2018

The Effects of Instrumentation and Lyrical Content on the Perceived Genre of Popular Music

Michael Trent Kimbrough
THE EFFECTS OF INSTRUMENTATION
AND LYRICAL CONTENT ON THE PERCEIVED
GENRE OF POPULAR MUSIC

By

MICHAEL T. KIMBROUGH

A Thesis submitted to the
College of Music
in partial fulfillment of the
requirements for the degree of
Master of Arts

2018
Michael T. Kimbrough defended this thesis on April 19, 2018.
The members of the supervisory committee were:

Brian Gaber
Professor Directing Thesis

Clifford Madsen
Committee Member

Kimberly VanWeelden
Committee Member

The Graduate School has verified and approved the above-named committee members, and certifies that the thesis has been approved in accordance with university requirements.
# TABLE OF CONTENTS

List of Tables ................................................................................................................................. iv  
Abstract ........................................................................................................................................... v

1. INTRODUCTION ......................................................................................................................... 1 

2. METHODS ..................................................................................................................................... 9 

3. RESULTS AND DISCUSSION .................................................................................................... 13 

APPENDICES .................................................................................................................................. 25 

A. FULL COMPOSITE SCORES .......................................................................................................... 25 
B. BREAKDOWN OF FULL COMPOSITE SCORES .......................................................................... 26 
C. GROUP A RESPONSES .................................................................................................................. 27 
D. GROUP B RESPONSES .................................................................................................................. 28 
E. GROUP C RESPONSES .................................................................................................................. 29 
F. IRB APPROVAL MEMORANDUM ............................................................................................... 30 
G. IRB PARTICIPANT CONSENT FORM ......................................................................................... 31 

References ....................................................................................................................................... 33 

Biographical Sketch ......................................................................................................................... 36
# LIST OF TABLES

1. Composite Scores for Correctly Identified Genres ........................................... 25
2. Breakdown of Composite Scores for Correctly Identified Genres .......................... 26
3. Genre Breakdown of Group A Responses ............................................................ 27
4. Genre Breakdown of Group B Responses ............................................................ 28
5. Genre Breakdown of Group C Responses ............................................................ 29
ABSTRACT

The purpose of this study was to understand the effects of both instrumentation and lyrical content on the perceived genre of popular music. Participants for this study (N= 58) were undergraduate and graduate students from a large, public, south-eastern university. Results revealed there was no significant difference between the effect that instrumentation alone had on the perceived genre of music compared to the full composition/recording (instrumentation and lyrics). However, there were significant differences found between the effect that lyrical content alone had on the perceived genre of music compared to the full composition/recording, as well as the effect that instrumentation alone had on the perceived musical genre compared to that of lyrical content alone. This indicated that even though lyrical content does in fact matter in how a song is classified, instrumentation is more impactful in that regard.
CHAPTER 1
INTRODUCTION

It is important to understand the various compositional components that make up and define musical genre in order to be successful as a songwriter in any particular genre. However, it can become very difficult in trying to navigate the ins-and-outs of musical genre due to how rapidly genres continuously change and evolve over time. Because of this, there seems to be some level of uncertainty when it comes to having to correctly classify a modern popular piece of music into a specific genre.

In 2016, only 132 different songs (out of a possible 200 spots) were found across eight different genre-specific Billboard Top-25 Year End charts. This means that fifty-two songs were sorted into more than one chart/genre (Kimbrough, 2017a). Forty songs appeared on two different charts, eight songs appeared on three different charts, and four songs appeared on four different charts. The question that arises regarding these results is how can a song be classified into four different musical genres? This paper will explore not only how genre has evolved to the point in which a multi-genre classification could be possible (and presumed to be accurate and reliable in its classification), but also try to identify the different compositional factors that influence genre classification and determine their relative importance to said classification.

The entertainment industry has in recent years been undergoing a paradigm shift in terms of how artistic content is being created, shared, and classified by those who produce and consume it on a regular basis (Hargittai & Walejko, 2008). This change can be accredited to numerous factors, but the most prevalent of these, especially regarding the music industry, is the effect that technology has had on how artists and content creators are influenced. The modern
evolution of the internet has ushered in an age of online content streaming/sharing platforms such as Spotify, Instagram, and YouTube, that have granted artists the ability to access an astounding collection of archived creative content; thereby providing them with an avenue in which they can easily draw inspiration from numerous styles, cultures, and past eras that they previously would not have had such easy access to (Mangold & Faulds, 2009).

As previously stated, the music industry is one particular field where this technological phenomenon is most noticeably present. Music is something that has historically always resided within a specific cultural, demographic, and/or locational framework, and musicians who were a part of these populations generally aligned their musical creations with the characteristics that were associated with their respective groups (Taruskin, 2005). It was not until the 19th century that society as a whole began to see a widespread, long-term cross-pollination of musical styles and ideas, stemming from centuries of Western colonization, immigration/emigration, and diasporic events such as the Atlantic slave trade. The result of these events could be most notably found in the south-eastern United States with the birth of jazz. Jazz music was the culmination of various musical styles and characteristics that can trace its roots back to the Caribbean, Africa, and Western Europe (Martin & Waters, 2016).

American society continued to see this ongoing evolution of musical genre and style throughout the 20th century by ways of the British Invasion. Popular rock groups from England began to draw on the sounds of the American south (blues, jazz, gospel, etc.), as well as traditional American music (folk, bluegrass, etc.) to bend the rules of what constituted as traditional “rock n roll,” which in turn brought these lesser known types of music to the forefront of American and global culture/popularity (Martin & Waters, 2016). The British Invasion may have originally been classified as a movement among rock n’ roll acts, but it

2
permeated throughout the entire musical world. Miles Davis was now playing jazz music with rock/electronic elements (jazz-fusion), The Who were covering soul artists such as Marvin Gaye, and folk acts such as Joan Baez were sharing the stage alongside funk musicians Sly and the Family Stone at music festivals across the country and around the world (Paleo & Wijnberg, 2006). These festivals represented a wide array of musical genres and styles across their full lineups, which allowed musicians to draw inspiration from one another in ways foreshadowing that of the current uses of the internet and social media. This helped expedite the musical evolutionary process, and created a necessity for new ways of classifying music to be added to the now-widening umbrella of musical taxonomy (Gridley, 1983).

The musical evolution witnessed throughout the 20th century has made it evidently clear that genre is fluid; over time the notable qualities used to sort music into respective categories are always changing and thereby creating new genre groupings, and it is also evident that musical styles are evolving as well at an exponential rate (Brackett, 2005; Lena & Peterson, 2008). One distinction that should be made, however, is that for purposes of this study, musical genre and musical style will be treated as two separate entities. As Moore suggested in their 2001 study which investigated the discourse between musical genre and style, they found that “similarities thereby identified (do not) exist on the same hierarchical level, (but) …are subordinate to others.” In borrowing Moore’s findings, a basic example of this subset relationship would be that not all rock music (genre) is heavy-metal (style), but all heavy metal is rock music. It is musical genre that is of interest in the present study, not musical styles.

Musical genre, and genre in general, is beneficial to understand as it provides the consumer with an explanation as to why the “given work has the shape and content that it does,” and the ability to “evaluate that work by comparing it to others of the same generic class.”
(Conley, 1979). Consequently, there is also a negative side to musical genre due to the problems that it can create. Unlike how scientists can accurately classify various organisms into phyla, families, and species based on observable physical features and genetics, musical genre is a theoretical construct that lacks definitive structure in delegating what any specific “genre” actually is (Lena & Peterson, 2008). Due to this abstractness, genre is largely a cultural language which at times can be non-translatable between different cultures around the world; the preconceived ideas of what country, rock, or pop music are could greatly differ from one another (McKay & Fujinaga, 2006).

Most genre labels also bring about different musical/artistic connotations, specifically negative connotations, that many artists might not want to adhere to or be confined by, as well as associated with (Lena & Peterson, 2008). This could hinder not only the artist’s desired mode of self-expression, but also how the public (negatively) critiques their work; which in turn cycles back to the artist (if they choose release music of a specific genre) by affecting their success and future inclinations to continue working within that part of the genre spectrum. This cyclical act was made evident by Lena in a 2006 study where it was shown that the way an artist proactively reacts to the market (future criticism, sales, chances of success) effects the musical content that they make. In another study done by Ballard, Dodson, and Bazzini (1999), which looked at the expectations of and biases towards certain genres of music, the researchers found that certain genres, such as rap and metal (rock), were viewed more negatively than other more classically accepted genres of music such as country and/or pop. The risk of being viewed as “less than” could greatly deter an artist from choosing to perform within a particular genre. Genre can also have the ability to remove any individuality or artistic uniqueness an artist may present by
grouping multiple songs together as the “same” under the guise of classification for classification’s sake (Brackett, 2005).

But these theoretical deterring factors (theoretical meaning that other outside factors do still contribute to an artist’s chosen genre such as ability, preference, finances, etc.) surely must be attributed to some characteristic, or derived from some sort of common factor shared between each negatively viewed genre. What are the differences that set apart country and pop music from that of rap and rock music? To be able to claim that some genres are inherently “better” or “more beneficial” than others, there must be a clear division between what is good and what is bad; essentially, what are the characteristics that attribute to genre classification?

There are shared basic qualities that all or most hit songs over the past few decades have in common: compelling lyrics, appropriate accompaniment (instrumentation and harmony), melody, and added artistic quality (York, 1971). Additionally, most hit songs in the modern era (20th and 21st centuries) share more advanced qualities such as song length (69% of hit songs have an average length of under four minutes), tempo (51% of hit songs have a tempo at or above 128 beats per minutes), and song form (the most popular song form for hit songs across multiple genres is that of intro, verse, chorus, verse, chorus, bridge, chorus; or ABA'BCB), (Tough, 2013). This is not at all surprising as musical popularity is directly linked to familiarity (Hargreaves, 1980), so it would be wise for most musicians to try and follow these popular models, regardless of genre, in the hopes of being successful. With all of this considered, the question still remains: with all of the similarities between hit songs across multiple modern popular genres, what are the discriminating factors that help designate proper genre classification?
The aforementioned four qualities that York stated all hit songs must contain can be simplified and sorted into two main groups: instrumentation and lyrical content. From this, we can infer that both instrumentation and lyrical content hold the most influence over the success of any one song from the compositional side. But there is another variable found in the success equation that is equally as important as the compositional layout of the song itself, that being the preference of consumers. As different types of instrumentation and lyrical content can influence the preference(s) of the listener, perhaps they can in-and-of-themselves influence musical genre as well (Boyle, Hesterman, & Ramsey, 1981; Gotlieb & Konečni, 1985).

One particular study that made note of the effects that instrumentation can have on preference found that with all things equal (lyrics, melody, song form, tempo, etc.), there was a difference between how participant’s rated their preference for pairs of audio recordings that only differed in instrumentation (Kimbrough, 2017b). Instrumentation has also been found to affect not only preference, but the perceived familiarity a listener has with a piece of music; changing something as simple as the instrumentation can hinder a listener’s ability to correctly identify the altered piece of music (Poulin-Charronnat, Bigand, Lalitte, Madurell, Vieillard, & McAdams, 2004).

Musical preference can also be effected not only by instrumentation but by any pre-existing genre labels or musical categorization (Britten, 1989). Consumers are more apt to seek out new music based on how it is classified, regardless of other compositional qualities of the music (Rentfrow, Goldberg, Stillwell, Kosinski, Gosling, & Levitin, 2012). One can use this information to assume a symmetric property is shared between both instrumentation and genre on musical preference, meaning that instrumentation alone can in fact influence the prescribed musical genre for any given piece of music. The musical instrument alone “shapes our
understanding of the taxonomy and genres of music,” (Alperson, 2008). It is common
assumption that hearing an electric guitar and drums implies a rock song, just as hearing a string
quartet implies a classical song/composition.

The lyrical content of most popular song compositions has been shown to also influence
how the music can be classified. Some characteristics of lyrics that can influence genre
classification are: rhyme scheme, use of slang language/complex vocabulary, and verse length
(Mayer, Neumayer, & Rauber. 2008). By using a computer program to analyze lyrical content
from a vast database of musical recordings, Fell and Sporleder (2014) were able to successfully
classify each song of their database into a distinct musical genre solely by the lyrical content. It
was more clear-cut as to how certain songs were classified than others, such as rap songs, as
complex rhyme structures and a very distinct vocabulary are ubiquitous with that particular
genre, whereas other songs were more difficult to place, such as folk songs, due to the inherent
similarity between folk and other genres such as country (i.e., structure, thematic material, etc.).

Just as rap music has its own genre-centric characteristics, various other musical genres
also contain their own idiosyncrasies. Rock music has been found to employ a higher rate of
semantic devices such as similes and metaphors, country and folk music tend to be more clear
and ballad-like in terms of its storytelling, and soul/funk music contains higher references to sex
as well as more redundancies/repeated phrases, just to name a few (Singletary, 1983). It is from
these specific lyrical characteristics that music can accurately be classified just as it can be by
listening to the instrumental components of any song and hearing how the musicians use that
instrumentation to achieve the desired (genre-abiding) sound.

If the goal is to write a modern rap hit, then knowing what sounds to use and what lyrical
themes to explore are important to know. Does the main audience for rap music care more for
hearing stories about love of country or would a song centered around excessive wealth and lavish lifestyles be more applicable? Should orchestral forces be called upon or should electronic drum and bass be predominately utilized? And more importantly, which of these two main components matter more in determining genre, if they matter at all? Thus, the purpose of this study was to understand the effects of both instrumentation and lyrical content on the perceived genre of popular music. The specific research questions were as follows:

1) Is there a difference between the effect that instrumentation alone has on genre classification compared to the full recording/performance of a song?

2) Is there a difference between the effect that lyrical content alone has on genre classification compared to the full recording/performance of a song?

3) Is there a difference between the effect that instrumentation has on genre classification compared to the lyrical content of a song?
CHAPTER 2

METHODS

The participants (N= 58) for this study were taken from a small sample of the general population of undergraduate and graduate students from a large, public, south-eastern university. There were no other restrictions to participate (e.g. academic major, age, ethnicity, gender, musical experience, or musical preference). All participants did so voluntarily, and each participant could only take part in the study one time. Ages for all participants ranged from 18-25 years.

The dependent measure was a survey created by the researcher. Appearing at the top of each survey was a brief demographic section that asked the participants’ age, year in school (freshman, sophomore, junior, senior, graduate), and gender (male, female, other). All three of these questions required the participants to record their answers in the provided response space. Following this section were a series of questions (three) pertaining to the current study, and each question was comprised of two different elements. The two elements for each of the three questions were: A) Please circle the one musical genre you would best classify the following example as, and B) In one or two sentences, please use your own words to describe why you chose that musical genre for Part A. For Part A in each question, there were six possible answer choices: country, folk, pop, rap, reggae, and rock. Each of these genre descriptions were chosen by the researcher as they were deemed different enough to avoid overlapping definitions, yet still broad enough as to not confuse the participant (i.e. punk vs. rock; hip-hop vs. rap). A blank set of lines directly followed the second element to designate a space for the participants to write their responses to Part B.
The musical repertoire used for this study were original compositions written by the researcher (music and lyrics). One song was composed in the style of each of the six previously mentioned genres from Part A of the survey, totaling six compositions. The researcher used his own discretion in deciding what constituted the appropriate instrumentation and lyrical content for each genre/style; however, to try and eliminate as much confirmation bias as possible the researcher had towards any one genre (i.e. preconceived ideas of what each genre entailed), each composition was modeled after a commercially released song that could easily be placed under each of the six genre definitions. Also, in order to remain true to the tradition of how rap music is created and shared by rap musicians, an outside party assisted the researcher in composing the rap lyrics used in this study. In rap music, the act of using a “ghost-writer” (performing any rap/verse composed by someone other than the performing artist) is frowned upon and often times ridiculed (Potash, Romanov, & Rumshisky; 2016).

The six reference tracks used were as follows: “Daddy’s Little Girl” by The Shires (country, 2016), “When the Ship Comes In” by Bob Dylan (folk, 1964), “Hands to Myself” by Selena Gomez (pop, 2015), “DNA.” by Kendrick Lamar (rap, 2017), “One Love” by Bob Marley (reggae, 1984), and “Weighted” by frnkiero and the cellabration (rock, 2014). Each reference track was used to help the researcher better understand each genre to ensure all six compositions used for this study were as true to their genre classifications as possible (instrumentation and lyrical/thematic content). Additional reliability testing was also done on each reference track as well as the original compositions (full audio recordings with instrumentation and lyrics) to ensure their intended genre was clearly recognizable. The researcher also completed all of the audio recording, editing, and mixing for each composition.
All 58 participants for this study were sorted into three separate groups prior to their participation, with three different conditions in each group. Group A (control group) consisted of listening to the full audio recordings (instrumentation and vocals), Group B consisted of listening to only the instrumental tracks for each audio recording (all vocal tracks removed), and Group C consisted of reading the lyrical sets for each composition. To begin the study, participants were asked to complete the demographic section of the survey. Procedures for the study were then explained to each participant. Participants in Group A and Group B were told they would hear three audio recordings, each between 2-4 minutes in length, and they should complete the questions for each example they hear. Participants in Group C were told they would be reading three different sets of lyrics, and they should complete the questions for each lyrical example once they had finished reading. Each audio recording for Groups A and B were only played once in their entirety, but participants in Group C could read the lyrical sets more than once if they desired.

The participants were only given three examples each (corresponding to the three survey questions) because the researcher wanted to ensure that any order bias or process of elimination was removed from the participant’s decision making when answering the research questions. For example, if the participant had already listened to five recordings and the only genre classification that had not yet been chosen was the folk genre, then it would be safe to assume that the correct response for the sixth and final example played would be the folk genre classification. By giving the participants only three examples with all six possible answer choices present, they were more apt to have to make a clear decision based on what they heard or read, and nothing more. The three examples that each participant in Groups A-C received were also randomly assigned. This was done by assigning each musical composition a number between one
and six, and having a computer program randomly generate three digits between that set for each participant. The numbers were assigned alphabetically by genre, so the country song was number one and the rock song was number six. Each participant was then administered the three compositions represented by the three randomly generated numbers. Because of this, not every example was listened to or read by each individual participant (as they were randomly given only three examples), or listened to or read an equal number of times within each group. In the event that the computer program generated a set of numbers containing two or more of the same digit, the researcher continued to generate sets until all three digits were different.

Following the instructions, the participants were asked to listen to (Groups A and B) or read (Group C) each example. After each audio recording ended, or the participant finished reading, the researcher reiterated how the participant was to answer each question on the survey. Each participant was given up to two minutes to answer, but once they finished answering the researcher continued on to the next example regardless of whether the allotted two minutes had passed. All participants took part in the study in the same room as the researcher, on an individual basis. For Groups A and B, a MacBook Pro was used to play the audio recordings and participants listened to them with Sennheiser HD 280 Pro headphones. To ensure the listening examples were of an appropriate volume, each participant was able to manually increase the volume (starting from completely mute) to a comfortable level. This volume adjustment was done to a publicly accessible recording of Beethoven’s 5th symphony. Those in Group C were handed individual pieces of paper (one at a time, as they progressed through each of the three examples) containing each set of lyrics they were to read. The entire study procedure took 10-15 minutes for each participant across all three groups. A pencil and eraser was provided to each participate for this study if they were in need of one.
CHAPTER 3

RESULTS AND DISCUSSION

Results

Initial results showed that participants in Group A correctly identified the genre of 43 out of 48 examples (89.6%; the highest percentage for all three groups). Participants in Group B correctly identified the genre of 53 out of 66 examples (80.3%), and participants in Group C correctly identified the genre of 35 out of 60 examples (58.3%; the lowest percentage for all three groups). Three separate 2 x 2 Contingency Table $X^2$ tests were also used to determine the following: whether participants were equally influenced by instrumentation alone on their perception of genre classification compared to that of the full recording (Group A vs. Group B), whether participants were equally influenced by lyrical content alone on their perception of genre classification compared to that of the full recording (Group A vs. Group C), and whether instrumentation or lyrical content carried more influence on participants regarding their perception of genre classification (Group B vs. Group C).

The results of the first test, which looked solely at instrumentation, indicated that there was no significant difference between the genre classifications of students from Group A compared to those of Group B: $X^2 (1, 144) = 1.47, p < .05$. The results of the second test, which looked solely at lyrical content, indicated that there was a significant difference between the genre classifications of students from Group A compared to those of Group C: $X^2 (1, 108) = 11.46, p > .05, \Phi = 0.32$. Calculation of binomial tests with a modified Bonferroni Correction indicated there was a significant difference between the correctly and incorrectly classified genres within Group A ($z = -5.34, p < .046$), as well as a significant difference between the
incorrectly classified genres between Group A and Group C \( (z = -3.47, p < .046) \). The results of the third and final test, which compared the effects of instrumentation to lyrical content, indicated that there was also a significant difference between the genre classifications of students from Group B compared to those of Group C: \( \chi^2 (1, 126) = 6.19, p > .05, \Phi = 0.22 \). Calculation of binomial tests with a modified Bonferroni Correction indicated there was a significant difference between the correctly and incorrectly classified genres within Group B \( (z = -4.80, p < .046) \). Post Hoc calculations comparing the correctly and incorrectly classified genres between groups were not made, as those discrepancies are of no importance to the current study. The only groupings that were compared during the Post Hoc calculations for this study were correct and incorrect responses within a single group, correct responses between two groups, and incorrect responses between two groups.

**Discussion**

The purpose of this study was to understand the effects of both instrumentation and lyrical content on the perceived genre of popular music. The results revealed that 89.6% of participants were able to correctly identify the genres for the musical examples that they heard based off of their full recordings (instrumentation and lyrical content included), 80.3% of participants were able to correctly identify the genres of the musical examples that they heard based on the instrumental recordings, and only 58.3% of participants were able to correctly identify the genres for the lyrical examples that they were presented with (Table 1; Appendix A). These numbers tell us that although listeners are influenced by both instrumentation and lyrical content when it comes to genre classification, instrumentation is by far the more influential component, as significant differences in correct responses were found between Groups A and C, Groups B and C, but not between Groups A and B.
The first statistical test that was run was done so on the correct and incorrect responses of Group A and Group B to see if instrumentation can influence genre classification as much as the full song/recording (including lyrics). Past research already has told us that instrumentation does effect genre classification, but not how much influence it holds. No significant difference was found between these two groups, meaning that instrumentation is just as strong of an indicator of musical genre in regards to modern popular music as the full composition (instrumentation and lyrics) is.

The second statistical test that was run was done so on the correct and incorrect responses of Group A and Group C, to see if the same level of genre influence could be credited to a song’s lyrical content. There was a significant difference found between the two, meaning that lyrical content alone is not as strong as instrumentation regarding their respective amount of influence on genre classification of modern popular music. Where those differences were present is an important thing to note. A significant difference was present in two different places: between the correct and incorrect responses within Group A, and the incorrect responses between Group A and Group C. Since it has already been shown that lyrical content can influence genre, the lack of a significant difference between the correct responses of Group A versus Group C verifies this (as they both had a majority of examples correctly placed), whereas the significant difference between the incorrectly classified genres between Group A and Group C lets us know that the combined influences of both instrumentation and lyrical content (Group A) are very accurate in correctly classifying musical genre (less incorrect responses) compared to the weaker influence of lyrical content (more incorrect responses in Group C). The significant difference found between the correct and incorrect responses within Group A verifies how instrumentation and lyrical content can combine (full recording) to correctly influence genre.
To further ensure that these relationships were true, a third statistical test was run on the correct and incorrect responses between Group B and Group C. As expected, a significant difference was found between the two. The significant difference was present between the correct and incorrect responses within Group B. As a difference was not found between the same data (correct versus incorrect responses) within Group C, this further strengthens the notion that instrumentation is more important than lyrical content on the perceived genre of modern popular music. A lack of significant difference between the other variables was present (Group B correct versus Group C correct, Group B incorrect versus Group C incorrect, and Group C correct versus Group C incorrect), again showing that lyrical content can and does influence musical genre, just not as strongly as instrumentation.

As the current study was only interested in observing the effects that instrumentation and lyrical content had on the perception of genre at the macro-level (not specifically between genres themselves), all six genres that were used in this study were included together to create composite scores for each group. For example, whether or not instrumentation effected the genre classification for pop music versus reggae music was not of importance. Also, not only were each of the three groups different sizes ($n=16$, Group A; $n=22$, Group B; $n=20$, Group C), but each individual song was also listened to a different number of times due to the randomly generated numbers that decided which examples each participant would be given. For this reason, no statistical tests were run on the results/scores for each individual song/genre within each group. However, Table 2 (Appendix B) displays all of the scores for each genre within each group to better show how the participants in each group were influenced by their respective group’s treatment.
The responses for Group A were the most accurate of all three groups (89.6% correct), and the full Group A responses can be found in Table 3 (Appendix C). While looking at the table, there appears to be a strong pseudo-linear relationship for how each song was classified based on the correct and incorrect responses. Of the six genres, three of them (pop, rap and rock) boasted perfect scores in regards to how they were classified. The other three genres had a majority of participants classify them correctly.

In regards to the country song, only two participants classified it incorrectly, one participant labeling it as folk due to how the lyrics “told a story” and because of the acoustic instrumentation (primarily acoustic guitar throughout each verse); the other classified it as rock, appearing to focus on the full drums and electric bass guitar that entered in each chorus. This can be supported by Fell and Sporleder’s study in which they found that folk music and country music shared many similarities. A similar case was found with the folk song, as one participant identified it as country due to its acoustic qualities. Another participant classified the folk example as pop, probably the most surprising response throughout this entire study, claiming that it “didn’t ‘sound’ like other genres.” The reggae song only had one participant wrongly classify it, stating that the “use of electric instruments and religious themes in the text” lead them to believe it was “Christian-rock,” with rock being the closest genre descriptor.

The responses for Group B were the second-most accurate of the three groups (80.3% correct), and the full Group B responses can be found in Table 4 (Appendix D). While looking at the table, there also appears to be a pseudo-linear relationship for how each song was classified based on the correct and incorrect responses, though a bit “wider” than the relationship found in the responses for Group A. Only two genres received perfect scores in regards to how they were classified, rap and rock. The most common responses for these two genres were that they
featured “heavy bass/electronic sounds” and a “strong emphasis of the beat” (rap), and very present “distorted electric guitars; riff-driven guitars” and “big drums” (rock).

The country song received a correct response rate of 62.5%, which was split solely between the country and folk genres (due to similarities previously mentioned). The folk song, on the other hand, received a correct response rate of 83.3%. This drastic increase in correct classifications could be accredited to one main thing as listed by numerous participants: the use of harmonica. The harmonica is an instrument that has, in recent time, come to primarily represent the folk genre. The instrumentation used for each of these two songs is as follows: acoustic guitar, electric bass, drums, sampled violin/strings (country), and acoustic guitar and harmonica (folk). Whereas the harmonica was the clear difference in how the folk song was classified, the use of common instruments in the country song clearly impacted what people perceived this song to be.

The worse response score belonged to the pop song, coming in at only 53.8%. Similar to country, the split was found between only two genres: pop and rap. In modern music, pop and rap share many similarities, and as this study can attest to, the biggest shared quality is instrumentation. Although the pop song did feature more varied instrumentation such as clean electric guitar, the majority of participants who classified the pop song as rap cited its use of “electronic/techno sounds” and a “continuous beat” (i.e. a looped two to four measure phrase that provides an artist with a groove/feel for their rap). The biggest difference between these two genres of music is how lyrics are delivered; the lyrics for pop music are almost always sung, while the lyrics for rap are delivered by speaking in-time. As both pop and rap received perfect scores in the responses of Group A, it can be assumed that the missing lyrics/vocals are what separated these two genres of music. However, the rap song was not classified at all as pop, and
this phenomenon can best be explained by saying the rap song featured a “heavier” beat consisting of loud, electronic bass drums, sharp snare drum hits, and intricate hi-hat patterns that are truly indicative of the genre.

The last remaining genre in Group B that did not receive a perfect score was reggae. Two participants classified it as rock, and just like the responses made by those in Group A, the use of electric guitar and bass were what influenced their decisions (drums and sampled organ being the remaining instruments that were used). What made 81.8% of participants correctly classify it as reggae can be accredited to how the instruments were played. Reggae music switches the purpose of the electric guitar with the electric bass. In rock music, the electric bass carries the harmonic motion, providing the guitars room to riff and solo. In reggae music, the guitar is used as the main harmonic backbone through signature up-strokes on the off-beat. The electric bass is then used to play short motivic/melodic passages outlining each chord change, similar to jazz music. Time is also kept more on the hi-hat/cymbals in reggae music compared to the kick drum of rock music (these characteristic found within each reference track).

The responses for Group C were the least accurate of the three groups (58.3%), and the full Group C responses can be found in Table 5 (Appendix E). While looking at the table it is clear that the relationship between lyrical content and genre classification is the weakest by how the responses are highly varied, much like a graph showing no correlation. Rap was the only song that was accurately classified by every participant who read its lyrics. This was largely due to the use of explicit language, referencing drugs and violence (common themes within the genre), and the overall length of each verse.

The responses for the country song were relatively strong (70% correct), and split between the country and folk classifications. Each participant who classified it as a folk song did
so because of the ballad-like aspect of the lyrics. The reference track consisted of a woman singing about her father, and the lyrics used in this study were written from a father’s point of view, each verse describing a different part of his daughter’s life (i.e. first day of school, prom, marriage) and how the father reacted to each experience. Again, due to the inherent similarities between country and folk, these results were not unexpected.

The folk song only received a correct classification rate of 50%. The incorrect responses were split between country, rap, and rock. One participant classified it as country due to its recurring references of western imagery (“dust, fields, soil, wind, etc.”), four participants classified it as a rock song due the “dark aesthetic” and “deep symbolism” of the lyrics (Singletary, 1983), and one participant classified it as rap due to the length of each verse and the “rhyme scheme” (AABB). The lyrics for this composition were centered around the idea that no one should be regretful while looking back at their past decisions because fear prohibited them to follow their dreams. The narrator addresses the listener multiple times through the song and encourages them to overcome their fear, as found in the lyric, “Through the veil of expectation that enshrouds all that you see / You may be hesitant to walk for fear of tripping on your feet.” Though the western/nature imagery used was cited by participants as making this song country, it is of the belief of the researcher that this is what made them traditional folk lyrics (Fell & Sporleder, 2014).

The way the pop song was classified within Group C was probably the most surprising result within Group C, only receiving a correct response rate of 33.3%. This was an unexpected number as the lyrics heavily referenced partying late into the night, high alcohol consumption, and “being bad,” (in regards to sexual promiscuity), which were all themes found within the reference track. While three participants correctly classified this example as pop, four classified
it as country. One reason why this specific classification most likely occurred was the use of the colloquial/slang term “mama” in the verses/chorus of the song. The exact lyric is, “Mama said nothing good ever happens after midnight / That’s okay, that’s okay I feel like being bad.” Had the term “mama” been substituted for something more formal, it is reasonable to believe that the responses would have been drastically different. Two participants classified it as a rap song, and this was due to the references to drinking/partying, as well as the rhyme scheme of the verses (ABAB).

While the reggae song might not have had the lowest rate of correct classification (36.3%), it had the most varied responses for classification. Participants also classified it as country, folk, pop, and rock. Reasons for these incorrect classifications can be credited to the spiritual/Christian themes found throughout the composition (country and rock), the simplicity of the lyrics (folk), and the lyrical repetitiveness (pop). As the majority of the incorrect classifications were labeled as rock, similar to the incorrect responses found in Group A for this same composition, that the participants associated this song with Christian-rock, a large and popular sub-genre of rock music. This is not a far-off assumption to make; this specific composition was written with religious themes in mind as the reference track for this particular song did the same: “Your love is all I ever need / I’ll shout Your praise / Singin’ this melody of life!” as well as, “Just as the mighty river flows into the ocean / I’ll walk this path as You guide my feet.”

The rock song received a correct classification rate of 66.7% within Group C. Two participants labeled it as folk and one participant labeled it as rap. The lyrics for this song described a narrator who is afraid of time and who is uncomfortable with the future and even fearful of it. It used a metaphor that equated the spinning core of the Earth (time) with the human
heart, an example of which can be found in the following lyric: “And as the core pumps its blood through the veins of this rock / I’ll have to cut myself deeper if I want to make it stop.” This metaphor also obviously evoked heavy imagery of self-harm, another theme associated with some modern rock sub-genres/styles. Because of the earth imagery, as well as the rhyme scheme (AABCB), it was incorrectly classified as folk and rap, respectively. The six participants who correctly labeled it as rock did so due to the references to self-harm and “moody” lyrics.

There are a few different ways that future studies could expand upon this information for further understanding on how genre is effected by both instrumentation and lyrical content. This study was only limited to six broadly-defined genres. Using a larger number of genre classifications, including sub-genre classifications (i.e. punk rock, heavy metal, bluegrass, hip-hop), might alter the results. Because the six genres that were used were so different from one another (though some similarities were notably present), it may have been easier for each participant to classify each example they encountered (from an instrumental standpoint), resulting in the differences found between Group B and Group C. Aside from including a larger number of genres in the study, the relationship between genres themselves could also be explored at the micro-level, compared to what was done in the current study at the macro-level. So not only can the effects of instrumentation and lyrical content be looked at between groups as a whole, they can also be looked at through each genre individually to understand if certain genres are more easily classified by either their instrumentation or lyrical content compared to other genres. It is also interesting to note that across all three groups of participants, there seemed to be a relationship between country and folk, pop and rap, and reggae and rock, regardless of the independent variable. A study that focuses only on one of those pairs and/or their respective sub-
genres could provide more insight in the differences and similarities between closely related genres of music.

There were a few limitations present in the current study. First, although this study was open to any student regardless of area/discipline, the vast majority of participants in this study were music majors. Having a formal musical education could have provided some of the participants with a prior knowledge as to the characteristics of certain genres of music if they had previously taken any courses centered on the study of modern popular music. Having more students from other academic areas could have helped provide even more accurate results due to the odds that they would have never explicitly studied this information. Secondly, there is still no way to eliminate the biases held by the participants towards certain musical genres and what characteristics those genres normally possess. For example, a rap song may be considered to be a pop song by one participant whereas another participant may classify it as a rap song. This has to do with their individual definitions for what genre is. In looking at the current state of the music industry, most rap songs are considered to be “pop” songs, meaning that they are popular in the competitive sense of the word. The same goes for other genres of music that are more closely related, such as country and folk or reggae and rock. Employing the use of more genre and sub-genre classifications is one way to try and fix this issue. Third, the age range for the participants was quite narrow (18-25 years of age). Due to the closeness in age of the participants, their own perceptions of musical genre are presumably very similar to one another; however, people belonging to different age groups would theoretically have contrasting definitions for what genre is and how music is classified, as well as an understanding, preference, and familiarity for/with certain genres of music that were used in this study.
The biggest limitation of this study was trying to figure out exactly what instrumentation to use for each recording, and what language and thematic material to use in each set of lyrics. The researcher followed the reference tracks as closely as possible to influence the original compositions used in this study, but as this study didn’t necessarily explore what specific characteristics were solely unique to each style, there may have been aspects of each original composition that misguided or hindered the participant’s efforts in classifying each example as accurately as possible. This problem could have possibly been avoided by using more than one songwriter/lyricist, using more than one reference track for each genre, or by running preliminary studies that sought to find out how different genres are classified and what characteristics are inherently apart of their unique genre DNA.

The purpose of this study was to understand the effects of both instrumentation and lyrical content on the perceived genre of popular music. By comparing the responses of three different groups receiving three different types of treatment, the data garnered was able to statistically support that, in regards to the perception of genre of modern popular music, instrumentation alone is more influential than that of lyrical content. Speaking to a songwriter’s perspective, it is often times their job to write a song in a certain genre/style of music they may be unfamiliar with, or at the very least less experienced in. By understanding that instrumentation is the one element that plays the biggest role in determining genre, compared to that of lyrical content, they can make sure to better identify the performing forces that they will need to use in their composition, as well as how those specific instruments are used, to increase the likelihood of them finding authenticity in their work and success in their endeavors.
Table 1. Composite Scores for Correctly Identified Genres

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number of Correct Responses</th>
<th>Total Number of Responses</th>
<th>% Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>43</td>
<td>48</td>
<td>89.6</td>
</tr>
<tr>
<td>Group B</td>
<td>53</td>
<td>66</td>
<td>80.3</td>
</tr>
<tr>
<td>Group C</td>
<td>35</td>
<td>60</td>
<td>58.3</td>
</tr>
</tbody>
</table>
APPENDIX B

BREAKDOWN OF FULL COMPOSITE SCORES

Table 2. Breakdown of Composite Scores for Correctly Identified Genres

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number of Correct Responses</th>
<th>Total Number of Responses</th>
<th>% Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>5</td>
<td>7</td>
<td>71.4</td>
</tr>
<tr>
<td>Folk</td>
<td>4</td>
<td>6</td>
<td>66.7</td>
</tr>
<tr>
<td>Pop</td>
<td>10</td>
<td>10</td>
<td>100.0</td>
</tr>
<tr>
<td>Rap</td>
<td>9</td>
<td>9</td>
<td>100.0</td>
</tr>
<tr>
<td>Reggae</td>
<td>5</td>
<td>6</td>
<td>83.3</td>
</tr>
<tr>
<td>Rock</td>
<td>10</td>
<td>10</td>
<td>100.0</td>
</tr>
<tr>
<td>Group B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>5</td>
<td>8</td>
<td>62.5</td>
</tr>
<tr>
<td>Folk</td>
<td>10</td>
<td>12</td>
<td>83.3</td>
</tr>
<tr>
<td>Pop</td>
<td>7</td>
<td>13</td>
<td>53.8</td>
</tr>
<tr>
<td>Rap</td>
<td>12</td>
<td>12</td>
<td>100.0</td>
</tr>
<tr>
<td>Reggae</td>
<td>9</td>
<td>11</td>
<td>81.8</td>
</tr>
<tr>
<td>Rock</td>
<td>10</td>
<td>10</td>
<td>100.0</td>
</tr>
<tr>
<td>Group C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>7</td>
<td>10</td>
<td>70.0</td>
</tr>
<tr>
<td>Folk</td>
<td>6</td>
<td>12</td>
<td>50.0</td>
</tr>
<tr>
<td>Pop</td>
<td>3</td>
<td>9</td>
<td>33.3</td>
</tr>
<tr>
<td>Rap</td>
<td>9</td>
<td>9</td>
<td>100.0</td>
</tr>
<tr>
<td>Reggae</td>
<td>4</td>
<td>11</td>
<td>36.3</td>
</tr>
<tr>
<td>Rock</td>
<td>6</td>
<td>9</td>
<td>66.7</td>
</tr>
</tbody>
</table>
APPENDIX C

GROUP A RESPONSES

Table 3. Genre Breakdown of Group A Responses

<table>
<thead>
<tr>
<th>Correct Genre</th>
<th>Response Genre</th>
<th>Country</th>
<th>Folk</th>
<th>Pop</th>
<th>Rap</th>
<th>Reggae</th>
<th>Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td></td>
<td>5</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Folk</td>
<td></td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pop</td>
<td></td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rap</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Reggae</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Rock</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
</tbody>
</table>
# APPENDIX D

## GROUP B RESPONSES

**Table 4. Genre Breakdown of Group B Responses**

<table>
<thead>
<tr>
<th>Correct Genre</th>
<th>Response Genre</th>
<th>Country</th>
<th>Folk</th>
<th>Pop</th>
<th>Rap</th>
<th>Reggae</th>
<th>Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td></td>
<td>5</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Folk</td>
<td></td>
<td>2</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pop</td>
<td></td>
<td>-</td>
<td>-</td>
<td>7</td>
<td>6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rap</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Reggae</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Rock</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
</tbody>
</table>
## APPENDIX E

### GROUP C RESPONSES

Table 5. Genre Breakdown of Group C Responses

<table>
<thead>
<tr>
<th>Correct Genre</th>
<th>Response Genre</th>
<th>Country</th>
<th>Folk</th>
<th>Pop</th>
<th>Rap</th>
<th>Reggae</th>
<th>Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td></td>
<td>7</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Folk</td>
<td></td>
<td>1</td>
<td>6</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Pop</td>
<td></td>
<td>4</td>
<td>-</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rap</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Reggae</td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>-</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Rock</td>
<td></td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>6</td>
</tr>
</tbody>
</table>
APPENDIX F

IRB APPROVAL MEMORANDUM

Date: 04/04/2018
To: Michael Kimbrough
Address: MUSIC SCHOOL
Dept.: MUSIC SCHOOL
From: Thomas L. Jacobson, Chair
Re: Use of Human Subjects in Research

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 04/02/2019 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Michael Kimbrough <mtk11@my.fsu.edu>
APPENDIX G

IRB PARTICIPANT CONSENT FORM

CONSENT FORM

Purpose of the Study: This is a research study whose purpose is to understand the effects of instrumentation and lyrical content on the perceived genre of 21st century popular music.

Participation: Participants will be asked to either listen to 3 different audio examples or read 3 different sets of lyrics. After listening/reading each example, participants will then be asked to categorize each example into a musical genre.

Time/Location: This is a relatively quick study and will only take 7-10 minutes to complete. On the second page you will find a list of times and dates in which the study will be conducted. Upon completing this consent form and submitting it back to the researcher, please also sign-up for a time and date to participate from the allotted list. All times are scheduled at a first-come, first-serve basis. The study will take place in HMU 211. ***All names and email addresses/FSU ID’s will be for the researcher only. This information will not be shared with anyone, at any time.***

Participation: Refusal to participate will involve NO PENALTY or loss of benefits to which the subject is otherwise entitled, and the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled.

Benefits/Risks: There are very few individual benefits to completing this study, and as this study is of extreme minimal risk, there are very few risks included. All musical recordings will be kept at an appropriate volume (chosen by the participant themselves), but there may be those individuals who are more sensitive to audio levels than others.

Contact Information:

Researcher: [Redacted]  Major Professor: [Redacted]
Email: [Redacted]  Email: [Redacted]
Phone: [Redacted]  Phone: [Redacted]
***For answers to pertinent questions about the research and research subjects' rights, and whom to contact in the event of a research related injury to the subject, please contact:***

**Human Subjects Office**

Phone: [Redacted]
Fax: [Redacted]
Email: [Redacted]

Print Full Name: _______________________________  FSU ID: __________

Sign Full Name: _______________________________  Date: __________

**Dates and Times:** All times for this study will take place between 8:00 AM and 12:00 PM, in 15 minute time-slots. (8:00, 8:15, 8:30, … 11:30, 11:45.) Please choose one time-slot on any day, Monday-Friday (though afternoons and weekends will be considered if those times are not suitable with your schedule). This information will be kept with the researcher; you will be receiving an email to your FSU address shortly before the scheduled time and date as a reminder. (Location: HMU 211 or otherwise specified area).
REFERENCES


Iero, F. (2014). She’s the prettiest girl at the party, and she can prove it with a solid right hook [Recorded by frnkiero and the cellabration]. On *Stomachaches*. [CD]. Belleville, New Jersey: Staple.


BIOGRAPHICAL SKETCH

Michael Kimbrough attended Florida State University as an undergraduate and received a Bachelor of Arts in Commercial Music, along with a Minor in Business. Through this degree program, Michael received his Avid Pro Tools User and Operator certifications. During his time as an undergraduate he also served as the Music Director for Coda A Capella and lead Coda to their first ever appearance at the International Championship of Collegiate A Capella (ICCA). Now as a graduate student, Michael holds a graduate assistantship within the College of Music and teaches all sections of MUS-3340. This course acts an introduction to Pro Tools through basic editing and mixing techniques via the use of MIDI technologies. Michael is also a member of Phi Sigma Theta National Honors Society, Sigma Alpha Lambda National Leadership and Honors Society, Delta Epsilon Iota Academic Honor Society, and the Pi Kappa Lambda National Music Honor Society.