**Research Question: Is love the main theme of Rihanna's music?  If so, what kind of love is being represented?**

| | Term | Count |
|---|---|---|
| 1 | love | 401 |
| 2 | i'm | 399 |
| 3 | like | 365 |
| 4 | yeah | 328 |
| 5 | just | 216 |
| 6 | oh | 214 |
| 7 | know | 192 |
| 8 | come | 175 |
| 9 | got | 175 |
| 10 | baby | 174 |
| 11 | it's | 142 |
| 12 | wanna | 140 |
| 13 | boy | 138 |
| 14 | bum | 134 |
| 15 | way | 132 |
| 16 | you're | 128 |
| 17 | cause | 119 |



It seems likely that love would be a major theme in Rihanna's music both from prior exposure to her work as well as knowledge that romantic themes tend to be common in popular music.  Starting with simple measures of word frequency, it is apparent that "love" is a frequently mentioned term in Rihanna's lyrics as shown the word clouds above -- it is mentioned 401 times, which is much more than any other word. This provides some support for  the contention that love is a major theme in many of Rihanna's songs. Part of the reason that might be because the chorus part of these songs will be repeated many times, and the chorus part is generally the place where the major theme of the song is mentioned the most times.  Besides that, the words "just", "know", "baby", "boy", "come" and "got" are also mentioned relatively frequently in the lyrics. Those words are commonly used in songs whose themes are associated with relationships, love and emotions.  Moreover, these words suggest that Rhihanna's lyrics are discussing a particular type of romantic feeling, an informal, unrefined love.  Rather than love

being discussed in idealised and purely romantic terms, words like "boy", "baby", etc. point to casual relationships and raw feeling.

It should be noted that these type of lyrics pose particular problems for basic textual analysis, for instance the numerous repetitions of single words within a line or a chorus ("Work work work work work work") and the use of non-content words ("Yeah," "ah," etc.) can lead to an inaccurate assessment of a word's importance to the actual meaning of the song. However, by maintaining an awareness of this problem and by not relying on a single computer analysis should allow us to reach more definite conclusions.
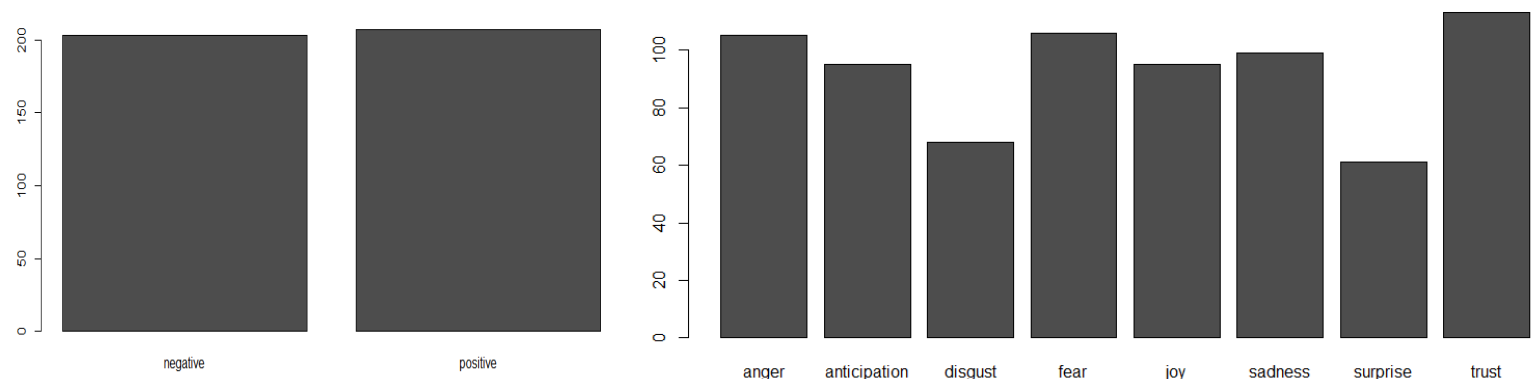


There are additional types of analysis tools available in R, such as sentiment analysis which allows for a computer-generated assessment of emotional content of the text. That is also really important to understand because the question that we formulated is basically an analysis of the emotions being represented within these song lyrics. The sentiment analysis conducted in R shows a broad range of emotions represented in Rihanna's lyrics that are relatively balanced between positive and negative emotions. Further study of individual songs within this corpus can show if the variety of emotion comes from the very distinct emotional themes of each song or if a range of emotions manifests within a single song. If this latter one is true then the variety of emotional content represented here may suggest that the lyrics are trying to convey a sense of unfiltered feeling that can dramatically shift from one extreme to another.

Another insight enabled by textual analysis tools is the identification patterns and connections in word use within a text. One useful analysis was provided by Voyant's Links tool which enables the collocates of specific terms in a text to be displayed and explored. By looking at the link maps below, we can observe that the love's collocates in Rihanna's lyrics cover a wide span of emotions linking it with words that are both positive ("good," "right," "great," etc.) and negative ("stupid," "hopeless," "poor," "desperate," etc.). A careful reading of the

connections also reinforces the suspicion that Rihanna's use of "love" is connected to youth, spontaneity and fun ("party," "mistaken," "tonight," "flame," etc.) rather than contemplation and seriousness.



In both analysis of Voyant and R, it is reflected that "love" is the most frequently used word in the lyrics and thus it can be concluded that love is the the main theme of Rihanna's music. In both word clouds, "love" is the most conspicuous and biggest word. Comparing the visualizations generated, although the word cloud generated by Voyant includes less words than R, the distinct colors and size are more clear at a glance, and it can also help users better identify the frequency of words. Likewise, the sentiment analysis conducted with R does not

really conflict with the findings suggested by Voyant's frequency and collocate analysis.  Overall, although R certainly has almost limitless possibilities, the accessibility and intuitive nature of Voyant proved to be more important enabling different possibilities to be explored without an excessive time investment.