

# A Visual Analysis of UK Number 1s

This data visualisation project highlights the most successful songs in UK chart history.

It considers how certain attributes of songs have changed over time and showcases some of the most surprising songs to have made music history.

The UK Music Charts began on  
**14th November 1952.**

In the **3398** weeks between then and the 1st of January 2018 there have been **1325** different songs reach number 1.

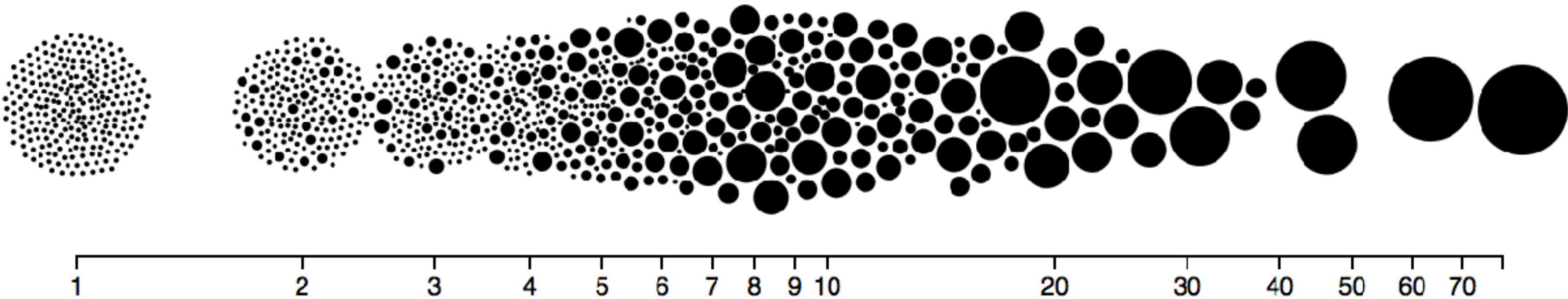
Did you know that children's cartoon character Bob the Builder has the same number of UK Number 1s as Adele?



Bob topped the charts with his signature song 'Can We Fix It?' for Christmas in 2000 and followed it up with 'Mambo No. 5' in 2001. Despite her album '21' going platinum, grammy award winning super star Adele has also only had two singles reach number 1 in the UK charts - 'Someone Like You' (2011) and 'Hello' (2015).

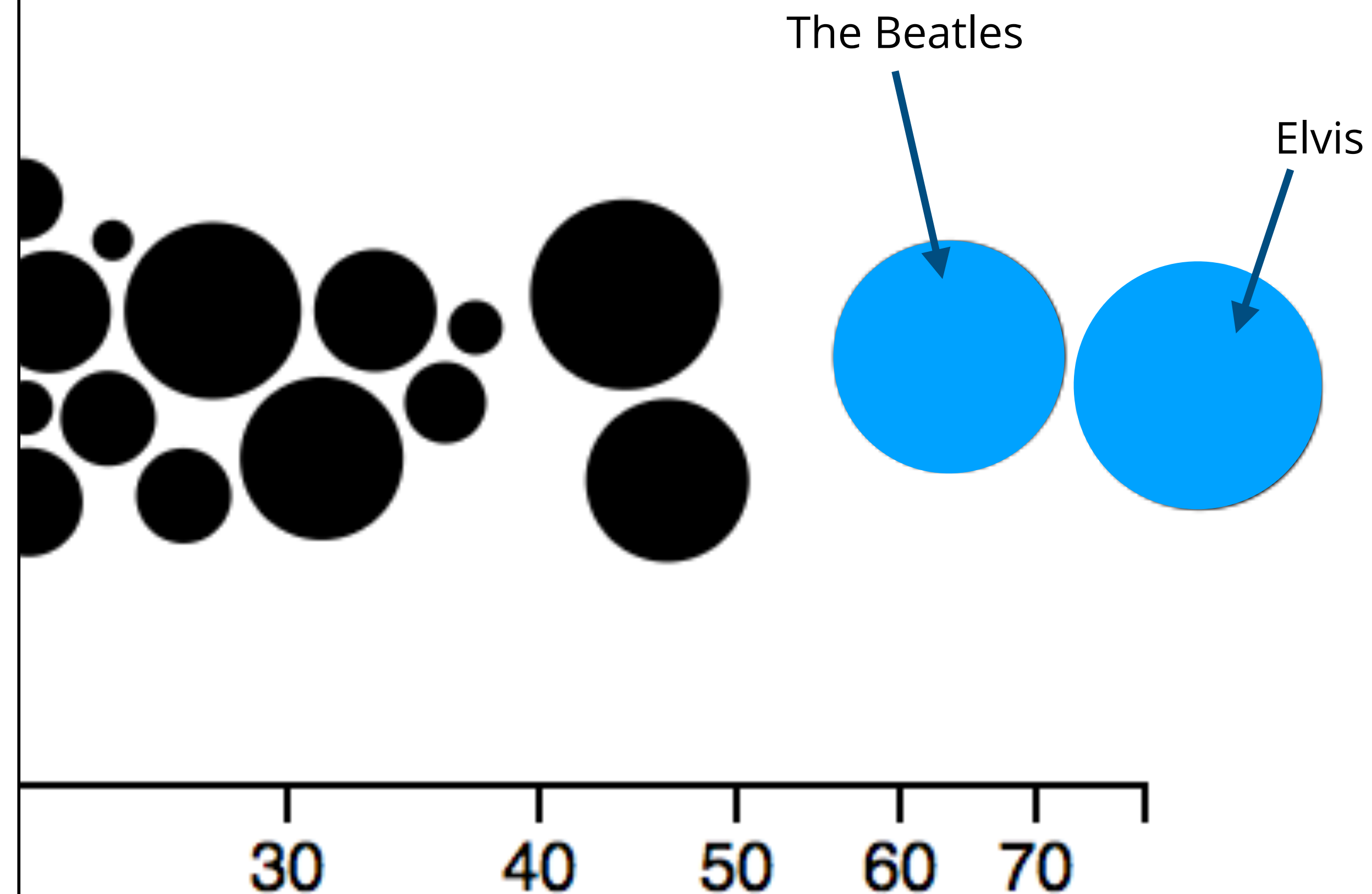
Which artists were most  
successful?

This graph shows the distribution of artists who have lasted the longest at number 1. The size of each bubble represents the number of tracks that have contributed to the length of time.



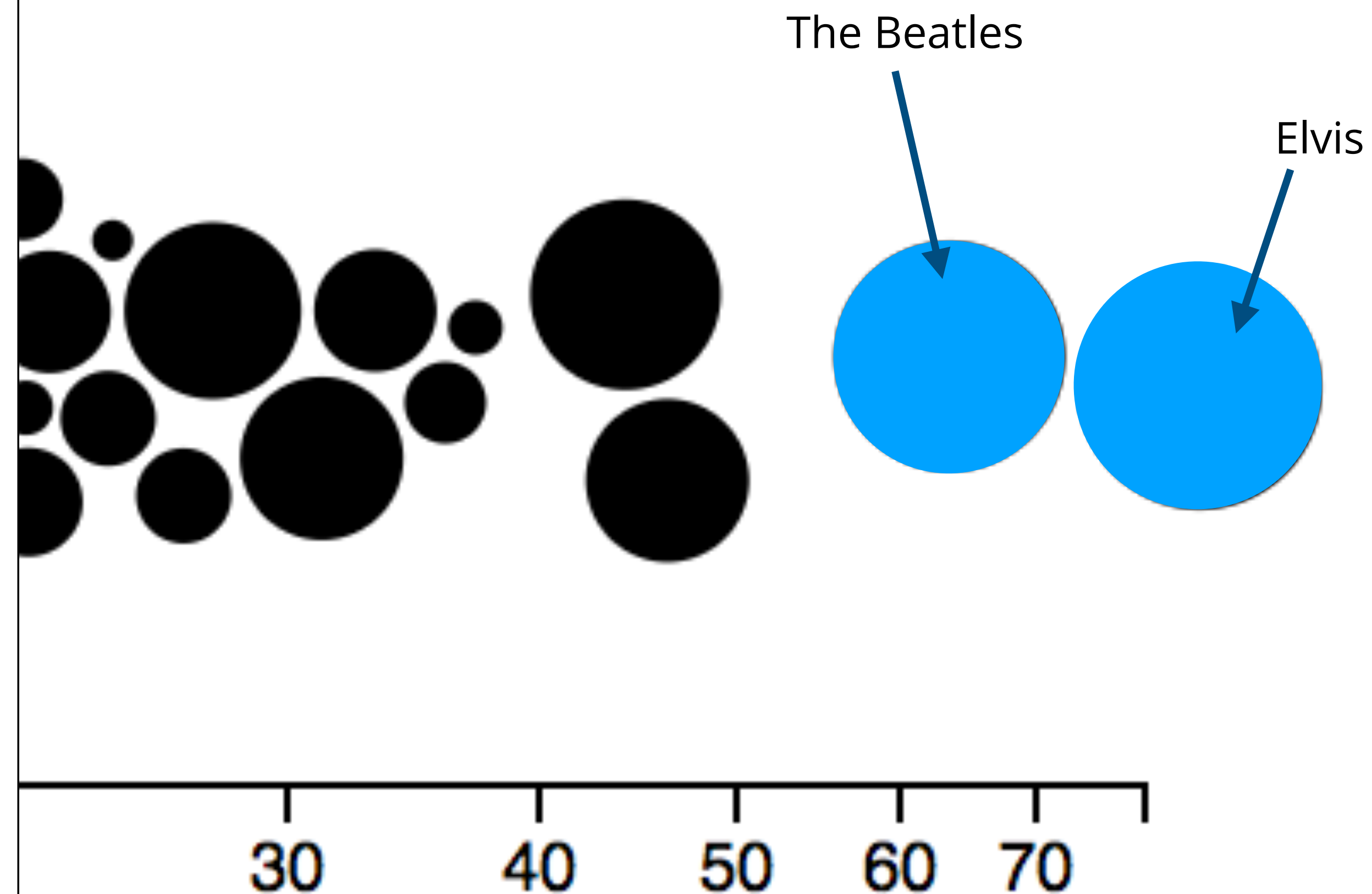
swarm chart showing artists weeks at 1, size of bubble represents number of tracks

Elvis is the King of the Charts, with 18 UK number 1s. The Beatles just miss out, with 17.

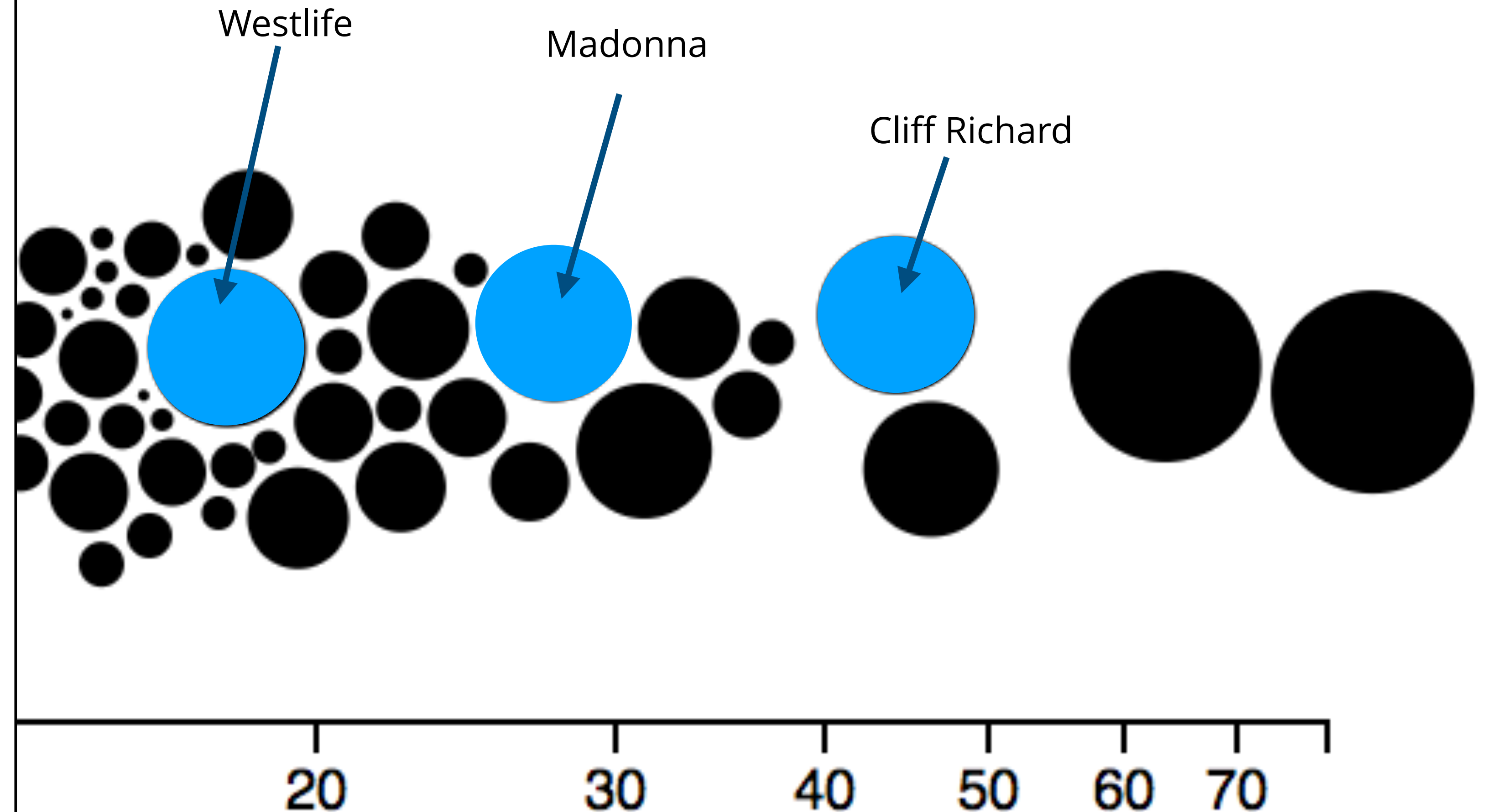




Unsurprisingly, Elvis and The Beatles have also spent the longest time at number 1, with 79 and 69 weeks respectively.



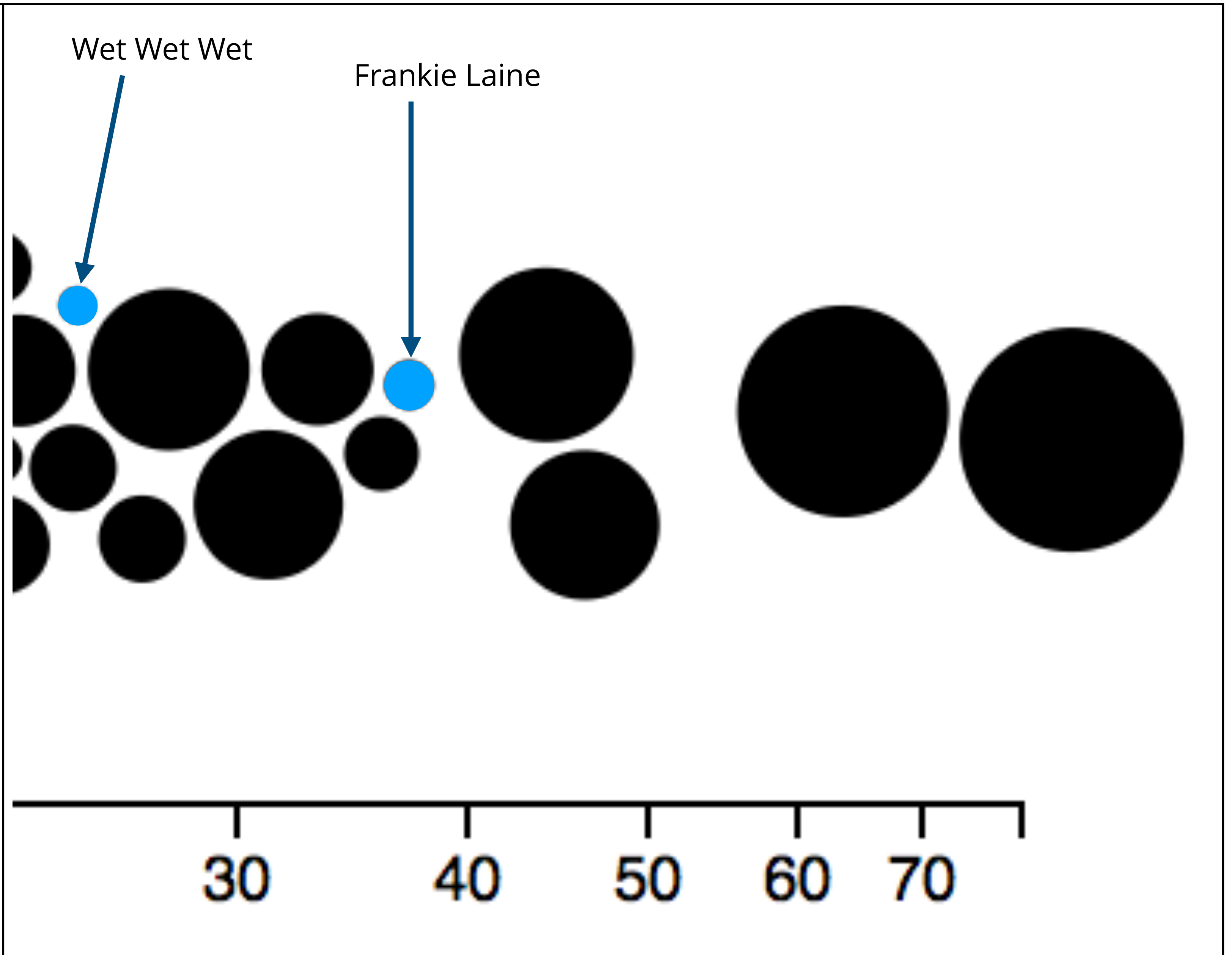
Other successful artists, in terms of most number 1s, include Cliff Richard (14), Westlife (14) and Madonna (13).



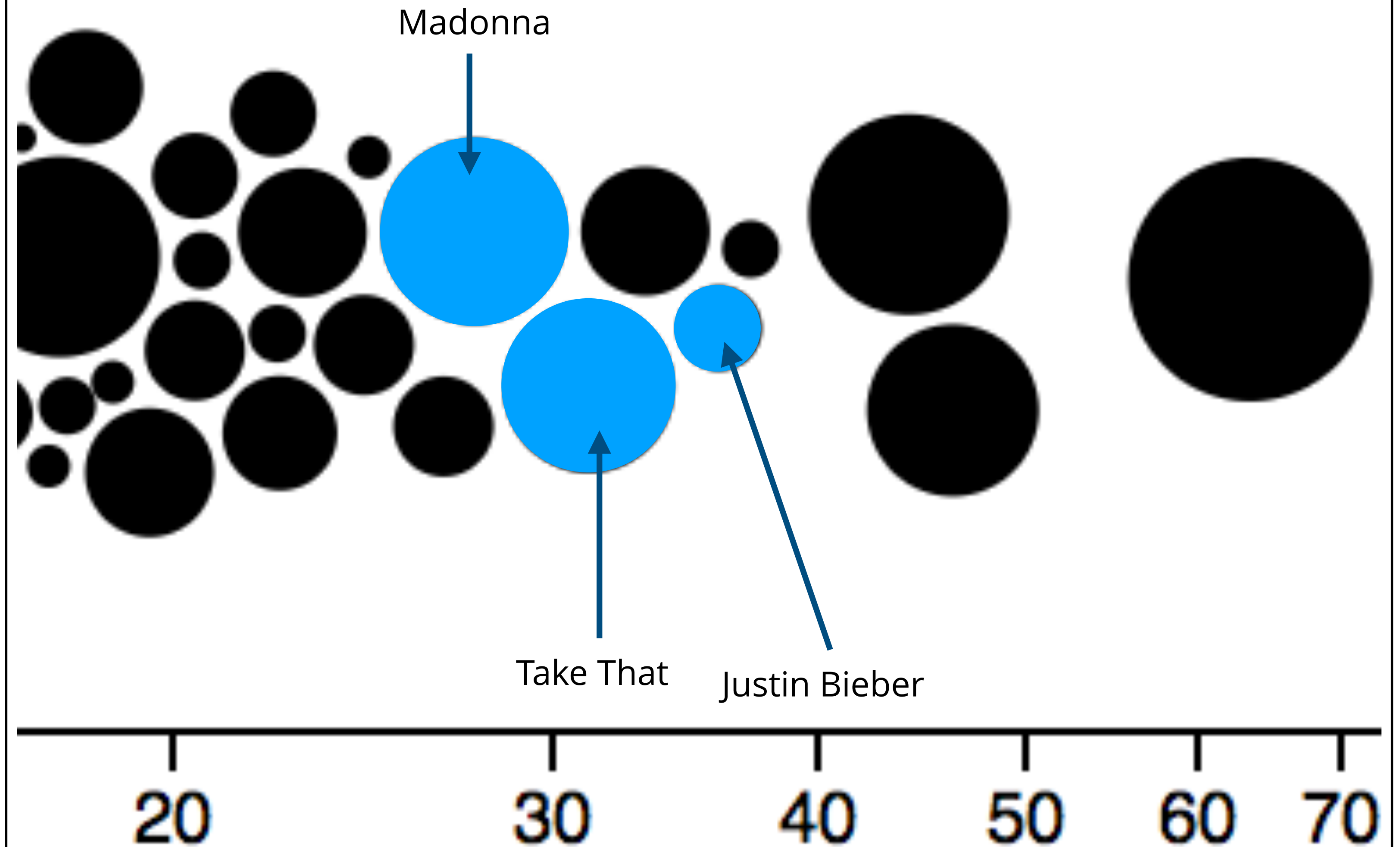
Frankie Laine has held the number 1 position for 32 weeks - the 5th longest serving artist. He did this with only 4 songs reaching number 1.

This could be that they were in 1953, when the charts were just beginning so there may have been less competition.

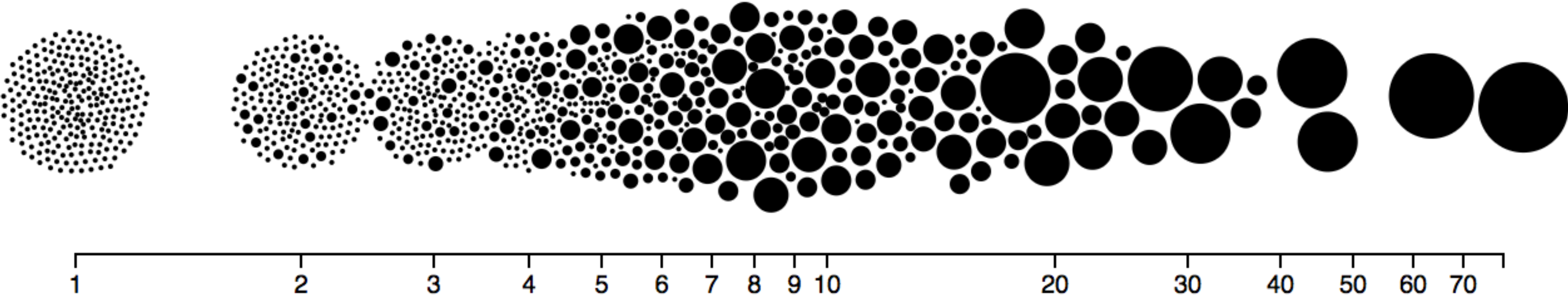
However, Wet Wet Wet have also held the position for a substantial amount of time (23 weeks) with only 3 tracks, thanks to the success of 'Love is all Around'.



Justin Bieber has spent the same amount of time at the top of the charts as Madonna and Take That, despite having half the number of songs reach number 1. They have each held the position for 29 weeks, with 6, 13 and 12 songs respectively.



# Explore

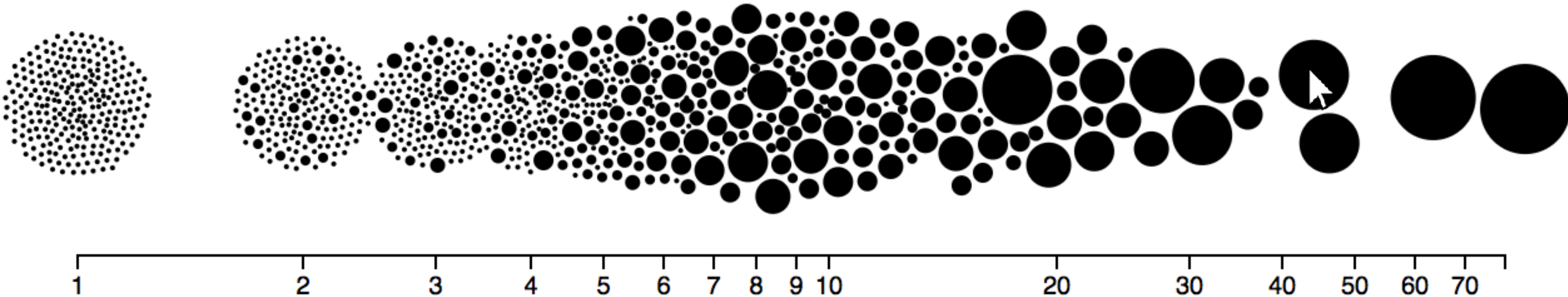




# Explore

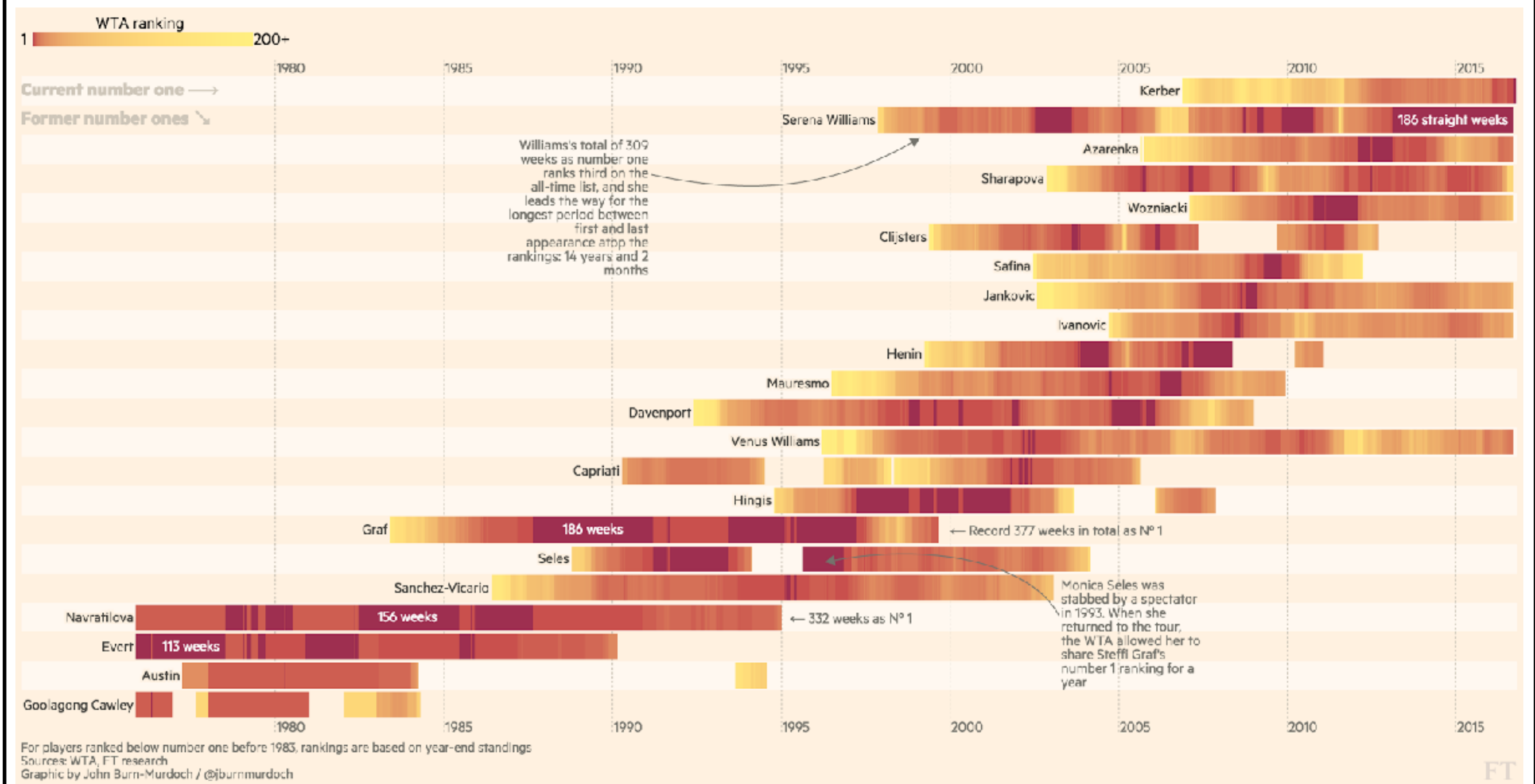
CLIFF RICHARD

46 weeks at number 1  
14 tracks



Which songs were most  
successful?

Songs which have spent the longest at number 1 are Frankie Laine's I Believe (18). Bryan Adams (Everything I do) I do it for you lasted 17 consecutive weeks (almost 4 months!) and Wet Wet Wet's Love is All Around lasted 15 consecutively.

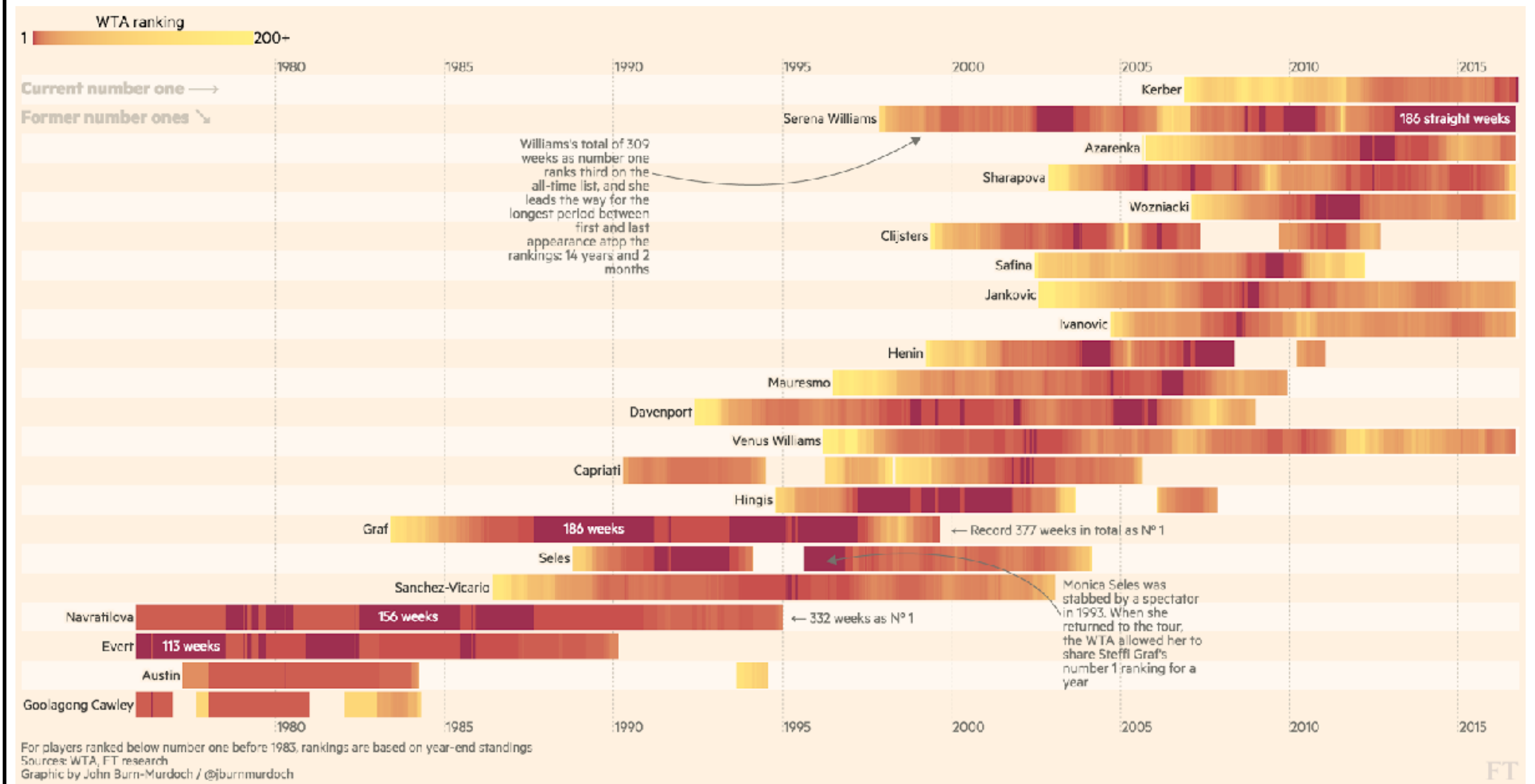


Gantt chart from FT to represent the style of gantt chart I will use to show longest lasting songs.  
Though it will not be coloured on another variable



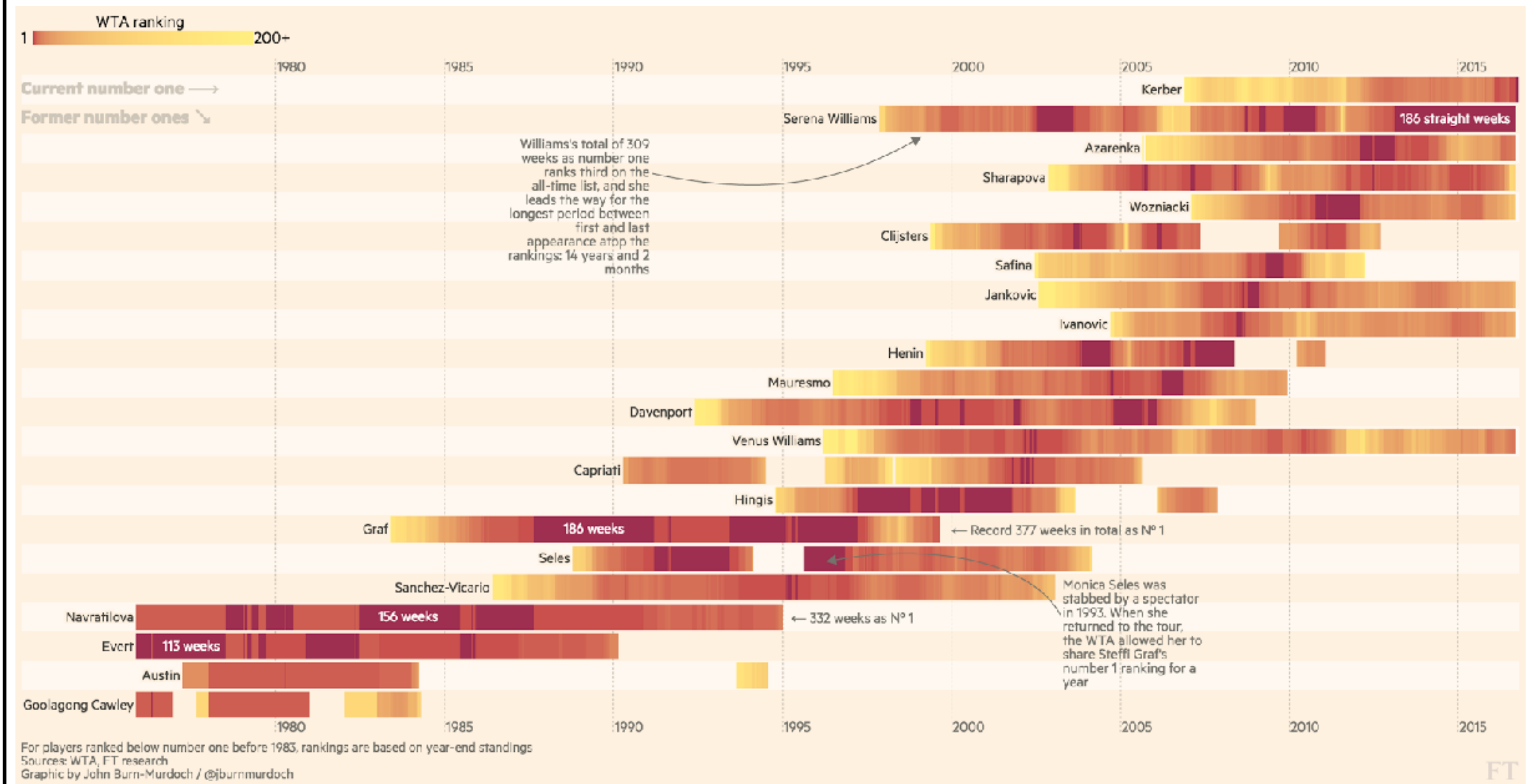
A few songs strongly defended their position at the top of the charts, they may have been knocked off but they regained the top spot.

5 songs reached number 1 three times, including Pharrell Williams' Happy, and Justin Bieber's What Do You Mean?

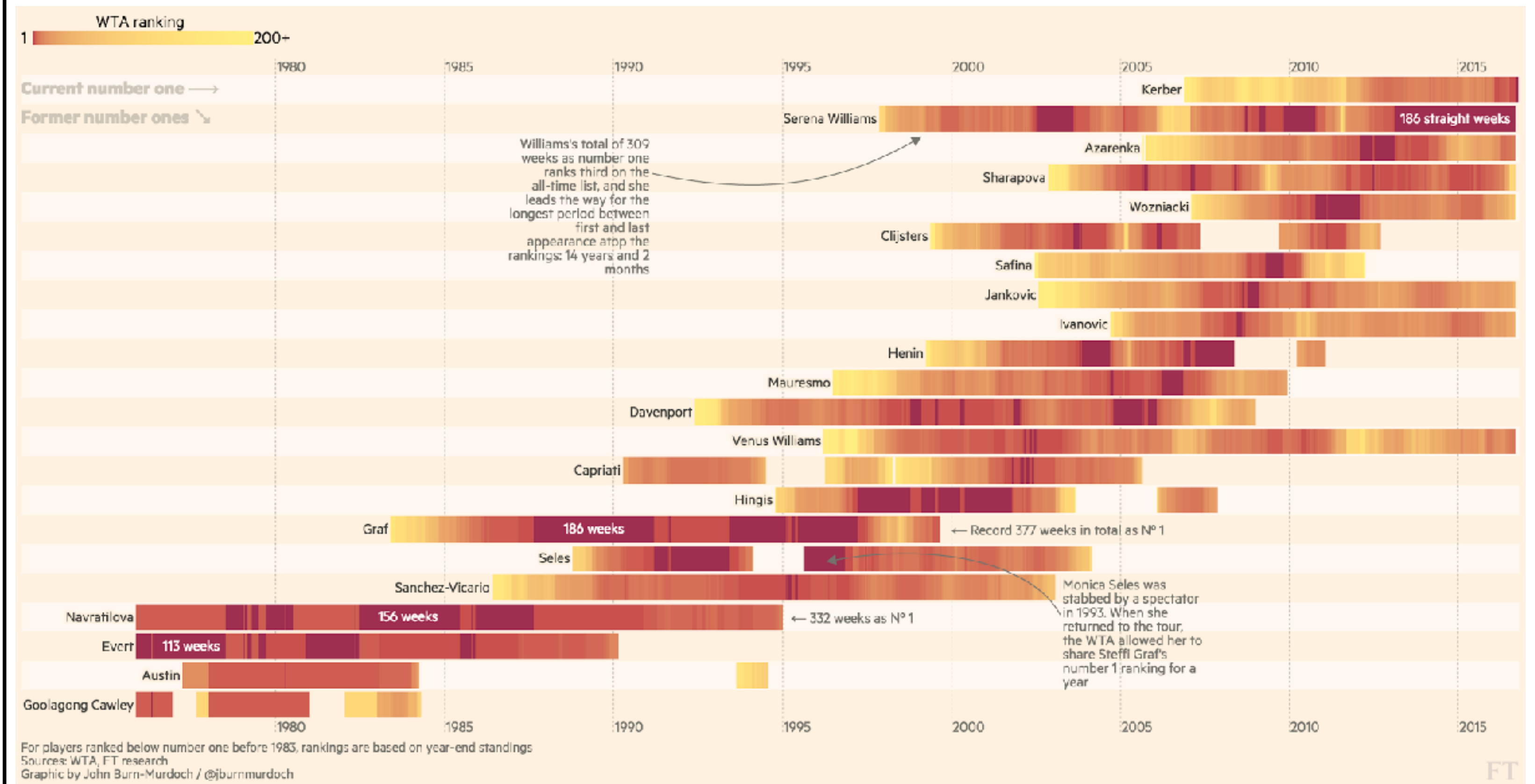


A couple of songs managed to reclaim the number 1 positions decades after they first conquered the charts.

This includes My Sweet Lord, by George Harrison and Queen's Bohemian Rhapsody. This was due to the singers dying, so more people were buying their music.



A few of Elvis's most famous singles were re-released in 2005 to mark his 70th birthday. Some of these reached number 1 again, over 45 years after they had first topped the charts.



How do audio features  
differ?

Spotify attaches a variety of attributes to each of the songs in their library. Described as 'audio features', these include danceability, valence ('feel goodness'), energy, acousticness and loudness.

The attributes are generated by EchoNest, who employ a range of techniques to quantify them. For example, danceability is calculated by considering overall tempo and beat strength, whereas valence used the opinion of a musical expert which was then expanded upon using machine learning.



The most danceable songs that have reached number 1 are ICE ICE BABY by VANILLA ICE and GIVE IT TO ME by TIMBALAND NELLY FURTADO JUSTIN TIMBERLAKE.

Justin Timberlake holds both one of the joint first most danceable number ones and the second most danceable.

Surprisingly, Eminem holds 3 of the top 10, including The Real Slim Shady.

The least danceable song that has reached number 1 is Westlife's You Raise Me Up.



Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_



Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_



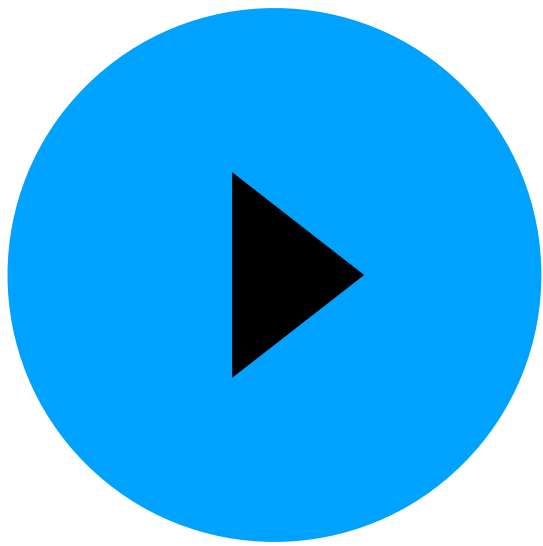
Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_

The most 'feel good' song is Madness' House of Fun, with a valence score of 98.5%. This is closely followed by Bucks Fizz 'Making your mind up'.

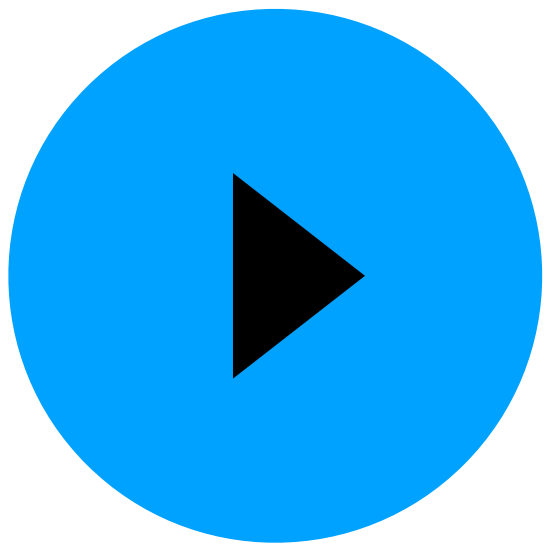
The song with the lowest valence score is Amazing Grace, as performed by the Pipes drums dragon band... followed by Celine Dion's My Heart Will Go On.



Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_



Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_



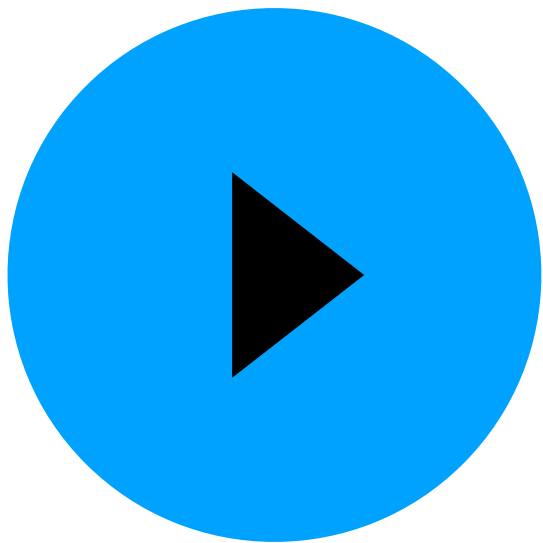
Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_

The most acoustic song to reach number 1 is Whispering Grass Windsor Davies & Don Estelle. I Believe Frankie Laine and Mad World Michael Andrews Gary Jules.

The least acoustic ones are The Masses Against The Classes Manic Street Preachers The Hindu Times Oasis and Baby Come Back Pato Banton.



Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_



Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_



Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_

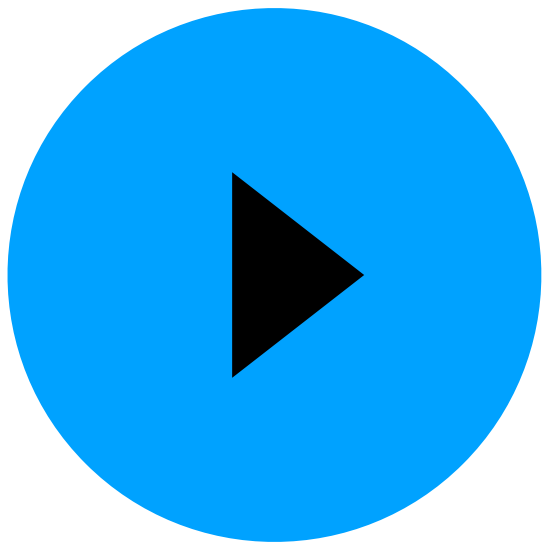


The highest energy songs to reach the top spot are No Limit by 2 Unlimited with a huge 99.9% energy. Close behind with 99.7% is Mr Vain by Culture Beat and Ooh Aah... Just A Little Bit by Gina G with 99.6%.

The lowest scoring song in terms of energy is Albatross by Fleetwood Mac (3.82%).



Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_



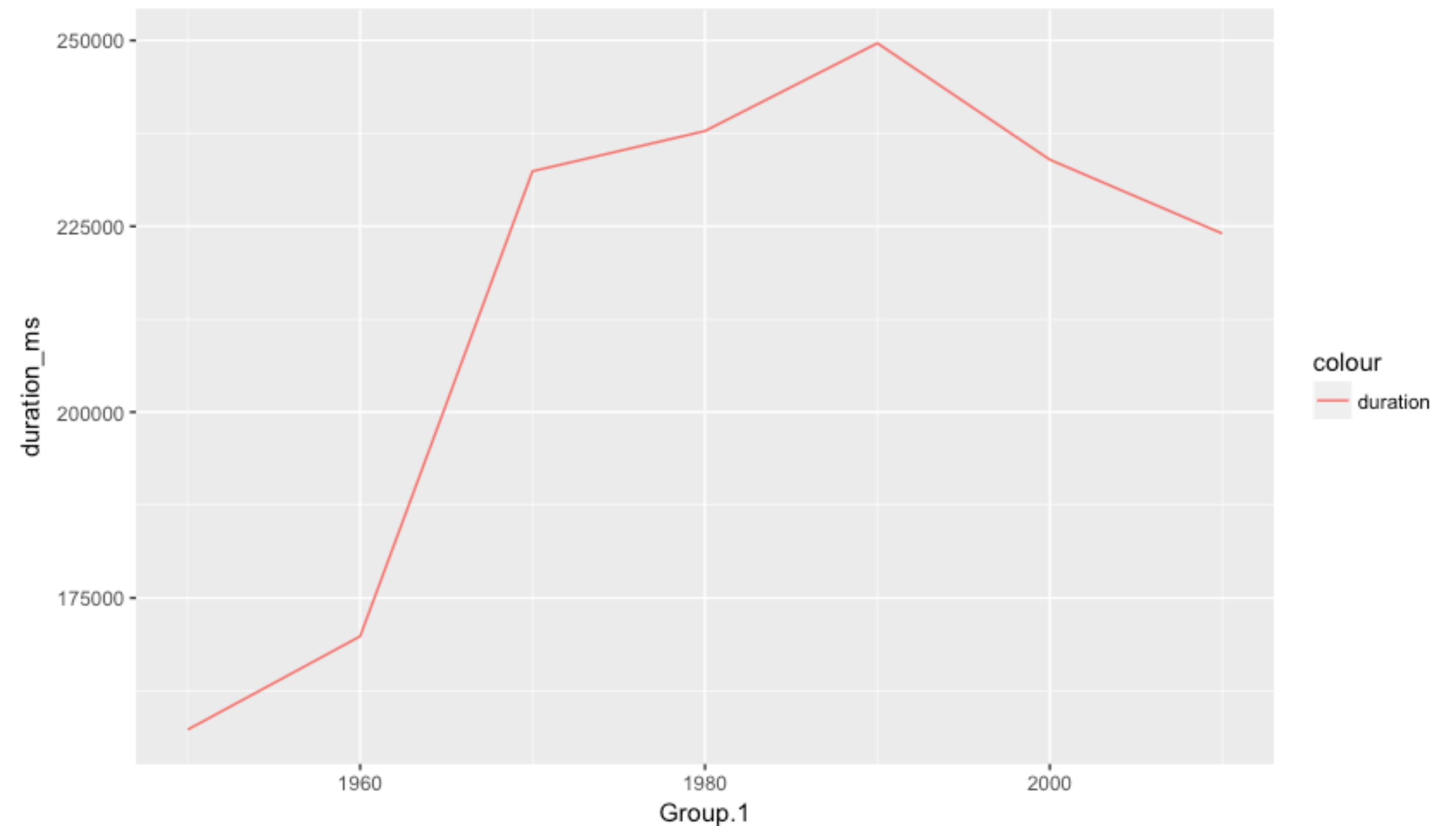
Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_



Track Name  
Artist Name  
Valence score : \_%  
Date: \_/\_/\_

How audio features of songs  
have changed over time

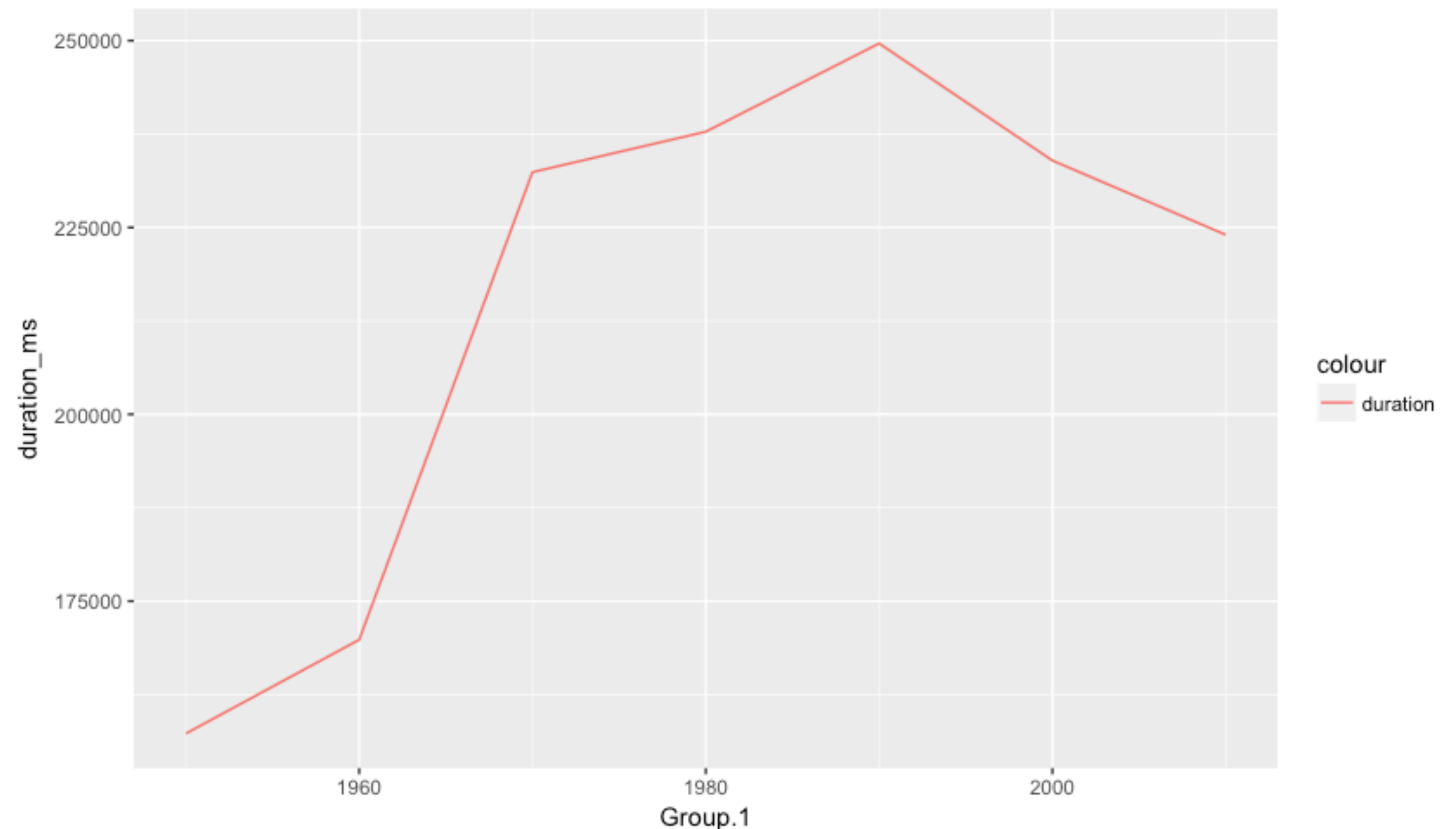
We can see that generally the length of songs was increasing over the decades, until the 90s when it began to decrease again.



On average, a song reaching number 1 lasted 3.6 minutes.

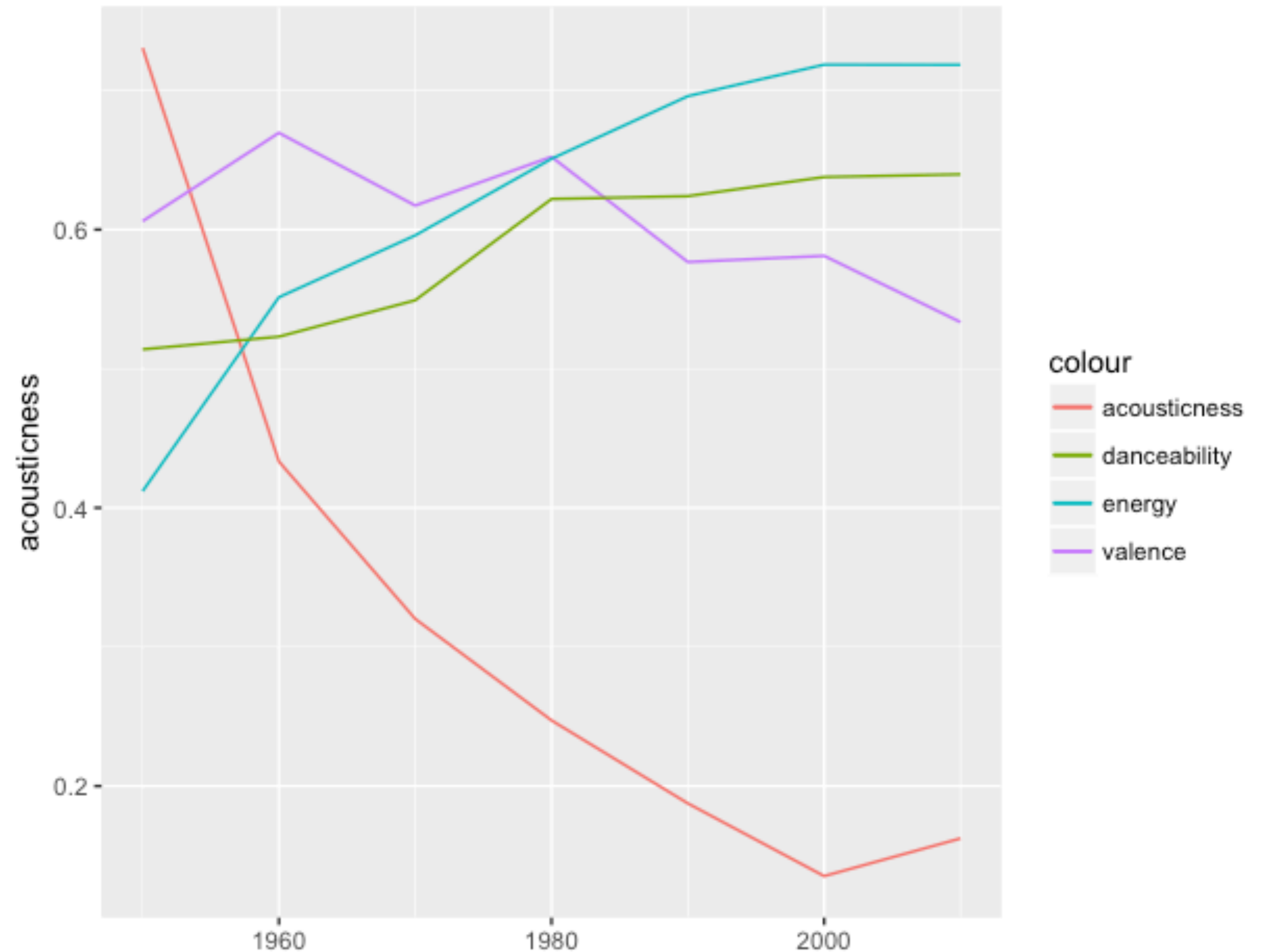
The longest song to reach number 1 was Voodoo Chile by Jimi Hendrix, which is almost 15 minutes long.

The shortest song is What Do You Want, by Adam Faith

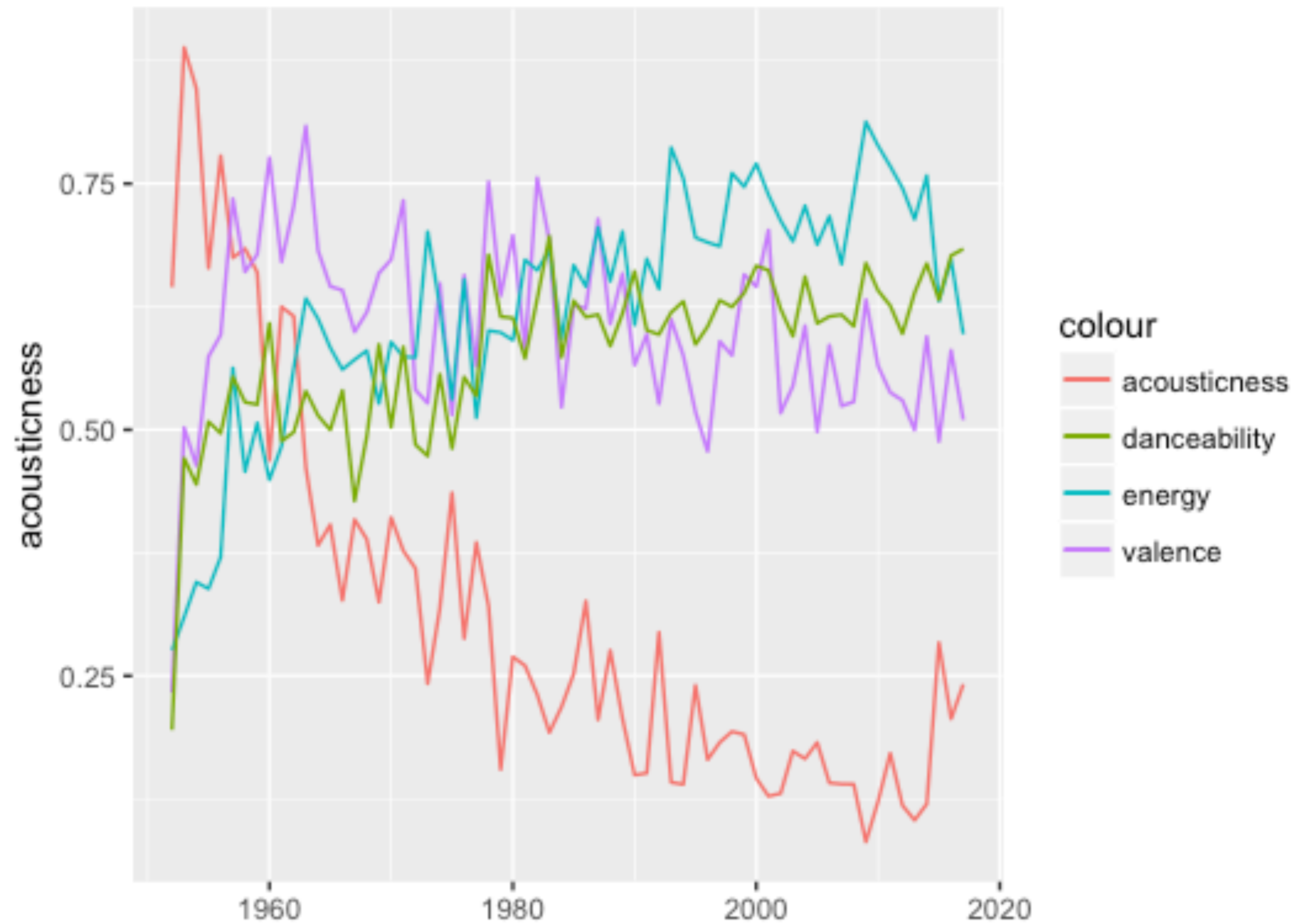


An overview of the average audio features by decade, we can see that acousticness reached its lowest point in the 2000s, when energy peaked. We can also see that valence has generally been declining since the 80s.

We seem to be living in the most danceable decade to date, though it increased most during the 80s, and has not increased much since.



By taking a closer look at yearly averages, we can see what years had the most changes musically.

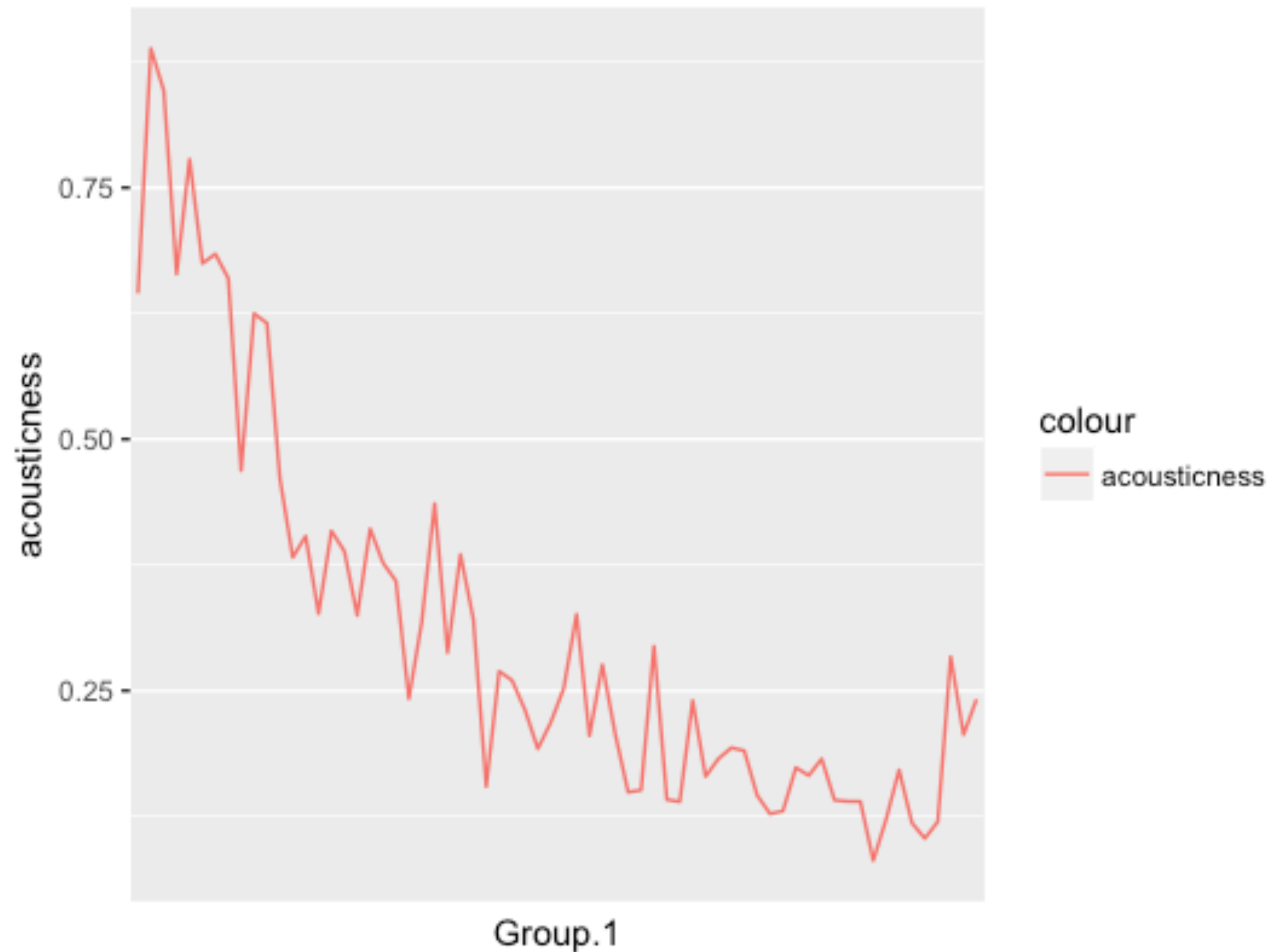




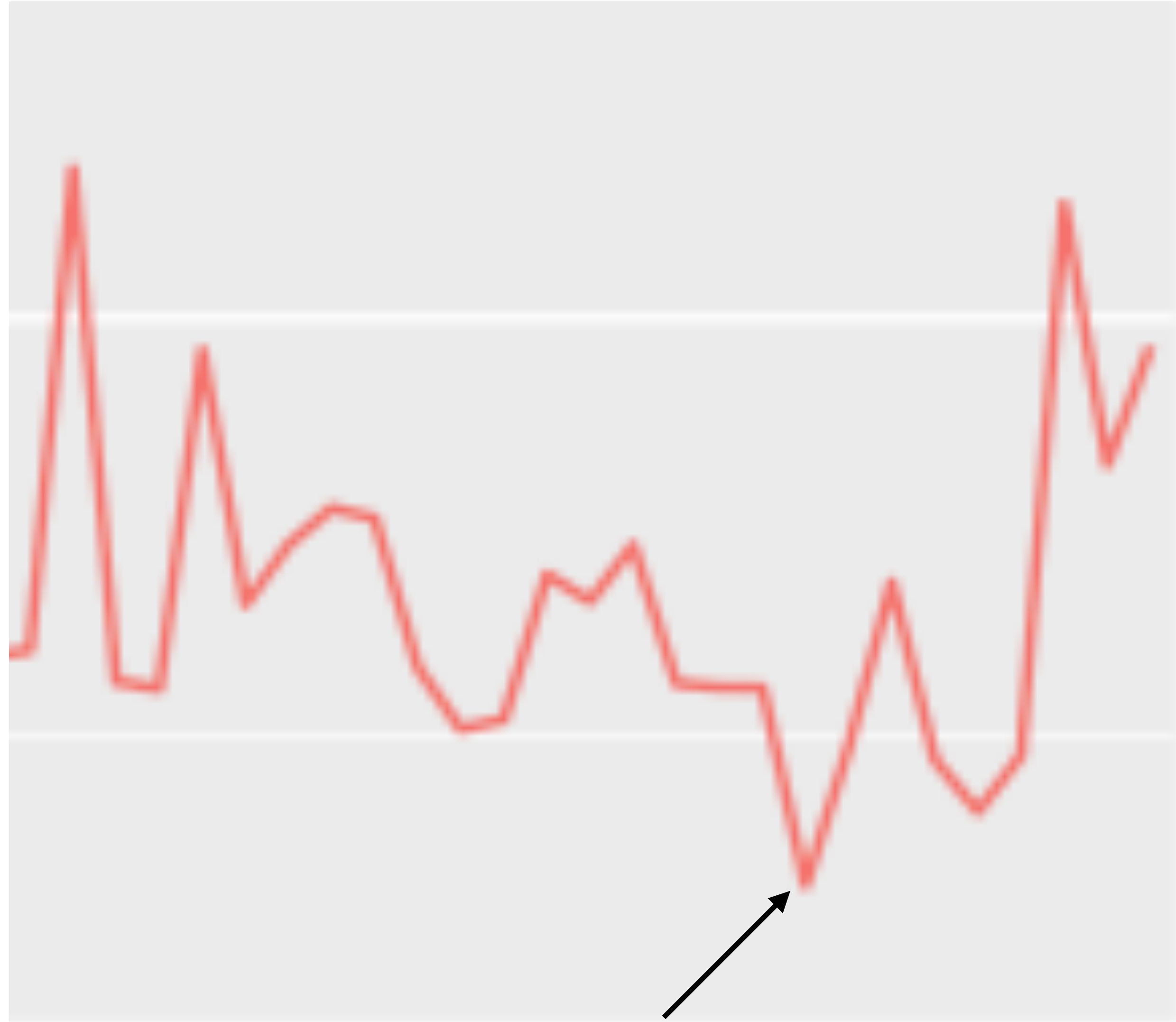
We can see that generally, acousticness has been declining.

It reached its lowest point (on average) in 2009, with songs such as La Roux's Bulletproof and Lady GaGa's Bad Romance.

It then spiked in 2015 thanks to more acoustic tracks taking the scene, thanks to artists such as Sam Smith and Justin Bieber.

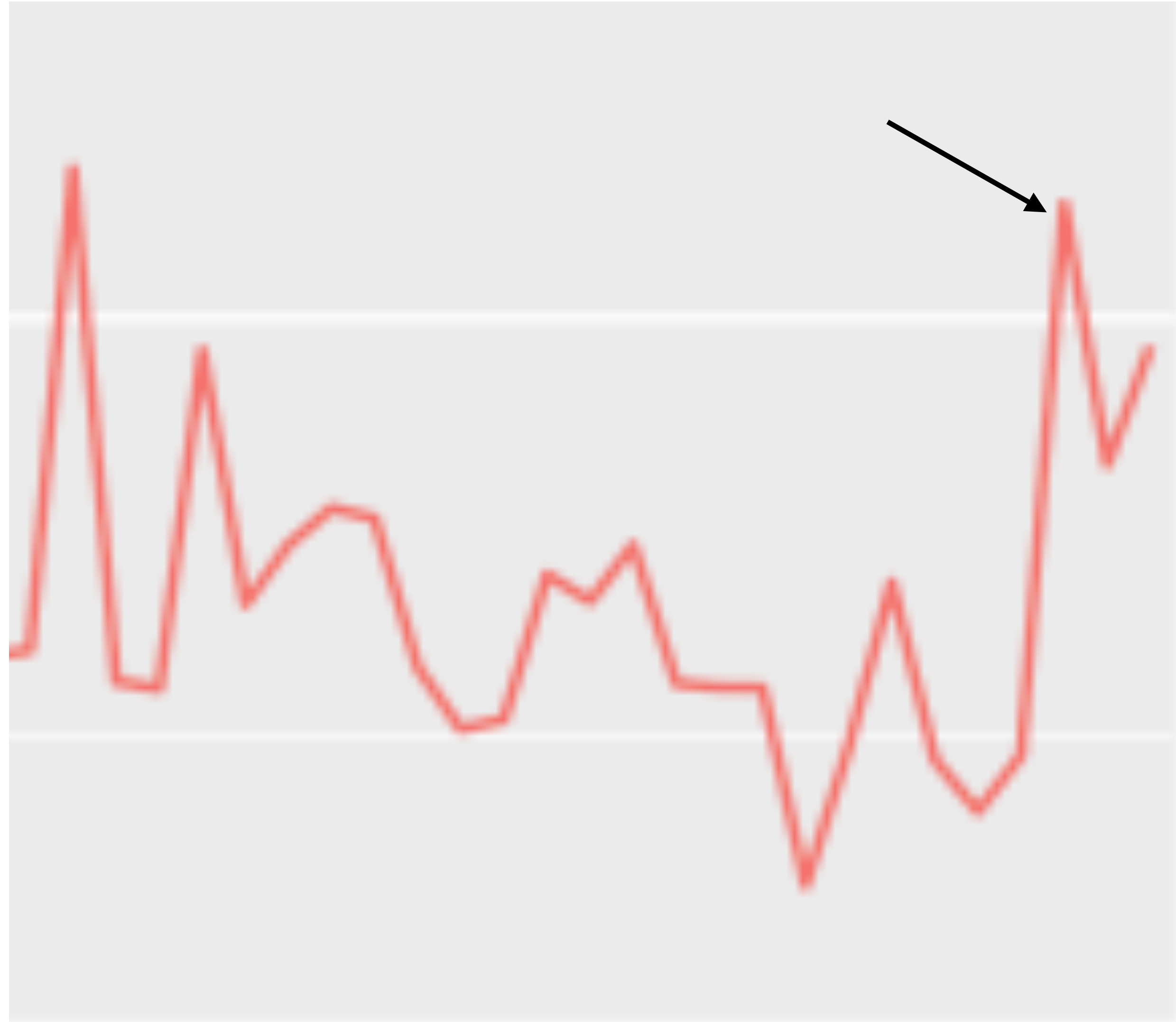


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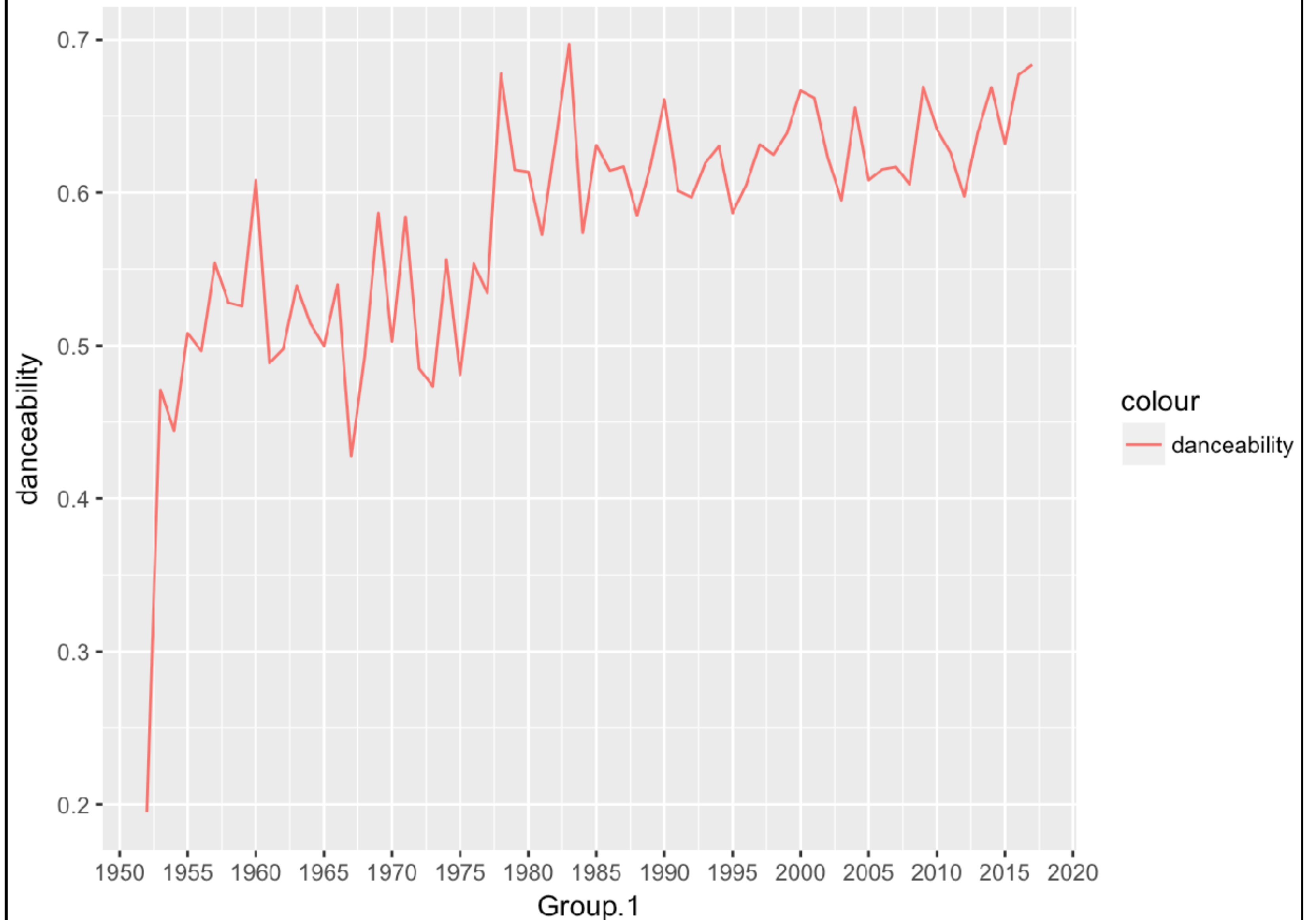




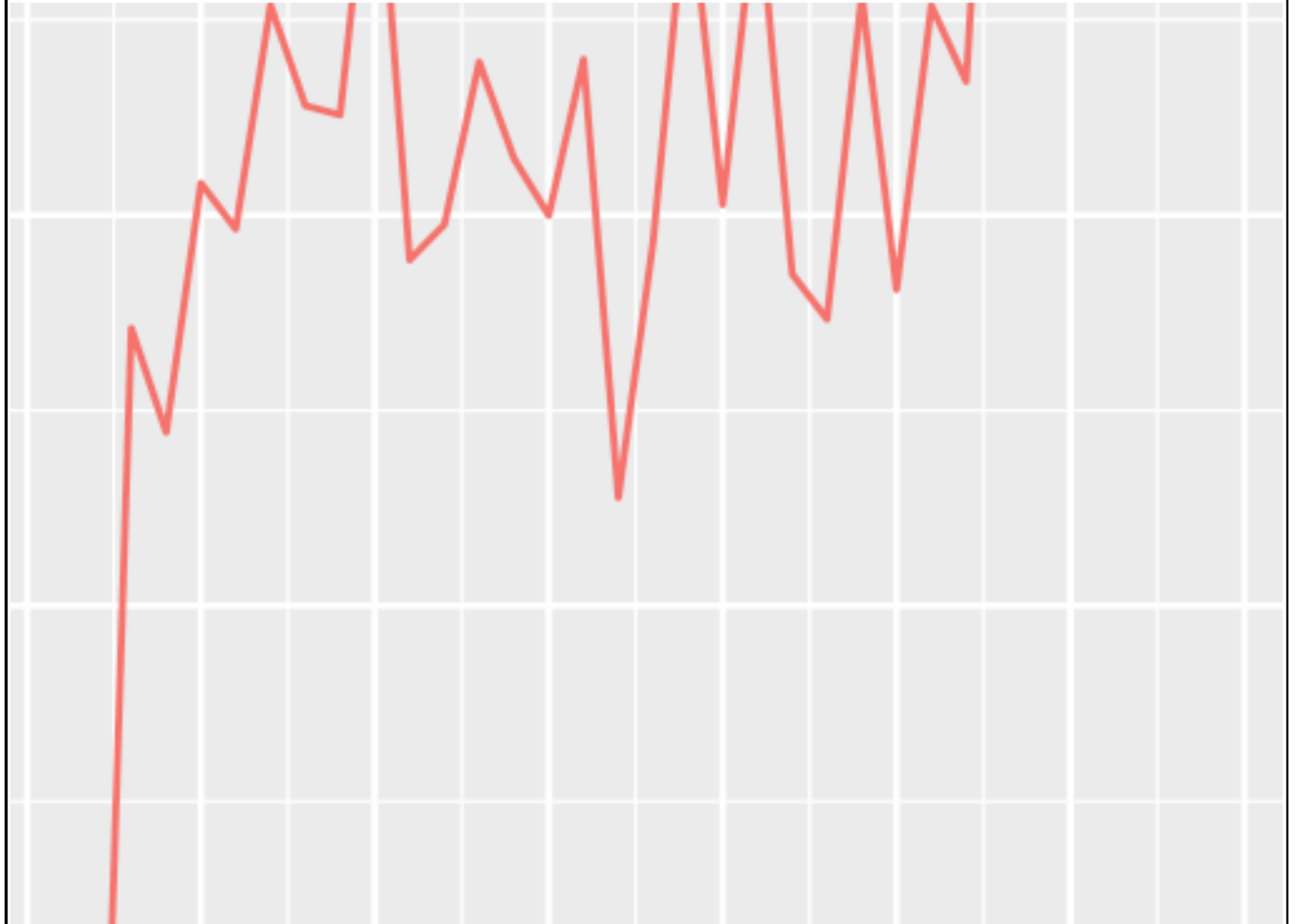
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Danceability has generally been increasing over the years, but saw its peak in 1983. This year saw some pretty danceable classics, including Billie Jean - Michael Jackson, Give It Up - Kc & The Sunshine Band And Red Red Wine By Ub40.

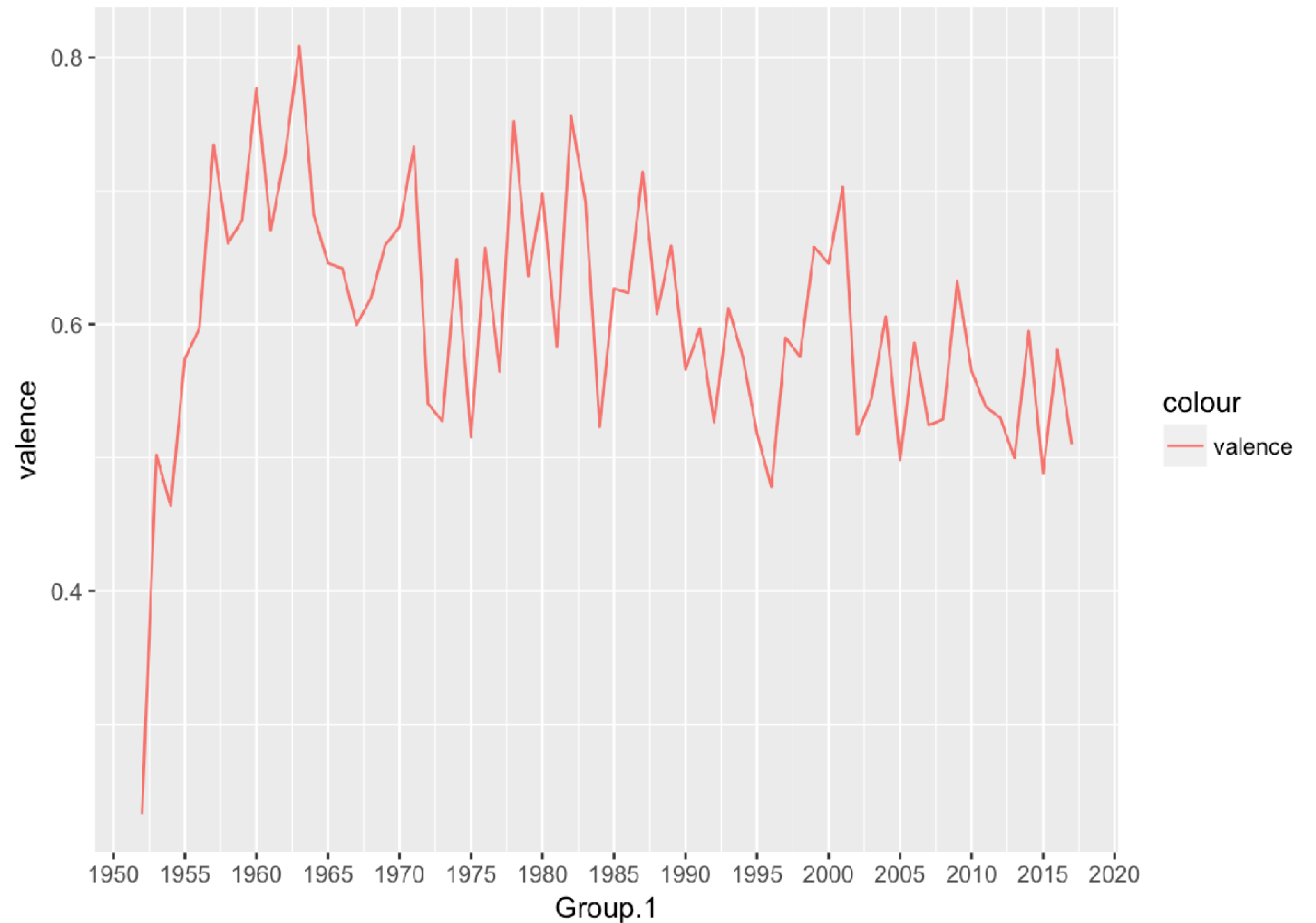


Danceability plummeted in 1969, the year when songs including Fleetwood Mac's Albatross and Bobbie Gentry's I'll Never Fall In Love Again made it big.

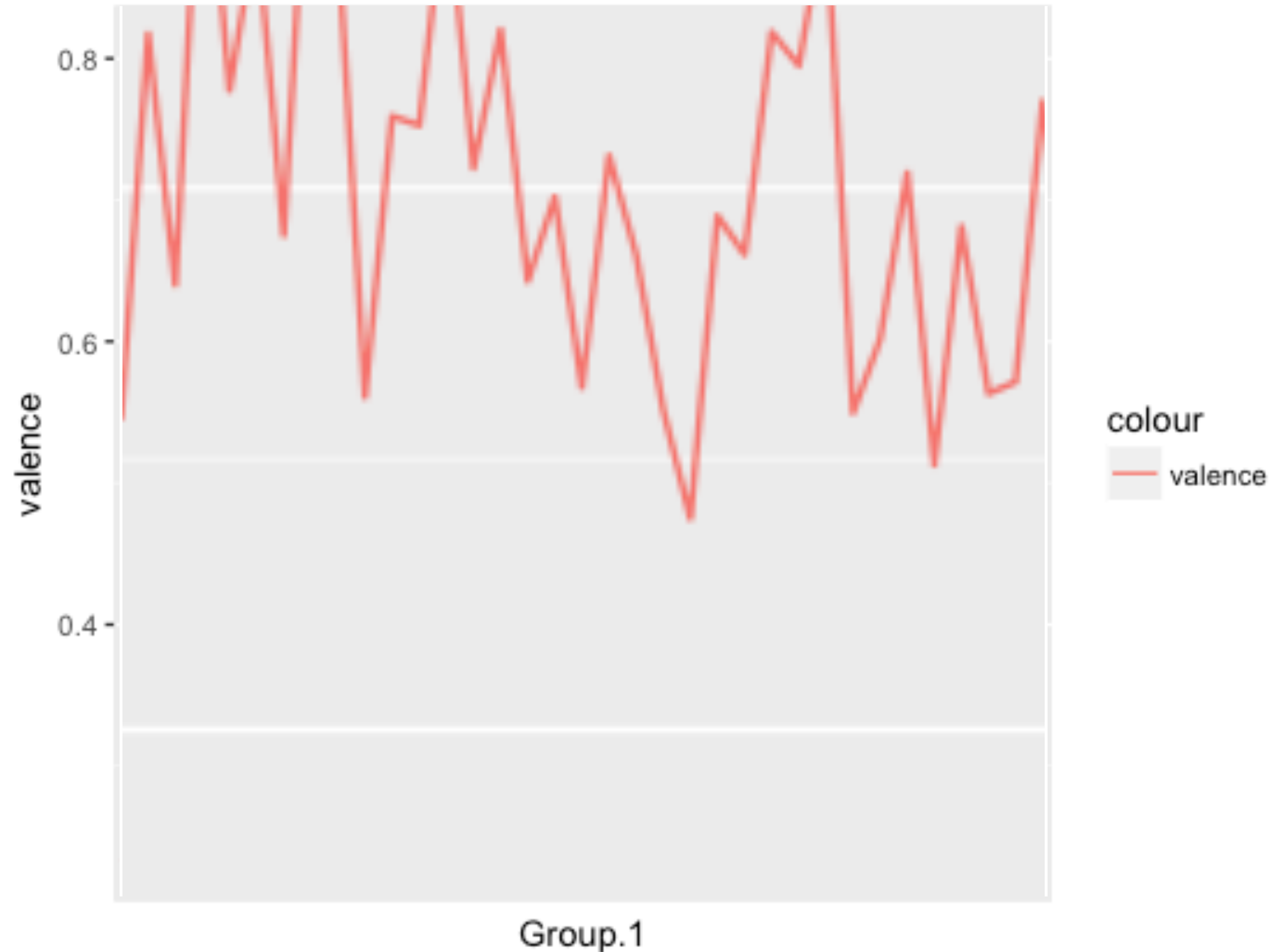


Valence peaked in the 60s, reaching its highest in 1963. Since then it has generally decreased, save for the 80s.

In 1963, most of the songs were high valence. Even the lowest scoring ones were pretty feel good - such as Cliff Richard's Summer Holiday (the 3rd lowest valence score that year).

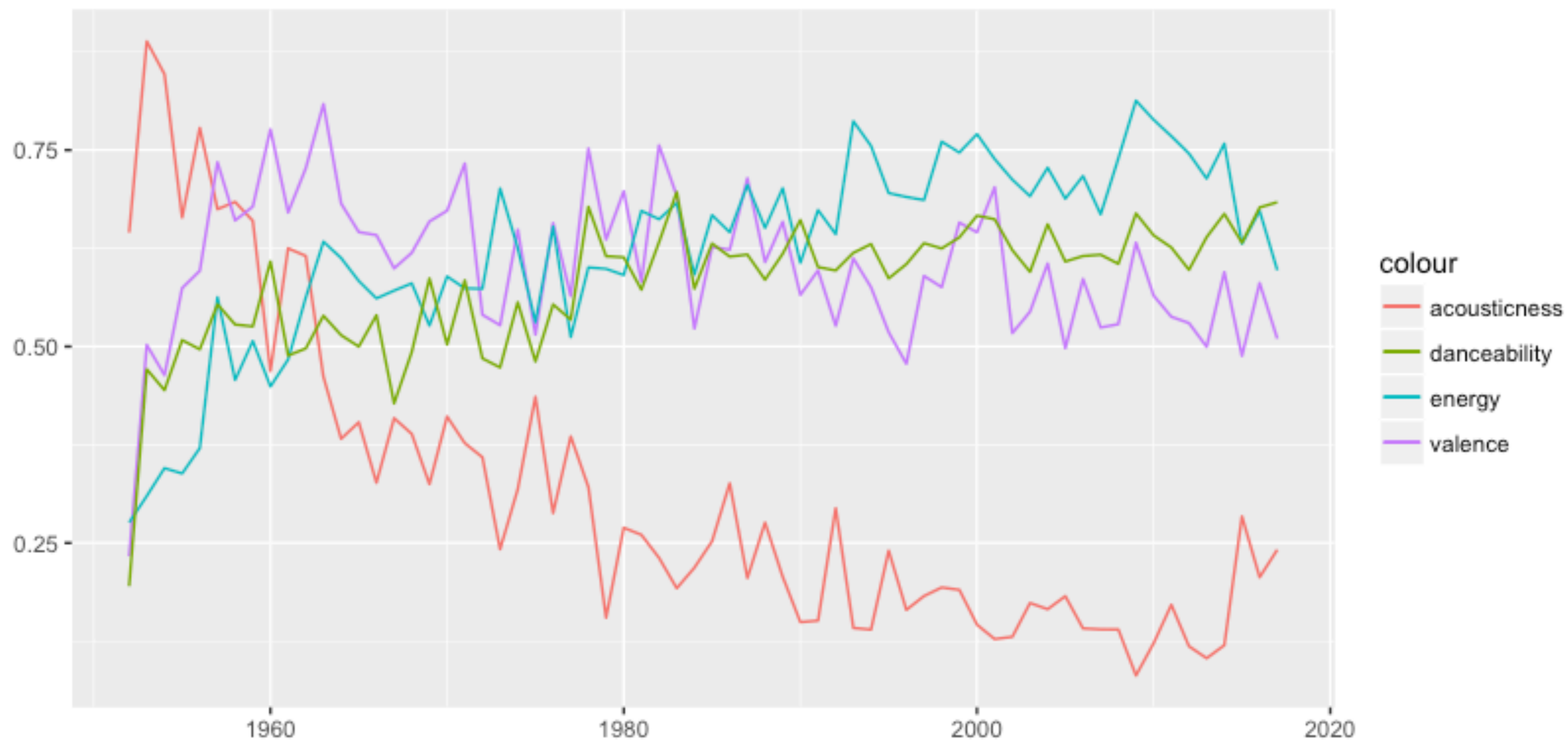


On average, the least feel good year since 1954 is 1996. This is interesting, as a few major events happened this year, including the Dunblane Massacre, IRA bombing in Manchester, Charles and Diana divorcing and Take That splitting up. Could it be that these events had an impact on the happiness of music produced that year?

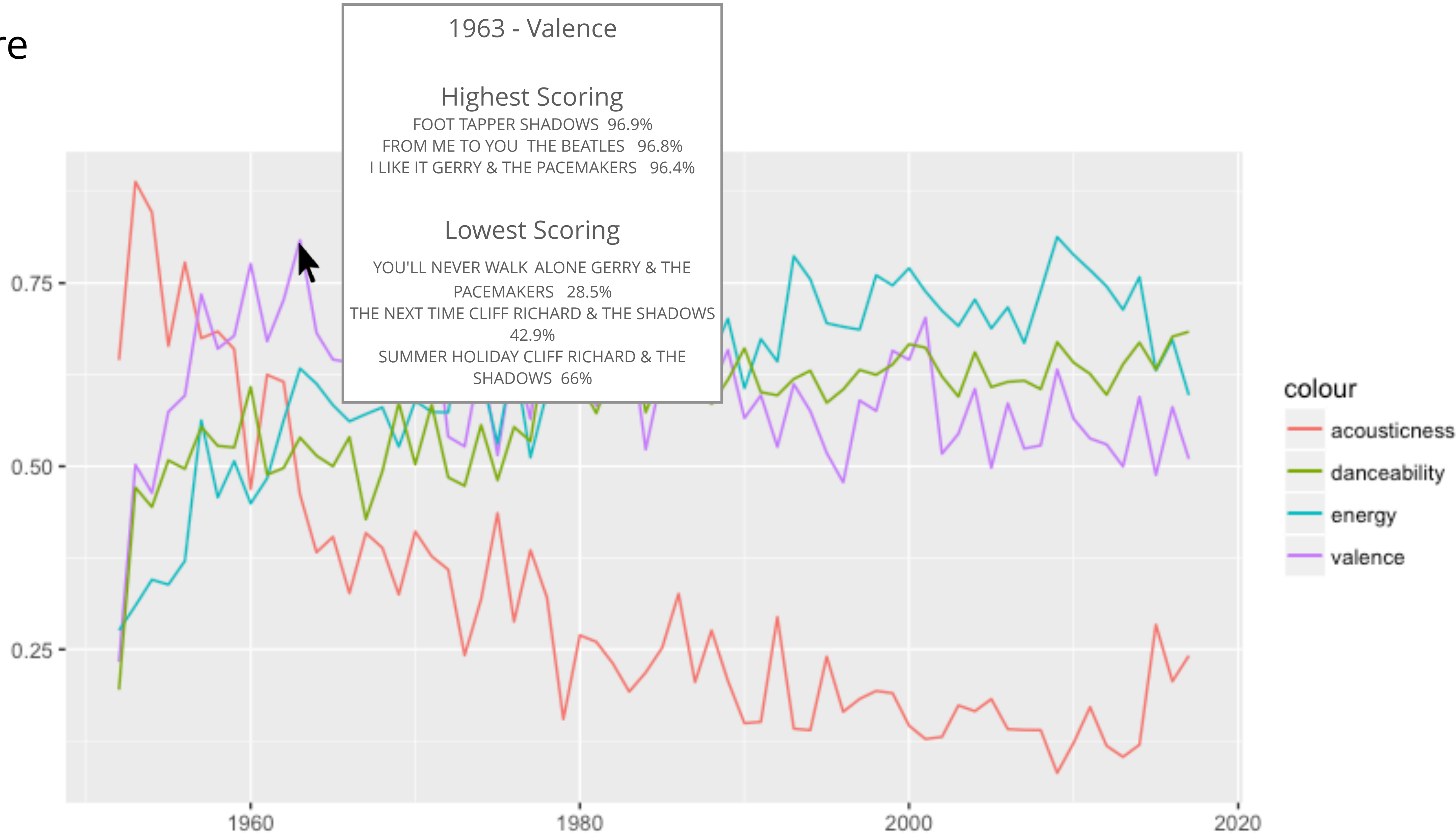




# Explore



# Explore

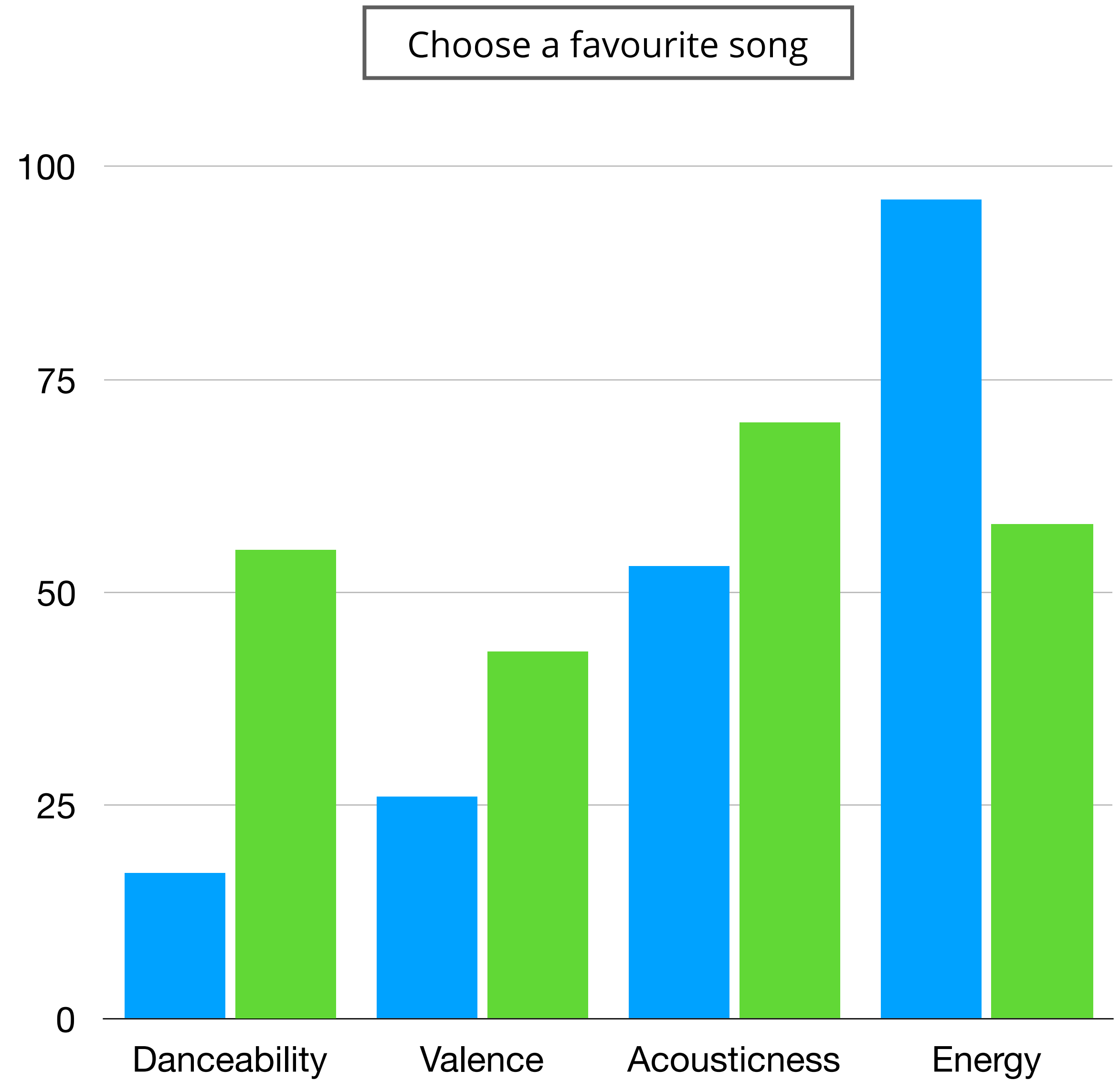


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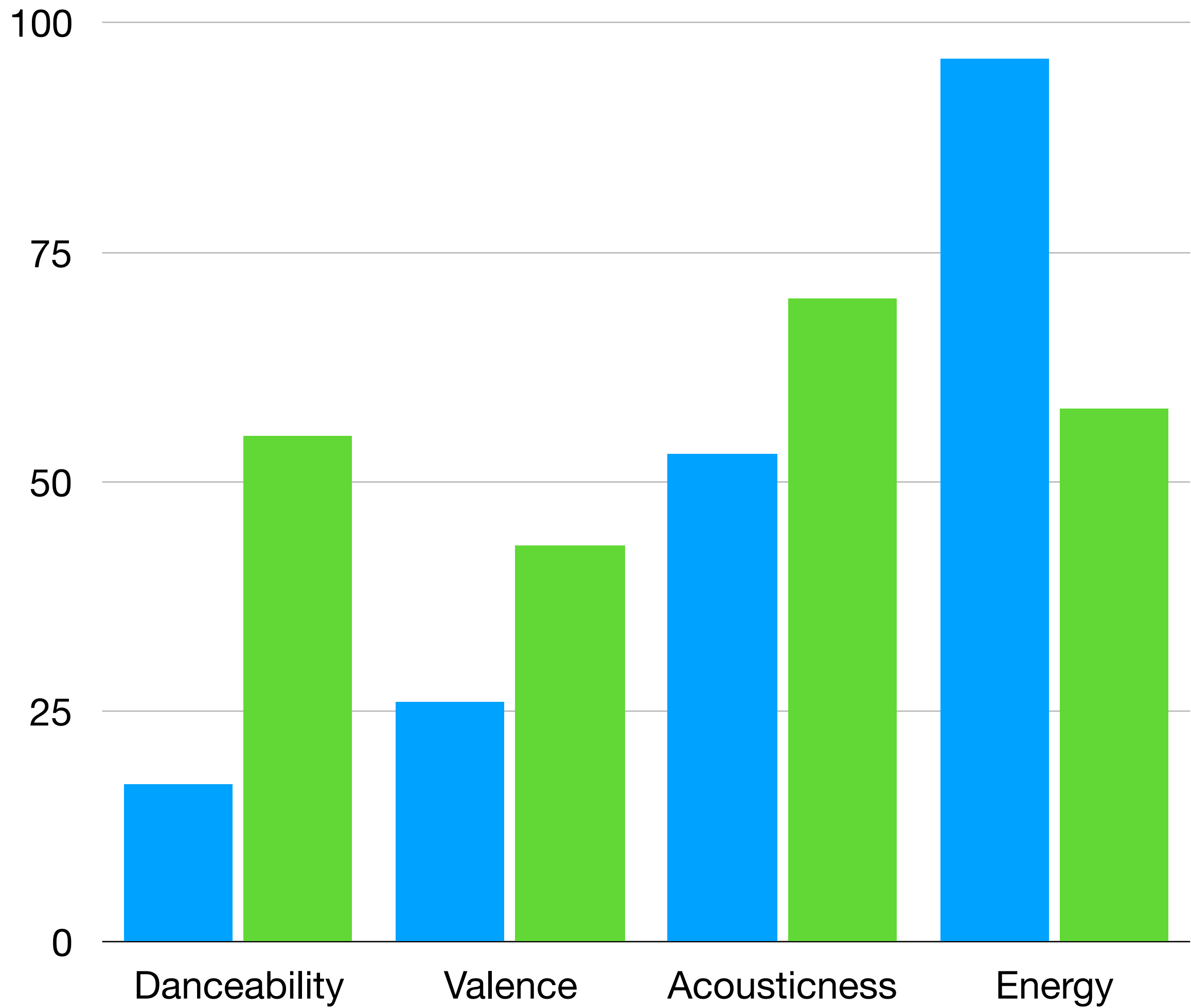
[Selected song] is more  
[feature] than [x]% of  
songs that reached  
number 1.



# Explore

Song 1

Song 2



- Audio features
- ☒ danceability
  - ☒ valence
  - ☒ acousticness
  - ☒ energy
  - ☐ instrumentalness
  - ☐ speechless
  - ☐ liveness

Follow Playlist

# Methodology

For this project, I gathered data from the Official Charts website about every number 1 hit in history. This has then been combined with the available data from Spotify, using the Spotify API, to investigate what trends and relationships exist between songs which reach number 1. The aim of this was to practice the web development and design skills I have learnt during my degree and learn some data analysis in the process.

A few tracks were removed from the audio attributes section because no data as available for them on Spotify.