

How is the US drug problem reflected in music?

Introduction

One of the main topics in music has always been the use of illicit drugs and alcohol.

The Beatles - Lucy in the sky with diamonds (1967), Rolling Stones – Sister Morphine (1971), Guns N' Roses - Mr. Brownstone (1987), Oasis – Cigarettes & Alcohol (1994) ... the list is infinitely long.

By observing the US charts of the last three decades, we wanted to analyze the evolution of drug and alcohol use referenced in music.

Are drugs and alcohol more present in today's chart music? If yes, to what extent? Are the drugs mentioned changing over time?

Motivation

Drug addiction is one of the greatest social troubles that modern societies struggle with, and especially in the United States, the percentage of drug abuse is constantly rising. That happens in an era when there is a close relationship between the young American and the music they listen to. Statistics say that an average millennial in the United States listens to music for more than 4 hours a day, which means that it is one of the things that affect him the most, even subconsciously when listening to music in the background.

How did we get the data?

- Billboard 'Year End' Top 30 Chart Songs from 1990 to 2019 (900 songs)
- GENIUS® API to get the URLs of the songs
- Python script to get the lyrics of the songs (beautifulsoup package)
- RStudio (We predefined a file with 230 drug referencing words and compared them with the song text of each song and took the context the words are used in consideration. We also counted the amount of times the words occurred per year and overall)



Results

Number of drug references per year

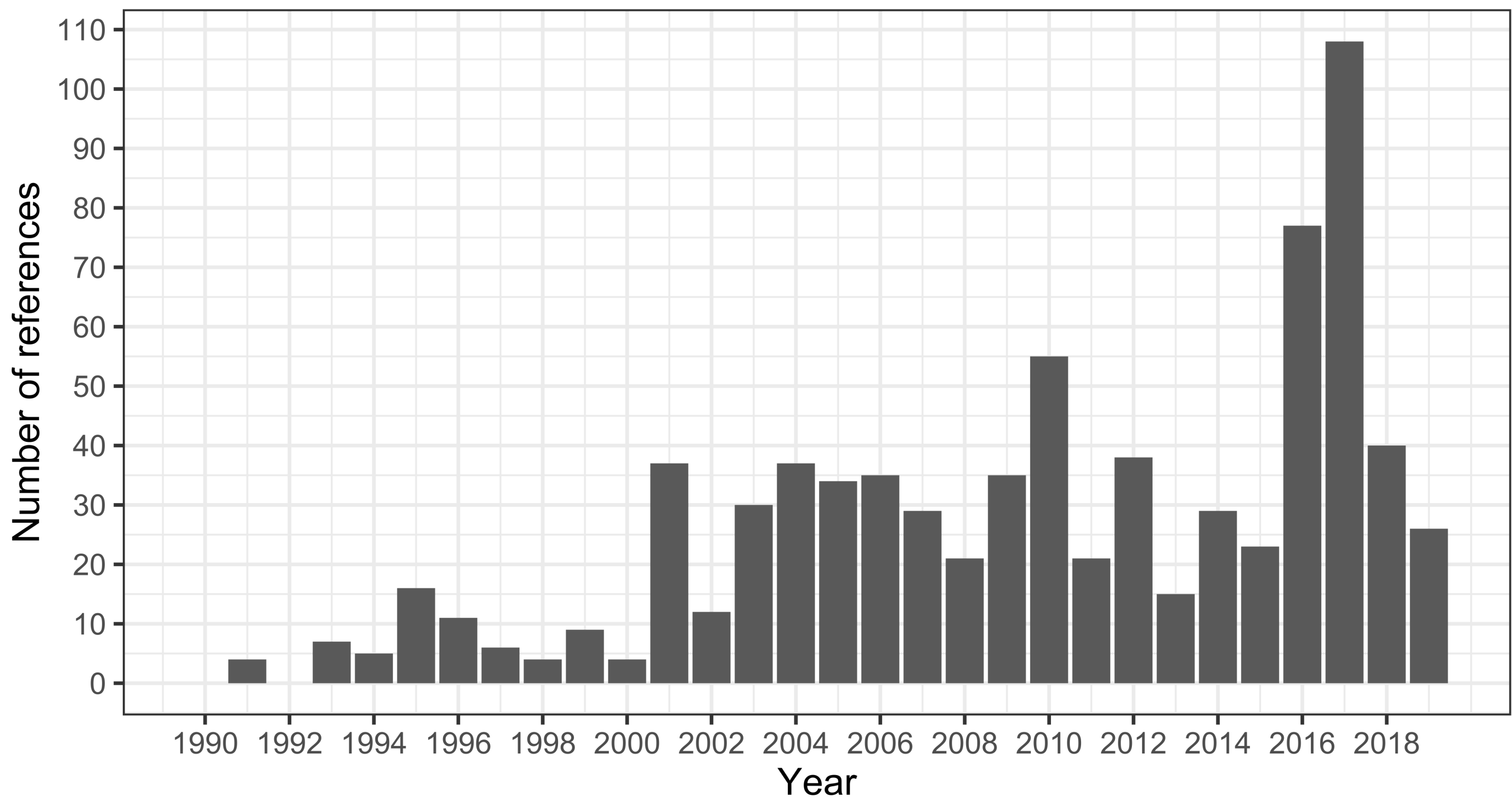


Chart 1: Number of drug references out of the top 30 songs per year

Number of songs referencing drugs per year

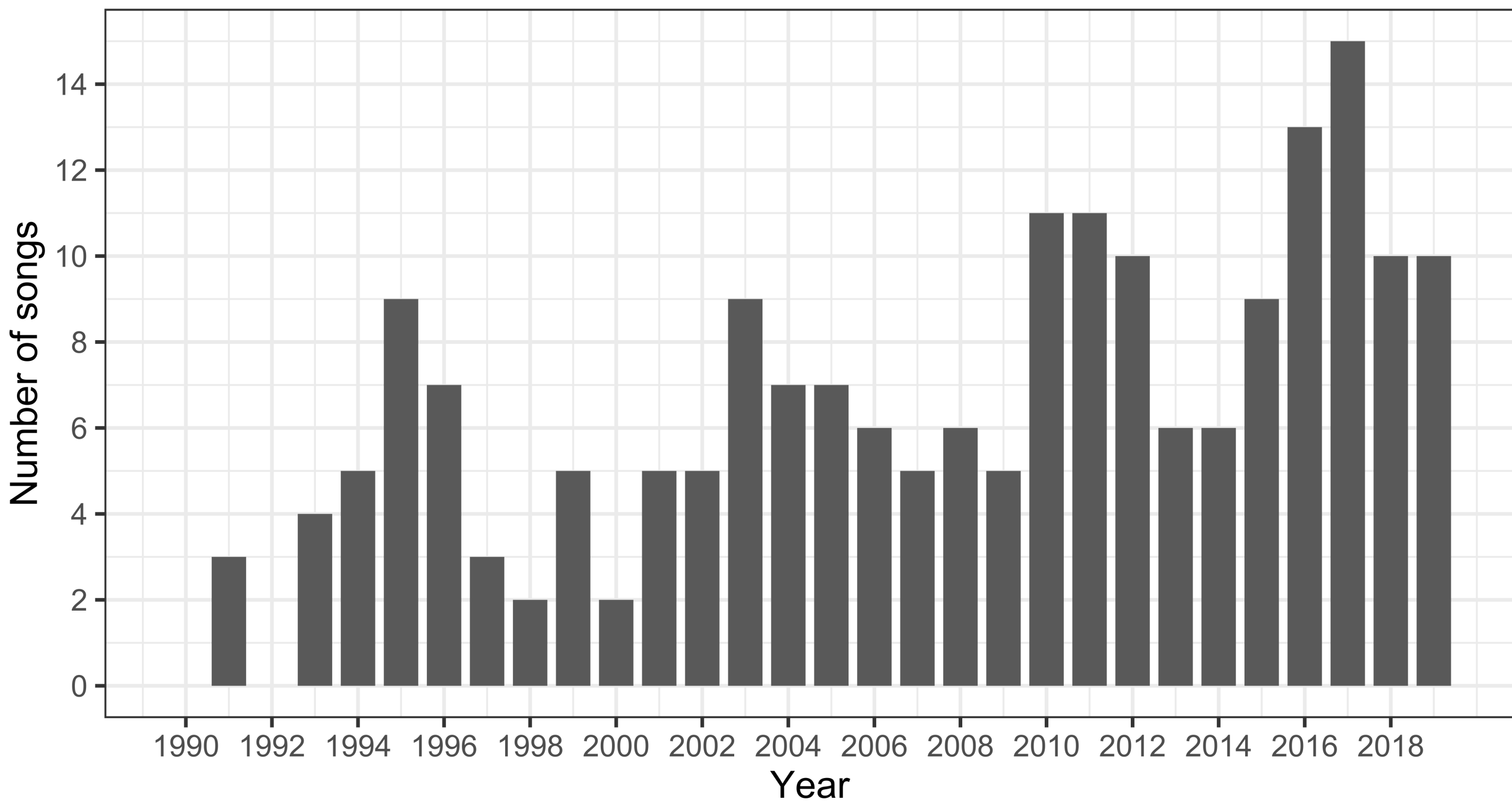


Chart 2: Number of songs referencing drugs out of the top 30 songs per year

Alcohol and Cannabis references

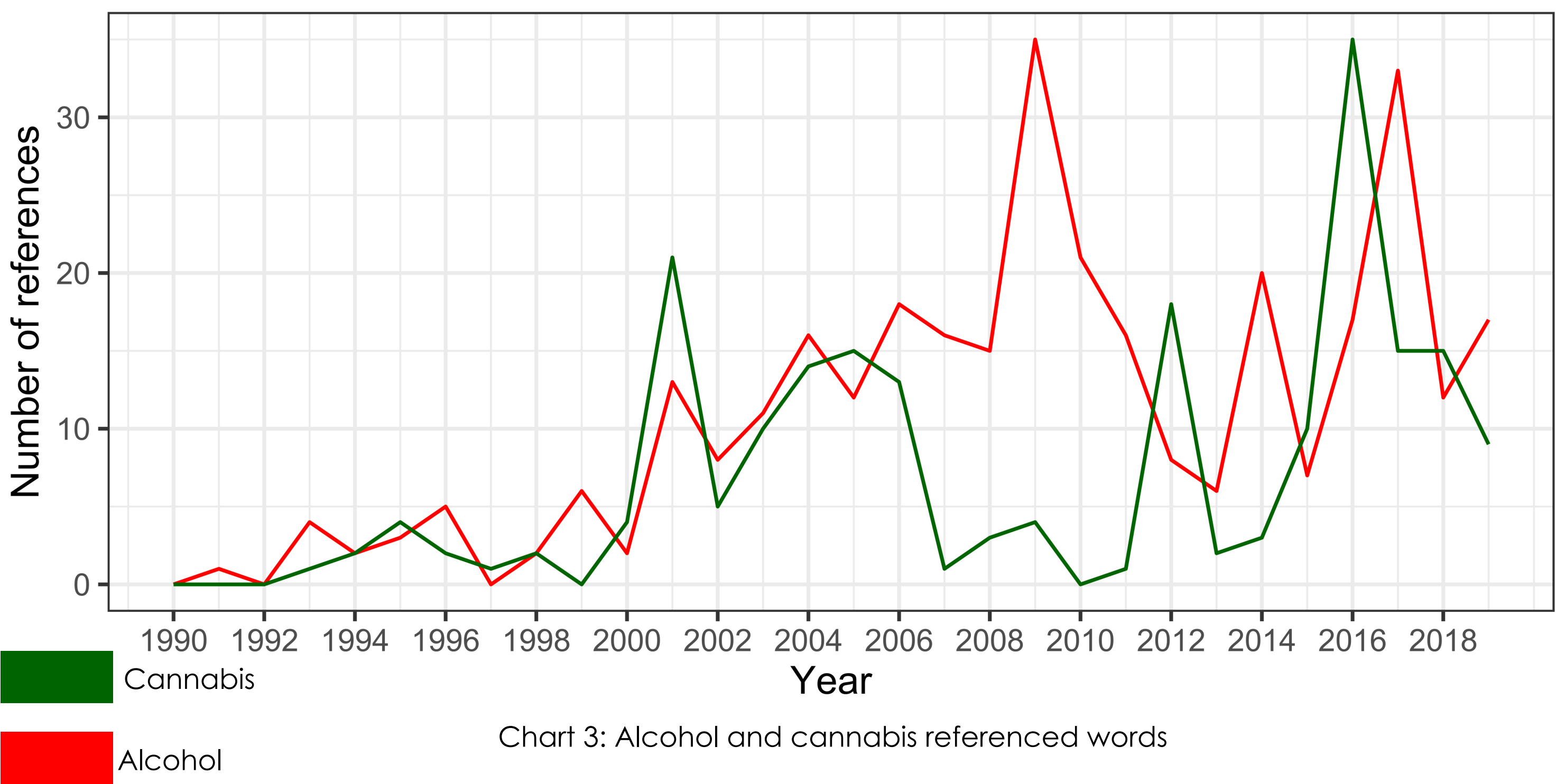


Chart 3: Alcohol and cannabis referenced words

Prescription and other drug references

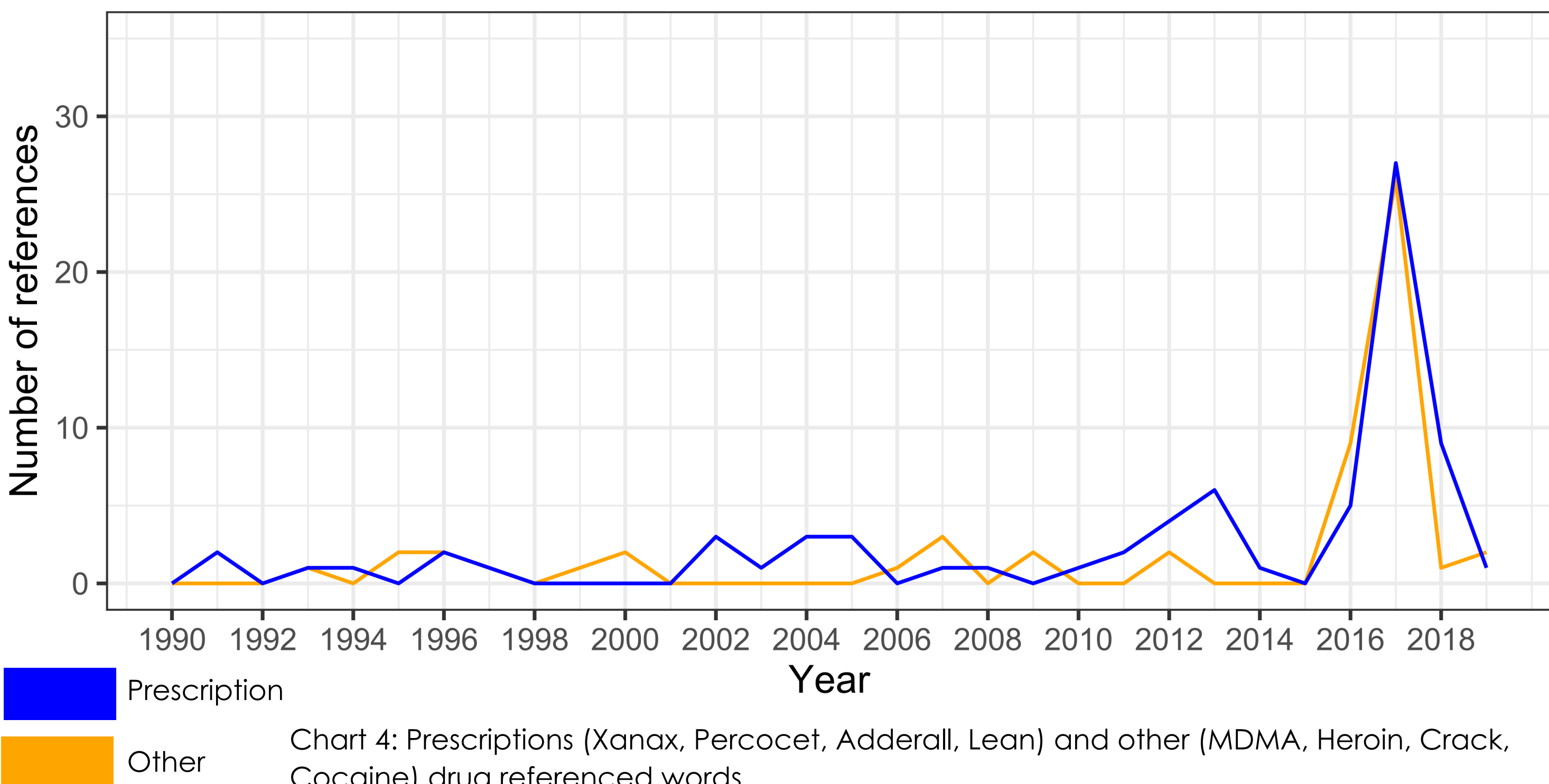


Chart 4: Prescriptions (Xanax, Percocet, Adderall, Lean) and other (MDMA, Heroin, Crack, Cocaine) drug referenced words

Decade	Total number of drug references out of the top 30 songs	Average number of songs referencing drugs out of the top 30 songs
1990 - 1999	62	3.8
2000 - 2009	277	5.7
2010 - 2019	432	10.1

Chart 5: Statistics about number of drug references

With this massive increase of drug references, the range of drugs mentioned in today's lyrics has become more diverse than ever. Cannabis and alcohol are without a doubt the all-time favorite drugs of artists. Whiskey, Cognac (especially "Hennessy" or "Henny") and champagne are the go-to liquors of songwriters. With rap taking over the charts these days (half of the top 30 songs in 2019 were listed in the rap / hip-hop category), cannabis came with it. Most of the times, rappers are plainly stating the fact that they are smoking "weed" or rolling joints, playing down the harmful effects of the drug. Today, we are observing a diversification of the drugs mentioned in chart songs. Besides alcohol and cannabis, prescription drugs like Xanax, Percocet's, Adderall, Lean (coughing syrup with codeine also called "Purple Drank") but also MDMA (also called "Molly") are getting more popular.

Conclusion

To answer the questions stated in the beginning, we are definitely observing an increase of drug and alcohol references in today's chart music. With this, comes a diversification of the drugs mentioned. What is really concerning, is the disingenuous and one-sided way drugs and alcohol are represented by the artists. This is fuel for the drug problem the US faces today. Of course, it is not possible to quantify the effect this has on the drug rate, but we must consider it as a factor of the problem.