Paper 1: Hearing the spaces around us

Write a 650-800 word paper describing how any classical music performance would sound in either

1) A traditionally constructed (Cross-shaped) cathedral.

OR

2) An opera house with a horse-shoe shaped theater.

Use the physical properties of sound waves to explain how the space affects the sound. As part of this paper, include two of the characteristics that define the sound from the classical time period.

NOTE: Do not provide lengthy explanations of the physical properties of sound waves or sound wave-material interaction instead of fully answering the prompt. Focus on the space and only provide the necessary explanations of the physical properties of waves and soundwave-material interactions to talk about the space.

Be sure to use in-text citations and include a reference page. Use AMA style, follow the provided styleguide on eCampus—including the in-text numbering system.

The paper is due on 06/10 by 11:59 PM (Germany time zone) on eCampus in the appropriate dropbox. Late papers will be accepted up to 3 days late, with a 10% penalty on the assignment for each day late. After three days, late papers will not be accepted.

NOTE: You should not include sound equations or calculations. You should use the general concepts that we discuss in class.

NOTE: See the rubric for the paper is graded and how many bonus points each of the options are worth.

Bonus points for the following:

- Incorporate a discussion of a specific composer’s sound—for these points, you must include a specific composition and how it would sound in the space you have chosen to write about.
- Compare and contrast the shape of whichever room you are writing about with an anechoic chamber.
- Suggest ways to alter the sound in the room, specifically practical solutions for modifying the space.

NOTE: The following resources are provided with specific chapters that are pertinent to your assignment. You are not required to use all of the resources provided here. Use these as needed. You may also find you need to explore chapters or find literature that are not listed here.
Acoustic Resources

Musical Acoustics: Chapter 15: Room Acoustics pp. 317-329. (located in the course reserves)

Physics and Music: The science of musical sound, Chapter 5: Sound Transmission, Chapter 10: Perception of Loudness, Pt V: Acoustical Architecture (located on the research guide) (located on the research guide)

Fundamentals of Musical Acoustics, Chapter 5: Sound Transmission, Chapter 10: Perception of Loudness, Pt V: Acoustical Architecture (located on the research guide)

Music, Physics, and Engineering, Chapter 8: Theater, studio, and room acoustics (located on the research guide)

Music Resources


What to listen for in Music, Chapter 13: Fundamental forms, the Sonata; Chapter 15: Opera and Music Drama (located on the research guide)

Music and acoustics literature (use Google Scholar)