Redefining Ornamentation as Formal Functions in 21st-Century Popular Music

Matthew Kolar

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REDEFINING ORNAMENTATION AS FORMAL FUNCTIONS IN 21ST-CENTURY
POPULAR MUSIC

by

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Bachelor of Music
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Abstract

Ornaments are embellishments and decorations of pre-established music; therefore, their existence relies on comparison to that original basis.¹ Because pop music’s text is the recorded track rather than a written score, the determination of what is the main melody is strongly influenced by its first iteration, and ornaments can be found by comparisons of further iterations to the primary source. The goal of this thesis is to categorize the types of ornaments that exist in this repertory as well as define their overall functions. In this sense, ornamentation is being redefined; ornaments are not just decorations to a melody, but a process used to enhance formal functions. In the top 20 songs from Billboard’s Top Pop Chart from 2011 to 2020, which consists of 197 songs, there are two general categories of ornaments: harmonization and insertion. These trends were uncovered through the tracking and detailing of variations in each song.

Harmonization is the homorhythmic addition of a countermelody to a melody, resulting in layered vocals in harmony. Insertion is either the addition of lyrics or the addition of new pitches to a melody. Examples could be single words added between lines, potential small changes to the melody, or added melismas. There are two general functions of ornamentation: accumulation and accentuation. Accumulation is the continued adding of ornaments to magnify the function of a formal structure. Accentuation is when ornaments

are used to highlight certain lyrics, which is used to help convey the narrative the lyrics are portraying.
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CHAPTER 1: OVERVIEW

Introduction

A song in the pop music genre (as defined by Billboard’s Top Pop Chart, 2011–2020) can have multiple main melodies, and those can be separated based on their place within the overall formal structure. Therefore, ornaments in this repertory can be defined as the differences that occur within the repetitions of the same formal structures, and thus rely on the accurate determination of form. However, form in 21st-century popular music is often ambiguous and still evolving alongside music technology. As new ways of creating music emerge, it is likely that the formal structures of this music will also include innovative ideas. The origin of the verse, chorus, and bridge have already been well-defined. The pre-chorus is a new addition to these categories that emerged in the 1960s. An even more recent development defined by Barna is the dance chorus. Based on this trend, there is potential for more formal units to emerge in the future, and these will directly affect the analysis of melodic ornamentations in this repertory.

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Within an overall verse–chorus unit (anything contained within a rotation beginning with a verse and ending with a chorus), it is potentially difficult to distinguish definitive formal units because of the possibility of different functions based on the supporting timbre or texture. As DeClercq discusses within the 1980s and 1990s pop/rock repertory, embracing and describing the ambiguity, in this case, might be better than attempting to reach a concrete conclusion.

Another way to organize some sense of form in pop music and related repertories is by detailing what Asaf Peres calls the sonic function of a formal unit. Peres determines three general sonic functions: set up, build up, and climax. It is likely that although the specific formal unit might be hard to define, the sonic function of that unit should be readily apparent. For example, although a listener might not know the terms “verse” and “chorus,” they would still most likely be able to identify that a chorus is a climactic moment because sonically there is a motion towards that section of music, and it is an overall higher energy level than the preceding section.

The placement of ornaments into a formal unit will directly affect the sonic function of that unit because any change to the established soundscape will affect the sonic energy level of that section. In other words, if the same ornament is placed within a verse, it will serve a different purpose than if it is placed within a chorus, because the verse and chorus serve different sonic functions. Furthermore, these ornaments can help

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create a distinction in a larger overall form of multiple verse-chorus units by creating some larger overall trajectory. Ornaments, in this sense, can only occur after the first statement of a formal unit, in its second, third, fourth, or further iterations, so therefore there is an inherently additive effect: further repetitions of a formal unit that have added embellishments will create that formal unit plus something more (the something being defined as whatever the function of the ornament is). Their purpose in this repertory is to do more than just add decoration to a melody or create variation; they are redefined as formal functions.

Ornamentation

Ornamentation is a process of embellishment that gained popularity in the Baroque era.\(^7\) Even before this, in the Middle Ages and Renaissance, “ornaments were not specified in the musical text but were added by performers at will within a more or less unwritten set of customs and proprieties.”\(^8\) These improvisations were eventually notated to create guides to the performance of this type of music, and this tradition carried on into the Baroque period. The goal of ornaments as an improvised tradition is to create melodic variation. It was expected that the written music would not be played exactly as notated, especially in situations of repetition such as the da capo aria.\(^9\)

The context of ornaments in this tradition relies on the harmony—melodic embellishments could not be used if they were outside the given context of either the

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\(^8\) Ibid.

\(^9\) Ibid.
basso continuo or implied harmony. There are several treatises that show examples of different ornamentations, but they also provide the specific context in which those variations can be applied. The only categories that could be applied would be embellishment of certain intervals, but the amount of variation that could be thought of is still vast.

In the context of the baroque era, it is unlikely that ornaments could be discerned aurally unless the audience member had prior knowledge of the original written music. The exception to this case would be if a section was repeated, and in that case, it could be possible to compare the repetition to the original, and the differences between the two would potentially show both where ornaments were being applied and their function.

Twenty-first-century pop music (as is defined by the Billboard Pop Airplay chart) does not allow room for performer improvisation because it exists as a recorded tradition and thus every time an audience experiences the song it is always the same (excluding live performances). However, there are still sections of music that repeat within a single song, and there is the potential for differences between those sections. Furthermore, those differences are inherently purposeful because pop songs are produced to maximize audience appeal, so an ornament that detracted from that goal would not be included in the released product. As a result, the differences must operate within a specific context to function appropriately.

If ornaments are broadly defined as purposeful differences between iterations of the same music material and are confined to a specific set of expectations, then the variations within repeating sections of pop music in the 21st century can be classified as

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ornaments. Also, since it is in a recorded tradition, the ornaments are permanent and can be categorized and described accurately, versus the embellishments of the baroque period that only exist in the live performance. The pop genre also exhibits formal characteristics that are shared by every song, so even ornaments between different songs can be compared due to the sharing of typical formal units. Thus, this genre requires the redefining ornaments as pertaining to this specific style of music. In a way, this is a similar process to the development of ornament notation from the baroque period; in this case, however, the goal is not to use written ornaments as a teaching tool for performers, but rather as an analytical tool for theorists to better understand the nuances of this genre.

Methodology

There were two possible options for the analysis of ornaments in the 21st-century context. One option is based on the baroque method of embellishments. Using this method, ornaments could potentially occur in the first performance of a melody, so the material that is presented would need to be stripped down to what would be considered the basic structural melody. This approach is anachronistic; the structural melody that would be determined would fit the theories that the Western classical tradition relies on. The benefits of this anachronistic tradition would be that a more precise approach could be used to categorize ornaments based on the traditional theories; for example, categorization based on harmonic context. The detriments, however, of using an 18th-century lens for 21st-century music are that the specific characteristics of this genre of music would be ignored in favor of connecting to tradition.
The music that comprises the corpus for this study exists in an age of mass communication. It would be inappropriate to assume that there is not influence from the vast amount of music in the world, and it would also be unfit to assume that pop music stems directly from the Western classical tradition. So, while there may be benefits to thinking of ornaments in this manner, it would also make sense that there would be a level of analysis missing because this type of methodology does not consider music of other traditions.

It is more productive to develop a new methodology instead, one that is more suitable in approach to account for the intricacies of this specific genre. Due to the construction of this music through several repeating melodies, one option of the analysis of ornaments is through comparison of those repeating melodies. This allows the theory to be tailored directly to the song itself, without comparison to other music.

Furthermore, as the genre of music being discussed exists primarily and principally as recorded sound, an attempt to represent this music in staff notation is erroneous. Instead, to create images of this music, two other types of representation will be created. One type will be form diagrams that will show the overall structure of a song with length-proportionate subunits. Another type will show the placement of the ornaments within the lyrics. These kinds of visualizations are more wide-reaching in terms of audience, which is extremely important as this genre of music is meant for mass consumption.
CHAPTER 2: CHARACTERISTICS OF POP MUSIC

Form in Pop Music

If ornaments are a result from the differences in variations of the same music, then a song in the pop genre must be broken down by its repeating sections to pursue this type of analysis. The main problem that persists is that the labeling of subunits can be problematic, as form can often be ambiguous. The solution is that the formal labels are secondary to their functions, and the functions of these vague sections are still generally apparent to audiences because the general expectations are well-known. So, while it is possible to differentiate between a verse, pre-chorus, chorus, post-chorus, dance chorus, or bridge, it is more important to classify them based on their functions, of which there is two: build-up and climax.

In a verse-chorus unit (VCU) or bridge-chorus unit (BCU), the verse or bridge leads to the chorus, which is the peak of energy in the song. While there may be multiple subunits that make up the two halves of each VCU or BCU, they only function as extensions of the two broader goals. Figure 2.1. depicts this general expectation of energy levels through the two general halves of a VCU/BCU. While other subunits are not specifically pictured, they will more than likely fit into this general mold and not

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contradict it. It can be reasonably assumed then, that ornaments that are added to a subunit also serve those broader sections, as it would not make sense for an ornament added to a build-up section to detract from that goal. The success of this music is dependent upon audience satisfaction, and the satisfaction is derived from the clear build-up and climax of each VCU/BCU. Therefore, it is unlikely that a change that warps that trajectory would be successful in this specific genre. The ornament can have a more specific secondary purpose as well, but even that serves to support the overall function of that section.

![Figure 2.1. Depiction of the general energy level of a VCU or BCU](image)

Ornaments do not necessarily involve just a melodic line, but in this case, we will consider an ornament within the context of the lyrics. That is, although there may be differences in repeated sections in parts of the music other than the melody the lyrics are set to, those variations will not be considered for this project, but are a potential future topic of study. A main reason for this distinction is that lyrics are a common feature of all music in this genre, while other textures are not. For example, the level of rhythmic involvement from backing instruments and the types of sounds used vary greatly from song to song, whereas it is a reasonable assumption that every song will have lyrics and melody. The only ornaments that will be considered are those involving text. The main
problem that results from this is that in some repeating sections, the lyrics are different, but the music is the same—namely the verse. However, because the melody the different lyrics are set to is still the same for the most part, it is still possible to consider differences between those melodies as ornaments.

As producing technology and the definition of pop music continues to evolve, it is likely that there will also be different types of formal structures that arise. Examples of this include the rise of the pre-chorus in the 1970s and dance chorus in the 2010s. Although it is impossible to predict what new formal structures might emerge, they will still likely fall into the same categories of build-up or climax, and therefore ornaments of those new structures also will. If new formal structures don’t fit into this established mold for the pop genre, then it would potentially be so different from the established style that it could be considered a different genre entirely. The focus of this project will be on categorizing ornaments based on their overall functions, not necessarily contained to the restrictions a formal label provides. Another term for this would be sonic functions, as detailed by Asaf Peres. Peres includes three categories: set-up, build-up, and climax. Peres’s work can be applied to multiple structural levels, which works well when discussing how ornaments affect both their respective VCU/BCU and the overall energy levels of the song. One note to make, however, is that in the set-up of the song,

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ornaments cannot be included because they depend on the repetition of formal subunits, which would not exist in the first VCU. When discussing the set-up of a smaller level of focus, for instance the set-up of a second VCU or a BCU, then ornaments could be included since they are a later repetition.

Expectation

One study by Rolison and Edworthy proved that audiences have a reasonable expectation to the order of formal subunits in pop music.\(^{14}\) However, this expectation is not necessarily linked to satisfaction, as in the same study they found that the “likeliness” of a song does not drastically change when formal subunits are re-ordered.\(^{15}\) So overall, the audience satisfaction likely relies on “in-the-moment” listening rather than any sort of comprehension of a full formal structure. A study by Lalitte and Bigand also confirms this theory. In their experiment, the reordering of small parts in both contemporary classical and popular music resulted in a lower aesthetic rating, although it was not perceived as being “wrong,” by the participants.\(^{16}\) There is further support for these as other studies have shown that listeners are sensitive to structures at a local level, although these experiments are focused on the classical genre.\(^{17}\)

This concatenationist form of listening puts less emphasis on the form and more emphasis on the order of individual events. However, if audiences have a reasonable


\(^{15}\) Ibid., 281.


expectation of the order of subunits in pop music, and their focus is on the aesthetic of the current section, then it is reasonable to believe that audiences also have expectations on what makes a section aesthetically pleasing. One hypothesis is that a song’s overall structure follows the sonic energy pattern that Asaf Peres describes: set-up, build-up, and climax. For example, if a subunit does not build in energy to the next, and the climax has not been reached yet, then an audience would deem that as not aesthetically pleasing, and therefore unsatisfying to listen to. In this case, an event that changes the sonic energy in a way that creates more of a difference in energy between sections (a bigger build-up), such as an ornament, would be an aesthetically pleasing event.

While there is also no data on the expectation of formal subunits in pop music to have slight variations or not, if audiences do have expectations about the order of formal units, then they also likely understand how each subunit functions in terms of their repetition. For instance, they would know the beginning part of the sonic energy pattern, generally a verse, has changing lyrics but similar melodies, and they would know the peak of the sonic energy pattern, generally the chorus, has the same lyrics and the same melody. Therefore, variations, even minor ones, to these melodies would cause an effect on the listener. We could consider ornaments as small surprises then—what David Huron defines as “unexpected events.” There are two reactions to a surprise: the first is rapid, which is biologically meant to trigger defense responses to safeguard against the surprise; the second response is an appraisal, which can overtake the rapid response if the surprise is judged non-critical.

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18 Peres, “The Sonic Dimension."
The connection of surprise to music is complicated; reasonably, an audience member would understand that listening to a recorded track provides zero danger. In this case, one hypothesis is that the rapid response is pre-emptively shut down. As a result, the only response in play is the appraisal response to the event; and this appraisal is potentially dependent on the audience member’s judgment of the surprise as aesthetically pleasing. So, if audiences have expectations of the order of formal units in pop music, and this is potentially due to an expectation of the sonic energy pattern of a VCU (set-up, build-up, peak), and ornaments are small surprises that contribute to creating a more dramatic energy pattern (creating a bigger build-up or a bigger peak), then ornaments should most likely be considered aesthetically pleasing, and thus a satisfying surprise for the audience.

If this thesis is correct, the pop music genre should exhibit an overall trend of an increase in ornaments. While there is not any long-term data, I have analyzed the form of one song on the Billboard Hot 100 each day starting January 1st, 2022.20 My personal comparison of the ornamentation in music released in 2021–22 with music released in 2011–20 (the corpus used in this thesis) supports this trend.

Corpus

The corpus used in this study consists of the top 20 songs of the Billboard Pop Airplay Chart from 2011 to 2020. Due to overlapping entries from the same song being in the top 20 in two separate years, the total number of songs is 197. The reason for this choice is the assumption that pop songs from 2000 to 2010 would likely still share

20 This data can be found in an Instagram account: @popmusicform
characteristics from the previous decade, and thus for a “purer” sampling of the 21st century, the corpus starts at 2011. Any variation in a song was noted and then further categorized so specific trends could be discovered.

In the corpus, 25.4% of entries showed no ornaments, showing that a considerable majority of the songs do include some sort of variation. Ornaments are far more likely to exist in the chorus (65.5%) than in the verse (21.3%). It is interesting to note that only 15.7% had variations in both (see Fig. 2.2.)

![Corpus Breakdown](image)

**Figure 2.2. Breakdown of corpus based on percentages**

Types of ornaments are broken down into two categories: harmonization and inserted vocals. Harmonization refers specifically to homorhythmic countermelodies, either in part or in full. In the chorus, 30.5% of songs exhibited this effect, and in the verse 12.2%. Inserted vocals are a much broader category, defined as any variation that is not homorhythmic. It includes mostly a change in the melodic contour or the addition of
layered lyrics on top of the original that are not homorhythmic. Vocal insertion appeared in 54.8% of choruses and only 8.6% of verses. It is important to note that these statistics do not reflect the exact probability of these occurrences but are rather a tool for showing trends assuming the genre remains similar.

There are two functions of ornamentation: accumulation and accentuation. The process of accumulation is the continued increased presence of ornaments within a section. This requires at least three repetitions; otherwise, the presence of any ornaments would be considered accumulation. The growing number of ornaments amplifies the function of the section. For example, a verse with an ornament will create a bigger build-up and a chorus with an ornament will be a bigger climax. The process of accentuation is bound to the lyrics. Its purpose is to highlight a portion of the melody so that the lyrics of that part of the narrative are more memorable. For example, if a certain section of the verse has an added ornament, then those lyrics will stick out more than others, and the ornament is thus working to shift the focus of the narrative. These two processes are not autonomous, and they work in tandem to make a song a more worthwhile experience for the audience. Examples of these functions will be explained in the case studies that follow.
CHAPTER 3: ORNAMENTATION IN THE CHORUS

CASE STUDY #1: Harmonization in the Chorus: Justin Bieber’s “Love Yourself”

The choruses of Justin Bieber’s “Love Yourself” is an example of both accumulation and accentuation using harmonization. In each repetition, the ornament is added to more and more of the lyrics, resulting in a gradual saturation of the texture. As the texture becomes denser, the energy level of each iteration is increased, thus increasing the peak sonic level. The audience of this repertory does expect the chorus to be the climax of each VCU or BCU, but they do not necessarily expect that the energy level of each climax to be different. Accentuation is a default function of harmonization as it is a requirement for the ornament to be attached to specific lyrics, which highlights that portion of the song’s narrative.

Figure 3.1. compares the four choruses. The sonic energy of the original chorus can be defined as some arbitrary number, “X.” The addition of the ornament in the first repetition can be thought of as an addition to the sonic density, “A,” resulting in an overall sonic energy of “X+A.” In the second repetition, the first ornament “A” is kept, but “B” is also added, resulting in a sonic energy of “X+A+B.” The same process can be used for the third repetition, since the two previous ornaments “A” and “B” are kept, with another addition “C,” resulting in “X+A+B+C.” Or, in summary, there is an accumulation of ornaments from the first repetition to the third, which results in an increase in sonic energy.
<table>
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<tr>
<th>Original (Hyperlinked)</th>
<th>Repetition 1 (Hyperlinked)</th>
<th>Repetition 2 (Hyperlinked)</th>
<th>Repetition 3 (Hyperlinked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause if you like the way you look that much</td>
<td>‘Cause if you like the way you look that much</td>
<td>‘Cause if you like the way you look that much</td>
<td>‘Cause if you like the way you look that much</td>
</tr>
<tr>
<td>Oh baby, you should go and love yourself</td>
<td>Oh baby, you should go and love yourself</td>
<td>Oh baby, you should go and love yourself</td>
<td><strong>Oh baby, you should go and love yourself</strong></td>
</tr>
<tr>
<td>And if you think that I’m still holdin’ on to somethin’</td>
<td>And if you think that I’m still holdin’ on to somethin’</td>
<td>And if you think that I’m still holdin’ on to somethin’</td>
<td>And if you think that I’m still holdin’ on to somethin’</td>
</tr>
<tr>
<td>You should go and love yourself</td>
<td>You should <strong>go and love yourself</strong></td>
<td>You should <strong>go and love yourself</strong></td>
<td><strong>You should go and love yourself</strong></td>
</tr>
</tbody>
</table>

Figure 3.1. Harmonization placement (in bold) within the four choruses of Justin Bieber’s “Love Yourself” and their resulting theoretical sonic energy levels.
Another consideration is the application of this rising energy level to the overall form. Figure 3.2 shows the placements of the choruses into the overall structure of the song. What is important to note is the length of time between each iteration. Between the original chorus and the first repetition, there are three subunits. Between the first and second repetitions, there are only two, and between the second and third there is zero. The expectation is set up in the first two VCUs that there are two pre-choruses that occur before the chorus. While in a BCU, expectations may be different in terms of structure, the audience would still expect some sort of preparation before the chorus is repeated, but in this case, it transitions directly from a verse into the second repetition of the chorus. In summary, repetition two of the chorus was premature based on audience expectations, which results in a satisfactory surprise. This satisfaction is augmented with the increase in the sonic energy of the section, and then is even further increased through the immediate repetition of an even denser-textured chorus. There is no previous pattern that suggests the chorus would be immediately repeated, so the choice to do so is again to purposely surprise the audience and increase their satisfaction. And this is, again, combined with the addition of more ornaments to increase the sonic energy of the section. The ramification of the combined accumulation of harmonization with the form of the song is an exponential increase in audience satisfaction: the sonic energy continually increases while there is increased satisfaction from continued surprises.
Figure 3.2. The overall form to Justin Bieber’s “Love Yourself”

The lyrics being accentuated by the ornaments also create a new emphasis on the narrative of the song. In the first repetition, the line with harmonization added is “go and love yourself,” with “yourself” being the emphasized pronoun. This same pronoun is further accented in the second repetition twice through the addition of the second ornament. The harmonization in the third repetition is also all added to any lyric that includes “you,” and “yourself.” The consequence is that the emphasis is placed on the other person in the narrative, and off the narrator whose pronoun is left unmodified by accents, “I.” Because harmonization by default includes accentuation, it could be considered secondary to the accumulation that occurs, however it is still worth noting the affect it has on the narrative. While the lyrics of each chorus do not change, the focus of each do slightly shift, which creates a more interesting narrative for the audience to experience.

Another consideration is the sequence of ornament placements. The first ornament added is at the very end of the chorus; at this point, the audience is not
expecting a modification from the original iteration, and the addition at the end creates intrigue. In the second repetition, the ornament added occurs before the original addition, which is again a surprise from the expected. This is continued through the third iteration, where the placement of the new ornament is right at the very start. So, the audience expectation is also continually subverted based on their placement within the chorus, which parallels the placement of the choruses in the overall form.

The accumulation of ornaments, the subverting of formal expectations, the accentuation of the narrative, and the placement of the ornaments within the choruses all work in tandem to create a continual rise in audience satisfaction through the entire song.

CASE STUDY #2: Insertion in the Chorus: Bruno Mars’ “That’s What I Like”

Bruno Mars’ “That’s What I Like” is an example of using vocal insertion for accentuation in the chorus. There are three iterations of the chorus, but the ornaments only occur in the last; thus, the lyrics that are included as part of the ornamentation are highlighted over the established repeating text. Although the addition of vocal insertion is not limited to just accentuation as the resulting function, accumulation requires at least two subsequent iterations to have ornaments, and this song does not exhibit that trait.

Figure 3.3. shows the established lyrics of the first two choruses versus the lyrics of the added ornament in chorus three. In this example, the words that are added in the ornaments are derived from the original lyrics. The narrative is simplified to include only specific elements. For example, the words, “strawberry,” “lucky for you,” and “silk sheets and diamonds” are all dropped in favor of highlighting the words, “champagne on ice,” “That’s what I like, babe,” and “All white” respectively. Furthermore, the lyrics of
the ornaments are drawn out, at a higher pitch level, and include added melismas when compared to the original text. The vocal insertion is thus meant to be the new primary line, with the original chorus melody becoming background support.\textsuperscript{21}

<table>
<thead>
<tr>
<th>Established Lyrics of Chorus 1 and Chorus 2 (Hyperlinked)</th>
<th>Added Vocal Insertion Ornaments of Chorus 3 (Hyperlinked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold jewelry shining so bright</td>
<td>Gold jewelry shining so bright</td>
</tr>
<tr>
<td>Strawberry champagne on ice</td>
<td>Champagne on ice</td>
</tr>
<tr>
<td>Lucky for you, that’s what I like, that’s what I like</td>
<td>That’s what I like, babe,</td>
</tr>
<tr>
<td>Lucky for you, that’s what I like, that’s what I like</td>
<td>Oh, oh</td>
</tr>
<tr>
<td>Sex by the fire at night</td>
<td>Sex by the fire at night</td>
</tr>
<tr>
<td>Silk sheets and diamonds all white</td>
<td>All white</td>
</tr>
<tr>
<td>Lucky for you, that’s what I like, that’s what I like</td>
<td>That’s what I like, babe</td>
</tr>
<tr>
<td>Lucky for you, that’s what I like, that’s what I like</td>
<td>Ooh, Ooh, Ooh</td>
</tr>
</tbody>
</table>

Figure 3.3. The established lyrics of choruses 1 and 2 versus the lyrics of the added ornament in chorus 3 of Bruno Mars’ “That’s What I Like”

\textsuperscript{21} There are also examples of harmonization in the third chorus, however, this case study is meant to isolate the vocal insertions. In this example, both ornaments work together to create the resulting function of accentuation.
Another potential reason for the accentuation is to give an audience something specific to remember at the end of the song. Figure 3.4 shows the overall form, and chorus three, which has the added ornament, is the last part. This specific subunit would be the last chance to make an impression on the audience. The ornament plays a dual role in leaving this impression: it increases the sonic energy, and it gives the audience’s ear something new to latch on to. By virtue of an added ornament, the sonic texture becomes denser, which results in a higher sonic energy. However, this new energy is not expected—the previous repetition had no change from the first, so an informed audience would not predict a change to the next. The change itself is also incredibly jarring because it is an entirely new melody in a new vocal range with a new melismatic text setting. As a result, this new change, completely unexpected and surprising, is likely satisfying for the listener. The simplification of the lyrics, along with the new vocal range, also reduces the amount of work it would take the audience to remember the song name. In the original choruses, “that’s what I like,” the title of the song, are secondary to the lyrics “lucky for you” based on their linear placement. In the ornament, the, “lucky for you” is erased, leaving room for “That’s what I like” to be extended and therefore more likely to be remembered by the audience.
Figure 3.4. The overall form of Bruno Mars’ “That’s What I Like”
CHAPTER 4: ORNAMETATION IN THE VERSE

CASE STUDY #3: Harmonization in the Verse: Kelly Clarkson’s “Stronger (What Doesn’t Kill You)"

Kelly Clarkson’s “Stronger (What Doesn’t Kill You)” is an example of accentuation from harmonization in the verse. By default, harmonization places emphasis on certain lyrics; in the specific case of this song, the accented lyrics support the narrative. With this analysis restricted just to the verse, the argument cannot be made that accumulation is also occurring because there are only two iterations of the verse in this song, and accumulation requires at least three instances where more ornamentation occurs in each repetition. Also, verses, by their nature, present a difficulty when determining ornaments. In a chorus, the lyrics are almost always repeated, which makes comparison of the repetitions to the original section simple. While each verse in a song has different lyrics, a comparison can still be made between them because the pitch content of the melody is still, generally, similar.

The lyrics of the first and second verses of “Stronger (What Doesn’t Kill You)” can be seen in Figure 4.1. The entirety of the second verse has an added harmonization ornament; however, there are distinct layers that suggest that some text lines are more important than others. In the first half, the first and third lines are a thinner texture than the second and fourth, and in the second half, the thicker texture is prevalent. Overall, the lyrics of the second verse are more important than the first through the accentuation
because of the ornament. The use of just a single voice in the first verse reflects the
feelings of the lyrics—the narrator of the song is newly alone and is attempting to prove
that she is not devastated by the loss of their romantic interest. In the second verse, the
addition of harmonization, or in more general terms, the addition of more voices to the
main melody, creates a sense of community and security. While in the first verse, the
singer is attempting to prove she was not devastated, in the second she is proving she’s
not devastated through the denser (stronger) texture provided by the added voice.
Metaphorically, the fact that all these voices belong to the same singer reflects her
growing strength.
Figure 4.1. The lyrics of verse 1 and verse 2 of Kelly Clarkson’s “Stronger (What Doesn’t Kill You)”

<table>
<thead>
<tr>
<th>Verse 1 (Hyperlinked)</th>
<th>Verse 2 (Hyperlinked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>You know the bed feels warmer</td>
<td>You heard that I was starting over with</td>
</tr>
<tr>
<td>Sleepin’ here alone (Sleepin’ here alone)</td>
<td>Someone new</td>
</tr>
<tr>
<td>You know I dream in color</td>
<td>They told you I was moving on and</td>
</tr>
<tr>
<td>And do the things I want (Do the things I want)</td>
<td>Over you</td>
</tr>
<tr>
<td>You think you got the best of me</td>
<td>You didn’t think that I’d come back</td>
</tr>
<tr>
<td>Think you’ve had the last laugh</td>
<td>I’d come back swinging</td>
</tr>
<tr>
<td>Best you think that everything good is gone</td>
<td>You tried to break me, but you see</td>
</tr>
<tr>
<td>Think you left me broken down</td>
<td></td>
</tr>
<tr>
<td>Think that I’ll come running back</td>
<td></td>
</tr>
<tr>
<td>Baby, you don’t know me, ‘cause you’re dead wrong</td>
<td></td>
</tr>
</tbody>
</table>

Figure 4.2. shows the form of the full song. The pre-chorus texture part at the end of verse 2 is half as long of that at the end of verse 1. The potential minimization of this section through a shorter duration in verse 2 is counteracted but the addition of the harmonization. Therefore, it can be argued that although it is present for less time, it includes more voices, which creates a higher sonic energy through a denser sonic texture. This, in turn, creates a bigger set-up for the arrival of the sonic climax, the
chorus. In terms of expectation, not only is the audience surprised by the addition of new voices to thicken the texture, but they are also surprised by a sooner-than-expected chorus based on the set-up they were given in the first VCU.

Figure 4.2. The formal structure of Kelly Clarkson’s “Stronger (What Doesn’t Kill You)”

The argument for accumulation occurring within the second verse is plausible. In the verse texture of the second verse, although harmonization occurs the entire time, only half of it experiences the denser texture. In the pre-chorus texture, the denser texture is used the entire time. So, on a micro-level, there is an example of accumulation, although the argument cannot be made at the macro-level since the verse does not have a second repetition. The primary function is still accentuation to support the narrative—the emphasis on verse 2 compared to verse 1 allows for an interpretation of character growth.
CASE STUDY #4: Vocal Insertion in Taylor Swift’s “Shake It Off”

Taylor Swift’s “Shake It Off” has an example of accentuation via vocal insertion in the verses. The ornaments in this case are just repetitions of the main lyrics already given, so they exist to reinforce those lyrics and make them more memorable to the audience. Furthermore, the ornament creates a denser overall texture, which increases the sonic energy and creates a bigger build-up into the pre-chorus and chorus, which is the peak sonic energy of the VCU.

Figure 4.3. shows the comparison of lyrics in the two verses, with the ornaments in italics. Although the text between the two verses is different, the ornament can still be isolated. In the first verse, the fifth and sixth lines have no repetition after them, while in the second verse there is a clear repetition. The added repetition is the vocal insertion, and it serves to accentuate the repeated lyrics. There are two potential reasons why this specific text was chosen. Narratively, in the first verse, the two lyrics of the fifth and sixth line have a negative connotation. “Too many dates” and “can’t make them stay” both support that the singer is doing something wrong or bad. However, the lyrics “dancing as I go” and “moves up as I go” both have a more positive connotation; the singer is spontaneously enjoying life and not focused on how people interpret them. So, the ornament emphasizes the positive emotions over the negative ones. Furthermore, these ornaments occur in the second half of the verse, which leaves the first half of the second verse to trick the audience into not expecting a change in the sonic texture. An informed audience will be aware that the energy will increase into the pre-chorus, but the addition of the ornaments creates a sort of mid-step on the way to the next formal structure. This halfway increase creates audience satisfaction through an unanticipated
jump in energy. And as sonic energy does not decrease until it has reached its peak, the perception is then that the pre-chorus and chorus of the second VCU are at higher energy levels than the previous iterations. This is further supplemented by the addition of a harmonization ornament on the last line of the verse as well.

<table>
<thead>
<tr>
<th>Verse 1 (Hyperlinked)</th>
<th>Verse 2 (Hyperlinked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I stay out too late</td>
<td>I never miss a beat</td>
</tr>
<tr>
<td>Got nothing in my brain</td>
<td>I’m lightning on my feet</td>
</tr>
<tr>
<td>That’s what people say, mm, mm</td>
<td>And that’s what they don’t see, mm, mm</td>
</tr>
<tr>
<td>That’s what people say, mm, mm</td>
<td>That’s what they don’t see, mm, mm</td>
</tr>
<tr>
<td>I go on too many dates</td>
<td>I’m dancing on my own (<em>dancing on my own</em>)</td>
</tr>
<tr>
<td>But I can’t make ‘em stay</td>
<td>I make the moves up as I go (<em>moves up as I go</em>)</td>
</tr>
<tr>
<td>At least that’s what people say, mm, mm</td>
<td>And that’s what they don’t know, mm, mm</td>
</tr>
<tr>
<td>That’s what people say, mm, mm</td>
<td>That’s what they don’t know, mm, mm</td>
</tr>
</tbody>
</table>

Figure 4.3. Comparison of the verses in Taylor Swift's "Shake It Off" with the vocal insertion shown in italics.

The change between the two verses is subtle, however the differences in sonic texture create different trajectories in energy for the rest of their respective VCUs. In the scheme of the overall song, which is three minutes and forty seconds long, this is important in creating an overall increase in energy on a macro-scale. If the ornament did
not exist, the first and second VCUs would be at a more similar sonic energy level, which would create a sense of inertness in the audience. The ornaments create a bigger difference in energy, which keeps the audience continually satisfied through a constant overall increase in sonic energy (Fig. 4.4.).

Figure 4.4. Hypothetical sonic energy trend of the first and second VCUs of Taylor Swift’s “Shake It Off”
CHAPTER 5: FULL SONG ANALYSIS

CASE STUDY #5: Ornamentation through a full song in Ariana Grande’s “Thank You, Next”

Ariana Grande’s “Thank You, Next” is an example of how both harmonization and vocal insertion can be used in tandem to create a more satisfying song through the resulting accumulation and accentuation. Each VCU is modified using ornaments to create a different experience for the audience, one that results in an overall increase of sonic energy and density each time. This creates a listening experience in which the audience is perhaps presented with an oversaturation of listening options; melodic structures are repeated, but also with so many different ornaments layered on top that even with repeated listening, audiences could still have new experiences.

Comparison of the verses shows the fewest number of changes relative to the comparison of changes between iterations of other sections of the form. Figure 5.1 shows the lyrics of the verses and the added ornaments in bold. The same ornament is added in both the second and third verses; this is accumulation in its simplest form. The ornament that was added in the first repetition is retained for the second. Because of the repeated lyrics, this is also by default an example of accentuation. However, in this case, the placement of the ornament is most likely not due to the focus on the narrative, but rather as a way of creating a larger build of energy into the pre-choruses. The vocal insertion is placed in the first last line of both verses, which creates denser sonic texture, which
increases the sonic energy. A verse builds in sonic energy into the pre-chorus, which in turn builds into the chorus. The increase of energy at the very end of the pre-chorus creates a larger change in energy between the verse and pre-chorus and is interpreted by audiences as a bigger build-up. This sets the pattern for an even larger build-up into the peak sonic energy, the chorus; this ornament builds anticipation for the next sections.

<table>
<thead>
<tr>
<th>Verse 1 (Hyperlinked)</th>
<th>Verse 2 (Hyperlinked)</th>
<th>Verse 3 (Hyperlinked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thought I’d end up with Sean</td>
<td>Spend more time with my friends</td>
<td>One day I’ll walk down the aisle</td>
</tr>
<tr>
<td>But he wasn’t a match</td>
<td>I ain’t worried ‘bout nothin’</td>
<td>Holding hands with my mama</td>
</tr>
<tr>
<td>Wrote some songs about Ricky</td>
<td>Plus, I met someone else</td>
<td>I’ll be thanking my dad</td>
</tr>
<tr>
<td>Now I listen and laugh</td>
<td>We havin’ better discussions</td>
<td>‘Cause she grew from the drama</td>
</tr>
<tr>
<td>Even almost got married</td>
<td>I know they say I move on too fast</td>
<td>Only wanna do it once, real bad</td>
</tr>
<tr>
<td>And for Pete, I’m so thankful</td>
<td>But this one gon’ last</td>
<td>Gon’ make that shit last</td>
</tr>
<tr>
<td>Wish I could say, “Thank you” to Malcolm</td>
<td>‘Cause her name is Ari</td>
<td>God forbid something happens</td>
</tr>
<tr>
<td>‘Cause he was an angel</td>
<td>And I’m so good with that (So good with that)</td>
<td>Least this song is a smash (Song is a smash)</td>
</tr>
</tbody>
</table>

Figure 5.1. The verses of Ariana Grande’s “Thank You, Next” compared

There is a much more accumulation in the pre-choruses. Figure 5.2. shows the comparison between the three iterations—insertions are in bold, harmonizations are in
red, and in the third chorus there is also harmonization added to vocal insertions—which are both red and bold. The accentuation that results from the ornamentation changes the narrative in the second and third pre-choruses. The first and second line are the same between both repetitions; the words “love,” and “patience,” are added; these are highlighted because these are the things the narrator learned from their past relationships. In the third line, “pain” is added in the second pre-chorus, and then that insertion has added harmonization in the third pre-chorus. This is the third skill that the narrator learned, and the change in ornaments between the two repetitions puts a greater emphasis on it, making it more important than the other two skills. This process is also repeated in the next line, with the addition of “yeah, she’s amazing” in the second pre-chorus, and in the third the entire line and the insertions are harmonized, again putting greater emphasis on it. The process is reversed in the following line, harmonization is added in the second pre-chorus but taken away in the third for the line “I’ve loved and I’ve lost.” The accentuation is not continued (in a reverse accumulation), taking the emphasis away from this line and allowing the connotation of the other ornaments to be more prominent. This also occurs in the second to last line, “ain’t no need for searching.” So, the different ornaments between the two repetitions brings out different narratives, which allows the audience a more dynamic listening experience.

While not every ornament is repeated into the third iteration, the accumulation that occurs from the addition of ornaments to previous ornaments (the added harmonization to vocal insertions; the red and bold text) creates enough of an increase in sonic energy to make-up for the ornaments that are lost. The texture overall is perceived as denser, which is equivalent to a boost in the sonic energy. In which case, the pre-
choruses, just as the verses did, support an overall rise in sonic energy throughout the entire song and creates perceived “motion” towards the climax of the last VCU, despite the drop in energy that occurs after the climaxes of the previous VCU.

<table>
<thead>
<tr>
<th>Pre-Chorus 1 (Hyperlinked)</th>
<th>Pre-Chorus 2 (Hyperlinked)</th>
<th>Pre-Chorus 3 (Hyperlinked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One taught me love</td>
<td>She taught me love (love)</td>
<td>I’ve got so much love (love)</td>
</tr>
<tr>
<td>One taught me patience</td>
<td>She taught me patience (patience)</td>
<td>Got so much patience (patience)</td>
</tr>
<tr>
<td>And one taught me pain</td>
<td>How she handles pain (pain)</td>
<td>And I’ve learned from the pain (pain)</td>
</tr>
<tr>
<td>Now, I’m so amazing</td>
<td>That shit’s amazing (Yeah, she’s amazing)</td>
<td>I turned out amazing (turned out amazing)</td>
</tr>
<tr>
<td>Say I’ve loved and I’ve lost</td>
<td>I’ve loved and I’ve lost (yeah, yeah)</td>
<td>Say I’ve loved and I’ve lost (yeah, yeah)</td>
</tr>
<tr>
<td>But that’s not what I see</td>
<td>But that’s not what I see (yeah, yeah)</td>
<td>But that’s not what I see (yeah, yeah)</td>
</tr>
<tr>
<td>So, look what I got</td>
<td>‘Cause look what I’ve found (yeah, yeah) (I’ve found)</td>
<td>‘Cause look what I’ve found (yeah, yeah) (I’ve fou-ou-ound)</td>
</tr>
<tr>
<td>Look what you taught me</td>
<td>Ain’t no need for searching,</td>
<td>Ain’t no need for searching</td>
</tr>
<tr>
<td>And for that, I say</td>
<td>And for that, I say-ay</td>
<td>And for that I say</td>
</tr>
</tbody>
</table>

Figure 5.2. Comparison of the choruses in Ariana Grande’s “Thank You, Next”

There are considerable differences between iterations of the chorus due to the added ornaments, which creates noticeable differences in the sonic peaks of the song. The original melody presented in chorus 1 a secondary texture in choruses 2 and 3 as vocal insertion takes over as the primary melody. Figure 5.3. compares the choruses. The
ornaments in the second chorus sound as a main melody and completely overshadow what was originally given in the first chorus. This is largely due to the fourth line, “I’m so fuckin’ grateful for my ex” (in italics) which is considered a vocal insertion because the contour of the melody is different than what was originally given. Another supporting item that the true melody is the ornamentation is that in the original iteration, the last line is incomplete; the full statement is only in the second and third choruses. This is clear accentuation—although (almost) all the lyrics were present in the first version, the change in melodic contour, added insertions, and competition of the phrase make the lyrics more memorable and highlight, specifically the line “I’m so fuckin’ grateful for my ex”. All these ornaments are copied over into the third iteration, and in this case, there is harmonization added to a small portion at the end. This accumulation of ornaments continues to increase the sonic density and thus energy of the music, which creates a sequence of larger and larger sonic peaks.
The post-choruses do the opposite of the rest of the formal units; there is a deaccumulation. The texture of the second and third post-choruses are less dense (and therefore a lower sonic energy) than the first. Figure 5.4. shows the comparison, we the deaccentuation in blue. This does make sense, however, as the third chorus was determined to be the highest peak in sonic energy; the second and third post-choruses come after that, so they are a part of a decline in sonic energy to the end of the song (see Fig 5.5.). While this is not a characteristic of all music, in this specific case it does makes

<table>
<thead>
<tr>
<th>Chorus 1 (Hyperlinked)</th>
<th>Chorus 2 (Hyperlinked)</th>
<th>Chorus 3 (Hyperlinked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thank you, next (next)</td>
<td>Thank you, next (thank you, next) (ne—ext)</td>
<td>Thank you, next (thank you, next) (ne—ext)</td>
</tr>
<tr>
<td>Thank you, next (next)</td>
<td>Thank you, next (thank you, next) (ne—ext)</td>
<td>Thank you, next (thank you, next) (ne—ext)</td>
</tr>
<tr>
<td>Thank you, next (next)</td>
<td>Thank you, next (thank you)</td>
<td>Thank you, next</td>
</tr>
<tr>
<td>I’m so fuckin’ grateful for my ex</td>
<td>I’m so fuckin’ grateful for my ex</td>
<td>I’m so fuckin’ grateful for my ex</td>
</tr>
<tr>
<td>Thank you, next (next)</td>
<td>Thank you, next (thank you, next) (ne—ext)</td>
<td>Thank you, next (thank you, next) (ne—ext)</td>
</tr>
<tr>
<td>Thank you, next (next)</td>
<td>Thank you, next (said thank you, next) (ne—ext)</td>
<td>Thank you, next (said thank you, next, yeah) (ne—ext)</td>
</tr>
<tr>
<td>Thank you, next (next)</td>
<td>Thank you, next (ne—ext)</td>
<td>Thank you, next (ne—ext)</td>
</tr>
<tr>
<td>I’m so fuckin’—</td>
<td>I’m so fuckin’ grateful for my ex</td>
<td>I’m so fuckin’ grateful for my ex</td>
</tr>
</tbody>
</table>

Figure 5.3. Comparison of the choruses in Ariana Grande’s “Thank You, Next”
sense as the sonic energy dissipates as the song ends, and the second and third post-choruses are a part of that process.

<table>
<thead>
<tr>
<th>Post-Chorus 1 (Hyperlinked)</th>
<th>Post-Chorus 2 (Hyperlinked)</th>
<th>Post-Chorus 3 (Hyperlinked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thank you, next</td>
<td>Thank you, next</td>
<td>Thank you, next</td>
</tr>
<tr>
<td>Thank you, next</td>
<td>Thank you, next</td>
<td>Thank you, next</td>
</tr>
<tr>
<td>Thank you, next</td>
<td>Thank you, next</td>
<td>Thank you, next</td>
</tr>
<tr>
<td>I’m so fuckin’—</td>
<td>Yeah, yee</td>
<td>Yeah, yee</td>
</tr>
</tbody>
</table>

Figure 5.4. Comparison of the post-choruses in Ariana Grande’s “Thank You, Next”

Figure 5.5. The full form of Ariana Grande’s “Thank You, Next”

The ornaments (or in the case of the post-chorus, lack of) create a more dynamic narrative and vary the sonic energy of the whole song to create a more satisfying listening experience. Fig. 5.6. shows a hypothetical sonic energy diagram of the entire song. Each chorus has a higher peak than the previous, and the continue increase in energy is due to
the added ornamentation of each section. Narratively, the different ornaments accentuate specific parts of the text each repetition, which creates a more dynamic storyline than if they were just being repeated without any change. Overall, the accumulation and accentuation the vocal insertions and harmonizations bring create a more unique listening experience for the audience that allows for even continued listening of the same song to create new experiences, because there are so many ornaments added that it would be difficult for even an experienced audience member to pick-up on every change.

Figure 5.6. A hypothetical sonic energy level throughout Ariana Grande’s “Thank You, Next”
CHAPTER 6: CONCLUSION

This study outlined two broad categories of ornaments in 21st century pop music: vocal insertion and ornamentation. Vocal insertion is the addition of either new melodic material in addition to or substitutes what was previously established. Harmonization is the addition of a second layer over the initial melody; a homorhythmic countermelody within the context of the established harmony. Harmonization, as it highlights specific lyrics, will always function as accentuation of a part of the narrative a song. Vocal insertion can potentially accentuate, although it is possible that the insertion is not related to the narrative at all (for example, nonlexical syllables). If an ornament is retained into a third iteration of a formal unit, it can function as accumulation: the increased presence of ornaments through several repetitions, which increases the sonic density and by result the sonic energy.

While only two categories and two functions were defined in this thesis, it is possible that as the pop genre grows and changes, other ornaments and functions will arise: especially with the increase of technology. One possible further avenue of research could be the choice of ornaments added by an artist versus a production team for a song; the two different lines of thought could produce an interesting difference in the types or placements of ornaments. Another area of continued study could be the comparison of recorded ornaments to live performances by artists; recorded ornaments are likely different than embellishments a vocalist would use live just by nature of their being.
While this study was limited to one specific genre, the analysis of different repeating sections of recorded music could be applied to other recorded traditions as well; the analysis of new traditions of music requires innovative approaches, and as genres evolve so will the techniques to study them.
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