Original Paper

How the Titles of Popular Songs have Changed

over the Last 60 Years

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Abstract

Billboard magazine has been keeping track of the 100 hottest (most popular) songs of the year since 1958. Lists of the Hot 100 titles from 1960 to 2019 (6001 titles) were used to study the way in which popular song titles changed over time. Based on significant polynomial regression trends and significant results from a discriminant function analysis, it is concluded that there were three main phases in titles (early, middle, and late) and that these phases differ in predictable manners in terms of stylistic features such as length, abstraction, activity, and the use of the word "love". Early phase titles are longer, more concrete, more passive, and they do not use the word "love" often; middle phase titles are of medium length, more abstract, of medium activation, and use the word "love" frequently. Titles of the last phase are shorter, more concrete, more active, and do not often employ the word love. A possible factor contributing to these differences is the rise in popularity of rock and roll and hip-hop respectively and their different periods of ascendency.

Keywords

titles of popular songs, Billboard Hot 100, emotion, style

1. Introduction

This article describes how titles of popular songs (represented by the songs on the *Billboard Hot 100* charts) have changed across time from 1960 to 2019. Titles are analyzed in terms of their length, their pleasantness, activation, and imagery, their use of particular words ("I", "love", "you", and "the"), their use of elision (e.g., rockin'), and the length of the words in them. Graphs plotting changes across time and a discriminant function analysis indicate the presence of three mutually distinguishable phases in title style, with the earliest 20 years (1960-1979) being represented by one type of title, the middle 20 (1980-1999) by another and the final 20 years (2000-2019) by a third. A possible contributing factor to

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the changes noted is proposed; it rests on the relative ascendancy of rock and on the joint popularity of rock and roll and hip-hop. In the third and most recent phase "The heart of rock and roll is still beating" (Note 1) where popular music is concerned, but so is the heart of hip-hop.

1.1 Popular Songs and the Billboard Hot 100

Popular songs can be seen as representing the culture in which they were popular, although this representation is somewhat biased. For example, consumers of popular songs are generally adolescents and young adults rather than being among the very young or the aged, and since records (in the past) and downloads or streamlines (currently) have a cost, statistics based on them might preferentially represent consumers with more disposable income. However, information such as that gathered by *Billboard* for its charts represents the common behaviors of millions of individuals, so the resulting charts are far from trivial. Song titles are worthy of study because they play an important role in the popularity of songs (Beall, 2009, chapter 8, pp. 159-178).

The popularity of songs has been measured in many different ways since the beginning of the 20th century. In the earliest years, sales of sheet music were employed to represent popularity, later it was air (radio) plays, jukebox plays and record sales. More recently popularity has also been defined in terms of streaming and downloads on the internet. A combination of yearlong sales, streaming numbers, and airplay numbers is currently employed by *Billboard* magazine to establish its yearly charts in the US. *Billboard* (Note 2) provides several charts of different kinds (Country, R&B/Hip Hop, Emerging Artists...). The *Hot 100* chart, which includes the 100 "most popular" songs of a specified time period has been published since 1958. This research employs the titles of songs in the *Hot 100* charts for every year from 1960 to 2019 to study titles of popular songs.

1.2 Titles as "Handles", "Summaries", and "Hooks"

Every song in a *Billboard Hot 100* chart has a title. Titles are assigned at the time of a song's publication and used to represent the song in charts, on the radio, on television and on streaming and downloading platforms. This means that a title is an identifier of a song (a "handle"): it is also an indication of the song's contents (a "summary"). For example, one expects Alanis Morissette's song "Isn't it Ironic" to be about disappointing contrasts, and Green Day's "Boulevard of Broken Dreams" to be about heartbreak. For popular instrumental songs, which have no lyrics, the title summarizes the theme or mood of the song, as is the case with "Tequila" by the Champs or "Apache" by the Shadows. Many songs contain a "hook" or "tag-line": this is a frequently repeated memorable phrase that allows the audience to participate in the song. The hook commonly serves as the song's title. Some examples of hook-titles are Queen's "We Will Rock You", Sia's "Chandelier" and the Rolling Stone's "(I Can't Get No) Satisfaction".

Researchers from various areas have focused on the importance of popular song titles. Some have concluded that titles have the power to make songs more memorable (Anglada-Tort, Steffens, & Müllensiefen, 2019). Others have suggested that titles of some popular songs are employed in titles of

scientific articles because of their power to attract readers (Luscombe, Rijkers, & Sloof, 2018). The craft of forming "titles that sell" is discussed by Beall (2009, chapter 8). Beall concludes that popular song titles should be three of four words long, that they should be unique, that they should be found within the song itself, and that they should be expressed in the second rather than the first or third person, i.e., they should speak about "you" rather than "I" or "she/he".

1.3 Why would we Expect Titles to Change across Time?

It is probably not time itself but factors associated with time that are responsible for changes in the titles of popular songs. One such factor is the early predominance and later "death" of rock and roll (Note 3) (Note 4). In the 1950s and 1960s rock and roll was omnipresent in popular music (although country songs, instrumentals, and ballads hailing back to the 1940s were also popular). Many critics and analysts agree that by 2010 rock and roll was supposedly "dead", and that it had been replaced by other popular genres such as disco, pop, metal, grunge, and new metal. All of these genres arrived on the scene during the 60 years studied, as did hip-hop. Hip-hop is often equated with rap and is related to rhythm and blues. All of these styles of music, and rock and roll as well, have their roots in the music of the Mississippi Delta early in the 20th century and they are informed by the cultural traditions of various groups of immigrants (Star & Waterman, 2007, chapters 8, 9, 11). Important social changes took place between 1960 and 2019: the movement toward desegregation, the Vietnam, Gulf, and Afghanistan wars, and several economic crises (including Black Monday in 1987 and the financial crisis of 2007-2009). It was argued above that popular songs (and their titles) are a society-wide phenomenon. With all of society changing around them, not to mention the necessity for the "fashions" of a period to be distinct from those of previous periods, it would be extremely surprising if the titles of popular songs remained consistent. Although Pettijohn and Sacco (2009a, 2009b) were studying lyrics rather than titles, they concluded that popular songs mirrored the issues of the days in which they were popular. The research described below aims to outline how the titles of popular songs have changed over the last 60 years; the author discusses one possible contributing factor to the changes observed.

2. Method

Song titles were downloaded from the various Wikipedia pages listing the *Hot 100* songs for each of 60 years (1960-2019). For example, the 1970 list (Note 5) was the source for that year. There were 6001 titles in all (1969 included a tie for 100th place) and these titles contained a total of 19,067 words. Each title was described in terms of the total number of words in it, and the average length of its words.

To assess the emotional impact of words in the titles, each word for every title was scored by being matched to the Dictionary of Affect (Whissell, 2009), and values for matched words were imported into the data set. The matching rate for the Dictionary was 86.4%, somewhat lower than the rate of 90% typically expected for everyday English texts (Whissell, 2009). This was likely because the texts under study were titles rather than being conversations or expositions, and because of abbreviation and elision

(e.g., "fallin" from a 1970 title) and inventive spellings (e.g., "U" instead of "you", from a 2000 title). The Dictionary has three scoring dimensions, pleasantness, activation, and imagery. Scores for these dimensions are based on earlier participants' ratings of the words in a context-free task. The presence of many pleasant words such as "love", "sweet", or "darling" in a title would lead to a higher score for pleasantness. The presence of many active words such as "party", "play" and "lover" would lead to a higher score for activation, and the presence of concrete words such as "baby", "hands" and "girls" to a high score for imagery (because the referents of these words are easily pictured or imagined). The opposite end of each dimension represents unpleasantness, passivity, and abstraction. A sample of everyday English (an essay, advertisement, TV report...) would have a score close to the norm of 50 on all three dimensions. Means higher or lower than 50 indicate the presence of bias in one direction (pleasantness, arousal, or imagery) or the other (unpleasantness, passivity, abstraction). Examples of extremely pleasant Hot 100 titles include "Love" (2006) and "Beautiful" (2019) while "Misunderstanding" (1980) and "Faded" (2000) are very unpleasant. "Escape" (2002) and "Beatnik Fly" (1960) carry very active titles while "Moonlight" (2013) and "Wolverton Mountain" (1962) have very passive titles. "Frozen" (1998) and "Tie a Yellow Ribbon Round the Ole Oak Tree" (1973) are very concrete or imaged titles while "Finally" (1992) and "The Motto" (2012) are very abstract: these titles are difficult to envision.

Table 1. Descriptions and Examples of the Variables Employed to Quantify Song Titles Using Three Titles from the 1975 Hot 100

Titles	A	В	С
	Raindrops Keep Fallin' on my Head	Turn Back the Hands of Time	The Wonder of You
Pleasantness	38.9	47.5	54.4
Activation	57.8	56.1	44.5
Imagery	63.0	44.5	21.0
"I"	0	0	0
"Love"	0	0	0
"You"	0	0	1
"The"	0	1	1
Elision	1	0	0
Word Length	4.5	3.7	3.5
Title Length	6	6	4

Note: Titles: A=Raindrops Keep Fallin' on my Head (B J Thomas); B=Turn Back the Hands of Time (Tyrone Davis); C=The Wonder of You (Elvis Presley).Pleasantness, Activation, and Imagery are means for all scored words in each title, based on the Dictionary of Affect; all three of these have a normative English mean of 50. "I", "Love", "You", "The", and Elision represent a count of how often

the individual words (or an elision) appear in the title; Word Length is measured in terms of number of letters per word and Title Length in terms of the number of words per title.

Titles were scored in terms of how often they included each of the words "I", "love" and "you" partly because many popular songs have been love-songs. In his 1976 hit which appeared on the *Hot 100* for that year, Paul McCartney referred to popular songs as "Silly Love Songs" and repeated the phrase "I love you" several times in the chorus. The singer concluded that in 1976 the world had not yet had enough of love songs, and that the genre had an enduring popularity. In addition, the presence of the word "the" was counted in each title: the presence of this word indicated a more complex, sentence-like structure than its absence. Finally, the presence of elision (as, for example, with the replacement of a "g" by an apostrophe in "rockin") was noted. Frequent employment of elision indicated the use of less formal and more unsophisticated language within titles.

Table 1 provides an example of the scoring procedures of the research using three *Hot 100* titles labeled A, B, and C. The first of these (which includes "raindrops") is the least pleasant and the third (which contains the word "wonder") is the most pleasant. The first two titles are moderately active and the third is moderately passive. Title A, which contains the words "raindrops" and "head" is the easiest to picture and has the highest imagery score while Title C, which does not contain many words that promote a clear mental picture, is the hardest to envision and therefore the most abstract. None of the titles contains the words "T" or "love" but one title (C) contains the word "you". Two of the titles contain the word "the" (B and C), while only one contains an elision (A). Titles A and B are both six words long while title C is four words long, and the average length of words within titles is similar for B and C while A contains longer words.

3. Results

3.1 What do Popular Song Titles Look Like as a Whole?

Emotionally scored words in popular song titles (N=16,474) were more pleasant (M=56.75, t=32.02, p<.001, d=.26) than the norm for everyday English as well as being more active (M=54.84, t=25.55, p<.001, d=.20) and more highly imaged or concrete (M=60.52, t=32.78, p<.001, d=.28). Titles were therefore more positive, punchier, and easier to envision than everyday English, which makes sense in view of the functions of titles as handles, summaries, and hooks that aim to attract attention to a song. The average title was 3.18 words long (within the ideal range suggested by Beall, 2009), and mean word length was 4.57 letters. The word "love" was in 2.4% of titles, the word "I" in 1.7% and the word "you" in 2.6%. Seventeen percent of titles included an elision and 12% include the word "the". Beall's (2009) advice to writers to focus on the second rather than the first person and to have three or four words in a title were observed in most cases.

3.2 Predicting Changing Trends from the Powers of Time

Standardized time and its squared and cubed powers were employed in stepwise linear regressions to predict changes across time for each of the nine variables outlined in Table 1. Pleasantness was excluded from this analysis as it did not correlate significantly with any of the powers of time, and in fact contributed nothing to prediction when it was included. Cases were means for each variable for each of the years 1960-2019, so the equations had 3 possible predictors and 60 cases. The regressions were successful with *R* ranging from .32 (for active language) to .89 (for title length), with a median of .65 (which characterized the function for the use of the word "the"). The functions are depicted in Figure 1 and described in more detail in Table 2. Seven of the nine functions included significant quadratic terms. This implies that the modeled curves were taking one direction early in the period and that they reversed direction later. For example, this happened with word length, which first decreased and then increased. Alternatively, the beginning, middle, and end phases evinced different trends. This was the case with the use of elision, which decreased, leveled off, and then decreased again.

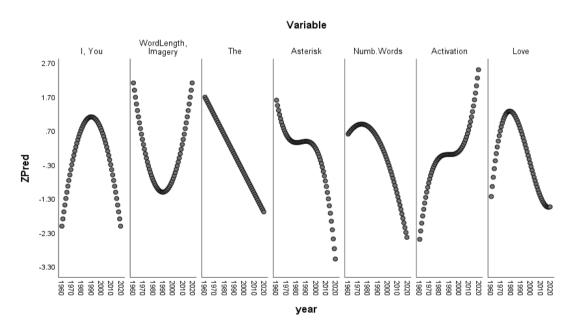


Figure 1. Changes in Titles across Time According to Modeled Data from Polynomial Functions

Note: The first two functions represent multiple variables, and the function labeled "Asterisk" applies to the employment of elision. Functions for "I", "you", word length, and imagery were quadratic; the function for "the" was linear; the remaining functions are combinations of linear, quadratic, and cubic trends (Table 2).

A visual inspection will reveal that changes in the modeled curves are centered about the years 1980-99. It was therefore possible to divide the 60-year time span into three equal phases: early (1960-1979), middle (1980-1999), and late (2000-2019). Table 2 describes the performance of each of the nine

variables in each phase. A three-group stepwise discriminant function was conducted to predict phase (early, middle, or late) from the nine measures. Prediction was extremely successful with 98% correct prediction (one error), and a canonical correlation of .92 based on three predictive variables: word length, title length, and imagery. The first function discriminated the early phase from the late phase. Standardized discriminant function coefficients were .58 for imagery, .59 for word length, and 1.41 for title length. High scores on this function were characteristic of early titles and low scores of late titles. The second function had a high standardized weight for imagery (.96) with weights <.1 for the other two variables. Low scores on this function were distinctive for the middle phase. According to the highest coefficients, titles of the early phase were longer, those of the late phase shorter, and those of the middle phase more abstract. Other differences among groups, e.g. that for the use of the word "love" (Table 2), were not needed for prediction. The single misclassified year (1984) belonged to the middle phase but had titles with imagery scores that matched the mean for the early phase (62.7), which led to its being miss-classified.

Table 2. Characteristics of Titles, Descriptions of Values from each of Three Phases, and Sample Titles Typical from each Phase

Phase				
Variable	1960-1979	1980-1999	2000-2019	Significant Trends (R)
Active Language	Lower	Medium	Higher	Cubic (.32)
Concrete Language	Higher	Lower	Higher	Quadratic (.70)
Title Length	Higher	Medium	Shorter	Linear, Quadratic (.89)
Word Length	Longer	Shorter	Longer	Quadratic (.49)
Use of Word "I"	Lower	Higher	Lower	Quadratic (.49)
Use of Word "you"	Lower	Higher	Lower	Quadratic (.57)
Use of Word "love"	Lower	Higher	Lower	Linear, Quad, Cubic (.73)
Use of Word "the"	Higher	Medium	Lower	Linear (.65)
Use of Elisions (')	Higher	Medium	Lower	Quadratic, Cubic (.65)

Sample Titles Typical of the Early Phase 1960-79: What in the World's Come Over You? Let the Little Girl Dance; A Rockin' Good Way (To Mess Around and Fall in Love).

Sample Titles Typical of the Middle Phase 1980-99: Saving all My Love for You; I Remember You; I Want to Know What Love Is.

Sample Titles Typical of the Late Phase 2000-19: Eyes on You; Baby; Worth It.

Note: Trends were evaluated on the basis of the first three powers of year in a stepwise regression predicting each variable, and R comes from the final equation in each case.

4. Discussion

The titles of popular songs change significantly, and in a predictable manner, over time. Several of the curves in Figure 1 represent a largely quadratic trend, where scores for a variable move in one direction during the early phase (1960-1979), decelerate and reverse direction during the middle phase (1980-1999), continuing in the opposite direction in the later phase (2000-2019). Other variables take a largely linear direction with a consistent increase or decline across time. Why were "love" songs unpopular (or, at least, less popular) in the 1960s and 70s as well as the 2000s-10s? Why were they especially popular in the 1980s and 90s? Is extremity of style (in clothing, in hair design) related to the extremity of "love" in song titles? Could monetary inflation (which was rather high during this phase) be related to the use of the word "love"? Would it be logical to define the 1980s and 90s as a more "romantic" phase? These explanations are all in the realm of possibility, and the changes observed are likely multi-determined and do not rest on a single causal factor. Additional potential sources of influence on song titles include the manner in which songs are produced, promoted, and distributed, and the proportion of the total population that can afford to participate in the behaviors that make songs popular.

4.1 The "Death" of Rock and Roll? A Post Hoc Theory

The final proposed explanation for changes in song titles is related to an issue raised earlier – the supposed death of rock and roll—and this explanation will be treated analytically. Is rock and roll really dead? Many critics had reached this conclusion (Note 6). However, data from Google Ngram (Note 7) (which reviews the words employed in millions of books) and Google Trends (which reports on the frequency of different computer searches on Google) suggest that rock and roll is far from dead. Like the *Billboard* charts, these sources access the behaviors of millions of individuals on an ongoing basis, so they are valid sources for information as to popularity. The three-word phrase "rock and roll" appeared 75 times per million words in Google Ngram for 2019. "Rock and roll" was also used frequently in searches on Google, as attested to by data from Google Trends.

Not dead, therefore. Although it "lives" rock and roll is no longer in ascendancy. It is not the main music of today, in spite of its continued popularity, reflected in its many mentions and associated searches. It has been overtaken in both of these metrics, by hip-hop. Hip-hop, which was not even on the horizon in 1960, achieved 94 mentions per million words in 2019 according to Google Ngram (Figure 2). Its use in Google searches was almost three times as high as that of "rock and roll" for the year October 2019-October 2020. Within the time period studied (1960-2019), rock and roll grew in popularity, but hip-hop also grew (though somewhat later in time). This is reflected in the rising curves for mentions of both music genres in Figure 2. A rough measure of the ascendancy of rock and roll in music could be estimated by subtracting the mentions per million for hip-hop from those for rock and roll (this answers the question "How much more popular is rock and roll than hip-hop"). Rock and roll is in ascendancy when its mentions exceed those for hip-hop. It loses this position when mentions for

hip-hop exceed those for rock and roll. The values for this rough estimate of ascendancy move from 16 in 1960 to 20 in 1970 to 27 in 1980 to 43 in 1990, 44 in 2000, -6 in 2010, and -19 in 2019. There is a gigantic drop in ascendancy score between 2000 and 2019 (the beginning and end of the last phase). Ascendancy data for rock and roll are, in fact, quadratic first rising, then staying high, then falling. A second indicator, total popularity could be represented as the total number of mentions for both types of music, or by the sum of the two mentions at each point, which rises steadily from 16 in 1960 to 169 in 2019. Many of the effects associated with year and its powers are strongly correlated with the ascendancy of rock and roll and the joint popularity of the two genres.

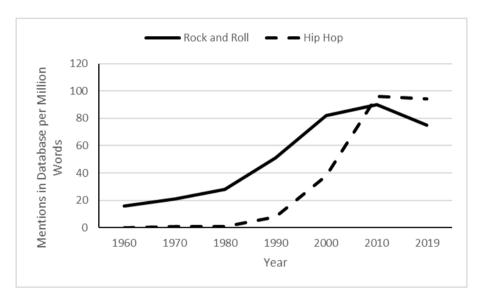


Figure 2. Changes in the Popularity of the Terms "Rock and Roll" and "Rip Rop" over time (data from Google Ngram)

4.3 Conclusions

In one approach to understanding changes in popular song titles over a sixty-year range, we can envision the sixty years as being underpinned by three phases. The first is an early phase, with rock and roll rising and ascendant, the second a middle phase, with rock and roll still ascendant and hip-hop rising, and the third a late phase, with rock and roll losing its ascendancy to hip-hop, although both remained popular. While recognizing that causation has not been demonstrated in this article (merely correlation) and furthermore that there are other potential causes for the differences observed, and other popular music genres besides rock and roll and hip hop, we can cautiously describe the three phases as follows:

Phase One (1960-1979) Emergence and Ascendency of Rock and Roll. Popular song titles in this phase are more emotionally passive; the words in them are more concrete; titles are longer and the words within them are longer; there is a relatively lower use of the words "I", "love", "you" and a relatively

higher use of the word "the"; elision is employed more frequently.

Phase Two (1980-1999) Ascendancy of Rock and Roll and Emergence of Hip Hop. Popular song titles in this phase include words that are more abstract; the titles are of medium length; there is a more frequent use of the words "I", "love" and "you." All remaining variables are at a medium level.

Phase Three (2000-2019) Ascendancy of Hip Hop, Continuing Popularity of Rock and Roll. Titles from this final phase contain active, concrete, and longer words; the titles themselves are shorter; they tend not to include the words "I", "love", "you" and "the", and they employ elision less frequently.

Further research could investigate the characteristics of song titles in the different *Hot 100* lists representing different genres in order to clarify the contribution of genre to title style. If differences between titles of popular hip-hop songs and other popular songs are in the same direction as those noted above, the role of genre in affecting song titles will be supported.

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Notes

- Note 1. This is the title of a song by performed by Huey Lewis and the News in 1983.
- Note 2. https://www.billboard.com/charts
- Note 3. https://www.youtube.com/watch?v=1YvXAf_-Tf4; Youtube Commentator Rick Beato "Is rock music dead?" October 28 2017.
- Note 4. https://www.youtube.com/watch?v=yAm1UWQSriI; Youtube Commentator David Bennet "When did rock stop being pop." July 17 2018.
- Note 5. https://en.wikipedia.org/wiki/Billboard_Year-End_Hot_100_singles_of_1970
- Note 6. For Dominic The 2020 example, Green in Critic, in early https://thecritic.co.uk/issues/january-2020/the-year-the-music-died/ or Bill Flanagan, in the NY times in November of 2016

https://www.nytimes.com/2016/11/20/opinion/sunday/is-rock-n-roll-dead-or-just-old.html

Note 7. Measures were taken from Google Trends (https://trends.google.com/trends/?geo=US) and Google Ngram (https://books.google.com/ngrams) sites in October of 2020. Word capitalization (or lack therefore) did not influence counts.