Coldplay vs Radiohead Danceability over Time*

Coldplay reamins more danceable over the years

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This study explores the danceability of Coldplay and Radiohead over time by using data extracted from Spotify's API. The results show that Coldplay has consistently maintained a higher level of danceability compared to Radiohead. These findings are relevant in understanding the musical evolution of both bands and their appeal to different types of listeners.

1 Introduction

The estimand in this paper is the average danceability of tracks by both Coldplay and Radiohead over time. Danceability describes how suitable a track is for dancing based on a combination of tempo, rhythm stability, beat strength, and overall regularity. This paper shows how this metric changes for each band and discusses the implications.

Understanding how danceability evolves over time can provide insight into the bands' stylistic changes and the broader trends in the music industry. All analysis in this paper was completed using R (R Core Team 2023). The remainder of this paper is structured as follows. Section Section 2 describes the data collection and preparation. Section Section 3 presents the findings using the tidyverse package (Wickham et al. 2019), and Section Section 4 discusses the implications of these results.

2 Data

The data used in this study was retrieved using the Spotify Web API and processed using the R package spotifyr (Thompson et al. 2022). The package allows bulk retrieval of an artist's entire discography along with associated audio features, including danceability, tempo, energy, and others. We accessed both Coldplay's and Radiohead's discographies and calculated the

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*Code and data are available at: https://github.com/chenikabukes/RadioheadColdplay

average danceability of their songs by year of release. The data consists of metadata about each track, including the release year, danceability score, and album information.

3 Results

In Figure 1, we observe Coldplay's tracks exhibit relatively stable danceability over time, with scores ranging between 0.4 and 0.6, with slight increases toward the latest releases. Coldplay's more consistent and upward trend aligns with their pop-rock style, which tends to favor rhythmically engaging and accessible music, contributing to a higher and more consistent danceability score. Radiohead's danceability exhibits much more fluctuation, ranging from around 0.2 to 0.6. There is an increase during the early 2000s, but it dips again afterward. The lower and more fluctuating danceability for Radiohead reflects their tendency to diverge from mainstream pop structures.
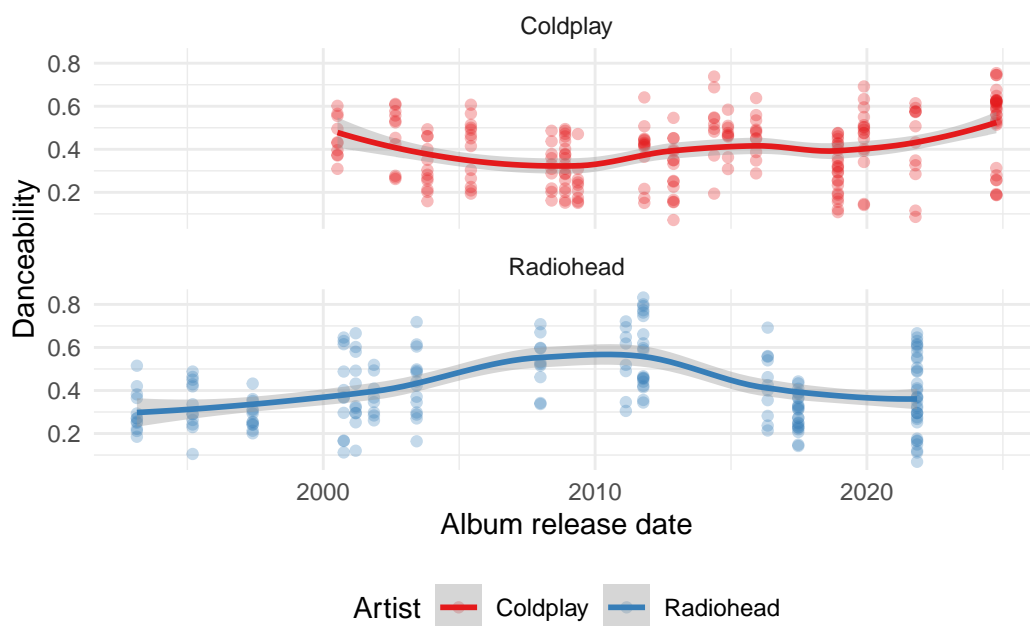

Figure 1: Danceability of Coldplay's and Radiohead's tracks over time

4 Discussion

Both bands show some increase in danceability in their later albums, though Coldplay's increase is more pronounced, reflecting their shift towards more pop-centric music.

5 Appendix

Out of interest we decided to explore the correlation between danceability and tempo. The below results do not show a significant relationship and thus were not included in the main findings.
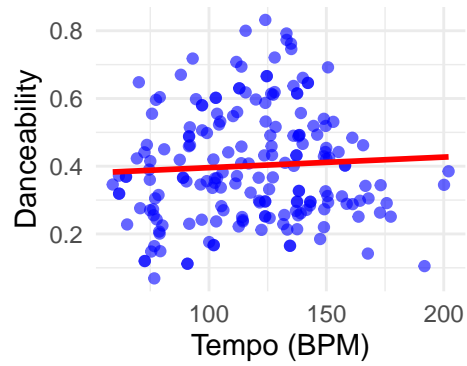

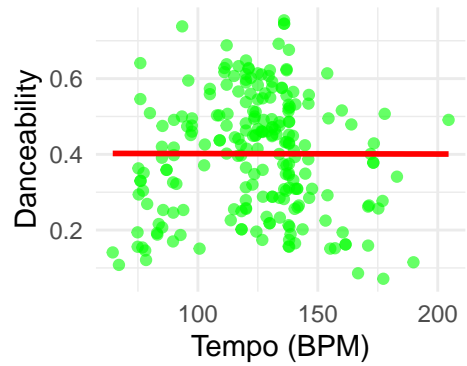Figure 2: Danceability vs Tempo for Radiohead Tracks

Figure 3: Danceability vs Tempo for Radiohead Tracks

References

R Core Team. 2023. *R: A Language and Environment for Statistical Computing.* Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.

Thompson, Charlie, Daniel Antal, Josiah Parry, Donal Phipps, and Tom Wolff. 2022. *Spotifyr: R Wrapper for the 'Spotify' Web API.* https://github.com/charlie86/spotifyr.

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. https://doi.org/10.21105/joss.01686.