MTO A JOURNAL OF THE SOCIETY FOR MUSIC THEORY

"Cueing" Your Playlist: Texture and Teleology in Post-Millennial Pop*

Emily Schwitzgebel

NOTE: The examples for the (text-only) PDF version of this item are available online at:
https://www.mtosmt.org/issues/mto.25.31.1/mto.25.31.1.schwitzgebel.php

KEYWORDS: expectation, texture, teleology, post-millennial pop, cues, corpus, form

ABSTRACT: The abundance of popular music in everyday life has led to the formation of schematic frameworks that are implicit and accessible to most listeners. Accordingly, we have come to implicitly expect and delight in prototypical patterns of verses and choruses as the music unfolds. This study highlights the role of texture as a source of local, perceptual input informing the real-time experience of musical form and climax, which includes the development of schematic and veridical expectations and their assessment. I expand upon Moore's (2012) textural layers with *textural cues*, claiming that cues spark listener expectations for formal section changes that coincide with texture change. Following a corpus study which compares the use of cues in post-millennial pop with that of pre-millennial pop, I then create my own visual representations—*texture models*—of *Billboard* Hot-100 hits that spotlight exemplar songs, categorizing them according to a four-part taxonomy of perceptual climax. Broadly, I suggest that texture serves as one particularly dynamic and valuable aspect of Western post-millennial pop music that aids musical navigation through local cues and clarifies their relationships to other parameters. The cues balance expectational tension and release: whereas their suddenness and novelty induce tension, they facilitate accurate predictions of textural change, resulting in subsequent expectational release and perceptions of climax through the meeting of local and global expectations about pop music forms.

DOI: 10.30535/mto.31.1.5

Received July 2023

Volume 31, Number 1, March 2025

Introduction

[0.1] Listeners are afforded a wide range of tools to navigate a musical landscape. We are adept at quickly and easily switching between schematic frameworks according to what the music requires and, as such, make use of different expectations from one musical work to another (Huron 2006, 122; Meyer 1956, 45). We can determine the appropriate genre, artist, and song name immediately upon hearing the opening of a pop tune and are quite sensitive to patterning and symmetry (Gjerdingen and Perrott 2008; Granot and Jacoby 2011; Krumhansl 2010). Given the ease with

which listeners can and do switch between listening frameworks, it is unsurprising that the navigational tools and expectations associated with classical music should shift when applied in a popular music context. When listening to Western classical music, listeners might choose to attend to harmonic grammar and meter as salient features of the landscape. The same listeners, when listening to American pop music, might attend instead to dynamics or texture for navigational influence (Butler 2006; Smith 2019). Traditionally, the former musical features have been grouped under the category of "primary parameters" while the latter fall under "secondary parameters" (Meyer 1989, 15). In popular music, these secondary parameters are more likely to serve a structural role, while in Classical music they may take on a more supportive, expressive role. In both settings, critically, these so-called "secondary" parameters provide key perceptual information to a listener's real-time musical experience (Lamont and Dibben 2001; Ziv and Eitan 2007).

[0.2] Focusing specifically on the genre of post-millennial pop music, I ask two central questions. First, what specific expectations and schematic frameworks do we apply to pop music? Second, based on these expectations and frameworks, how do we actively navigate listening in real time? To the first of these, I propose that listeners familiar with pop music expect a prototypical unfolding and repetition of verses to choruses, which Temperley (2018) refers to as the "verse–chorus unit." Each of these discrete sections exhibits identifiable characteristics—namely an intensification from verse to chorus arising from the layering of new instruments, registral change, and/or more explicit beat emphasis (Adams 2019; Butler 2006, 93; de Clercq 2012; Summach 2011). Additionally, listeners might expect novel musical material—commonly labeled the bridge—to appear roughly two-thirds of the way through the song, upon finishing the second verse-chorus unit. (White 2020 calls the surge of new events at the end of a song the *novelty swoosh*.)

[0.3] To the second question, I suggest that texture serves as one particularly dynamic and valuable aspect of pop music that can aid real-time musical navigation through local cues and their relationship to other parameters. In doing so, my aim is to situate local textural cues within the bounds of pop music in a way that highlights their ubiquity and utility from a local, accessible, and listener-based perspective. While acknowledging that parameters like melody and harmony have historically driven pop music's formal organization, I concern myself instead with the real-time listening process and experience as they relate specifically to the understudied parameter of texture and its relation to teleology. Here, I do not present any new theory of popular music; rather, I direct attention to textural cues as prominent post-millennial features, through which expectation emerges and facilitates perceptions of musical climax in light of formal organization. I thereby, first, acknowledge how literature has previously related texture to the Western tonal music landscape and propose this same focus in pop music. I then test my theoretical conceptions in a corpus study spanning 63 years of music and 200 songs. Finally, on the basis of trends uncovered in the corpus study, I present a taxonomy of perceptual climax and a set of corresponding analytical examples that both offer broad new applications to post-millennial pop analysis and exemplify the use of cues and texture in today's hits.

[0.4] Before continuing, it is worth bearing in mind that the term "popular music" is quite broad, loosely defined largely according to its commercial presence and marketability. Nate Sloan and Charlie Harding (2020, 146) describe the "sound of pop" not as a cohesive sound at all, but rather a broad category of music that seems to "slide fluidly across disjunct genres" based on commercial success. Drew Nobile (2020) addresses issues of genre categorization by distinguishing between a more inclusive, "small-r" rock that encompasses pop music and a "capital-R Rock" that refers to the more specific genre of Rock music alone. Electronic dance music (EDM), Rock, country, rap, etc., are all variations that may fall under the umbrella of pop. (Mauch et al. 2015 have tracked the evolution of American popular music from 1960–2010, showing the arcs of popularity of different genres over time.) Though they can be differentiated from one another due to certain musical characteristics like timbre and orchestration, each of these genre's perceptual features and general formal structure remain similar. In what follows, the term "pop music" should be understood as the multiple, ever-changing genres that are contained by this larger commercial category and regarded for their marketability among the general population.

1. What Is Texture in Music?

[1.1] Historically, texture as a musical parameter has been under-theorized, frequently described in music using simplistic terms such as "monophony" or "homophony," or more general metaphors like "dense" or "sparse," "thick" or "thin." Texture's abstract essence makes it a complex topic to focus on, and indeed, some Western tonal music analysts have spoken of texture's "elusive" and "unexplored" nature in musical structure (Levy 1982, 482). With no clear definition or standardized lexicon, it is (as noted earlier) often characterized as a mere secondary parameter, despite its potential to "function as a sign—both for where we are in a piece and for what may or may not happen next" (Levy 1982, 482). It is possible that the complexity of texture is in part due to the entanglement with its neighboring domain, timbre. While timbre has its own set of metaphorical descriptors (e.g., "bright," "dark," "pure," "noisy") that vaguely overlap with texture's, the former is primarily associated with sound qualities (i.e., spectral and pitch components) that work together to inform a listener's ability to identify instruments and genre, whereas the latter takes on a more general role as an informant of structure, change, and blend—how various sounds function in relation to one another (Blake 2012; Goodchild and McAdams 2018; Lavengood 2020; Moore 2012, 19). For the purposes of this discussion, texture can be thought of as the several timbral layers that interact to create the "sound world" of a song and connote meaning through changes in musical structure.

[1.2] Until relatively recently, texture has been underemphasized in the way of listening and analysis, particularly in the realm of popular-music research, which has tended to focus on harmony, meter, and form (Biamonte 2014; Covach 2005; Doll 2017; Temperley 2018). Now, texture in popular music has become a more central focus to music analysts, who have recognized the weighty influence of EDM on recent pop hits (Peres 2016; Smith 2019). Kyle Adams (2019) observes the role of texture in the delineation of form in post-millennial pop music, demonstrating that texture is just as crucial as melody and harmony to the perception of formal organization. Indeed, he says, "formal units do not take on an identity unless a section has sufficient melodic, harmonic, lyrical, and (most critically) textural features to trigger an unambiguous classification" (Adams 2019, 34). Later, Adams shows through a series of case studies that the removal or addition of textural layers within these formal sections can lead to instability and ambiguity in the listener's classification process. Allan Moore actively advocates elevating texture's significance in popular music, saying:

> By dismissing matters of texture we run the risk of missing crucial details about the music, and about how it relates to us, since texture is of its nature about relationships, relationships between strands in a musical fabric. . ., and in finding significance for ourselves in the music we listen to, we may find our relationships mapped in that music. (2012, 19)

Moore's description of texture is especially provocative when considering a context-driven approach to position-finding and navigation in music—that is, elements that rely on both intra- and extra-musical relationships as well as the relationship between the two. (Meyer [1956 (1957)] would say that musical significance stems from listener experience and knowledge in combination with the music.) Recognizing these intra- and extra-musical relationships means that texture is necessarily influenced by and intimately interacts with parameters like dynamics, orchestration/instrumentation, and rhythm, as each of these parameters could modify a listener's perception of texture.

[1.3] This paper's focus on post-millennial pop music continues a trend following researchers' increasing recognition of a shift in the efficacy of prior analytical tools, starting as early as the 1990s but most explicit in post-2000s music. Nobile explains that "as digital recording tools became more sophisticated and widely available . . . timbre and texture increasingly became the main catalysts of formal contrast and formal teleology" (2022, [3.2]). Similarly, Ragnhild Brøvig-Hanssen and Anne Danielsen (2013, 71–72) find that the emergence of new technologies over several decades has led to noticeable changes in pop music's use of "virtual space" and listeners' perceptions of musical convention (a process that they refer to as *naturalization*). Perhaps most relevantly, Asaf Peres (2016, 2) speaks of a "sonic syntax" that is completely unconcerned with tonality and relies instead on

"manipulation[s] of timbre, sonic density (the presence and amplitude of frequencies across the sonic spectrum at any given moment), and rhythmic intensity," originating from the sound-world of EDM and spreading through popular music genres. Post-millennial pop music adopts a sound-world—or, for Brøvig-Hanssen and Danielsen (2013), a "sound stage"—that is unlike that which came before and must be treated accordingly.

[1.4] My own conceptualization of texture rests on much of this current research and specifically makes use of Moore's four textural layers (2012, 20–21): the *explicit beat layer*, which clearly articulates the beat pattern; the *functional bass layer*, which connects root harmonies; the *melodic layer*, which serves as a memorable song identifier; and the *harmonic filler layer*, which fills the middle range between bass and treble. Moore notes that these layers make up the most common parts of pop music's textural whole, though fluctuate dynamically and independently over the course of a song.(1) Further, since a real-time listening experience with texture as a driver of expectations should incorporate a robust definition of texture, I also incorporate pop-specific musical elements like production techniques in my modeling of this parameter.(2)

[1.5] With aid of these layers and with production included, the most probable schematic frameworks for post-millennial pop music are captured. The beat and bass layers often work together to form the groove, a looping rhythmic pattern that promotes listeners' enjoyment, entrainment, and desire to engage and move with the music (Butler 2006, 5; Câmara and Danielsen 2019). The melodic layer makes obvious the melody, the layer most closely associated with identification (i.e., the "tune"), and the harmonic filler fills the space between the bass and treble using a range of instruments and sounds that work together as an indication of style and genre. In line with Meyer's description, these textural layers might adequately be categorized as sound streams within the texture parameter, each ideally described using relational continua like louder/softer, thicker/thinner, higher/lower, etc. (see Meyer 1989, 209).

[1.6] Analyzing pop music through the lens of texture foregrounds formal organization and the prototypical unfolding of musical features from section to section. This approach is easily tracked through corpus study (see White 2021), and it provides partial information about the "what" and the "when" in this music; however, it does not capture the most valuable elements of a listener's expectational experience in real time. From an organizational perspective, moving across formal boundaries—for example, verse to chorus or verse to prechorus—involves an intensification of sound in which the perceived loudness often increases, and melodic pitches get higher, along with the addition of textural layers (Adams 2019; Attas 2015; de Clercq 2012; Ensign 2015; Summach 2011). The events in the form-defining domains most prototypically associated with the verse-to-chorus intensification create a flexible perception of texture as an organizational tool. Where "thin" and "sparse" might describe the texture of the verse, the addition of new musical layers in the chorus sparks a transition to words like "thick" and "dense" instead.

[1.7] As Steven Rings (2013) has shown, a single piece or song can be presented and perceived in myriad ways, changing the listening experience each time. Likewise, though many listeners have internalized pop music's schematic frameworks to the extent that they can predict formal events, I argue that it is the more local features that punctuate and reinforce this global perception, aligning them more with the minutiae of real-time listening experience. We know that a listener's memory and attention capacity while listening in a present moment are relatively short, spanning an average of two to three seconds and with an upper limit of just seven or eight seconds (Michon 1978, 92).(3) Local musical features, then, falling under the constraints of the psychological present, can be real-time expectational cues for change in the musical landscape, offering a reminder to the listener for what imminently follows (London 2002; Michon 1978).

Textural Cues

[1.8] Before proceeding, I wish to briefly define the psychological notion of a "cue" and discuss how that definition can facilitate the forthcoming analyses. The American Psychological Association Dictionary (n.d.) defines a cue as "a stimulus, event, or object that serves to guide behavior, such as a retrieval cue, or that signals the presentation of another stimulus, event, or

object, such as an unconditioned stimulus or reinforcement." Applying this definition to our study of texture, I suggest that a cue "signals the presentation of another event," for example, the increase in rhythmic density that often occurs immediately before an EDM song's drop section. Holding this definition in mind, Irène Deliège's "cue abstraction model" (1996; 2001) offers further insight into how local cues within a musical environment can be perceived by a listener. She explains:

> The existence of a *basic level* within a musical piece appears fundamental to processes of cue-abstraction in listening. The most significant evidence for this suggestion resides in the fact that cues are distinctive, specific, and quickly picked up, as are the determinants of basic level categories; from a psychological point of view, this appears to act as the most prominent level, but with a minimal cognitive load. (Deliège 1996, 136)

Deliège's "basic level" coincides with what others have called the "surface" or "perceptual" level (Lamont and Dibben 2001; Ziv and Eitan 2007) made up of secondary parameters. It is also important to note that, for Deliège, these abstracted cues "enable the operation of a process of categorisation which underlies the progressive development of a mental schema of the piece whether or not it is familiar for the listener" (1996, 131). Here, she asserts that cues should inform the listening experience no matter the listener's prior knowledge, meaning that they are a crucial scaffolding to schematic frameworks. This work has been continued more recently by Roni Granot and Nori Jacoby (2011), who show that local, surface-level musical cues are a more helpful aid to listeners' sensitivity to organizational structure than global cues, suggesting that local, surface cues in the music can indeed reinforce global organization.

[1.9] Robin Attas (2015) has similarly characterized cues as tools for the listener. Regarding rhythm, she suggests that "the use of specific cues [can] help listeners accurately predict the arrival of the first verse or the start of a new groove cycle . . . [and] more broadly, [that] anacrusis may be used to create attentional 'pushes' throughout the buildup introduction that enhance the sense of forward motion and drive along with listener excitement and anticipation" (2015, 289). I locate similar and additional cues in the context of texture, claiming that they spark listener expectations for texture change that often coincides with formal section change. Given their role as basic-level categories, I further suggest that listeners' cue abstraction can occur either explicitly *or* implicitly, depending on the cue and the listener. Which is to say, conscious recognition and declaration of a musical cue need not take place in order for it to infiltrate and influence the listener's perceptual experience. In this way, the effect of these specific and local musical features can reside in the "tension" (T), "prediction" (P), and "reaction" (R) stages of David Huron's (2006, 15) ITPRA theory, encapsulating both the feelings leading up to an event and the responses occurring after the event's onset, all in an acute timespan.

[1.10] In Huron's ITPRA, these response systems should include the following biological functions: (T) "Optimum arousal and attention in preparation for anticipated events," (P) "Negative/positive reinforcement to encourage the formation of accurate expectations," and (R) "Neurologically fast responses that assume a worst-case assessment of the outcome" (2006, 16). In other words, T prepares listeners for an event by increasing arousal and attention, P confers a valenced, expectation-related emotion, and R reflects the immediate, reflexive outcome response in relation to P. The cues eliciting the tension-prediction-reaction (TPR) sequence of musical expectations can therefore be described as tension-inducing, attention-grabbing, novel, and local. To place cues in the context of pop music textures, I furthermore claim that cues spark listener expectations for texture change consistent with section change primarily in their initiation of the "TPR" portion of ITPRA.

[1.11] I refer to these local, novel, musical events that occur immediately prior to imminent texture change as *textural cues*, where their strategic placement and locality allows the listener to prepare for some recognizable change in the musical landscape. Most commonly, these cues facilitate accurate predictions about the section of music to come, but they can also trigger expectations that are immediately denied, leading to moments of striking musical affect and breaks in musical teleology and trajectory.[(4)] I put forward four distinct textural cues used in pop music to foster expectations: *rhythmic acceleration*, *layer withholding*, *melodic soar/swoop*, and *upbeat activity*. These

cues may occur together or separately. It should be noted that these four represent only the most typical of textural cues found in post-millennial pop and do not necessarily embody all possible cues used in popular music.

(1) *Rhythmic acceleration* ("Acceleration") is characterized by a marked increase in rhythmic motion restricted to the explicit beat layer—usually emphasized by the bass drum or snare—leading from one section to another. In EDM this is a stock technique that leads into the drop or "pop-drop" section (Attas 2015; Barna 2020; Butler 2006, 246; Osborn 2023; Sloan and Harding 2020, 50).

(2) *Layer withholding* ("Withholding") refers to the sudden absence of one or more textural layers on a local time scale. Frequently, the explicit beat layer is the one withheld—a phenomenon in line with Mark Butler's (2006, 92) "withholding the beat" right before the drop (see also Attas 2015; Smith 2019)—though note the withholding of any of the distinct five layers is sufficient to serve as a textural cue.

(3) *Melodic soar* ("Soar") refers to a fast-paced upward climb in pitch not in the melodic layer, but instead typically as a part of the harmonic filler layer. This soar may also be as a generalized, production-fueled technique sounding as a "swoosh," or some sort of rapid feeling of ascent, like the EDM "riser" (Smith 2019). Some recent music also features the soar's counterpart, a *melodic swoop* ("Swoop") in which one or more textural layers descend instead of ascend into the next section.

(4) *Upbeat activity* ("Upbeat") refers to musical activity that occurs as a novel event in any layer—but, most commonly the explicit beat layer—on the upbeat immediately preceding the downbeat of a new formal section with texture change. In many instances, this takes the form of a single percussive beat, a beat-long drum fill, or a melodic pickup in the vocal line.

2. The Corpus Study

[2.1] To this point, my argument has taken for granted the presence of textural cues in pop music, assuming as a given the recent shift in analytical strategies from harmonic to textural. In this section, I undertake a corpus study to test these theories more concretely, turning to songs appearing on *Billboard*'s Hot 100 chart between 1958 and 2021 to better determine (1) if cues situate within pop music frameworks and (2) their shifting role in musical structure and rhetoric over time.[(5)]

[2.2] The starting point for my corpus construction is Ashley Burgoyne's (2012) "*Billboard* Data Set" (also called the "McGill *Billboard* corpus"), which presents chart information and harmonic annotations for 890 total songs sampled from the top charts. Because *Billboard* updates its Hot 100 weekly, a corpus of the Hot 100 spanning 33 years would be quite large, with many song overlaps. Burgoyne resolves this issue by using a sampling algorithm that divides songs first by era and then by chart quintile (i.e., song ranking in the chart), yielding 15 discrete and representative chunks for sampling (and thus, 890 songs over 33 years rather than 1,716). The algorithm, Burgoyne writes, "protects against sharply skewed random draws and, in an attempt to conserve resources in the case of music that may be expensive to obtain, assumes that the singles in adjacent chart slots are exchangeable" (134).

[2.3] Burgoyne's corpus starts in the year 1958, the beginning of the *Billboard* Hot 100, and intentionally stops at 1991 on account of, first, the changes in *Billboard*'s data collection from manual survey collection to automatic data collection through Nielsen SoundScan and second, the growing popularity of rap and hip-hop music, which move away from harmony as a central musical feature. From this pre-constructed corpus of 890 songs, I randomly sampled 100 songs, extracting only year, song name, and artist name. Given the nature of my study, which inquiries the prevalence of textural cues as opposed to harmony, I found it necessary to also sample from more recent *Billboard* hits outside of the McGill *Billboard* dataset. As such, I used *Billboard*'s search function to compile a full list of Hot 100 songs from 1992 through 2021—an additional 29 years of pop music. To align with my first sample of 100 songs as closely as possible, I followed Burgoyne's

sampling algorithm, narrowing this "Millennial *Billboard* Dataset" to 600 total songs. Here, I again randomly sampled 100 songs from the total, noting the year, song name, and artist name for each song. In combining the random sample of 100 songs from the McGill corpus with the random sample of 100 songs from the Millennial corpus, I was left with 200 songs over 63 years. (See the Appendix for a full list of songs, artists, and years.) In this study I draw from others whose work has suggested that post-millennial pop marks a shift from harmony-driven to texture-driven popular music (e.g., Nobile 2022, [0.1]; Peres 2016). To better investigate this shift, each 100-song subset in the "Extended" corpus divides the 63 years of pop music roughly in half, meant to represent pre-millennial and post-millennial musical tendencies. **Example 1** presents a visual of how the Extended Corpus was derived.

[2.4] Informed by the recent rise in form-oriented analytical approaches and the attention to texture that comes with section change, I hypothesized that the later 100-song subset (the Millennial dataset) would contain a greater number of textural cues per song than the earlier 100-song subset. To test this hypothesis, I encoded each song by hand, using a spreadsheet to mark each section change (e.g., verse>chorus) and corresponding textural cue (or lack thereof), resulting in data looking like **Example 2**.[(6)] Sections were classified according to their prototypical textures, registers, position, and repetition, each used as common and effective tools for identification by listeners (Butler 2006, 222; de Clercq 2012; Ensign 2015; Nobile 2020, 71; Summach 2011). This classification system yielded intuitive results that reflect standard pop form sensibilities. Verses contained the fewest number of instruments, had the lowest vocal register, often occurred first in the song, and did not repeat lyrics, while pre-choruses increased the feeling of tension by adding instruments, occurred right before the chorus, and repeated lyrics in the verse-prechorus-chorus cycle. Choruses were recognized for their high energy, full texture, high vocal register, and lyric repetition as a part of the verse-chorus unit. When verses and choruses did not match their prototypical textures, I relied instead on lyric content and on the textural contrast between the two. While bridges contained entirely novel material and occurred roughly two-thirds of the way through the song, interludes contained new material that was entirely instrumental (e.g., a guitar solo).

[2.5] For each section change, a "0" indicates no cue present and a "1" indicates the presence of one or more cues (Example 2). It is important to note that, because the Extended Corpus contains 63 years of music, the textural cues of recent years might sound different than those used in the 1950s and 60s. The four cues introduced earlier are intended to serve as very broad categories for situating nearly all textural cues, regardless of their commonality or presence in the post-millennial "pop-drop." Under this broad classification, a violin's glissando in the '60s and a swoosh effect in the 2010s would both register as a melodic Soar, and, likewise, popular '70s and '80s drum fills could be called rhythmic Acceleration or Upbeat activity cues. In the encoding process, for a section change to be credited as having one or more textural cues, I required that the cue(s) be novel to that section, to occur on a local time scale, and to definitively cease by the end of the section. These specifications ensured that musical activity marked as a textural cue could in fact infiltrate listeners' attention and influence their perceptual experience and expectations.

[2.6] Following the encoding of a song, I calculated a percentage by dividing the total number of cues in the song by the total number of section changes. For example, a song with four textural cues and eight total section changes would be rated at 50%; a song with one textural cue and five total section changes would be rated at 20%. After encoding the first 100-song subset, I calculated the mean and standard deviation of all the songs' textural cue percentages. The same encoding procedures were applied to the second (Millennial) 100-song subset, with results for both subsets shown in **Example 3**. After calculating means and standard deviations for both subsets, I used a *t*-test to assess whether the two were substantially different from one another in terms of the number of textural cue occurrences. The *t*-test revealed a significant difference between the subsets ($t(198) = 7.75$, $p < .0001$), meaning that the number of textural cues used to signal a section change in songs released between 1992 and 2021 is substantially different from the number of textural cues used in songs released between 1958 and 1991 (see **Example 4**). In order to visually see how this has changed over time, I calculated the average number of textural cues as a percentage for each year in the corpus, yielding 63 distinct percentages. **Example 5** provides a scatter plot visual of how the

prevalence of textural cues has changed over the span of the corpus's 63 years of music. Here, a linear regression with an R^2 of .402 ($F(1, 59) = 39.67$, $p < .0001$) has the best fit, suggesting that, as the year increases, so too does the prevalence of textural cues in popular music's section changes; this result is consistent with the significant difference in the number of textural cues used between each of the two 100-song subsets.

[2.7] The marked shift in how musical characteristics change in Top-40 hits over the past several decades is well documented (see Mauch et al. 2015; Schellenberg 2012; Temperley 2018, 257). To further explore this, examining how musical features change over time as represented by the difference in textural cue use between the two subset corpora, I ran additional comparative analyses using Spotify's API data. First, I selected seven of Spotify's song attributes: acousticness, danceability, energy, loudness, speechiness, tempo, and valence. These seven were selected for their potential relationship to textural density and listeners' perceptions. Spotify defines these attributes roughly as follows.(7)

- *Acousticness*: Spotify's confidence measure of how acoustic a track is (scored 0–1; 1 = algorithm has high confidence that the track is acoustic).
- *Danceability*: a combination of tempo, rhythm stability, beat strength, and overall regularity that work together to determine how "danceable" a track is (0–1).
- *Energy*: a measurement of perceived intensity, drawing from perceptual features of dynamic range, perceived loudness, timbre, onset rate, and general certainty or randomness (0–1).
- *Loudness*: a measurement of a track's amplitude as a psychological correlate of relative strength (decibels).
- *Speechiness*: the presence of spoken words in a track (0–1).
- *Tempo*: the speed of a track as derived by the average beat duration (beats per minute).
- *Valence*: a measurement of how much musical positiveness is conveyed by the track (0–1).

[2.8] Upon obtaining the Spotify data for all 200 songs in the Extended Corpus, I grouped again by Millennial subset (100 songs) and McGill subset (100 songs), comparing attributes both within and across subsets. **Examples 6** and **7** display correlation plots for each of the subsets. Looking at the plots together, it appears that, although the largest correlations remain the same across subsets (e.g., loudness/energy), smaller correlations change. For example, speechiness/danceability and valence/speechiness correlations do not correlate in the McGill subset but are both positively correlated in the Millennial subset. Whereas energy/tempo and energy/speechiness are each positively correlated in the McGill subset, they do not appear at all correlated in the Millennial subset. These correlations are especially interesting when considering that speechiness does not actually differ between subsets. It is possible that this is due to the post-millennial pop trend toward the minor mode, non-male artists, and slower tempo (Schellenberg 2012), making for sad-sounding music that is perceptually matched by the lyrics. In fact, in the Millennial subset, energy correlates with only three other attributes, while in the McGill subset it correlates in some way with all six other attributes. Considering Spotify's definition of "energy" as a perceptual measure, drawing from perceptual features of dynamic range, perceived loudness, timbre, onset rate, and general randomness, it stands to reason that the correlational changes between the earlier and later halves of the Extended Corpus is a result of production interference that has grown alongside the rise in technology and analytical shift from harmony to texture.

[2.9] While correlation plots can show how various musical attributes relate in a corpus, they do not show the more specific details regarding how these attributes' average measurement compares between subsets. To observe similarities or differences more closely in attributes over time, I undertook a second analysis using density plots to represent the distribution of each attribute, directly comparing McGill and Millennial subsets (**Examples 8–14**). Here, energy, speechiness, tempo, and danceability (Examples 8–11) remain relatively similar between the McGill and Millennial subsets, but acousticness, valence, and loudness (Examples 12–14) distributions show differences between subsets. Seen in Example 12, the McGill distribution for the acousticness attribute is quite spread out, indicating that this corpus contains many acoustic songs but also many songs that are barely or not at all acoustic. By contrast, the Millennial distribution is heavily

right-skewed, suggesting that the majority of songs in this corpus have low ratings of acousticness. Conversely, the McGill distribution for the valence attribute (Example 13) is left-skewed, while the Millennial distribution is settled in the middle, meaning that McGill tracks were often positively valenced while Millennial tracks encompass both positive and negative valence throughout. Finally, despite both subsets' left skew in the loudness distribution (Example 14), the Millennial corpus has a higher amplitude, with a greater concentration toward the right side of the graph. This particular difference can be attributed to the "loudness wars," in which the average volume of popular music tracks has gradually increased over time with the onset of digital technologies (Devine 2013; Vickers 2010). Altogether, returning to post-millennial production as a potential source of change between subsets in the Extended Corpus, I suggest that the differences in acousticness, valence, and loudness distributions are a product of the increased attention to texture in post-millennial music. Which is to say: with the increase in computer-generated sounds and new sound stages also comes an increase in loudness (again: "loudness wars"), a decrease in acousticness, and a more varied valence rating.

[2.10] The aim of this corpus study was to provide evidence for the notions that, first, with the shift from navigating pop music via harmony to navigating via texture also comes a shift to using cues as perceptual mechanisms for imminent change of some kind, and second, that this shift is marked by changes in musical attributes from subset to subset that can be examined via Spotify's API.(8) As it stands, the current results suggest that pop music released in the past 30 years contains a greater number of textural cues and, perhaps also, a greater diversity of textures. In what follows, then, I use the results from this study to motivate a close examination of post-millennial Hot 100 hits, showing in context how textural cues serve as perceptual inputs for the listener.

3. An Analytical Case Study in Four Parts: Taxonomy of Perceptual Climax

[3.1] To demonstrate how textural cues situate within pop music frameworks, in this section I turn to visual representations of form and texture. Mark Butler's (2006) visual representation of prototypical EDM form is displayed in **Example 15**. Following a series of interviews with EDM concert goers, Butler concluded that listeners have a strong grasp of prototypical form in this music and are also interested in the attributes that make up this formal organization. Unsurprisingly, their descriptions of formal structuring are based largely on textural change. In this same chapter, Butler replicates the visual representation of prototypical form in what he calls the "two-core model" (Example 15) as first drawn by DJ Stanley in an interview (2006, 222). Triangles with a rightward slant approximate sections of layered instrumental buildup, and we can see the sequence of buildup, breakdown, and drop through the respective high and low points on the vertical axis, which signifies relative textural density. Importantly, given the production-oriented nature of certain cues (like the Soar and Swoop) and the emphasis on texture suggested by Butler's interviewees, this kind of visual offers an approximation of textural motion through a song that cannot be captured in the same way by staff notation.

[3.2] Building upon Stanley's and Butler's visual, I create my own visual representations, subsequently referred to as *texture models*, of some *Billboard* hits; see **Example 16**. In doing so, I create shapes that also show more local textural changes, and therefore finer detail beyond just that of prototypical form. As a result, the shapes in my diagrams do not always adhere to simple geometric patterns like squares, rectangles, and triangles; they rather reflect subtler instances of textural change both within and between formal section boundaries. In each of these graphic representations, the *x*-axis represents the start-to-finish song time, while the *y*-axis represents textural density, with colors differentiating between formal sections (note: color labels are provided in Example 16). These figures, it must be noted, are approximate and reductive: the temporal and textural visualizations are not proportional or precisely quantified. (With the current project undertaking only an approximate visualization of textural density over time, I intend to pursue such quantification in future methodologies.) Special attention should be given to the measurement of textural density (*y*-axis), which presents most clearly the changes in texture outlined above. In this context, more precise quantification would involve (1) a more specific delineation of objects on the *x*-axis, where each section of the larger structure is accurately proportioned to the others, and

(2) a *y*-axis which registers the presence or absence of textural layers and quantifies accordingly. To this latter point, one should expect a weighting of production with Moore's (2012) and Lavengood's (2020) textural layers according to their perceptual salience (i.e., is the melodic layer more perceptually important because of its salient role in memory and recall? Or would the absence of an explicit beat layer be more jarring to listeners?).

[3.3] Four analyses of songs have been selected from the Hot 100 to demonstrate the interaction of global pop form schematics with local textural change and to explore the teleological implications pointed to by textural cues.(9) In contrast to the more objective survey approach followed earlier, here I have personally chosen four works that I feel represent the interactions of textural cues, pop forms, and teleology.(10) The four analyses, more specifically, represent exemplars for what I refer to as a "taxonomy of perceptual climax," in which different formal plans of songs utilize different organizational strategies to achieve the perception of climax. In these songs, textural cues facilitate acute expectations for what is to come next (a punctuated reminder, perhaps, of schematic expectations), thus providing both a critical point of engagement and a rise in felt tension for the listener. The subsequent meeting, violation, or deferral of expectations is what contributes to the perception of climax typically experienced in the final third of a song, rather than mere textural density alone. To return to Huron's ITPRA theory, we can imagine that the presence of a textural cue in its local time frame sparks the tension stage; this is followed quickly by listeners' predictions and then their reaction to the onset of the next section as derived from these predictions. As noted, each of these analyses reflects my own hearing of the music; this is a condition that undeniably muddies the empirical waters as I locate and identify textural cues while, at the same time, knowing what the hypothesis is. Still, I offer the following texture models as a starting point for similar kinds of work in the future. For each new song analysis, the texture model starts anew, resetting according to the song's unique textural layers, sections, organization, and effects. In this way, comparison between songs must account for these differences before any claims can be made about their similarities.

[3.4] Building on existing work on trends in the execution of formal climax (e.g., de Clercq 2012; Osborn 2013), I present four distinct pop climax types falling within the taxonomy of perceptual climax; each stem from the foundation of the "Prototype" formal plan displayed in Example 16. In line with de Clercq (2017, [2.1]), the Prototype is meant to represent the most typical popular music forms in terms of their most typical textures, where the verse–chorus unit appears twice before moving to the final third of the song that contains the bridge and last chorus (see again: Adams 2019; Butler 2006, 93; Ensign 2015; Summach 2011; Temperley 2011; White 2020, 2021). As shown in the figure, Prototype forms may contain textural cues or not, but do not necessarily manipulate listener expectations in the same ways that the four climax types do, meaning that, crucially, no perceptual climax exists within this form. **Example 17** lists five examples of recent Prototype songs derived from the Hot 100, along with their *Billboard* statistics; note that a lack of perceptual climax does not mean a lower ranking on the Hot 100 chart.

Type 1: Release

[3.5] The first entry in the taxonomy of perceptual climax types is termed "Release" (see texture model in **Example 18**.) The Release takes its name from the large contrast that takes place between the bridge and final chorus. The compounding of multiple textural cues at the end of the bridge prompts acute expectations for the final chorus, which arrives sounding as the perceptual climax of the song. This type, although it centers on different formal sections, is similar to Christopher Doll's "breakout chorus," which occurs when a contrast between the verse and chorus involves "an increase in intensity with respect to various parameters, including loudness, lyrical content, pitch level (both melodic and harmonic), rhythmic and textural activity, and timbral noise" (2011, 2). Often, the cues in a Type-1 climax progress from Soar to the Withholding of all textural layers (complete silence), to an Upbeat drum hit that leads to the final chorus onset. Perhaps most salient of the three in this sequence is the complete silence that occurs as a result of Withholding all layers, which draws the listener in while heightening tension and facilitating predictions about when the chorus will come in. At the precise moment these predictions are met, the climax is perceived.

[3.6] "Heat Waves" by Glass Animals (2020) provides a good exemplar of perceptual climax Type 1; see the texture model in **Example 19**. The song begins with a thin, filtered sound, where the beat, melody, and harmonic filler layers are present but sound distant and weak as a result of the low-pass filter. Despite its thinness, the texture starts to build up with the onset of new harmonic filler instruments. At 0:17, a sudden anacrustic tom hit on beat four leads the music into an entirely new, totally unfiltered texture which continues to add new layers free from the bounds of the filter. The tom's Upbeat anacrusis occurs alone, as all other layers are withheld to make space for the cue; it marks the first textural cue in the music, and thus the first perceptual cue for the listener to take hold of as a sign of imminent texture change. This cue is flagged with a red star in Example 19 and labeled above the figure with the textural cue categories of "Withholding" and "Upbeat." Just 24 seconds later, coinciding with a formal boundary change from the intro/verse to the chorus, another bass drum hit in isolation signals a change of texture. Although the first two cues feature the same categories of Upbeat and Withholding, they sound entirely novel; because the second textural cue sounds amidst a denser texture with new layers, the Withholding of these layers is heard as more abrupt than it was the first time around when there were fewer layers. In other words, the difference in local contexts between 0:17 and 0:40 is vast and highly influential to a listener's perception.

[3.7] The analyst (and perhaps also the listener) will notice that, moving from the first chorus to the verse and then back, there are no textural cues. I speculate that this is a matter of both strategically balancing tension and release in the music and adhering to a listener's expectations. If every section boundary used a textural cue to signal change, the song would threaten to be overly predictable, failing to engage listeners and induce arousal (Berlyne 1970; Chmiel 2017). At the same time, since listeners have already heard one instance of the verse–chorus unit, it stands to reason that they might not need the textural cue tool to navigate this unit a second time. The beginning of the second verse is the first time listeners are hearing a section that they have heard previously, making it easier for them to recognize. As such, the third cue does not arrive until the end of the second verse. Here, in a miniature version of the breakdown–buildup–drop sequence, textural layers are quickly withheld and then just as quickly added back in immediately preceding the third chorus. While there is no Upbeat to accompany the layer Withholding, this time the Soar is introduced with a subtle synthesizer ascent (in the harmonic filler layer) and quick "swoosh" into the next section. Recall that textural cues are both tension-inducing and attention-grabbing, so the decision to reintroduce a cue and to replace one cue category with a new one is largely based on a concern for novelty. The final cue that occurs in between the bridge and final chorus is the most perceptually jarring. The bridge differentiates itself from the other sections by its exclusion of the explicit beat layer and lengthy textural buildup from start to finish. As it builds, it is accompanied by a melodic Soar starting midway through the section that culminates in a "swoosh" effect. Given this cue, the listener subsequently expects a change of texture—namely, the reentry of the missing beat layer, but the cue extends many seconds past that which is typical and instead initiates a full measure of complete silence between the formal sections. A third distinct textural cue category sounds at the end of the silence to signal the onset of the chorus' texture: here, the Upbeat drum hit from the beginning returns to mark this prominent moment in the song.

[3.8] This section (i.e., the build-up of the bridge into the final chorus) is transcribed in **Example 20**. Here, we can see the Release that happens at the onset of the sixth measure in the example. Just prior to the onset of the final chorus, a measure of near silence amplifies the tension of the section transition, and a tom hit on the second half of beat four anticipates the change in texture. The harmony ceases during these rests, and the tonic chord it left off on leaves no specific expectations for resolution. Yet, this moment is still one of great expectation for change—specifically, a change of texture. As the explicit beat layer re-enters and the harmonic filler layer speeds to quarter notes when the chorus begins, the second half of this score appears visually denser than the first half. Recall, however, that one additional cue facilitates expectations for a change in texture at the end of the bridge. The Soar precedes both the Withholding of layers and the Upbeat in this moment but is quite difficult to depict via staff notation due to its ethereal, wind-like production. **Example 21** depicts the same section of music spectrographically. In this graph we can similarly make out the Withholding (see the darkness that emerges on the graph at 2:52) as well as the tom's Upbeat just prior to the "Chorus" marker. Additionally, around 2:47, the spectrogram begins to feature higher

frequencies, which are not accounted for in the notation of the synthesizer chords or the vocal melody. The bracketed area in Example 21 captures the Soar cue that was missed in Example 20's notation.(11)

[3.9] This example shows how textural cues can be functional tools for navigating the pop landscape and creating perceptual climax in the music. In this case, the tripartite textural cue in "Heat Waves" moving from the bridge to the chorus creates a moment of large contrast and huge release that is most likely to be perceived by listeners as the climax of the song—a Type-1 climax. Many popular songs use cues and create climax in ways similar to "Heat Waves;" **Example 22** lists five examples of recent Type-1 songs derived from the Hot 100, along with their *Billboard* statistics.

Type 2: One More Time

[3.10] The second type in the taxonomy of perceptual climax emphasizes a "breakdown" chorus section.(12) This Type-2 climax violates expectations for specific texture/section pairings, needing to immediately repeat the section in order to achieve the appropriate texture, creating the perception of climax in the process. When the end of the bridge features an expectation-inducing cue, listeners anticipate a procession to the chorus as they have heard it before, in full texture. The failure of a full-texture chorus to occur after the bridge draws in listeners' attention through the manipulation of expectations. With an additional cue at the end of this "false" chorus, we—already engaged on account of the expectational thwarting—again expect a change of texture that corresponds with our original expectations. Our original post-bridge expectations are next deferred to the end of the false chorus, making the subsequent meeting of their expectations a perceptual climax in the song. **Example 23** displays a texture model outline of the perceptual climax found in the One More Time.

[3.11] The Type-2 form in the taxonomy is exemplified in "Bad Habits" by Ed Sheeran (2021); **Example 24** shows the texture model for this song. The first verse progresses with a prototypical layering of textures: we first hear instruments of the harmonic filler layer or the novelty layer (multiple synthesized lines and background vocals), followed quickly by Sheeran's vocals (the melodic line). Halfway through the verse, the explicit beat layer joins, adding to the slow buildup of textural density in its approach to the chorus. At roughly 34 seconds into the song, the first textural cues are heard. Here, the vocal melody climbs in pitch (on "tonight had something wonderful") and all textural layers immediately drop out; this leaves four beats of only an echo before Sheeran's voice returns on the anacrusis to sing "My bad habits lead to. . ." On "late nights," the chorus officially begins, marked by the sudden return of nearly all previous textural layers as well as a shift from backbeat emphasis to a "four on the floor" beat, where the increase in rhythmic activity also makes for a perceptually denser texture.

[3.12] One will note in Example 24's model that the first chorus continues to grow in texture, as shown by its upward slant. This occurs because a key textural layer (harmonic filler/novelty) that was heard at the start of the verse is delayed in its chorus debut, returning only midway through the chorus rather than at its onset. The return of the harmonic filler layer completes the presence of all textural layers at once. Unlike in "Heat Waves," another cue appears in the transition from chorus to verse, alerting the listener to upcoming textural decrease. Between the chorus and second verse, every layer is again withheld for a full measure, and a subtle "swoosh" leads the listener into the verse. From the second verse into the second chorus, the cue treatment is the very same as the first verse-chorus unit: Withholding, Soar, and—this time—Swoop work together to lead to the denser chorus texture.

[3.13] In the final third of the song, following style expectations, contrast is introduced in the bridge. No cues appear from the second chorus into the bridge, perhaps to make the novel musical material especially engaging; however, there is a decrease in texture which immediately begins to build in layers as it moves toward the anticipated climax of the song. At the end of the bridge a notable textural cue occurs, evidenced by a large melodic Soar while the beat layer sounds more prominently through filters and effects like reverb and delay. Listeners likely anticipate hearing the chorus in full texture at this point, especially in light of the sparse texture of the bridge. Instead, the bridge moves into the expected chorus section with a quite unexpected texture: all layers are left

out except the melodic layer and a singular instrument in the harmonic filler layer, adding a thin backbeat layer several measures in. This texture is sparse and rather inactive, a complete deviation from the expected one. Following this mismatched chorus, however, is another textural cue which withholds layers and repeats the anacrustic "My bad habits lead to. . ." Upon hearing this cue, a listener might again anticipate an increase in texture which contrasts the sparseness of the unexpected chorus. Indeed, the chorus returns at its fullest texture so far, and the listener's perceptual expectations for climax are fulfilled. **Example 25** lists five examples of recent Type-2 songs derived from the Hot 100, along with their *Billboard* statistics.

Type 3: Stairstepper

[3.14] The third entry in the taxonomy of perceptual climax is "Stairstepper," named for its terraced textural change in the middle of complete sections. While the first two types depend on some amount of intra-song memory to inform song teleology, Type 3 centers these veridical expectations as a critical part of listeners' perceptions of climax. In Type-3 forms, the initial verse or prechorus features a textural cue and proceeds to the chorus as expected, but the onset of the chorus is less texturally dense than expected. As the chorus advances, an additional cue is heard, facilitating a new expectation for texture change. As a result, the chorus's texture immediately increases (as if ascending a staircase) and is maintained for the remainder of the section. Following two rotations of the verse–(prechorus)–chorus unit, the bridge enters as a source of contrast. At the end of the bridge, a textural cue once more signals a change in texture that is likely to co-occur with the onset of the final chorus, invoking schematic expectations. Having heard the chorus two times before in its textural stairstep iteration, a listener may be surprised to hear the final chorus instead in full texture right at its onset. In the context of the prior two choruses, the fullness of this chorus's texture leads to the perception of climax. Songs in which each chorus progressively adds to the texture can be considered Type-3 examples, with each chorus smoothly ascending the next stair of the staircase (perhaps suggestive of motion on an escalator). **Example 26** displays a texture model outline of the perceptual climax found in Stairstepper.

[3.15] Halsey's "So Good" (2022) furnishes our example of Type 3 in the taxonomy of perceptual climax (**Example 27**). Unlike the previous two songs, this song does not slowly add textural layers in its first verse to build momentum and density toward the chorus. Instead, Halsey's voice immediately enters accompanied by subtle, flowing chords in the synthesizer. Already, the melodic layer and harmonic filler layer are present. Only ten seconds into the song and halfway through the verse, a novel "swoosh" sound grows out of the harmonic filler layer, alerting the listener to the impending addition of new synthesizer sounds to the sound world. As the two synthesizer lines surge in the harmonic filler layer, another shimmering Soar upward begins at 21 seconds, marking the end of the verse and the subsequent transition into a fuller prechorus. Here, the prechorus—in fulfillment to its primary duties—increases the intensity by introducing the explicit beat layer and the bass layer. The prechorus moves into the chorus just as fast as it began and, yet again, a melodic Soar that grows stronger through aid of production signals imminent texture change. As the new chorus texture enters, there is a somewhat surprising entrance of an acoustic guitar, which newly occupies the space the synthesizer held in the harmonic filler layer. The guitar is not as subtle as the synthesizer was, and despite the removal of the prechorus's beat and bass layers, the texture does not seem to change much. Midway through the chorus (the fourth measure), however, a *fourth* textural cue appears: a series of Upbeat clapping sounds which pan from one ear to another.(13)

[3.16] With the unfolding of the first three sections, Halsey introduces four textural cues. This trend continues, as accelerated drumbeats in the beat layer lead the listener into the second verse. Unlike the first, this verse retains the beat layer from the chorus, with no need to quickly build the intensity halfway through to meet the prechorus. Just as before, though, a Soar leads the verse into the prechorus, where the re-entry of the bass layer and an additional harmonic filler layer increase the textural density in preparation for the chorus. Here, because the beat layer continued through the second verse, an additional cue is layered on top of the Soar: the beat is withheld momentarily right before the prechorus begins, further reinforcing the section change. The second prechorus progresses like the first, culminating in a novel Soar in expectation of the chorus, and the chorus again abruptly changes texture halfway through after the same Upbeat claps.

[3.17] Following the second chorus, the music moves into the bridge, un-cued. Given the characteristics of a bridge as the section that is meant to introduce novel musical material near the end of a song, it makes sense that Halsey, Sheeran, and Glass Animals do not cue this section's sudden drop in texture. In fact, the lack of textural cue in this position works *with* the bridge rather than against it in its role of exhibiting novelty and garnering attention. The listener, having now heard the verse-prechorus-chorus sequence twice, surely suspects the bridge to come, but must embrace the unexpectedness of exactly when. Halsey's bridge, like the other two songs, immediately drops in texture with the removal of the bass and beat layers, featuring only piano chords, pulsing string sounds, and solo voice. In reaching its most sparse texture yet, the music suddenly changes as it Soars upward, the vocals are doubled, and the piano and strings are withheld. The Withholding of the harmonic filler layer that had been present for the entirety of the bridge and the swoosh upward reminiscent of the first three textural cues serve as a signal for yet another section/texture change.

[3.18] At this moment, Halsey provides listeners with the chorus at the expected time and, somewhat ironically, in the most expected texture, a change from the two prior choruses. In other words, Halsey's final chorus reaches its (schematically) expected texture in contrast to the first two (veridically expected) choruses that waited until halfway through to do so. Nobile's (2022) *telos principle*, manipulated for expressive effect, is highly relevant here; for the verse–prechorus–chorus teleology to adhere to the telos principle, the chorus must correspond with arrival, rather than sectional buildup. Thinking across the entirety of the song, then, Halsey has masterfully engineered this teleology. Whereas the first two choruses "fail" according to the telos principle due to not meeting the initiation, buildup, and arrival in the first two trajectories, the final chorus rectifies this with an immediate textural arrival that simultaneously catches listeners off guard *and* fulfills their hopes for climax. A critical aspect of Stairstepper form (Example 26), in other words, is its meeting of schematic and veridical expectations all at once. **Example 28** lists five examples of recent Type-3 songs derived from the Hot 100, along with their *Billboard* statistics.

Type 4: Hybrid

[3.19] I last introduce "Hybrid" as a way to encompass songs that seem to combine Type-1, Type-2, and Type-3 climaxes. Hybrid songs may use cues to facilitate expectations just as in the prior three types or the foundational prototypical form but, rather than fully executing any one type, instead draw from multiple types to achieve perceptual climax. As this is a wholly derivative type, we may move to immediately discussing song exemplars. **Example 29** presents a texture model of Justin Bieber's "Anyone" (2021), as a prime example of a hybrid form. In the final third of this song, Bieber builds the texture up in the bridge using a sequence of three cues (Acceleration, Soar, and Upbeat) at the end to increase tension and facilitate expectations for impending climax via final chorus. The bridge moves to the expected chorus anticipated by the cues, but the texture is initially quite sparse. This texture lasts only a few seconds before a new cue (Upbeat) prompts the onset of a new texture: this time the expected full texture of the chorus. This song achieves the perception of climax by drawing from two different climax types: bits of Release (Type 1) and Stairstepper (Type 3) work together in this song to create a climactic moment in the final chorus. **Example 30** lists five examples of recent Type-4 songs derived from the Hot 100, along with their *Billboard* statistics.

[3.20] To summarize, recalling most pop form prototypes, the listener expects the bridge to occur between two choruses. Because this expectation is so strong, the artist often must delay or violate expectations in other ways. For Glass Animals, this entailed adding three distinct cues and a lengthy silence at the end of the bridge to increase the tension associated with acute expectations for the final chorus. For Sheeran, it meant giving the listeners the expected chorus with an unexpected texture, effectively deferring their expectations for climax and then cueing expectations once more before the final climactic chorus. In "So Good," Halsey's cues work to provide listeners with the expected section in its schematically most expected (i.e., perceptually climactic) form but its veridically unexpected form. Finally, Bieber's back-to-back cueing of texture change combines Glass Animals' and Sheeran's approaches to both violate and then immediately meet listeners' expectations. The instance of "mismatched" choruses and their deferral are examples of how large-

scale formal deviations in expectations can, in fact, make the subsequent fulfillment of this teleology all the more refreshing and climactic.

4. Conclusion and Future Paths for Texture Analysis

[4.1] With the knowledge of these four song analyses, I find it useful to reiterate the ubiquity of textural cues in this music. Recalling Moore's (2012) quote from earlier about the significance of relationships in music, I suggest that textural cues offer the context necessary to identify both local and global relationships in a real-time listening experience. For example, cues serve first and foremost as preparation for local textural change, as in the move from verse to chorus (i.e., the local textural relationship between sections); however, once a listener has internalized the textures most common to a formal section, they can also recognize more global relationships (e.g., a chorus with the unexpected texture). This mode of listening ensures that we need not be explicitly aware of our schematic memory for pop forms the entire way through the song. Rather, the novelty of the cues, influenced by other parameters and across textural layers, serves as a local, attention-grabbing reminder immediately before change takes place, reinforcing these known schematic frameworks at opportune times.

[4.2] Further, textural cues work to reinforce a balance of tension and release. Where cues are fundamentally tension-inducing through their suddenness and novelty, an accurately predicted onset of textural change is the release where expectations are fulfilled. The relatively equidistant (and not back-to-back) spread of cues across a song also balances tension and release when considering that their novelty is meant to grab the listener's attention. Their dissemination and locality also suggest that they induce a relatively low cognitive load on the listener; the listener is attuned to textural change for only short periods of time falling under the psychological present. Finally, the frequency of textural cues in post-millennial pop music provides important breaks in the repetition loops prevalent to these structures in the absence of more complex harmonic activity. Similar to the balance of tension and release, a balance of the expected with the unexpected, even at a very local level, is a crucial element of the formation of meaning and affect for the listener (Meyer 1956, 31, 71), and these cues work with known schematic frameworks and veridical expectations to expressively manipulate teleology.

[4.3] Having approached the concept of texture and cues in pop music theoretically, quantitatively, and analytically, I close with a brief look into artist intentionality. Ed Sheeran knows better than most what goes into writing a hit, with 53 of his songs earning a spot in *Billboard*'s Hot 100. In an interview by *The New York Times*, Sheeran, with co-writers Johnny McDaid and Steve Mac, reveals what went into their 2017 hit, "Shape of You." Unsurprisingly, the three seem most focused on motion, momentum, and listener engagement, grappling with how they can balance expectation and novelty by adding and removing textural layers:

> Steve: "It's moving, it's moving all the time, every time you start getting bored of it something new comes in or something drops out."
>
> Ed: "It kind of builds and builds and builds and then drops and builds and builds and builds and then drops."
>
> Steve: "You just get this feeling of tension, release, tension, release." (Pareles 2017)

Although they don't refer directly to parts of the form and prototypical textures, their concern with tension and release, the build and then the drop, alludes to the notion of teleology that is evoked—implicitly or explicitly—each time a listener is present amidst the musical landscape.

[4.4] In another interview, Charlie Puth, a singer-songwriter-producer with twelve songs on the *Billboard* Hot 100, responds to questions from *Rolling Stone Magazine* about the breakdown of his musical process. He talks about his new song, "Charlie Be Quiet!," noting how his personal struggles manifest musically as he quite literally talks to himself, trying to quiet anxious thoughts. Like Sheeran and other post-millennial pop artists, he uses the ebb and flow of the musical texture to tell this story, but he focuses on how local musical features (i.e., textural cues) can provide

expectational hints to the listener as they anticipate the next part of the story. Below, Puth speaks about the careful intertwining of his story with the musical texture:

> Charlie: [music plays] ''Cause it's all getting too loud.' "Get it? It's all getting too loud, because [the music] was too loud. [music plays] Quiet it down, and then you have some brash snares . . . that also pan to the left and the right . . . that show that it's going to get loud again." (*Rolling Stone* and Puth 2022)

[4.5] These anecdotes provide us with a second channel for communicating the essence of what this paper means to convey via analysis, offering a proper segue into my final takeaways. First, cues as surface-level musical features interact closely and importantly with listeners' expectations and navigation through a piece of music, and artists are more than likely aware of this interaction in their songwriting processes. Next, as texture has risen in musical importance since the 1990s, these cues are most logically embedded in the texture, leading to a greater number of cues in post-millennial tunes. Finally, in popular music, these cues occur as a signal for texture change that coincides with formal section change and are used in diverse ways over the course of the song to modulate teleological expectations and perceptions of climax.

[4.6] By way of conclusion, I offer some suggestions for further work in this critical area. To begin, as mentioned earlier, future work should include methodologies which quantify these texture models. The current models show simplistic increases and decreases in texture according to placement on the *y*-axis, but this neglects the complexities of texture that result from counterbalancing textural layers with production techniques. As such, quantification that affords a greater view of these complexities will be preferable and may more clearly display the subtleties of teleology. Implicit in my overall arguments is a push for the elevation of so-called secondary parameters to the same status as primary parameters in view of their salient and viable role as perceptual mechanisms. As methodologies in texture work are standardized, it will prove advantageous to examine how texture operates similarly or differently according to smaller and more demographically diverse genres subsumed under the umbrella of popular music, and to construct a typology of cues based on their locations within formal sections and association with climax. Building on the current work, this exploration may reveal new textural cues that function in versatile and equally stimulating ways.

Emily Schwitzgebel
Northwestern University
EmilySchwitzgebel2025@u.northwestern.edu

Works Cited

Adams, Kyle. 2019. "Musical Texture and Formal Instability in Post-Millennial Popular Music: Two Case Studies." *Intégral* 33: 33–46.

American Psychological Association. n.d. "APA Dictionary of Psychology." https://dictionary.apa.org/. Accessed August 27, 2024.

Attas, Robin. 2015. "Form as Process: The Buildup Introduction in Popular Music." *Music Theory Spectrum* 37 (2): 275–96. https://doi.org/10.1093/mts/mtv020.

Barna, Alyssa. 2020. *The Dance Chorus in Recent Top-40 Music*. *SMT-V* 6 (4). https://doi.org/10.30535/smtv.6.4.

Berlyne, D. E. 1970. "Novelty, Complexity, and Hedonic Value." *Perception & Psychophysics* 8 (5): 279–86. https://doi.org/10.3758/BF03212593.

Biamonte, Nicole. 2014. "Formal Functions of Metric Dissonance in Rock Music." *Music Theory Online* 20 (2). https://doi.org/10.30535/mto.20.2.1.

Blake, Andrew. 1997. "Making Noise: Notes from the 1980s." *Popular Music and Society* 21 (3): 19–33. https://doi.org/10.1080/03007769708591677.

Blake, David K. 2012. “Timbre as Differentiation in Indie Music.” *Music Theory Online* 18 (2). https://doi.org/10.30535/mto.18.2.1.

Brøvig-Hanssen, Ragnhild, and Anne Danielsen. 2013. “The Naturalized and the Surreal: Changes in the Perception of Popular Music Sound.” *Organized Sound* 18 (1): 71–80. https://doi.org/10.1017/S1355771812000258.

————————. 2016. *Digital Signatures: The Impact of Digitization on Popular Music Sound*. The MIT Press. https://doi.org/10.7551/mitpress/10192.001.0001.

Brøvig-Hanssen, Ragnhild, Bjørnar Ersland Sandvik, and Jon Marius Aareskjold-Drecker. 2020. “Dynamic Range Processing’s Influence on Perceived Timing in Electronic Dance Music.” *Music Theory Online* 26 (2). https://doi.org/10.30535/mto.26.2.3.

Brøvig-Hanssen, Ragnhild, Bjørnar Sandvik, Jon Marius Aareskjold-Drecker, and Anne Danielsen. 2022. “A Grid in Flux: Sound and Timing in Electronic Dance Music.” *Music Theory Spectrum* 44 (1): 1–16. https://doi.org/10.1093/mts/mtab013.

Burgoyne, John Ashley. 2012. “Stochastic Processes & Database-Driven Musicology.” PhD diss., McGill University. https://www.proquest.com/openview/dae6d26ba2112d9c05adcf9b0573a795/.

Butler, Mark J. 2006. *Unlocking the Groove: Rhythm, Meter, and Musical Design in Electronic Dance Music*. Indiana University Press.

Câmara, Guilherme Schmidt, and Anne Danielsen. 2019. “Groove.” In *The Oxford Handbook of Critical Concepts in Music Theory*, ed. Alexander Rehding and Steven Rings, 271–294. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780190454746.013.17.

Chmiel, Anthony, and Emery Schubert. 2017. “Back to the Inverted-U for Music Preference: A Review of the Literature.” *Psychology of Music* 45 (6): 886–909. https://doi.org/10.1177/0305735617697507.

Corey, Jason. 2016. *Audio Production and Critical Listening: Technical Ear Training*. Taylor & Francis. https://doi.org/10.4324/9781315727813.

Covach, John. 2005. “Form in Rock Music: A Primer.” In *Engaging Music: Essays in Music Analysis*, edited by Deborah Stein, 65–76. Oxford University Press. https://hcommons.org/deposits/item/hc:27437/.

de Clercq, Trevor Owen. 2012. “Sections and Successions in Successful Songs: A Prototype Approach to Form in Rock Music.” PhD diss., University of Rochester, Eastman School of Music. https://search.proquest.com/openview/5062d01d16a81a4526abcf589f4a9fd4/.

————————. 2017. “Embracing Ambiguity in the Analysis of Form in Pop/Rock Music, 1982–1991.” *Music Theory Online* 23 (3). https://mtosmt.org/issues/mto.17.23.3/mto.17.23.3.de_clercq.html.

Deliège, Irène. 1996. “Cue Abstraction as a Component of Categorization Processes in Music Listening.” *Psychology of Music* 24 (2): 131–56. https://doi.org/10.1177/0305735696242007.

————————. 2001. “Prototype Effects in Music Listening: An Empirical Approach to the Notion of Imprint.” *Music Perception* 18 (3): 371–407. https://doi.org/10.1525/mp.2001.18.3.371.

Devine, Kyle. 2013. “Imperfect Sound Forever: Loudness Wars, Listening Formations and the History of Sound Reproduction.” *Popular Music* 32 (2): 159–76. https://doi.org/10.1017/S0261143013000032.

Doll, Christopher. 2011. “Rockin’ Out: Expressive Modulation in Verse-Chorus Form.” *Music Theory Online* 17 (3). https://mtosmt.org/issues/mto.11.17.3/mto.11.17.3.doll.html.

Doll, Christopher. 2017. *Hearing Harmony: Toward a Tonal Theory for the Rock Era*. University of Michigan Press. https://doi.org/10.3998/mpub.3079295.

Ensign, Jeffrey S. 2015. “Form in Popular Song, 1990–2009.” PhD diss., University of North Texas. https://search.proquest.com/openview/872b292a621150d48788c4730a41024e/.

Gjerdingen, Robert O., and David Perrott. 2008. “Scanning the Dial: The Rapid Recognition of Music Genres.” *Journal of New Music Research* 37 (2): 93–100. https://doi.org/10.1080/09298210802479268.

Goodchild, Meghan, and Stephen McAdams. 2018. “Perceptual Processes in Orchestration.” In *The Oxford Handbook of Timbre*, ed. Emily I. Dolan and Alexander Rehding, 496–524. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780190637224.013.10.

Granot, Roni Y., and Nori Jacoby. 2011. “Musically Puzzling I: Sensitivity to Overall Structure in the Sonata Form?” *Musicae Scientiae* 15 (3): 365–86. https://doi.org/10.1177/1029864911409508.

Huron, David Brian. 2006. *Sweet Anticipation: Music and the Psychology of Expectation*. MIT Press. https://doi.org/10.7551/mitpress/6575.001.0001.

Iler, Devin. 2011. “Formal Devices of Trance and House Music: Breakdowns, Buildups and Anthems.” MM thesis, University of North Texas. https://search.proquest.com/openview/5bfa82f69f47d807eb221ccab472345f/.

Krumhansl, Carol L. 2010. “Plink: ‘Thin Slices’ of Music.” *Music Perception* 27 (5): 337–54. https://doi.org/10.1525/mp.2010.27.5.337.

Lamont, Alexandra, and Nicola Dibben. 2001. “Motivic Structure and the Perception of Similarity.” *Music Perception* 18 (3): 245–74. https://doi.org/10.1525/mp.2001.18.3.245.

Lavengood, Megan L. 2020. “The Cultural Significance of Timbre Analysis: A Case Study in 1980s Pop Music, Texture, and Narrative.” *Music Theory Online* 26 (3). https://doi.org/10.30535/mto.26.3.3.

Levy, Janet M. 1982. “Texture as a Sign in Classic and Early Romantic Music.” *Journal of the American Musicological Society* 35 (3): 482–531. https://doi.org/10.2307/830985.

London, Justin. 2002. “Cognitive Constraints on Metric Systems: Some Observations and Hypotheses.” *Music Perception* 19 (4): 529–50. https://doi.org/10.1525/mp.2002.19.4.529.

Mauch, Matthias, Robert M. MacCallum, Mark Levy, and Armand M. Leroi. 2015. “The Evolution of Popular Music: USA 1960–2010.” *Royal Society Open Science* 2: 150081. https://doi.org/10.1098/rsos.150081.

Meyer, Leonard B. 1956. *Emotion and Meaning in Music*. University of Chicago Press.

Meyer, Leonard B. 1989. *Style and Music: Theory, History, and Ideology*. University of Chicago Press.

Michon, John A. 1978. “The Making of the Present: A Tutorial Review.” In *Attention and Performance VII: Proceedings of the Seventh International Symposium on Attention and Performance, Senanque, France, August 1–6, 1976*, ed. by Jean Requin, 89–111. Taylor & Francis. https://doi.org/10.4324/9781003310228-7.

Molanphy, Chris. 2013. “How the Hot 100 Became America’s Hit Barometer.” *NPR Music*, August 1, 2013. The Record. https://www.npr.org/sections/therecord/2013/08/16/207879695/how-the-hot-100-became-americas-hit-barometer.

Moore, Allan F. 2012. *Song Means: Analyzing and Interpreting Recorded Popular Song*. Ashgate.

Moorefield, Virgil. 2010. *The Producer as Composer: Shaping the Sounds of Popular Music*. The MIT Press.

Nobile, Drew. 2020. *Form as Harmony in Rock Music*. Oxford University Press. https://doi.org/10.1093/oso/9780190948351.001.0001.

Nobile, Drew. 2022. “Teleology in Verse–Prechorus–Chorus Form, 1965–2020.” *Music Theory Online* 28 (3). https://doi.org/10.30535/mto.28.3.8.

Osborn, Brad. 2013. “Subverting the Verse–Chorus Paradigm: Terminally Climactic Forms in Recent Rock Music.” *Music Theory Spectrum* 35 (1): 23–47. https://doi.org/10.1525/mts.2013.35.1.23.

Osborn, Brad. 2023. “Formal Functions and Rotations in Top-40 EDM.” *Intégral* 36: 35–54.

Pareles, Jon. 2017. “‘Shape of You’ Was 2017’s Biggest Track. Here’s How Ed Sheeran Made It.” *The New York Times*, December 20, 2017. Arts. https://www.nytimes.com/interactive/2017/12/20/arts/music/ed-sheeran-shape-of-you.html.

Peres, Asaf. 2016. “The Sonic Dimension as Dramatic Driver in 21st-Century Pop Music.” PhD diss., University of Michigan. http://deepblue.lib.umich.edu/handle/2027.42/133191.

Rings, Steven. 2013. “A Foreign Sound to Your Ear: Bob Dylan Performs ‘It’s Alright, Ma (I’m Only Bleeding),’ 1964–2009.” *Music Theory Online* 19 (4). https://doi.org/10.30535/mto.19.4.3.

Rolling Stone, and Charlie Puth. 2022. “Charlie Puth Gets Personal on “Charlie Be Quiet!” | The Breakdown.” YouTube video, 14:49. https://www.youtube.com/watch?v=_jF-P2Du_1E.

Schellenberg, E. Glenn, and Christian von Scheve. 2012. “Emotional Cues in American Popular Music: Five Decades of the Top 40.” *Psychology of Aesthetics, Creativity, and the Arts* 6 (3): 196–203. https://doi.org/10.1037/a0028024.

Shea, Nicholas, Lindsey Reymore, Christopher Wm. White, Ben Duinker, Leigh VanHandel, Matthew Zeller, and Nicole Biamonte. 2024. “Diversity in Music Corpus Studies.” *Music Theory Online* 30 (1). https://doi.org/10.30535/mto.30.1.8.

Sloan, Nate, and Charlie Harding. 2020. *Switched On Pop: How Popular Music Works, and Why It Matters*. Oxford University Press. https://doi.org/10.1093/oso/9780190056650.001.0001.

Smith, Jeremy Walter. 2019. “The Salience, Shapes, and Functions of Continuous Processes in Contemporary Electronic Dance Music.” PhD diss., University of Minnesota.

Summach, Jay. 2011. “The Structure, Function, and Genesis of the Prechorus.” *Music Theory Online* 17 (3). https://doi.org/10.30535/mto.17.3.2.

Temperley, David. 2011. “The Cadential IV in Rock.” *Music Theory Online* 17 (1). https://doi.org/10.30535/mto.17.1.8.

Temperley, David. 2018. *The Musical Language of Rock*. Oxford University Press. https://doi.org/10.1093/oso/9780190653774.001.0001.

“The Hot 100.” 2013. *Billboard* (blog). January 2, 2013. https://www.billboard.com/charts/hot-100/.

The New York Times, and Ed Sheeran. 2017. “Ed Sheeran’s ‘Shape of You’: Making 2017’s Biggest Track | Diary of a Song.” YouTube video, 8:45. https://www.youtube.com/watch?v=ZpMNJbt3QDE.

Vickers, Earl. 2010. “The Loudness War: Background, Speculation, and Recommendations.” In *Audio Engineering Society Convention* 129 (8175). Audio Engineering Society. https://www.aes.org/e-lib/browse.cfm?elib=15598.

White, Christopher Wm. 2020. “Some Elements of Form in American Popular Music.” Presented at the Society for Music Theory (virtual), November 7–8 and 14–15.

White, Christopher. 2021. “Deployments of Change and Novelty in a Corpus of Popular Music.” Presented at the Future Directions of Music Cognition conference (online). https://osf.io/mpbt5/.

Ziv, Naomi, and Zohar Eitan. 2007. “Themes as Prototypes: Similarity Judgments and Categorization Tasks in Musical Contexts.” *Musicae Scientiae* 11 (1): 99–133. https://doi.org/10.1177/102986490701100105l.

DISCOGRAPHY

Bieber, Justin. 2021. “Justin Bieber - Anyone (Lyric Video).” YouTube video, 3:11, January 5, 2021. https://www.youtube.com/watch?v=4cLa1c7Zzg8.

Glass Animals. 2020. “Glass Animals - Heat Waves (Official Video).” YouTube video, 3:55, June 29, 2020. https://www.youtube.com/watch?v=mRD0-GxqHVo.

Halsey. 2022. “Halsey - So Good (Visualizer).” YouTube video, 2:56, June 9, 2022. https://www.youtube.com/watch?v=ObUvyMtiP34.

Sheeran, Ed. 2021. “Ed Sheeran - Bad Habits [Official Lyric Video].” YouTube video, 3:51, June 28, 2021. https://www.youtube.com/watch?v=HeOpRzcqKrE.

Footnotes

* I would like to thank Daniel Shanahan, Richard Ashley, and the anonymous reviewers for their invaluable feedback on previous drafts of this article. I’d also like to thank Lori Burns for her encouragement and mentorship while this work was at an early stage.
Return to text

1. Megan Lavengood’s (2020) novelty layer can also be included, adding a fifth layer by incorporating timbral considerations. For Lavengood, this layer “functions in opposition to the melodic layer, it comprises instruments whose timbral characteristics are more resistant to blending with the rest of the ensemble, and it is the most typical place to find ‘world instruments’ in 1980s popular music” ([0.3]). That is, melodic sounds that seem to cut through the blend of the curated sound stage to stand out in the texture appear in this layer.
Return to text

2. Production should account for modulations to the above elements, focusing specifically on effects that can be perceived by listeners and therefore alter their experience of the music (Brøvig-Hanssen and Danielsen 2013; 2016, 13). The reason I am calling attention to this aspect of pop music is to give agency to the producer as an additional facilitator of the pop music sound world and to highlight how production informs each of the five textural layers (2010, xvii). Unquestionably, large-scale sonic changes created through these techniques impact the textural landscape. These effects are often intentionally used to modulate a listener’s sonic perception: a listener might describe a section of music containing a low-pass filter using texture words like “thin” or “soft,” or their metric perception might be altered through side chain compression that disrupts the quantization, making the beat sound “ahead” or “behind” (Brøvig-Hanssen, Sandvik, and Aareskjold-Drecker 2020, [2.1]; Brøvig-Hanssen, Sandvik, Aareskjold-Drecker, and Danielsen 2022; Corey 2016, 125–27). Production acts as a textural layer modulator, providing uniqueness and expression to pre-existing layers through the incorporation of one or more extra elements.
Return to text

3. Separate from both short- and long-term memory, the “psychological present,” as defined byJohn Michon (1978), is “a time interval in which sensory information, internal processing, and concurrent behavior appear to be integrated within the same span of attention” (89), subject to revision under higher order cognition.
Return to text

4. See Huron (2006, 269–304), Meyer (1956, 70–74), Nobile (2022), and Peres (2016, 74). Moore agrees: “It appears that all interpretation works partly on the basis of comparison, between what we might expect to happen within a track…and what we find actually does happen during its course” (2012, 168).
Return to text

5. *Billboard*’s top chart rankings are compiled according to surveys, radio airplay, and streaming services, making up the most popular music in America for any given week (see Molanphy 2013 for more information about why the *Billboard* Hot 100 is still a good barometer of America’s top hits). Considering the wealth of listening information that can be gleaned from these practices, I

find this music to be representative of the top hits in America, and therefore an appropriate corpus for which to examine the prevalence of textural cues. At the same time, it should be acknowledged that biases against non-white and non-male popular music artists remain prevalent, sometimes persisting in large music corpora. For more on this topic, see Shea et al. (2024).
Return to text

6. Here, I encoded according to the cues identified in the previous section, as these seemed to encompass a wide range of cues used in popular music over the last 60–70 years or so and are consistent with observations by other scholars (e.g., Attas 2015; Butler 2006; Osborn 2013).
Return to text

7. Note that Spotify regularizes the volume levels of their tracks. A more detailed description of Spotify's audio features can be found on their Spotify for Developers page titled "Get Tracks' Audio Features": https://developer.spotify.com/documentation/web-api/reference/get-audio-features. See also "What do the audio features mean?": https://help.spotontrack.com/article/what-do-the-audio-features-mean
Return to text

8. My goal was to determine whether this phenomenon exists at all rather than to make more specific claims about the typology of cues over time or their situated meanings in each of the two subsets, though I propose a few potential reasons for the rise in textural significance and believe that it is this textural emphasis that prompts the increased prominence of cues. Given the size of Burgoyne's McGill *Billboard* corpus and the Millennial corpus that results from his methodologies, a more rigorous study might sample more than 100 songs, carefully examining the similarities and differences in cues between and within songs in the corpus.
Return to text

9. The songs chosen for analysis are not a part of the Extended Corpus in any capacity and are uniquely found.
Return to text

10. As de Clercq explains, "The analysis of form in pop/rock music traditionally involves partitioning a song into various discrete sections, such as verse, chorus, and bridge. Perhaps unsurprisingly, this process is not always straightforward, since two different analysts sometimes provide two different interpretations of the same song" (2017, [1.1]).
Return to text

11. Although graphs and notation are both inevitably loaded with analyst biases, here, the spectrograph shows us something that notation alone cannot. Similarly, Example 19's texture model gives us more information, in yet another way. Bearing this in mind, I find texture models to be an appropriate representation of texture change in post-millennial pop, and use these models instead of traditional staff notation in the following examples.
Return to text

12. The "breakdown" phenomenon has been discussed by others as a moment near the end of a song, often in the bridge section, where the texture "breaks down" in preparation for a full-texture drop (Blake 1997, 23; Butler 2006, 91–92; de Clercq 2012, 235–37; Iler 2011, Ch. 4). The One More Time relies on this textural breakdown moment, but specifically offers a texturally thin chorus followed immediately by a return to the full-texture chorus.
Return to text

13. In this case, both the end of the second measure of the chorus and the end of the fourth measure feature anacrustic clapping sounds, but, as a result of both filtering and timbre, the claps in measure four are far more perceptible to the ear than are those of measure two. Though, as in the verse, we might expect a more gradual textural increase rather than an abrupt one, the Upbeat once again accurately predicts the sudden reintroduction of the beat and bass layers which increase the texture (what Brad Osborn [2013] might call the "sectional climax").
Return to text

Prepared by Andrew Blake, Editorial Assistant