

CSC 490

Question Set 3

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A set of questions based on chapter 3 of Aiello's Musical Perceptions.

1. Write a 5 sentence biographical sketch of Milton Babbot, devoting 2 sentences to personal information and 3 sentences to musical ideas.
  - Milton Babbot is an American-born composer and musical theorist. He was born in Philadelphia and raised in Jackson, Mississippi. He put forth a theory of combinatorial serialism in music. This theory states that music is built out of “interval classes” which combine to form the complete piece. He also stated that anyone that can identify different pitches is able to hear combinatorial structure.
2. Write a 5 sentence biographical sketch of Karlheinz Stockhausen, devoting 2 sentences to personal information and 3 sentences to musical ideas.
  - Stockhausen was a German composer. He was widely regarded as both one of the most important of his time as well as one of the most controversial. Stockhausen used logarithmic relationships of duration in his music based on the science behind pitch. Difference in pitch lies along a logarithmic scale of wavelength duration, he noted, and therefore audible duration can as well. He stated that pitch was simply “duration transferred to a higher level”.
3. In what way does Cook suggest that Babbot inappropriately drew on perceptual data in order to justify one of his theoretical works?
  - Cook suggests that Babbot draws quite a generalization from being able to identify pitch to being able to identify structure, by carelessly leaping from small idea to big picture.
4. In what way does Cook suggest that Stockhausen inappropriately drew on perceptual data in order to justify one of his theoretical works?
  - Cook suggests that Stockhausen also draws out a large generalization in his theory of pitch-duration relationships, by simply applying one idea to the other without concern for the applications’ validity.
5. Konecni and Gotlieb...
  - a) Showed that college-level listeners showed no preference of the ordering of movements, original or modified, in a large scale piece.
  - b) Referenced music theorists of questionable authority who claimed that the ordering was vitally important.
  - c) Concluded that music theorists and critics should temper their claims about music and music listening according to empirical results of cognitive psychologists.
  - d) All of the above.**
6. Rita Wolpert conducted experiments which indicated that theorists view melody, harmony, and rhythm as the essential constituents of music, with instrumentation having a secondary function. (True or False)
  - True
7. Cook suggests that Wolpert’s research-based claim that musicians and nonmusicians listen to music very differently may be questionable because the two groups may, in fact, be engaging in different tasks. (True or False)
  - True
8. What is the “language game of Western music”?
  - The language game is the set of terms and definitions that are attached and intertwined with Western music in a way that makes it hard for any true value to be attached to words outside of the language of music. When people talk of

Western music, they do so with these terms, bending them to fit their own ideas and not necessarily making their point known.

9. How is the language game an issue (and a big one at that, for Cook!) in Wolpert's research?
  - When people respond to what they have heard, they often do so in the language game, and are oftentimes unable to clearly get across their meaning.
10. Cook claims that psychological writings about music often attempt to give a purely psychological explanation for what are in part social phenomena. (True or False)
  - True
11. Evidently...
  - a) Music theorists are sometimes guilty of misrepresenting phenomena associated with the psychology of music.
  - b) Music psychologists are sometimes guilty of misrepresenting musical phenomena.
  - c) **Both of the above.**
12. Write a 5 sentence biographical sketch of Pierre Boulez, devoting 2 sentences to personal information and 3 sentences to musical ideas.
  - Pierre Boulez is a French composer and conductor. He is a rather abstract composer, and dabbled with early electronic music. His work with serial music brought about his innovation which he likes to call "pitch multiplication". Pitch multiplication evokes the feel of gamelan music, along with modern jazz and other feelings. Boulez is right at home working with 12 or more instruments at once.
13. In his article, "Cognitive Constraints on Compositional Systems", Fred Lerdahl discusses potential mismatches between the structure that a composer puts into a piece and the mental representation of it that the listener forms in terms of disjunction between "compositional grammar" and "listening grammar". Write a one sentence definition of "compositional grammar". Write a one sentence definition of "listening grammar".
  - A compositional grammar is the grammar that the composer had in mind when writing the piece; it is the rules that help the piece make sense to the composer.
  - A listening grammar is mental representation that the listener is able to form of a piece when s/he listens to it. Oftentimes, this grammar is severely disjoint from the compositional grammar.
14. What does "La Marteau sans Maitre" (the title, not the music) mean in English?
  - It means "The Hammer without a Master".
15. The idea that music involves the encoding and decoding of kind of message – something that passes from the composer's brain to the listener's – is based on an analog with language. (True or False)
  - True
16. In two or three sentences, answer the question: "What is Lerdahl and Jackendoff's Generative Theory of Tonal Music (GTTM)?"
  - GTTM is a theory of music that puts forth rules for creating a grammar of music listening. GTTM attempts to answer questions about grouping structure, parsing, and meaning, in regards to music listening. GTTM is considered *the* seminal piece for understanding modern music listening, even though several people strongly disagree with it.
17. What aspect of GTTM did Irene Deliege validate, at least to some extent?

- a) **Its mechanism for segmenting the musical surface**
  - b) Its mechanism for deriving the hierarchical structure of the music from the musical surface
  - c) Both of the above
  - d) Neither of the above
18. In simple conceptual terms, what is the concept of “tonal closure”?
- Tonal closure is the concept that the listener is expecting a piece to begin and end in the same key. There may be variations within a piece, but they should begin and end in the same key.
19. Evidence cited by Cook suggests that:
- a) Tonal closure only has a direct effect on listeners (even musically trained listeners) when the time scale involved is well under a minute.
  - b) In perceptual terms, an extended composition cannot have the tonal unity that a single phrase has.
  - c) **Both of the above.**
20. Cook appears all too eager to throw Lerdahl and Jackendoff’s baby (GTTM) out with the bathwater of scalability issues. (True or False)
- True
21. By X Chomsky means the grammatical knowledge that a competent language user has internalized; as the word “internalized” shows, this is considered to be a mental construct. What is X?
- “Competence”
22. By Y Chomsky means the way in which X is used in actual situations. If theories of X deal exclusively with perfect, well-formed sentences, theories of Y deal with interruptions, syntactic breakdowns, failures of comprehension, and the goals that people have in using language in specific contexts. What is Y?
- “Performance”
23. It is an axiom of formal linguistics that issues of X cannot be understood except on the basis of a theory of Y. (True or False)
- False, though if X and Y were switched, it’d be true.
24. Lerdahl and Jackendoff built GTTM on the basis of the aforementioned axiom of formal linguistics. (True or False)
- True
25. What is the classic definition of a grammar?
- A grammar is a finite set of rules that will generate all, and only, well-formed sentences in a given language.
26. Why does Cook find the idea of a musical grammar problematic?
- A musical grammar simply cannot exist to Cook, as composers do things outside of the rules all the time to purposely get meaning out of their work.
27. In what way does Cook suggest that music is much more fluid than language?
- In music, you cannot be sure of the “grammar” of it until you have heard the piece at hand.
28. Alan Marsden (1989) has outlined a model of music listening based on the idea of discovery learning. In just a few sentences, describe Marsden’s model of listening with reference to GTTM.

- As someone listens to a piece of music, rules governing the interpretation of the piece are strengthened and weakened on the fly, with regards to how the piece has progressed thus far. The rules that are strengthened or weakened are the same rules put forth in GTTM, though in that work the rules seem much more steadfast, and not as flexible as in Marsden's theory.
29. Cook argues that the competence/performance distinction drawn by Chomsky cannot be sustained in music. (True or False)
- True
30. Harris has an issue with formal linguistic theory – the collection of ideas inspired by Chomsky. Cook claims to have essentially the same issue with recent developments in music theory that were so stridently advanced by GTTM. In a sentence or two, articulate the issue.
- The issue at hand is that the theory of competence has been transformed into a theory of performance. Cook claims that music is being studied for its practice rather than its actual foundation.
31. What is *scriptism*?
- Scriptism is the idea that writing is a more ideal form for representing language than speech.
32. Which do linguists claim is the proper basis for the study of linguistics: speech or the written word?
- They claim speech is the proper basis for study.
33. Which do music theorists claim is the proper basis for the study of music: sound or score?
- Theorists claim that sound is the proper basis for study.
34. Cook writes: “It stands to reason, then, that the kind of full and satisfying comprehension of music at which the theorist aims is unlikely to be attained, except on the basis of a representation as richly determinate as that in which the music was conceived.” Which of the following do you believe this idea legitimizes?
- a) Carrying out a set-theoretic analysis of notes that may not be discernable in the music as heard.
  - b) Writing a program that explicitly captures the hierarchical structure of a melody.
  - c) Both of the above.
  - d) **Neither of the above.**
35. Which of the following do you believe to be true?
- a) One of the benefits of music theory is that it enables people to hear music better.
  - b) One of the benefits of modeling music in Clay is that it enables people to hear music better.
  - c) **Both of the above.**
  - d) Neither of the above.
36. Describe the *probe tone technique* introduced by Krumhansel and Shepard in 1979. (Limit yourself to a few sentences.)
- Listeners are played a set of notes randomly from a diatonic set, and then played a final note, the probe tone, and asked how well it follows from the others in a musical sense.
37. Generally speaking, what is the probe tone technique used for?
- The probe tone technique is used to figure out how the context a note is situated in affects how it is perceived.

38. The concept of *key profile* is closely associated with Carol Krumhansel. What is a key profile?
- A key profile is a profile of how well a note “fits” musically within a set of other notes. For example, a fifth might fit in well in a diatonic set, and will be reflected in the key profile of the diatonic set.
39. The Krumhansel Key Finding algorithm is a distributional algorithm based on key profiles. David Butler notoriously took issue with the theoretical foundation on which this algorithm is based. What was his problem with Krumhansel’s algorithm?
- Butler states that the test materials were heavily weighted with fifths and tonics, and that the prevalence of “sound” tonics and fifths in the key profiles reflects this artifact, not actual hearing. It’s simply a case of a bad control.
40. What was the main point of Cook’s article?
- Cook’s article was to point out that perception is a widely controversial aspect of modern music cognition and music psychology. Cook seems to disagree with nearly everyone he cites, but at the same time offers little of his own ideas. This leaves the article with a feeling of “much work to be done” but unfortunately also with a taste of “no definite answers to be found”.