WHERE’S THE ROCK? AN EXAMINATION OF ROCK MUSIC’S LONG-TERM SUCCESS THROUGH THE GEOGRAPHY OF ITS ARTISTS’ ORIGINS AND ITS STATUS IN THE MUSIC INDUSTRY

A thesis submitted in partial fulfilment of the requirements for the
Degree of Master of Arts in Geography,
Geographic Information Science

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May 2015
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Acknowledgements

I would like to thank my committee members and all of my professors at California State University, Northridge, for helping me to broaden my geographic horizons. Dr. Boroshaki, Dr. Cox, Dr. Craine, Dr. Davidson, Dr. Graves, Dr. Jackiewicz, Dr. Maas, Dr. Sun, and David Deis, thank you!
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This study explores the geography of rock music’s success in the continental United States for the period between 1964 and 2011. The origins of successful rock musicians are examined with relation to established music production centers and city populations. Through AOR (album-oriented rock), a radio-format genre, rock artists have found a vehicle for long-term prosperity that does not rely on immediate, short-term popularity. Music ranking charts and album sales data are used to gauge rock’s standing in the music industry. The findings indicate that rock artist origins have remained largely unchanged over time, and that successful rock artists still tend to cluster in areas near established music production centers. The modern music genre is seen as the latest iteration in rock’s evolution, and represents the beginning of a new rock geography, away from the established hotspots. Finally, rock’s music chart performance reveals long-term success through decades-old albums, while album sales figures show that rock consistently sells more albums than any other genre.
Chapter 1 – Introduction

The first known recording of sound was made in 1860 on a piece of smoke-darkened paper by Frenchman Édouard-Léon Scott de Martinville (New York Times 2008). It wasn’t until 2008, when the recording was played back for the first time by audio experts at the Lawrence Berkeley National Laboratory in Berkeley, California, that it was discovered to be a recording of a piece of music, a song (Morrow 2009). The technological advancements that have been made in sound recording and reproduction over the past century and a half are indeed astonishing. Today, music can be recorded and listened to in practically any place imaginable, and can be distributed literally in seconds, to any place on earth.

Since the 1930s, Billboard Magazine has been keeping a close eye on this distribution, mostly in the United States. The company tracks music sales, radio airplay, and digital media services, and ranks the most popular music on its charts (Molanphy 2013). To keep different styles of music separate, Billboard puts music into different categories, or genres. Of these genres, rock is at the core of this study, as it has a very long and powerful history, especially in American culture. It not only has its roots deep in American culture, but it has also given rise to many other types of popular music.

Since its birth in the 1950s, rock (or rock and roll as it was known then) has undergone many changes, but has always managed to survive and indeed to stand the test of time. Whether it was criticized socially, or pushed into chart obscurity by one-hit-wonders, rock has managed to persevere, often while keeping a low profile. This lack of visibility over the years has given rise to the phrase “rock is dead”, which revolves
around the idea that rock music is losing its popularity, and is dying out. However, the health of rock music (whether it is thriving, dying, or maintaining its standing in the music world) cannot be deduced simply by examining the popular music charts. Rock’s success depends largely on its long-term performance, not the weekly singles music charts. At the center of this success lies *album-oriented rock* (AOR), which is a rock sub-genre that consists of music that is performed by the artists who largely create it. The fact that AOR artists are largely responsible for constructing the music they sell, makes this genre more suitable for geographical analysis, than say, pop music, that is generally not composed by the performers. Studies have shown that rock artists’ origins tend to cluster around major music industry production centers. Since the music itself often reflects the geographic conditions surrounding its origins, it is worthwhile to examine possible relationships between album chart success and the geography of artist origins.

### 1.1 Purpose and Research Questions

The purpose of this thesis is to examine rock music’s success through its artists’ origins and rock’s standing in the music industry. More specifically, the geographic dispersion patterns of rock artist origins are analyzed and compared to the locations of major music production centers and city populations in the United States. Rock’s standing in the U.S. music industry is evaluated by examining rock’s share of the music charts and music industry revenues. To investigate, the following questions are posed:

- How are rock artist origins related to population sizes?
- How do rock artist origins compare to the origins of artists in other genres?
- How have rock artist origins changed over time?
- How do rock artist origins relate to the locations of major music production centers?
- How has rock’s share of the Billboard album charts changed over time?
- What share of the music industry’s total album sales are accounted for by rock?

Butler (1984) examined rock artist origins and dispersion patterns for the years 1954-1970 and found that there was westward expansion and concentrations of artist origins in highly populated music-producing cities across the United States. In measuring rock’s current status, and in support of my research questions, the geographies of rock artist origins and other popular genres are mapped for the period of 1964 to 2011. These origins are compared to each other and to major music production locations across the United States.

The commercialization of rock by the music industry has not worked in rock’s favor in the short-term, but has allowed its artistry to show through its long-term achievements. One way to measure the long-term success of artists’ music is to examine the success of their albums. AOR (album-oriented rock, as the term is used here), which was originally a radio format, refers to the product of musicians who write collections of songs with the intent of releasing them in an album format (Allmusic 2014). These albums are largely written and performed by the artists themselves, in sharp contrast to many singles artists in other genres who often do not write their own material. For this reason, I examine Billboard’s album charts, and analyze the share that rock has occupied over the years. As a final step, rock’s share of music industry revenues is analyzed through an examination of album sales across all major genres.
2.1 An Overview of Rock and Roll

Rock and roll music has evolved over the past sixty years, and it will undoubtedly continue to do so. Its roots are firmly planted in several music styles that preceded it, and it continues to give birth to new music styles and sounds. Over its history, rock and roll has been called many things, has called for many things, and has represented many things. From the expression of feelings, to the expression of political ideas, rock and roll has been with us at every step, sometimes taking on new form as a reaction, and sometimes causing a reaction. Its history is long and full of significant events, far too many to cover in this paper. However, the brief history given in this paper touches upon key factors and events that made rock and roll what it is today.

Disc jockey Alan Freed coined the term “rock and roll” (Palmer 1995; Urban dictionary 1 2014), but others used the term in various fashions earlier. As far back as 1951, Freed played upbeat records by black artists, and used the term when describing this music (Ford 1971; Rockhall 2014). In written form, the phrase was used as early as 1946, when Billboard, a music industry journal, used it to describe a popular rhythm and blues song (Woog 1999). However, there is evidence that the phrase has its beginnings as far back as the early part of the 20th century. In 1922, blues singer Trixie Smith sang a blues song called “My Man Rocks Me (With One Steady Roll)” in such a way that clearly emphasized “rock and roll” (Morrow 2009), which in black culture was slang that meant “having sex” (Palmer 1995: 8). As the century progressed, the phrase “rock and roll” became simply “rock” (Woog 1999). In 1971, Ford wrote that rock “is no longer a ‘lower class’ type of music associated with ghettos and greasy-haired hubcap stealers”,}

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and that “rock and roll brought real American music into the spotlight” (Ford 1971: 213). Forty-five years later, Ford’s (1971) words hold true, as rock music is indeed part of the establishment, and is the parent classification for many offspring.

Defining rock and roll is nearly impossible, and no standard definition for it exists (Weinstein 1991). It is a combination of its musical roots, cultures, and experiences that make it unique and practically indescribable. The music has to be experienced in order to be understood. However, some broad, vague definitions serve as a start to comprehending this music style.

One common definition is that rock and roll is simply music with a strong beat, and that it can be identified by the types of instruments it uses, namely electric guitars and basses (Britannica 2014). Another describes rock and roll as having multiple personalities, sometimes being silly pop, sometimes embodying the soul’s emotions, sometimes just junk, and sometimes artistically beautiful, powerful, and full of meaning (Woog 1999). Rock and roll musicians and their music’s transformative power have been described as dangerous and threatening to the established order, the status quo (Palmer 1995; Street 1986). Depending on point of view, of course, this can be a good thing or a bad one.

Personal definitions of rock and roll will never be the same, yet all can be true. The idea of what rock and roll is, and what it represents to each person, will be different. It can be seen as a tree with many branches, or as a river that is constantly mixing old stuff with new (Woog 1999). Musician Pete Townshend of The Who said, “rock won’t eliminate your problems. But it will let you sort of dance all over them”, and Jerry Garcia of the Grateful Dead characterized rock as “the background music for the events of my
life. My theme music” (Woog 1999: 8). As shown in the upcoming section of this paper, rock and roll is many things, and can be described in countless ways. Its boundaries are not clear-cut, and its sound cannot be identified by simply listing the instruments used in creating a particular piece of music.

2.1.1 History of Rock and Roll

Rock and roll’s ancestry can be traced to so-called roots music. Roots music is all the different music and styles that immigrants brought to America from different parts of the world. Black slaves from Africa brought their native sounds, as did the Irish, English, Germans and Poles, to name a few (Woog 1999). These styles of music, known as folk songs, carried the stories of their people, filled and sung with great emotion, and traditionally passed on orally from one generation to the next (Santelli et al. 2001; Friedlander 1996). Once in America, these folk songs began to influence one another, giving rise to new American styles of folk music such as gospel, country, Western swing, Cajun, Native American, and blues (Woog 1999; Santelli et al. 2001). Musician Bonnie Raitt insists that “without roots music, there would be no American music or modern popular culture today. No jazz, no rhythm and blues, no pop, no rock & roll… no rap.” (Santelli et al. 2001: 8).

From the many styles that developed out of this musical melting pot, one is of particular importance to this paper, the blues. The origin of the blues lies in centuries-old African tribal music that incorporated strong beats and syncopated rhythms, accompanied by powerful vocals and call-and-response chants (Friedlander 1996; Kallen 2012). As African slaves were brought to America, this style of music came with them, and was
modified to reflect their lives and help cope with their hardships. Call-and-response work and prison songs evolved into songs about disenfranchisement, poverty, racism, economic and other hardships, out of which the blues was born (Santelli et al. 2001). That African music’s strong beat, syncopated rhythm, and backbeat, which gave birth to the blues, is the musical foundation and heart of rock and roll (Friedlander 1996; Woog 1999).

2.1.2 Important events in Rock and Roll’s history

The 1950s are generally credited with giving birth to a new underground music that was called rock and roll (Friedlander 1996). Between 1953 and 1955, in what was the first of two generations of rock and roll pioneers, Chuck Berry, Fats Domino, Little Richard, and Bill Haley enjoyed great success on the music charts with recordings that mixed black and white musical styles (Friedlander 1996; Woog 1999). In contrast to this predominantly black group, the second half of the 1950s brought the second generation of rock and rollers who were all white and enjoyed even greater commercial success (Friedlander 1996). Elvis Presley had his first national hit in 1956 with “Heartbreak Hotel”, and was followed in 1957 by Jerry Lee Lewis, Buddy Holly, and the Everly Brothers with their own chart success (Friedlander 1996). Together these two generations were responsible for the explosive success of this new style onto the music scene, and are considered the first Golden Age of Rock and Roll (Palmer 1995).

In the late 1950s and early 1960s, the music industry found success in pop music (popular – with lighter themes, cleaner lyrics, and less sexuality) with good-looking teen idol groups like Frankie Avalon, female vocal groups like the Shangri-Las, and a wave of
surf music groups such as Dick Dale and the Del-Tones (Morrow 2009; Friedlander 1996; Woog 1999; Palmer 1995). However, an overwhelming outside presence was about to take center stage and re-invigorate America’s rock and roll passions (Friedlander 1996). In 1964, The Beatles, already popular overseas, made their first appearances in America, setting off what became known as Beatlemania (Woog 1999). Other groups from Britain, including the Rolling Stones and The Who, followed in what came to be known as the British Invasion (Friedlander 1996; Woog 1999).

By the late 1960s and into the early 1970s, rock and roll turned to just rock. That is, rock and roll was a term that now referred to the music the early, classic rock and rollers had produced, and rock was used to describe the new music (Woog 1999). Musicians and audiences were taking rock more seriously, both as art and as a form of expression, and as a result, the music enjoyed a newfound freedom to experiment with different instruments and lyrics (Friedlander 1996; Woog 1999). Two well-known music events occurred during this time. The Monterey International Pop Festival in 1967 was the first major rock festival, and the Woodstock Music and Art Fair in 1969, which remains the most famous of music festivals (Woog 1999). Both were significant in that they exposed this new rock music to large audiences, and that they were peaceful gatherings of large crowds, something that subsequently organized festivals failed to duplicate (Woog 1999).

Around this time, in the early 1970s, rock spawned another style of music, with a harder, rougher edge, known as hard rock or heavy metal (Weinstein 1991). The groups Black Sabbath and Led Zeppelin are considered to have fathered this type of music, and strong debate exists to this day with some calling the former the most influential, while
others regard the latter as the prototype band of this type (Weinstein 1991; Friedlander 1996; Woog 1999; Kallen 2012; Borthwick and Moy 2004). During the rest of the 1970s, audience demographics grew more diverse, as did their tastes in music. Many singer-songwriters such as Elton John and Neil Young emerged, as did many other musical styles (Friedlander 1996). From the mid-1970s through to the early 1980s punk rock had emerged with bands like the Sex Pistols and the Clash, and had given rise to new wave, which mixed elements from both punk and pop (Woog 1999).

As the 1980s rolled on, the corporate influence on the music scene became evident in dwindling sales, as music fans thumbed their noses at the rampant commercialization of rock. However, the resilience of rock and its ability to adapt allowed it to persevere once again and reinvigorate the industry. In this latest incarnation, the sound took an even harder turn from the heavy metal of the 1970s. Groups like the wildly successful Metallica, which paved the way for other bands to follow, played music as fast as possible, so fast that this style was called speed metal (Kallen 2012).

In the late 1980s and into the 1990s, music styles of all types were mixing and emerging as new styles. Under the catchall name of alternative rock, R.E.M. and other bands emerged that were largely independent of major record labels, and popular among college students (Kallen 2012). In Seattle, a new music style called grunge was created by bands like Nirvana, Soundgarded, and Pearl Jam (Kallen 2012). As the 20th century ended and the 21st began, music styles continued to mix, giving birth to new sounds. Rock has never been predictable, and trying to map its future course is simply impossible (Woog 1999). This is especially true considering the current state of technology.
(personal computers and the internet), which allows musicians to easily create and distribute their own music to audiences worldwide. Rock music now takes the shape of anything its creators and listeners want it to take, and “with tens of thousands of songs available at the click of a mouse, the words sung by legendary rocker Neil Young in 1979 are as true now as they were in the 1950s: rock and roll will never die” (Kallen 2012: 110).

2.1.3 Rock’s Influence

Rock’s perseverance can be attributed in large part to its ability to change and become relevant with the times, without losing its integrity. Along with giving rise to many other music styles and sounds, rock has also played a part in giving a voice to those who struggled to be heard. Whether it is a political voice, a human rights stance, or a humanitarian effort, rock has had some significant moments in history. These are just a few.

From its beginnings in the 1950s and 1960s, rock has had the ability to influence ideologies. Seen as a threat to the established order of things, rock went against popular opinion by providing a way to break down racial segregation. In America, rock and roll concerts were the first public functions to be racially integrated (Palmer 1995). From the mid-1960s and into the 1970s the freedom enjoyed by rock musicians allowed them to charge their songs with strong messages about political and social issues (Woog 1999). Aretha Franklin’s version of Otis Redding’s song Respect, helped strengthen women’s rights movements starting in the late 1960s (Morrow 2009). In 1976, Rock Against Racism, a movement in Britain started by artists of many types, including punk rock
musicians, was aimed at opposing fascist political groups such as the National Front party (Garofalo 1997).

Former Beatle George Harrison organized the now famous benefit concert for Bangladesh in 1971, setting a precedent for others like the 1979 MUSE (Musicians United for Safe Energy) concert in New York (Woog 1999; Beyondnuclear 2014). The 1980s saw more of these events including Live Aid, which raised money for famine victims in Ethiopia, Farm Aid, which helped struggling family farmers in the United States, and the Amnesty International Human Rights Now! Tour (Street 1986; Woog 1999; Friedlander 1996). The effectiveness of these events and movements may or may not have been immediately apparent, but in the long term, the effect they had in spreading awareness about these issues most certainly was. Considering that popular musicians’ faces and songs are recognized and recalled much more easily than those of politicians and their messages, the power and influence of music cannot be denied (Street 1986).

2.2 Genres

Simply put, a *genre* is a category. The term is typically used to describe art, literature, and music by style or content. Assigning a piece of music to a particular genre is not always clear, and can be quite arbitrary. Much of the music produced can be fitted into more than one category, and so it can belong to several genres simultaneously. In order to make sense of the vast amounts of music styles and sounds, some generalizations must be made by limiting the number of genres. That is not to say that any music is excluded from categorization, but simply encompassed by a wide-ranging genre.
The way that music is grouped also depends on who is doing the grouping. Billboard’s music charts list seven main genres: pop, country, rock, r&b/hip-hop, dance/electronic, Latin, and Christian/gospel. A category labeled “additional genres” includes blues, classical, jazz, and other smaller categories (Billboard 2014). Statista.com, an online resource for statistical analyses and studies, lists thirteen genres in their analysis of music sales: alternative, Christian/gospel, classical, country, dance/electronic, jazz, Latin, metal, new age, r&b, rap, rock and soundtrack (Statista 2014). In their 2013 U.S. music report, Nielsen SoundScan, which tracks music sales in the United States, lists fifteen genres: blues, children, Christian/gospel, classical, comedy, country, dance/electronic, holiday/seasonal, jazz, Latin, new age, pop, r&b/hip-hop, rock, and world (Nielsen 2014).

It must be noted that musicians themselves rarely use genre labels to categorize their own music. In the early days of rock’s life, genres were considered mainly by non-musicians as an easy way of examining music. Musicians, meanwhile, were busy “stirring Dixieland and surf music, rockabilly and r&b, pseudojazz and honky-tonk country and western into a big gumbo” (Palmer 1995: 6).

When looking over these various music categories, it is evident that the main players who keep track of these statistics, often agree upon certain fundamental genres. Yet, defining a genre is not an easy task, and is best done by giving examples of some of the artists that generally fall into one category more than another (see Table 1).
Complicating matters even further, there are numerous sub-genres, which separate these categories into even more specific areas. For example, Wikipedia (2014) lists 215 sub-genres of rock, which seemingly include a category for every imaginable sub-category. In their examination of popular music genres, Borthwick and Moy (2004) explain that these sub-categories are essential for the identification of what certain music represents. The generalizing main genres “such as rock or pop transcend historical epochs” whereas more specific ones “such as progressive rock or Britpop, do not” (Borthwick and Moy 2004: 3). The specificity that a sub-genre label brings to a music style is what ties it to the means of its creation and the circumstances of its place and time.

Because my research relies heavily on Billboard’s charts, and because the focus is on examining rock’s standing and popularity in today’s music scene, the main genres that will be examined in this paper are: pop, rock, country, r&b/hip-hop, jazz, and blues. The rock genre will include rock, rock and roll, hard rock, and metal. Although they are not
always bundled in the same group, the r&b/hip-hop genre will include rap music, as listed on the Billboard charts (Billboard (2) 2015).

2.3 The Billboard Charts

In the music world, when relating to the charts, it is understood that one is referring to the Billboard music charts. More specifically, the Billboard Hot 100 is the music singles chart that lists the most popular songs in the country every week, irrespective of genre (Molanphy 2013). For album sales, the Billboard 200 tracks the top two hundred albums every week, across all genres (Billboard (4) 2014). Although there are many other specialized charts produced by Billboard, they are not discussed here, since the two aforementioned lists are the main ones.

Billboard started out in the entertainment industry in 1894 as an advertising business, by posting weekly bills (or adverts), and over the next sixty years it would evolve into a magazine specializing in music and the music industry (Billboard (3) 2014). By the mid-1950s, the magazine had been tracking sales for nearly two decades, and in 1958 decided to pool their knowledge and data-gathering techniques to create the Hot 100, which tracked sales and play statistics from radio disc jockeys and jukebox operators (Molanphy 2013).

These charts were often criticized as biased due to their subjective nature and inconsistent data-gathering methods. For instance, at times only large market areas were monitored and not all markets, sales, or airplay data were included (Sernoe 2005). As technologies changed, Billboard adjusted their methods over the years in order to keep their charts relevant (Molanphy 2013). One major change came in 1991 when they
started using SoundScan to track music sales (Sernoe 2005, Molanphy 2013). SoundScan monitors music sales weekly by tracking barcodes from points of sale (Schmutz 2005, Nielsen 2014). With this more comprehensive data, Billboard’s charts shone new light onto the popularity of different genres and artists. This was especially relevant when looking at the success of artists who crossed over genre boundaries, and when examining non-mainstream genres that may have been misrepresented under the old system (Sernoe 2005).

In their continuing evolution, the Billboard charts changed in 1998 to include songs that were only played on the radio, and that did not have retail singles (Molanphy 2013). The launch of iTunes in 2003, a digital media service, lead to the inclusion of digital song sales to be considered in the charts by 2005 (Molanphy 2013). By 2013, streaming music services, such as Spotify, Rhapsody, and YouTube, which don’t actually sell music, have been tracked and included in the Hot 100 (Molanphy 2013).

The weekly album-tracking Billboard Hot 200 chart is compiled purely on sales of entire albums, whether they are purchased as hard copies or digital downloads (Billboard (4) 2014, Nielsen 2014). Worth mentioning here is Rolling Stone Magazine’s Greatest Albums of All Time, which lists what musicians and music industry insiders consider to be, the best albums ever produced (Rolling Stone 2012). The importance of this list is that it measures an album’s popularity among fans and critics through the years, and is not affected by fluctuations in fads and fashions. This is a crucial aspect of the longevity of music, especially rock, which is examined further in this paper.
2.4 Geographical Background

The main aspect of this research is the geography of music, specifically the changes in origins of popular and successful rock artists. As shown in the background section of this paper, rock’s ancestry lies in the blues, which has its roots in the African continent and is later mixed with other roots music of immigrants that came to America from different parts of the world (Woog 1999). From the late 19th century through to the mid-20th century, the southern parts of the United States, or simply the South, was the place where the blues began to evolve (Santelli et al 2001; Friedlander 1996). In fact, “cultural historians, folklorists, and sociologists have long recognized that most, if not all, American music originated in the southern region of the United States” (Nash 1996: 71). The early blues evolved in southern states like Texas, Louisiana, Mississippi, and Georgia, but also northward in states like Tennessee, Missouri, and Illinois (Evans 2001). Arkell (1991) explained the blues’ northward diffusion from the Mississippi basin as a reflection of African slaves’ movements from Southern plantations to Northern urban areas. However, due to geographic barriers that restricted travel, the styles that developed in the various locations were distinctly different and did not start influencing one another until later in the early 20th century when recorded music and radio allowed for the music to disperse more easily (Woog 1999). Since the period of interest in this research deals with the period after rock and roll was created, rock’s geography after the 1950s is examined.

The study of music geography by geographers is a relatively new phenomenon. Carney (1998) discusses the beginnings of this sub-field of cultural geography that occurred starting in 1968. Through 1974, several important papers were published on
topics surrounding music, including regional music, diffusion, origins, and spatial dimensions, which made such an impact that this new sub-field was born (Carney 1998). An example is Ford’s (1971) examination of rock and roll in America, where he explained the processes behind rock’s birth and eventual success. Ford (1971) looked at the cultural aspects of music origins, the diffusion processes of those cultural traits, and the acceptance or rejection of the music born from that culture. Still, in 1998, Carney contended that music geographers had just touched the surface of the vast amounts of music data that was available, such as roots music of many American cultural heritages and regions, and even stage and film music.

When considering origins of artists, Butler (1984) used the artist’s birthplace instead of locations where their records were produced, or places they may have moved to after becoming successful. Focusing on the geography of rock from 1954 to 1970, Butler (1984) looked at the spatial aspects of the evolution and dispersion of rock in the United States. One significant event was the legal removal of the American Society of Composers, Authors and Publishers’ (ASCAP) monopoly on music production, which was concentrated in New York (Ford 1971). This allowed the dispersal of rock production (including publication and recording) to other parts of the country (Butler 1984). A mapped comparison of two periods, 1954-1959 and 1960-1970 not only showed that rock artists were originating mostly from outside New York, but also clearly showed the westward spread of their origins, with Detroit, Chicago, Nashville, San Francisco, and Los Angeles as significant centers of rock (Butler 1984).

A study of world music production geography over a two-decade period found that although the artists originate from nearly every part of the world, the production
centers have clustered in major cities in the United States and Europe (Brandellero and Pfeffer 2011). In a case such as this, as it pertains to my research, the artist’s origin was the key variable. That is, when examining the geography of rock, the production location was not taken into consideration, as the main point was to map the dispersion of artist origins over the forty-eight year study period.

Nersesian (2013) examined the geography of music production with respect to the current state of technology. The question here was to see if the availability of low cost audio recording equipment, which allows musicians to record their own music at low costs, had taken away from the corporate music industry’s hold on production over a period from 1991 to 2010. Nersesian (2013) used data compiled from the Billboard music charts to map artists’ hometowns. The researcher found a clear lack of dispersion in music production, indicating that the music industry’s hold on the business was largely unaffected by the do-it-yourself musician/recording artist (Nersesian 2013).

McCarter (2012) used a different approach to analyze spatial and temporal properties of surf rock for the years 1962-1966. The researcher used surf rock songs that were popular on radio stations across the United States, and mapped their success over the period in question. The interesting thing in McCarter’s (2012) approach is that he used surveys that the radio stations themselves had conducted during the period in question, instead of using the Billboard charts. On one hand, this could be a limiting factor in that the data would be incomplete, but on the other hand, it provided a localized perspective from a city level instead of a national rank of popularity.
2.5 Radio and Album-oriented Rock (AOR)

Radio, of course, has been an integral part in the distribution of rock and roll since the mid-20th century. It is still the way millions of people in the United States are exposed to new music, which is why Billboard continues to include radio airplay when it tallies popular music charts (Molanphy 2013). Palmer (1995) pointed out that in the 1940s and 1950s when rock and roll was forming, disc jockeys on local radio stations played whatever their audiences wanted to hear. Morrow (2009) discussed the fact that AM radio’s two and a half minute format created an environment that nurtured short-format songs by unknown artists known as “one-hit-wonders”.

Eventually FM radio, that did not conform to the short format of AM, “proved to be an ideal medium for the long song tracks and high-fidelity recordings released by rock artists” (Morrow 2009: 173). By the 1970s, rock bands were finding great success in album sales without making many appearances on the singles music charts. They had found a home on FM radio where the longer, more intense songs from their albums would be played in a new radio format called album-oriented rock (AOR), which resulted in the opposite of the one-hit-wonder, helping to create long term careers for artists, and growth in the industry (Morrow 2009; Keightley 2004).

Schmutz (2005) examined the retrospective cultural consecration of albums, which is the process by which albums become so important to a culture over time that they reach a sacred or pure artistic standing. *Rolling Stone Magazine’s 500 Greatest Albums of All Time*, published in 2003, provided the list of albums from which Schmutz (2005) chose a sample. His research attempted to find what variables of early success might indicate that an album would make it onto the 500 list. He looked at whether an
album had received professional recognition by way of a Grammy nomination, popular recognition by seeing if the album had reached the number one position on the Billboard album charts, and/or critical recognition by whether or not the album had appeared on Village Voice critics’ list of top 20 albums (Schmutz 2005). Schmutz (2005) found that the strongest indicator of an album’s consecration is critical recognition, and that popular success, as measured by the Billboard charts, is less related.

It is worth mentioning here, that the success of rock music is rooted in the early 1950s. Rock and roll became the leading music genre through radio airplay and 45-RPM records (the 45) (Mabry 2015). Invented by RCA in 1949, the 45-RPM record format had better sound quality than its predecessors, the 78-RPM and 33 1/3-RPM records, and allowed music to spread more easily (Peneny 1998, Mabry 2015). Their smaller physical size made them cheaper and easier to ship, and was ideal for fitting more songs into the new-format jukeboxes that were becoming popular throughout the United States (Katuna 1998, Scaruffi 2009). Helping this distribution was the fact that RCA sold its record players at very affordable prices in order to boost sales of the 45s (Mabry 2015). Even though the 45s had a shorter playing time, their portability made them ideal for the quick release and distribution of popular music, whether it was through jukeboxes or personal record players (Mabry 2015).

My research examines the success of rock through its longevity. That is, rock’s staying power is not immediately evident in the popular singles charts, and must be gauged by other factors. Although rock’s long-term success began with the popularity originally achieved in the 1950s with the 45s, it is the longer format of FM radio that is of interest here. AOR (album-oriented rock), which flourished in the late 1960s and early
1970s, is a key component in my study because its format provides artists a medium of expression through which they can write and perform their own music. For this reason the Billboard 200, which charts *album* success, was used to examine the changing geography of successful artists’ origins over time.
3.1 Billboard data

The music artist data for this project was obtained from the Billboard 200 album charts. This chart tracks the top two hundred albums every week, across all genres (Billboard (4) 2014), and is based on sales in the United States. For this analysis, the top one hundred albums of each year for the period of 1964 to 2011 (48 years) were compiled in a Microsoft Excel spreadsheet. Additional data necessary for this project was obtained from ESRI. These included city and state shapefiles, and basemaps necessary for the analysis.

The information obtained from the Billboard 200 charts included the name of the album, the artist, and the year in which the album made the chart. In order to separate and categorize this data, each of the 4,800 albums in the dataset was looked up individually on the Wikipedia website in order to obtain the artist origin and genre categorization. Since many artists and albums fall into more than one genre, the decision was made to use the first genre listed in their background information, which is the one the artist or album is most closely identified by (figure 1). This resulted in 173 different genres and 1,563 artists, whose origins were entered into the spreadsheet using city, state, and country attributes.
Some of the entries were omitted for various reasons. Albums that were
categorized as soundtracks, compilations, or collaborations were not used, as a single
origin could not be determined. Some albums were not included due to the lack of
available data, while a few duets were also omitted because a single definitive artist
origin could not be identified. As a result, the dataset was reduced by 428 records,
leaving 4,372 albums.

Many albums were removed from the dataset because their artists originated in
countries other than the United States: 688 entries from the United Kingdom, 145 from
Canada, 59 from Australia, and 158 from various other countries. Because the analysis
was for the 48 continental United States (the lower 48), 18 albums with artist origins from Alaska and Hawaii were also excluded, bringing the total number of albums left for analysis to 3,304, by 1,096 different artists.

3.2 Methodology

Because this project examines rock music, and because radio has played a major role in the distribution of rock, the radio format AOR (album-oriented rock) was used to classify the rock albums in the dataset. As such, all albums were reclassified into seven radio-format genres: adult contemporary, AOR, country, jazz, modern, r&b/urban, and top 40. The 173 original genres were reclassified into the radio format they are most frequently associated with. An eighth category, other, was created to hold the albums that did not fit into any of the seven main genres. Some examples are comedy, film score, and Latin pop albums.

Using a pivot table in Excel, every record in the dataset was checked for accuracy, specifically for spelling errors in the artists’ names and cities of origin. The city names were especially important because they would be used as the matching criteria during the geocoding process. Using Esri’s ArcMap 10.1 software, the dataset was geocoded in order to place the artists’ cities on the map properly. Geocoding the artists ensured that they were referenced to the correct city, as several cities with the same name exist in several states. A custom address locator was created in ArcMap that matched the artists’ cities of origin by matching both the city name and state which had been previously entered into the datasheet. The resulting geocoded layer was exported into to a file geodatabase that would hold all subsequent shapefiles and tables.
A new map document was then created in ArcMap, with a projected coordinate system of NAD 1983 Contiguous USA Albers applied to the data frame. A layer containing the shapes of the 48 continental United States was added, as was the geocoded artist origins layer mentioned above. Both layers were projected in the same coordinate system as the data frame, which had a linear unit of meters, and allowed further geoprocessing to be conducted accurately. For verification purposes, a basemap was temporarily added as a layer in order to confirm that the geocoding and projection had placed the city points accurately.

As a first step, the entire dataset was separated into genres using the *select by attributes* tool in ArcMap. This resulted in seven layers, one for each genre, which included all years in the dataset, 1964-2011. Each of these layers was then separated into 5-year periods, with the exception of the first and last periods which contained two and one extra years respectively (1964-1970, 1971-1975, 1976-1980, 1981-1985, 1986-1990, 1991-1995, 1996-2000, 2001-2005, and 2006-2011).

Because several artists originated from the same city, the depiction of the number of artists on each city point on the map was not representative of the total count of artists originating from that city. To make this clearer, the *collect events* tool was used on each layer. This procedure counts the number of events (in this case, artists) that are located on the exact same point on the map (in this case, cities), and produces weighted points which are shown as graduated symbols. The higher the number of artists that come from a city, the larger the symbol will be. For example, while there were 116 albums whose artists originated from Los Angeles, and only three from Santa Monica, the red dot depiction on the map showed all cities in the same fashion. When classified with
graduated symbols, the difference in the number of artists is shown with the larger yellow marker (figure 2). This allowed for an initial visual analysis of the data. Another advantage of this procedure was that the resulting layer containing the collected events had a count column in its attribute table showing the number of events occurring on each point (artists in each city). It should be noted that an artist was counted as an event once for every time one of their albums made the top 100 in the Billboard 200 album chart.

For a more visually appealing representation of artist origins, and for a more effective way to identify hotspots in the data, the kernel density tool was used on each of the collected events layers. For this procedure, an output cell size of 1000 was used with a search radius of 200 kilometers. A raster analysis mask of the 48 continental United States ensured that the output was clipped to within the U.S. borders. The output kernel
density raster layers were then classified using the *quantile* classification method with 9 classes, and the “slope” color ramp, running from green for cooler areas (fewer artists), to red for hotspots (more artists). The above parameters allowed for effective visual representation of the data, and kept processing time down to a manageable level (figures 3 & 4).
Figure 3. All artist locations shown as points

Figure 4. Kernel density map showing all artist hotspots
In order to look for overall changes in artist origin patterns, the *mean center* and *
directional distribution* (standard deviational ellipse) of each period were also mapped. 
The mean center shows the location of the geographic center of all the features, in this 
case the artist origins. The directional distribution ellipse shows the central tendency of 
the features, as well as their dispersion and directional trend. These two methods allowed 
for a generalized analysis of the shifting patterns in rock artists’ origins between each 
period (see section 4.2).

A population map of the United States was used to evaluate artist origins with 
respect to city populations. Using the same procedures as with the above data (collected 
events and kernel density) the population map was produced for analysis of the 
relationship between hotspots in artist origins and population size of U.S cities (figure 5).

![Population - Hotspots](image)
Additionally, the raster calculator tool was used to perform map algebra operations on the population map and the hotspot map depicting all artist origin locations. This resulted in a map that showed areas of lower population with high numbers of artists, and higher population with low numbers of artists. Three cities were subsequently chosen as case study subjects.

3.3 Butler’s data

Butler’s (1984) article included two maps depicting rock and roll artist origins. The first covers 1954 to 1959, while the second is for the period from 1960 to 1970 (figures 6 & 7). In order to have something to compare the maps produced in this project to, Butler’s (1984) maps were digitized so that spatial analysis could be performed on them in a similar fashion that the Billboard data was analyzed with (figures 8 & 9).
Figure 6. Butler’s original map 1954-1959

Figure 7. Butler’s original map 1960-1970
Figure 8. Butler’s 1954-1959 map digitized and geocoded

Figure 9. Butler’s 1960-1970 map digitized and geocoded
For both of these maps, the procedure was the same. A spreadsheet was created with columns for city name, state, and count. For every city listed on Butler’s (1984) maps, the number of points corresponding to that city were added up and input into the count column. If a city was not named, the tallied points for each state were assigned to a major city within that state. For example, the three points in the state of Arkansas were assigned to the city of Little Rock. Both the above tables were subsequently imported into the working ArcMap document, were geocoded, and then projected to match the working data frame. The same procedures were performed as on the Billboard data (mean center, directional distribution, and kernel density) in order to produce maps that could be compared and analyzed in a similar manner.

3.4 Map design

The analysis portion of this project relied heavily on visual interpretation of the data. The maps, therefore, were created with the intent of representing the dataset clearly, without unnecessary elements. Initial data manipulation done in ArcMap produced the base maps showing the cities and hotspot locations. These maps were exported and adjusted in Adobe Illustrator vector editing software. For the initial analysis (section 4.1), the only adjustments made were to the city names. That is, major cities in and near hotspot locations were labeled so that they would be easily discernible on the smaller scale maps used in that section.

In section 4.2, the kernel density maps were symbolized using standard deviation stretched values, instead of the quantile classification used in section 4.1. With this scheme, the cooler areas (few or no artists) are shown in blue, while the hotspots are still
shown in red. This symbolization method accentuated the areas with higher artist concentrations, and minimized the depictions of the mid-range areas, allowing for better identification of the major hotspot locations. Additionally, a workflow was established between ArcMap, Adobe Illustrator, and Adobe Photoshop that allowed further adjustments to be made to the final maps. Some of the cartographic design adjustments included a visual hierarchy for labels, transparency adjustments, and the addition of shaded relief layers that allowed the physical geography to be examined. An example showing the difference in the two map styles can be seen in figures 10 and 11 below.
Figure 10. AOR hotspots using quantile classification

Figure 11. AOR hotspots using stretched values symbology
3.5 Rock’s share of the charts and revenue

Since the dataset used in this study was not exclusive to rock artists, it allowed for the comparison of rock’s album chart performance against the other genres. Using pivot tables in Microsoft Excel, the number of albums that made the top 100 in the Billboard album charts was separated and plotted for every year from 1964 to 2011 (section 4.3). Additionally, charts showing album sales for the years 2008-2012 were created with data acquired from statistics portal, Statista.com. The analysis and comparison of these two datasets allowed for the evaluation of rock music’s current standing in the music industry.
4.1 Initial analysis

As a first step in analyzing artist origin patterns, all genres in all years were mapped together using the kernel density tool, and compared to a population map. At first, these two maps appeared to be very similar in hotspot activity. That is, the concentrations of artist origins seemed to coincide with the population size of cities (figures 12 & 13).

However, examination of the map produced by the raster calculations indicated that this was not always the case (figure 14). Several locations were observed showing lower population with a high numbers of artists (red areas), and higher population with low numbers of artists (blue areas). Many of these areas were near cities with large populations and large numbers of artists. The

Figures 12 & 13. All artist hotspots (top); city population hotspots (bottom)
pattern observed here was that diffusion of population away from hotspot centers was much less than that of artists. That is, artists tend to remain clustered near large population centers, and as distance increases away from these centers, the number of artists is reduced much more rapidly than population size.

After breaking down the dataset by genre, for the entire period under study, it became increasingly evident that the number of successful artists was not necessarily related to city population size. Figures 15-21 show the hotspots of artists in each genre.
Figure 15. Adult contemporary hotspots - all years

Figure 16. AOR hotspots - all years
Figure 17. Country hotspots - all years

Figure 18. Jazz hotspots - all years
Figure 19. Modern hotspots – all years

Figure 20. RnB/urban hotspots - all years
With these seven genre maps, each covering 1964 through 2011, it was possible to conduct an initial inspection of artist origins, and identify any similarities or differences. Over the 48-year period, some initial trends in artist origins could be identified. All maps showed hotspot locations in the Los Angeles and New York areas, with the exception of country, which had low numbers coming from both these locations. Other major cities indicated hotspots of origins, but not all genres showed up in those cities. A general trend was that all genres showed more activity in the eastern half of the United States. This is not at all surprising, as many early music production centers were located in this eastern part, such as New York, Philadelphia, Detroit, Chicago, Memphis, and Nashville.
Similarities in hotspot location patterns were found between the AOR, r&b/urban, top 40, and modern genres, but with varying intensities. The distribution of country music’s hotspots stood out more than any other genre, as its artist origins were clearly concentrated in the southern states. There were also many locations on these maps showing low to moderate levels of artist origin concentrations. From this broad view of the mapped data, some areas were identified for further analysis, and since rock music is the focus of this paper, the AOR patterns were analyzed more closely.
4.2 Analysis of AOR artist origins

4.2.1 1940 to 1970

In the 1940s, the breakup of the ASCAP’s (American Society of Composers, Authors and Publishers) monopoly on music production in New York allowed music creation and distribution to expand westward (Ford 1971). By the mid-1950s, there were other music production centers in direct competition with New York, such as Nashville, Memphis, Detroit, Chicago, Los Angeles, and San Francisco (Ford 1971; Butler 1984). When examining the period 1954-1959 in rock and roll artist origins, Butler (1984) found that the dominating states were the southern and southwestern ones. During the period 1960-1970 however, more dispersion of artist origins occurred, with Philadelphia, Detroit, and Los Angeles gaining prominence (Butler 1984). This can clearly be seen by looking at the mean center and directional distribution map derived from Butler’s (1984) data (figure 22).

Figure 22. Butler’s data. Mean centers and directional distributions: red: 1954-59; green: 1960-70
My analysis began with the examination of AOR artist origins in the period between 1964 and 1970. By looking at the mean center and directional distribution of artist origins in this period, it became more evident that the geographic distribution of artists was indeed spreading westward between the New York/Philadelphia and the Los Angeles/San Francisco regions. This distribution was also much narrower in the north/south direction, indicating a departure from Butler’s (1984) earlier distribution curves which showed the concentrations of talent in the southern states (figure 23).

Figure 23. AOR artists: mean center and directional distribution 1964-1970
The hotspot map derived from my dataset was compared to the map derived from Butler’s (1984) data showing the concentrations of rock artist origins (figures 24 & 25). The New York, Philadelphia, Los Angeles, and San Francisco regions showed up as hotspots in both maps, but there were some differences. Butler’s (1984) map showed several areas with moderate to high concentrations of artist origins in the southern states, where my map did not show any. In addition, one major hotspot that was prominent on my map but not shown on Butler’s (1984) was Hibbing, Minnesota. This variation may be because we used different data sources, and/or the manner in which I reclassified my original dataset. This may also be attributed to the fact that his analysis included four more years (1960-1970) than my map (1964-1970).
Figure 24. Butler 1960-1970 hotspots

Figure 25. AOR 1964-1970 hotspots
4.2.2 1971 to 2011

The next forty-one years (1971-2011) were then mapped and examined for similarities and patterns of AOR artist origins. The directional distribution curves for this period showed a slightly less east-west pull than did the 1964-1970 data, which represented the strong initial stages of artist origin dispersion away from the eastern and southern United States to California (figure 26). The locations of the mean centers indicated that artists were originating in comparable numbers from both the east and west parts of the country, something that was verified with the subsequent examination of the hotspot maps (figures 27-34).

Most major centers of music production remained constant hotspots over this period, while a few were not shown in all periods. The Los Angeles area had a strong presence as a hotspot throughout the analysis, while the New York area showed a slightly weaker position between 1996 and 2005. The San Francisco region was also a major contributor with a strong presence throughout, only showing a slight decline in rock artist origins in the period from 1991-1995.
In all periods, the AOR artist hotspots were mostly on the east and west coasts, with significant contributions from the northern parts around the Great Lakes, and moderate contributions from the southern states. The Detroit/Chicago area had a strong presence on the maps through 1985, and showed some southward expansion from 1981 to 1990. However, from 1991 to 2000 the Chicago area did not contribute any artist to my dataset, while the Detroit area showed a significant drop from 1991 to 1995. Both regions showed signs of recovery, and by 2011 were moderately strong hotspots of rock artist origins.

In the South, AOR origins exhibited low to moderate hotspotting throughout this period. The states that AOR artists came from fluctuated, as did the number of artists coming from those states. An obvious example was Texas which had a moderate to high showing from 1971 through to 1995, but then from 1996 to 2011 had no rock artists originating from anywhere in the state.
Figure 27. AOR 1971-1975
Figure 31. AOR 1991-1995
Figure 34. AOR 2006-2011
4.2.3 Case studies

With these origin maps laid out in succession alongside the population map, an effective visual inspection of their respective hotspots was possible. Among several potential candidates for inspection, three cities stood out and were chosen for further examination. Seattle, WA, Hibbing, MN, and Miami, FL presented interesting questions concerning their over/under representation in the dataset.

Seattle was a presence from 1971 to 2000, but showed no activity since then. In 1971, the only rock artist from Seattle to make it onto the album charts was Jimi Hendrix. For the rest of the 1970s through to 1990, the band Heart represented the city well with several records that made the album charts. From 1991 to 1996, the bands Alice in Chains and the Presidents of the United States of America kept the city on the map.

When comparing the entire AOR dataset (1964-2011) and population hotspot maps, Seattle had a moderate to high presence in both (figures 35 & 36). If a city’s population size were an indication of that city’s contribution of rock talent to the music world, it would follow that Seattle would be a major contributor of rock artist origins throughout this period. However, its moderate contribution of rock artists from 1981 to 1996 eventually dwindled to nothing between 2001 and 2011. Having experienced the explosion of grunge, a new music style produced by bands from the Seattle area during the mid-1980s through the 1990s, I was expecting to see this city as more of a contributor to the album chart success of AOR. However, many of the popular artists that came out of the Seattle grunge scene in that period were classified as alternative rock, were subsequently put into the modern music genre, and thus do not show up in the AOR artist origin maps.
Figure 35. AOR - 1964-2011 hotspots

Figure 36. City population hotspots
Seattle’s contribution to rock’s album chart success was indeed greater than the maps showed. After revisiting the data tables, it was determined that 21 albums that charted were not attributed to rock artists because of genre re-classification. The bands Candlebox, Foo Fighters, Pearl Jam, Soundgarden, and Temple of the Dog, which had great album chart success between 1992 and 2011, were classified in the *modern* genre because they are primarily identified as *alternative rock*. Additionally, the band Nirvana, which was a major contributor to the grunge movement, was also classified as *modern*. Although the band’s origin is Aberdeen, Washington, the city’s proximity to Seattle would have caused a more intense hotspot in that area, had it been classified as AOR.

Another hotspot that showed up on the AOR map for the entire period, but was not represented in all of the 5-year maps, was Hibbing, Minnesota. Unlike Seattle, Hibbing did not exhibit hotpotting in the population map, but showed a moderate contribution of rock artists. This gave the impression that several AOR artists from this city may have been successful over the 48-year period in this study. The 5-year maps showed activity in Hibbing from 1964 to 1980, showed no activity from 1981 to 2005, and a low-moderate hotspot again in 2006. The dataset revealed that all of the activity on the charts credited to the city of Hibbing was due to a single artist, Bob Dylan. Dylan had successful albums from 1965 to 1976, only failing to chart in 1971 and 1973. From his successful 1976 album charting, 30 years went by until his next album charted in 2006. Further review of the data revealed that Dylan was the only artist from Hibbing to contribute to the album charts, regardless of genre.

The final city chosen for closer examination was Miami, Florida, where the opposite pattern to Hibbing was observed. The city’s population was a major hotspot, but
no AOR artists originated there. A closer look at the dataset confirmed that there were no rock artists from Miami to make the album charts in the entire dataset, and that re-classification of artist genres to the radio-format genres was not the cause, as it was with the Seattle bands mentioned above.

Unlike Hibbing, however, Miami has made several contributions to other genres over the years. When looking at the genre hotspot maps, the city is well represented in the jazz, r&b/urban, and top 40 genres. Additionally, the other genre, which includes Latin pop, accounted for over half of Miami’s album chart success, with the main contributor being Gloria Estefan and the Miami Sound Machine.
4.3 The current state of rock music

In addressing the question of rock’s current standing in the music industry, two aspects were examined: rock’s share of the album charts over the forty-eight year study period, and rock’s recent album sales. The album data was plotted on a line chart, which showed the number of albums that made the top 100 album charts by each genre for each year (figure 37). AOR’s (rock) meteoric rise can be seen from its beginnings in 1965 to its album chart peak in 1971 (blue line in chart). After a small drop during the period from 1972 to 1975, AOR enjoyed great chart success through to the early 1990s, when fewer of its albums were making it onto the charts. Since then, AOR’s share of the album charts has remained low through 2011.

As mentioned in earlier sections of this paper, genre re-classification has been a possible factor in the chart performance of the different genres in the dataset. A closer look at the line chart in figure 37 revealed the rise of the modern genre (yellow line) during the same period that AOR began to drop in the early 1990s. The subjective nature of genre classification is indeed a factor that must be taken into consideration, especially
when artists fall within the boundaries of several genres. In the case of the modern genre, I believe that all of the artists falling within that genre in my dataset should be classified as rock artists. If this were the case, AOR’s album chart success would have continued to be strong through to the end of the study period, being surpassed only by the r&b/urban genre, which has been very prominent on the album charts since the early 1970s. When combined, the AOR and modern genres (blue line in figure 38) had a significantly stronger standing in the album charts through 2010, before showing a noticeable drop in 2011, as they did when they were shown separately.

![Number of Albums in the Top 100 (by year)](image)

*Figure 38. Number of albums that made the charts, by genre. AOR and modern genres combined*

Both of the above line charts indicated that since the early to mid-1990s, the strongest competition for AOR had been r&b/urban. When analyzing the first line chart, before the combining of AOR with the modern category (figure 37), rock had strong competition from the country, top 40, and modern genres from the late 1990s through
2011. The question here was whether this downturn in AOR’s chart success had affected its share of music industry revenue. To find out, recent album sales were analyzed.

Album sales data for a 5-year period covering the later part of my dataset, plus one more year, were plotted and analyzed. Figure 39 shows the number of albums sold (in millions of copies) in the United States for the period from 2008 to 2012. It was immediately apparent that the rock (AOR) genre had sold the most albums in all five years. Since the genres listed by the source (Statista 2015) had a slightly different breakdown than the ones used in my classifications and in the chart performance figures, a reclassification was performed (figure 40). With the categories now matching those used throughout this paper, it was again evident that AOR had the strongest album sales among all other genres in the dataset. As a final step, the AOR and modern genre sales
numbers were combined, showing again that rock’s revenues far surpassed those of any other genres in the dataset (figure 41).

Despite rock music’s drop in album chart performance, the fact that it is still in the top position in album sales is a testament to its long-term success. An examination of the current (4/5/2015) Billboard 200 album chart suggests that AOR still has a strong presence, albeit with entries mostly in the bottom 100 chart positions, which are not
accounted for in my dataset. All of the eighteen AOR albums that were found in the current chart included music that was recorded over twenty years ago, with some dating back to over forty years (table 2).

<table>
<thead>
<tr>
<th>Artist</th>
<th>Album</th>
<th>Year Released</th>
<th>Current Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Led Zeppelin</td>
<td>Led Zeppelin IV</td>
<td>1971</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Elton John</td>
<td>Goodbye yellow brick road</td>
<td>1973</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Pink Floyd</td>
<td>The dark side of the moon</td>
<td>1973</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Led Zeppelin</td>
<td>Physical Graffiti</td>
<td>1975</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Fleetwood Mac</td>
<td>Rumors</td>
<td>1977</td>
<td>bottom 100</td>
</tr>
<tr>
<td>AC/DC</td>
<td>Back in black</td>
<td>1980</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Metallica</td>
<td>Master of puppets</td>
<td>1986</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Metallica</td>
<td>Metallica</td>
<td>1991</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Nirvana</td>
<td>Nevermind</td>
<td>1991</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Creedence Clearwater Revival</td>
<td>Chronicle: 20 greatest hits</td>
<td>1976</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Fleetwood Mac</td>
<td>Greatest Hits</td>
<td>1988</td>
<td>top 100</td>
</tr>
<tr>
<td>Journey</td>
<td>Greatest Hits</td>
<td>1988</td>
<td>top 100</td>
</tr>
<tr>
<td>Eagles</td>
<td>The very best of the Eagles</td>
<td>2003</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Queen</td>
<td>Greatest Hits (1973-1982)</td>
<td>2004</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Guns N' Roses</td>
<td>Greatest Hits</td>
<td>2004</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Lynyrd Skynyrd</td>
<td>Family (hits)</td>
<td>2006</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Bob Seger &amp; the Silver Bullet Band</td>
<td>Ultimate Hits</td>
<td>2011</td>
<td>bottom 100</td>
</tr>
<tr>
<td>Foo Fighters</td>
<td>Greatest Hits</td>
<td>2011</td>
<td>bottom 100</td>
</tr>
</tbody>
</table>

Source: (Billboard (2) 2015) Accessed 4/5/2015

Table 2. AOR artists currently on the Billboard 200 album chart

The presence of these AOR artists and albums on today’s charts shows that rock’s success does not lie in short-term popularity. As evidenced by the number of units sold, AOR’s sales are spread over many different artists and albums, which results in modest album sales figures and sparse showings on the Billboard Album charts. The question of whether the downturn in AOR’s chart success has affected its share of music industry revenue has thus been answered.
Chapter 5 – Discussion

5.1 Addressing the research questions

When considering population size in relation to concentrations of rock artist origins, the findings are mixed. Although high numbers of artists did originate in highly populated areas, not all places with large populations produced successful rock artists. This was shown in the case studies involving Hibbing, MN and Miami, FL.

The origins of artists from all genres considered in this study showed a similar pattern of having more locations in the eastern half of the United States. Although Los Angeles and other cities in the west were shown in many of these maps, they accounted for fewer locations. The r&b/urban and top 40 genres showed similar patterns of artist origin locations to those of AOR, primarily due to their wide coverage areas. Once again, the size of populated areas was not necessarily related to concentrations of artist origins.

However, the examination of the changing origins of rock artists over time indicated that these origins were more evenly distributed between the east and west parts of the country. After Butler’s (1984) assessment, which showed the mean center of rock artist origins moving from the southern states northward and with a westward dispersal, my analysis indicated that over the study period, rock artists were originating in similar numbers from the eastern and western United States. The directional distribution curves showed an initial pull toward the west coast between 1964 and 1970, but a more even east/west distribution in the subsequent periods. Only the latest curve, which showed the years 2006-2011, indicated an eastward trend.

Throughout the analysis, the more intense hotspots of rock artist origins were near many of the established major music production centers first identified by Butler (1984).
The Chicago, Detroit, Philadelphia, and San Francisco areas were contributors for most years included in the study period, albeit with varying intensities, while the Los Angeles and New York areas had mostly strong showings. The Memphis and Nashville areas, however, made few contributions to the AOR genre. Over the entire study period (1964-2011), many cities outside the aforementioned hotspots made significant contributions of rock artists, but the results are in line with previous studies that show clustering of artist origins around major music production centers.

Rock’s standing in the music industry has been proven strong, even though it may not be immediately apparent. Examination of the number of albums from each genre to make the top 100 in the Billboard album charts revealed that rock (AOR) had great success from the late 1960s through to the early 1990s. Since then, the number of rock albums to make the charts reduced dramatically, but the modern genre’s chart success improved considerably. When the issue of genre classes and re-classification was addressed, and it was determined that these two categories should be combined, AOR’s album chart performance continued to be strong until 2011.

Recent album sales figures showed that, even without being combined with the modern genre, rock sold more albums in the United States than any other genre. A recent examination of the Billboard 200 album charts revealed that rock albums were indeed present on these charts; however, most appeared in the bottom 100, which was not part of this study. All of the AOR albums listed include music that was recorded over twenty years ago, with some dating back to over forty years. This is exactly where rock music’s success lies. These AOR albums may not exhibit great success in the short-term, but remain popular in the long-term, selling consistently over the decades.
The examination of rock artist origins in this study found that since the initial dispersion of origins away from New York in the 1940s through to 1970, the geography remained largely the same. Although there were some outliers, the origins of successful rock artists tended to cluster around the same geographic locations over time. Areas around major music production centers were hotspots for rock artist origins, and the numbers of artists originating from the eastern and western U.S. were similar.

I believe that the artists originating in hotspot areas are producing music that is more in line with the established sound there. Artists that come from outside these areas are more likely to have a new and different sound. A comparison of the AOR and modern genre maps for the entire study period showed that modern music artists are increasingly originating in areas outside rock’s established production centers (figures 42 & 43).
Figure 42. AOR hotspots - all years

Figure 43. Modern hotspots - all years
Many of the moderate AOR hotspots showed an increasing intensity in the modern genre maps, while some of the more dense AOR hotspots showed significant dispersal to surrounding cities and states in the modern genre. This is the new geography of rock.

The modern genre should be combined with AOR, as the former is simply the next iteration in rock’s evolution. The analysis of rock’s standing in the music industry showed that rock’s success doesn’t lie in short-term chart popularity, but in its ever-evolving and expanding sound. This is evidence enough to answer the research questions put forth by this study, as well as to refute the notion that “rock is dead”.

5.2 Limitations and further study

Problems encountered during this project include issues of time and financing that are often found in studies at this level. One major issue was that of the available data. Although the dataset used had a manageable size and was suitable for analysis, more detailed data would allow for a more in-depth study. Further study would benefit from including the entire Billboard 200 album chart, as well as more extensive and detailed historical sales data.

However, the main limitation in this study was genre classification. Whether it is done by companies like Billboard or Wikipedia, or by someone conducting thesis research, at some point a decision has to be made on which genre an artist should belong to. The subjective nature of this procedure can result in dramatic differences in the outcomes of analyses, as was seen in the case of AOR and the modern genre.
Reference


