

In this project, I measured chart popularity, spotify streams, frequency of the word love, lead singer, and the theme of every original Beatles song, stopping at the album *Help!* from 1965. I went through the early discography of the group, first going through every UK album from *Please Please Me* to *Help!*, then analyzing every single and b-side that was not on an album from those years. I analyzed a total of 59 songs. The Beatles released more songs in this era, but they were covers of other songs, so I left them out since I was only analyzing original material. There was no sampling strategy in this, since I was measuring a population.

I decided to measure chart popularity along with spotify streams because the chart popularity measures what was popular when the songs were released, while spotify streams measures what is popular today. For chart popularity, I used a scale from one to six. One was a number one hit, two was a top five hit, three was a song in the top 20, four was anywhere on the chart, five was an album track, and six was if it was a B-side that didn't chart. I decided to measure it as a qualitative variable because not every song was on the charts so it didn't make sense to measure the chart number.

Measuring spotify streams was important because not only does it measure how popular songs are now, it also shows how popular songs were that were only on albums since they did not have a chance to chart in the past. I used the website "ChartMasters" which had the Spotify streams for every Beatles song from April 21, 2022. I didn't think it would matter that these numbers were a little dated because I don't think any Beatles songs got very popular in the past year, changing the proportions. I measured the songs in millions, so a song that had ten million streams would be written as 10 and I rounded to the nearest tenth.

I decided to measure the frequency of love in each song because I always hear that early Beatles songs were all about love and that's why they were popular, so I wanted to see if the more popular songs mentioned love more often. I used the word counter on databasic.io to measure this, and I just pasted the words of each song into it to see how many times love was said. I included different variations of the word, like loving or loved.

I also measured the lead singer of each song, to see if that had any correlation to how popular the song was or what the song was about. I measured it using a 1-5 coding system. One was a Lennon-McCartney shared lead, two was Lennon alone, three was McCartney alone, four was Harrison alone, and five was Ringo Starr alone. I included a Lennon-McCartney category since there are a lot of early Beatles songs where they share the lead or swap on verses.

The last variable I measured was the theme of each song. I had 6 different categories, one being love, two being discontent, three being heartbreak, four being friendship, five being jealousy, and six being any song that didn't fit the other categories. I picked these categories based on what I thought some of the most common themes in popular music were, to see how Beatles songs lined up. For the discontent category I put any song about being upset with ones circumstance or depression/sadness in it.