

Lesson 1

Texture in pop music (75-minute lesson)

Learning objectives

By the end of the class, students will be able to:

- Enumerate and characterize five functional layers of texture in pop music
 - Assign sounds to a functional layer
 - Diagram functional layers in a song
 - Compare functional layers between different pop songs
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Instructional Methods

- Lecture, student discovery, discussion, individual hands-on work
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References

- <https://viva.pressbooks.pub/openmusictheory/chapter/texture-in-pop-music/>
 - <https://brianedwardjarvis.com/auralayer/about.html>
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Lesson Plan

Definitions of functional layers

20 minutes

- Display list of functional layers: The explicit beat layer, functional bass layer, harmonic filler layer, melodic layer, novelty layer
- Listening: “3 on E” by Vulfpeck
 - **Prompt:** Before playing the example, ask students to get out a sheet of paper and keep track of the instruments they hear and which functional layer they imagine that instrument belongs to.
 - **Listen** to the song.
 - **Discussion:** What characteristics of each instrument’s part led you to categorize it? Write terms/definitions for each layer on the board as they come up.
- Compare intuitive responses to explanation on *Open Music Theory*

Discussion

15 minutes

- Go through “Questions to ask while analyzing” in *Open Music Theory* chapter, referring to the class’s analysis of “3 on E.”
- Emphasize that identifying functional layers is not itself the goal; instead, this should inform a broader interpretation of the song.

Demonstration and homework prep: Auralayer tutorial

20 minutes

- Focus on Example 2 on *Open Music Theory*, which uses Auralayer to illustrate functional layers. Talk through how layers are visualized: broken up by instrument, grouped by color.
- Watch tutorial video on Auralayer website, or do your own demonstration.

Individual work

15 minutes

Allow students to begin the homework assignment, walking around the room to assist with technology or answer questions.

Wrap-up

5 mins

Review discussion questions again and pick one to focus on for the last five minutes.

Lesson 2

Timbre Vocabulary (75-minute lesson)

Learning Objectives

By the end of the class, students will be able to:

- Distinguish terms within an oppositional pair of timbre descriptors
 - Assign timbre descriptors to sound signals
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Instructional Methods

Lecture, student discovery, discussion, critical thinking, small-group work

References

<https://mtosmt.org/issues/mto.20.26.3/mto.20.26.3.lavengood.html>

Lesson Plan

Preliminary definitions

5 minutes

- Simple timbre definition: what makes an instrument/voice sound like itself (sound source ID)
- One way of analyzing: spectrograms, which show all the physical energy in a sound signal.

Discussion of familiar timbre terms

5 minutes

- Ask students for some terms used to describe timbre, maybe from their applied lessons.
- Ask: do some of you use the same word to mean different things? (E.g., “warmth” tends to mean different things to different instruments.)
- Timbre is usually described metaphorically, so it can be hard to understand one another, but some music theorists have attempted to establish standardized timbre terminology.

Timbre oppositions (Lavengood 2020)

15 minutes

- On a classroom computer, pull up [Lavengood \(2020\)](#)
- Introduce spectrograms to students: they break down a complex sound signal into component parts, known as “partials,” which can combine to create a single perceived “sound” (see [1.1])
- Beginning at [1.9], go through oppositional pairs and video examples

Small group work: analyzing timbre in “Helix” by Flume

30 minutes

- Ask the class to split into groups of 2–3
- Distribute opposition tables
- Instruct students to identify at least 3 different sounds in “Helix” and describe their timbre by choosing one word from each opposition, filling in the chart with + and –.
- For each sound, identify what seems to be its most important timbral characteristic.

Presentation and discussion

25 minutes

- Ask each group to explain which sounds and terms they chose
- Discussion questions:
 - Where did two groups analyze the same sounds differently? What might be an explanation?
 - Timbre occurs on a spectrum; how did you decide which term to use?
 - Which terms seemed most useful? Least useful?
 - Did you notice any correspondence between timbre and rhythm, form, etc.?

Homework assignment

- Complete an analysis of all the sounds used in “Move.” Prepare to discuss more in class.

Lesson 3

Unpitched percussion timbre 1 (75-minute lesson)

Learning Objectives

By the end of the class, students will be able to:

- Distinguish terms within an oppositional pair of timbre descriptors
 - Assign timbre descriptors to unpitched percussion sound signals
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Instructional Methods

Lecture, hands-on experimentation, discussion, critical thinking, small-group work

References

- <https://works.hcommons.org/records/77d22-63m18>
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Lesson Plan

Review of timbre terminology 5 minutes

- Review Lavengood (2020) timbre terms from previous lesson and address any questions
- Make sure to address *pure/noisy*, *rich/sparse*, *bright/dark*, as these will be most useful today

Introduce the Roland TR-909 5 minutes

- Today we're focusing on unpitched percussion timbre by focusing on the TR-909.
- Explain briefly what the TR-909 is known for (see Lavengood 2021, 11)

Critique and expand terminology 5 minutes

- As we prepare to analyze these sounds, which timbre vocabulary terms are less useful?

Small group work: percussion timbre 20 minutes

- Ask the class to split into groups of 2–3
- Distribute customizable opposition table worksheet
- Ask students to use computers to open roland50.studio; in the top menu, open the TR-909
- Assign different groups to different sounds
 - Try to define them by their most distinctive characteristics.
 - Timbres should be defined relative to the overall sound palette of the TR-909.
 - Encourage groups to invent new oppositions if needed.
 - Explain using our established timbre vocabulary what the knobs change in each sound.

Presentation and reflection 20 minutes

- Ask groups to share their findings
- Try to agree on which terms are most useful, including any new terms

Homework prep: timbre analysis of TR-909 “Workout” 20 minutes

- Assignment goals:
 - Using an opposition table, track the timbre(s) of at least 3 instruments from the TR-909 throughout the track.
 - Write 150 words addressing your process and any questions you had.
- Listen to the entire song once in class (it is long—11 minutes).

Lesson 4

Percussion's Role in Texture (75-minute lesson)

Learning Objectives

By the end of the class, students will be able to:

- Critique the five functional layers of texture in pop music
 - Analyze unpitched percussion music with functional layers
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Instructional Methods

Lecture, discussion, critical thinking, small-group work

References

- <https://viva.pressbooks.pub/openmusictheory/chapter/texture-in-pop-music/>
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Lesson Plan

Review functional layers

5 minutes

- Review Moore's (2012) functional layers via *Open Music Theory*

Critique of functional layers using TR-909 Workout

10 minutes

- Consider the idea of functional layers in the TR-909 Workout. Do you think these layers exist here? Is everything just “explicit beat layer”?
- Review definitions: what aspects of each layer could also be present even in unpitched percussion?

Small group work: functional layers in the TR-909 Workout

25 minutes

- Ask the class to split into groups of 2–3
- Assign different groups to different functional layers
- Students should determine which instruments and rhythmic motives belong to their assigned layer
- Students may critique or build on the definition of their layer type

Presentation and discussion

25 minutes

- Ask each group to explain which sounds and rhythms they chose to belong to their layer.
 - Did you build out your definition of the layer as you worked?
 - What aspects of each sound led you to believe it belonged to your layer? Timbre? Rhythm? Something else?

Homework prep: analysis of Jlin, “Hatshepsut”

10 minutes

- Listen to the entire song once in class (4:40).
- Begin by identifying instruments in class (by name, by timbre, onomatopoeia)
- Assignment goals:
 - Categorize instruments as belonging to functional layers
 - Transcribe rhythmic motives as needed
 - Use timbre vocabulary as needed
 - Write a 200–300 word reflection: How did you determine which instruments belong to which layer? How did timbre factor into your decisions, if at all? What other musical domains influenced your decisions (rhythm? register? form?)?

Sound name					
- / + opposition					
Spectral components - sustain					
<i>bright / dark</i>					
<i>pure / noisy</i>					
<i>full / hollow</i>					
<i>rich / sparse</i>					
<i>beatless / beating</i>					
<i>harmonic / inharmonic</i>					
Spectral components - attack					
<i>percussive / legato</i>					
<i>bright / dark</i>					
Pitch components					
<i>low / high</i>					
<i>steady / wavering</i>					

ORIGINAL OPPOSITION TABLE

Sound name					
- / + opposition					
Spectral components - sustain					
<i>bright / dark</i>					
<i>pure / noisy</i>					
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Spectral components - attack					
<i>percussive / legato</i>					
<i>bright / dark</i>					
Pitch components					
<i>low / high</i>					
<i>steady / wavering</i>					

ORIGINAL OPPOSITION TABLE

Sound name										
- / + opposition										
<i>bright / dark</i>										
<i>rich / sparse</i>										
<i>pure / noisy</i>										
[attack] <i>bright / dark</i>										

CUSTOM PERCUSSION-FOCUSED OPPOSITION TABLE

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Sound name										
- / + opposition										
<i>bright / dark</i>										
<i>rich / sparse</i>										
<i>pure / noisy</i>										
[attack] <i>bright / dark</i>										

CUSTOM PERCUSSION-FOCUSED OPPOSITION TABLE