PROPOSAL: Repetition Preferences in Popular Music

The central role of repetition to the structure of music is almost universally agreed upon among theorists and composers. Schenker describes "hidden repetitions";[1] Lerdahl and Jackendoff exalt "the importance of parallelism in musical structure";[2] Stravinsky emphasizes the crucial aspect of "similarity."[3] Although each approach differs, there is often a sense that this repetition engenders unity within a piece of music.

The flip side of this argument usually follows, in which the unity of this repetition must be tempered through the contrast of variety. Variety itself comes in many guises: elaborations, transformations, or simply just "a change." The balance between unity and variety is a delicate one, however, and can involve every possible musical parameter.

Perhaps because of the multitude of ways in which unity and variety can be incorporated into a piece of music, these two factors have rarely been studied directly with respect to the form of a musical work. In classical music, repetition is rarely exact; when events or motives repeat, they often endure subtle or dramatic reinterpretations, thereby intertwining perceptual unity and variety such that they are difficult to separate.

In popular music, however, the strophic nature of the song form lends itself more easily to delineating repetition. Repetition, of course, can occur at all levels in a piece of music: from note to note, phrase to phrase, or section to section. Within the many verses and choruses of popular songs, though, often the only parameter to change is the lyrics; sometimes, even this parameter is static. Therefore, popular music provides a large corpus of test cases in which to control the extent of repetition on the level of the phrase.

The notion of "phrase" itself, however, can be challenging to define in popular music, for the harmonic explanation that tonal theory provides is too restrictive for popular music.[4] Yet

since popular music is focused on a sung text, phrases are often easy to identify because of segmentations in the lyrics. An explicit definition of phrase in popular music for the purpose of this study, however, is not necessarily a requirement.

Previous work on the cognition of form has taken sections of a specific amount of time as the basis for creating rearranged compositions. Tan and Spackman (2005) chose to manipulate sections of roughly 20 seconds to investigate perceived unity; Tillman and Bigand (1996) chose a length of 6 seconds as the general size of their sections. My own sense of phrase lengths in popular music is that repeated formal blocks almost always fall in between these two values, often around the midpoint of this range (12 seconds or so).

Other experiments involving form alterations, such as Karno and Konečni (1992) and Tan, Spackman, and Peaslee (2006), have focused on listeners' preferences for the original version versus altered versions. In the former study, rearrangements of formal sections showed no tangible effect on preference. Neither study, however, investigated the extent to which the repetition of sections would affect listeners' preferences.

As Berlyne's 1971 two-factor arousal theory posits, listeners' preferences are closely tied to perceived complexity.[5] Specifically, preference ratings peak at what is reported as the optimal level of complexity. This optimal complexity is typically only a listener-reported criterion; no quantitative musical measurement is available. When investigating phrase repetition in popular music, though, I predict that optimal complexity occurs when phrases are repeated exactly once (for a total of two presentations).

Therefore, I propose to investigate the role that repetition plays in popular music at the level of the phrase with respect to the perception of two sets of paired categories: unity/variety and preference/complexity. To study this role, I will create multiple versions of song segments

in which the level of repetition in either the verse or chorus is altered. To avoid the fatigue effect, song segments will be limited to about a minute, thus typically representing one iteration of the large-scale form (e.g. one verse-chorus set).

Since the number two is speculated to be the optimal level of preference and thus complexity, versions in which phrase repetition does not occur will represent low repetition. Two versions of high repetition will be used: one in which phrases repeat three times, but also another where phrases repeat four times in order to account for the possibility that the number three is not preferenced only because it does not result from a duple hierarchy. Thus, four versions (1x, 2x, 3x, 4x) will be created for each song.

Currently, I plan to use 16 different songs for which the originally-occurring level of repetition varies from song to song (although most will have 2x built in). To avoid the inherent repetition of hearing multiple versions of the same song, each listening session will include a variety of version types, but never different versions of the same song. Listeners will be able to do up to four separate listening sessions on separate days to counterbalance the versions. Certain songs may consistently rate higher than others, but there will be no song-to-song comparisons, only version-to-version, thereby negating aesthetic preferences based on genre, style, or artist.

In summary, this experiment's null hypothesis is that changing the amount of phrase repetition within a verse or chorus of a song will have no effect on listeners' preference ratings for the song, nor on the perceived level of complexity, unity, or variety. However, it is my prediction that preference ratings will maximize for the case of the single repetition (two presentations). In this case of optimal complexity, moreover, unity and variety ratings will be in maximal balance with each other, thus providing a tangible measure for what have traditionally been only vague descriptive terms.

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ENDNOTES

[1] Burkhart (1978), p. 155.

[2] Lehrdahl and Jackendoff (1983), pp. 52-53.

[3] Stravinsky (1942), p. 32.

[4] Laitz (2003), p. 229, requires a phrase to include the dominant harmony, which is often a non-existent chord throughout an entire popular song.

[5] A summary of Berlyne's theory as it applies to music can be found in Tan, Spackman, and Peaslee (2006).