Coldplay*

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Have bands with non gen-z audiences started writing shorter and more danceable songs since the rise of TikTok? This paper performs exploratory data analysis on audio feature data for the National and Coldplay. We found that over the past 20 years, Coldplay's song duration has decreased while its danceability has increased. On the contrary, we did not observe any notable changes in these audio metrics for The National.

1 Introduction

Coldplay and The National, though distinct in musical style, have both achieved significant success in the music industry. Coldplay's anthemic, pop-rock sound contrasts with The National's introspective, melancholic approach. While Coldplay's music is often described as more danceable, The National's emotionally charged songs connect deeply with a loyal fan base. However, little research has explored how these bands' song lengths and danceability have changed over the past two decades.

This paper uses data from Spotify's API to evaluate if or how the emergence of the popular social media platform Tiktok and short attention spans has caused older bands with sad dad audiences to write shorter, more danceable music. evaluate how the song duration and danceability of Coldplay and National albums have changed over time. By analyzing each band's albums from the past two decades, we identify changes in song duration and danceability over time and why these may (or may not) have changed over time. This analysis highlights the role of musical features in shaping an artist's success and provides insights into how diverse musical styles can engage audiences and vary across genres, artists, and bands. This paper explores the question of whether the era of shortened attention spans and TikTok soundbites caused older bands with sad dad audiences to write shorter, more danceable music.

*Code and data are available at: https://github.com/taliafabs/spotify-analysis-example.

Our findings show that Coldplay generally scores higher in danceability, while The National's popularity tends to align with different musical qualities.

2 Data

2.1 Overview

This analysis was conducted using extensive artist audio feature datasets for both Coldplay and the National. We used R programming language (R Core Team 2023) and R packages (Wickham et al. 2019) and ggplot to download, clean ,and save our data. We obtained our bands' audio features data data through the Spotify API (Thompson et al. 2022).The visualizations in Section 3 were created using R's ggplot package.

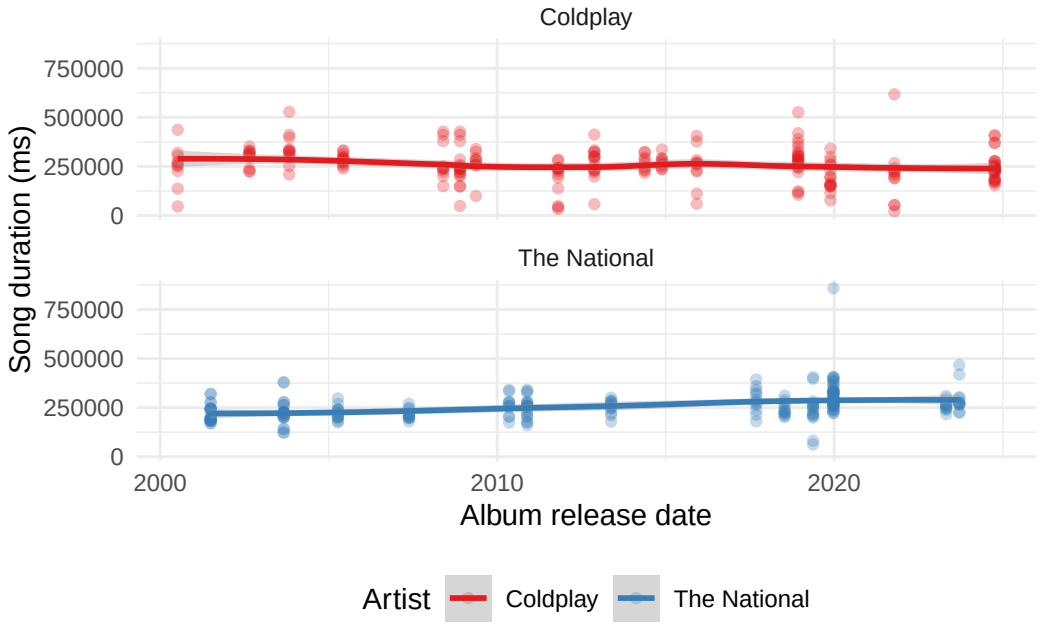
2.2 Method

To access the Spotify API, we used an existing Spotify account on the Spotify Developer website. We extracted the "Client ID" and "Client Secret" from the Spotify Developer website and used that in our code to link our RStudio to the Spotify account. We imported the spotifyr library and used the get_artist_audio_features function to extract information about the two artists. We saved this as an RDS file because each observation is a tibble, hence, we cannot save it as a CSV.

3 Visualizations

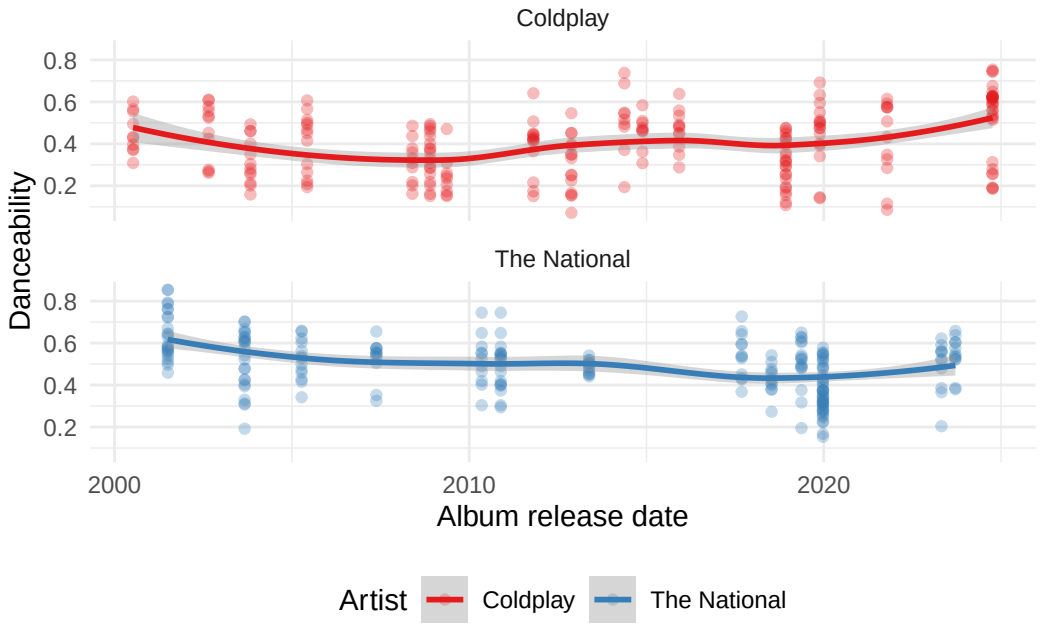
3.1 Song Duration

compares two bands with album release date on the x-axis and song duration in milliseconds on the y-axis. Upon visualizing the data, we find some interesting Overtime, the National has increased its song duration while Coldplay has kept its song duration relatively constant. However, both have had the same average song duration over time. This is interesting because artists have recently had shorter songs due to the reducing attention span of listeners. Moreover, the National has been more consistent with album releases in comparison to Coldplay.



3.2 Danceability

This graph compares the danceability of tracks by Coldplay and The National since the early 2000s, focusing on the release dates of their albums.



Coldplay generally has a higher and more variable range of danceability than The National, especially noticeable in recent releases. Danceability in Coldplay's tracks appears to have dropped during the mid-2000s but has risen again in more recent years.The National's tracks show more consistency in their danceability, with a gradual downward trend over time. The data suggests that Coldplay's music has evolved to become more danceable in recent years, perhaps reflecting a shift toward more pop and electronic influences. On the other hand, The National's tracks remain consistent in their lower danceability scores, aligned with their introspective and emotionally driven style. These trends highlight the contrasting musical paths of both bands, with Coldplay embracing a more upbeat, accessible sound while The National maintains a steadier, moodier approach to their music.

4 Discussion

Our very surface-level analysis found that Coldplay's songs have gotten slightly longer over the past two decades, while the duration of the National's songs has remained stagnant. We also found that Coldplay's once-slow and melancholic music has become a little more danceable.

4.1 Limitations

This analysis does not involve modeling and is very surface level. In fact, this is part of the exploratory data analysis stage for a future research project that will explore the effects of a changing market, particularly the rise of tiktok and short attention spans on the duration and danceability of "sad-dad" bands songs.

4.2 Next Steps

The next steps would include completing the exploratory data analysis, obtaining data for more bands with similar audiences, such as the Beatles, Backstreet Boys, and Radiohead, obtaining TikTok user and music data, building a model, and answering the question posed.

References

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Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686.