.

## Books and Other Course Materials

Required: Patel, Aniruddh. (2010). *Music, Language, and the Brain*. [ISBN: 978-0199755301]

This book is freely available in e-format through the BU Library. Readings from this book are labeled P (Patel) in the schedule. Additional readings will be provided through the course website.

## Courseware

The course website will be hosted on *Blackboard Learn*.

However, announcements regarding class cancellation, room change, and other timely news will be communicated primarily via *Slack* (a group communication tool to which you will be invited at your BU email address, so make sure you accept the invitation!). We will be using Slack to take questions as well.

We will also be making use of the following freely downloadable software:

Boersma, Paul, & Weenink, David. (2017). *Praat*. Available at <http://www.praat.org>.

## Assignments and Grading Criteria

- Biweekly quizzes (20%; six total, lowest grade dropped)
  - Quizzes will be administered at the end of class on alternating Thursdays. They will take no more than 15 minutes to complete, will consist of short-answer type questions, and will cover key concepts and terms introduced and discussed in the previous two weeks.
- Exams: midterm (15%) and final (cumulative; 20%)
  - Exams will have a similar format to the quizzes.
- Written analysis of a musical performance (10%)
  - Each student will attend a local live musical performance (where ‘musical’ may include vocal music, instrumental music, spoken word or poetry) and write up a short analysis of the **musical form**. The write-up is not to exceed 500 words and should locate the performance within the broader context or genre(s) to which it belongs. The analysis should include the use of computer-based tools for investigating sound (e.g., Praat), as well as a discussion of the key structural features of the musical performance (e.g., rhythm, melody, timbre, dynamics, etc.). A more detailed description of this assignment will be distributed during the second week of class.
- Class research project (35%)
  - In groups of 2–5 people, students will explore the **relationship between musical and linguistic form** by developing and carrying out an empirical research study. This will involve engaging appropriate sources from the primary research literature (at least 5 sources to be drawn from relevant academic journals), selecting a well-known non-lyrical melody (from some culture, not necessarily the U.S.), creating multiple sets of alternative lyrics (in some language decided upon by the group) to set to that melody which vary along systematic linguistic parameters (e.g., vowel quality, syllable structure and weight, stress, rhythmicity, lexical tone), surveying community members to examine their text-setting preferences (i.e., data collection), identifying qualitative and quantitative patterns in the data, and interpreting results within the broader context of the course. This project will consist of several components:
    - an initial proposal identifying the melody, its source, and possible alternative lyrics (due in week 5)
    - the full set of recorded stimuli (due in week 8)
    - each student’s individual data contribution (of at least 10 data points)
    - qualitative and exploratory quantitative analysis of the student’s own data
    - a final write-up (not to exceed 2,000 words, i.e. 8 double-spaced pages), which synthesizes the data of all group members and presents a set of unified conclusions addressing the research question (due at the end of the study period)A detailed description of this project will be distributed during the second week of class.

## Grading Scale

We do not grade on a curve. This means that grades are determined according to a standard we set, rather than via comparison of students against each other. Therefore, it is possible for everyone in the course to receive an 'A', as well as for everyone to receive an 'F'. The correspondence of numerical grades to letter grades is as follows:

≥ 93.00	A	78.00–79.99	C+
90.00–92.99	A-	73.00–77.99	C
88.00–89.99	B+	70.00–72.99	C-
83.00–87.99	B	60.00–69.99	D
80.00–82.99	B-	< 60.00	F

## Resources and Support

- Please feel free to visit your instructors' **office hours**; we would be delighted to chat with you informally about course content and any questions or comments you may have. If you cannot make our regularly scheduled office hours, please feel free to contact us to make an appointment.
- If you are experiencing difficulties in keeping up with the academic demands of this course, please consider contacting your **academic advisor** (or CAS's Office of Academic Advising: 100 Bay State Rd., Room 401, casadv@bu.edu, 617-353-2400) and/or make use of the **peer tutoring** resources at the Educational Resource Center (<http://www.bu.edu/erc/peer-tutoring/>).
- If you require course material in an alternative format or need special accommodations due to a **disability**, please contact the instructors and the Office of Disability Services as soon as possible (<http://www.bu.edu/disability/>).

## Class and University Policies

- Students are expected to come to class prepared and to engage with their classmates respectfully.
- There is no official attendance policy for the course. However, given the active learning approach adopted, students will get the most out of the course by attending regularly.
- All assignments will be submitted via Blackboard. Deadlines (for assignments, quizzes, and exams) are not flexible; however, if extenuating circumstances (e.g., religious obligation) make it impossible to meet a deadline or take a quiz/exam on the regularly scheduled date, please talk to your instructors to discuss alternative arrangements. In the case of a known conflict such as a religious holiday, please provide the instructors with written notice of the conflict in advance.
- You are responsible for understanding and complying with the BU Academic Conduct Code (<http://www.bu.edu/academics/resources/academic-conduct-code/>). It is assumed, unless you indicate otherwise, that your individual work in this course is your own. Work found to be the product of academic dishonesty can receive no credit, and such misconduct must be reported to the university.

(class schedule next page)

**Class Schedule** (subject to change)

WEEK	TOPIC	READINGS	ASSESSMENTS
09/03–09/05	Introduction	P, C1	
09/10–09/12	Musical sound systems <u>In-class exercise</u> : “You can’t sing the same song twice”	P, C2.1–2.2	
09/17–09/19	Linguistic sound systems <u>In-class exercise</u> : “You can’t say the same thing twice”	P, C2.3–2.5	Quiz 1 on 09/19
09/24–09/26	Rhythm in music	P, C3.1–3.2	Quiz 2 on 09/26
10/01–10/03	Rhythm in speech	P, C3.3–3.6	Project proposal due 10/03
10/08–10/10	Melody in music	P, C4.1–4.2	Quiz 3 on 10/10
10/17	In-class midterm (NO CLASS ON 10/15)		Midterm exam on 10/17
10/22–10/24	Melody in speech <u>In-class exercise</u> : “Sonic virtuosity”	P, C4.3–4.6	
10/29–10/31	Syntax of music	P, C5.1–5.2	Quiz 4 on 10/31
11/05–11/07	Syntax of language	P, C5.3–5.5	Project stimuli due 11/07
11/12–11/14	Musical meaning	P, C6.1–6.2	Performance analysis due 11/12 Quiz 5 on 11/14
11/19–11/21	Linguistic meaning	P, C6.3–6.6	
11/26	Language and natural selection <u>In-class exercise</u> : “It’s for the birds...and dolphins!” (NO CLASS ON 11/28)	P, C7.1–7.2	Quiz 6 on 11/26
12/03–12/05	Music and natural selection	P, C7.3–7.6	Project data due 12/05
12/10	Course wrap-up and review	TBD	
12/12–12/15	Study period		Project write-up due 12/15
12/16–12/20	Exam period		Final exam on 12/16