

# Song melodies have become simpler since 1950, study suggests

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The complexity of the melodies of the most popular songs each year in the U.S.—according to the Billboard year-end singles charts—has decreased since 1950, a study [published](#) in *Scientific Reports* suggests.

Madeline Hamilton and Marcus Pearce analyzed the most prominent melodies (usually the vocal [melody](#)) of songs that reached the top five positions of the US Billboard year-end singles music charts each year between 1950 and 2022. They found that the complexity of [song](#) rhythms and pitch arrangements decreased over this period as the average number of notes played per second increased. They also identified two significant decreases in melodic complexity that occurred in 1975 and 2000, along with a smaller decrease in 1996.

The authors speculate that the melodic changes that occurred in 1975 could represent the rise of genres such as new wave, disco and stadium rock. Those occurring in 1996 and 2000 could represent the rise of hip-hop or the adoption of digital audio workstations, which enabled the repeated playing of audio loops, they add.

The authors note that although the complexity of popular melodies appears to have decreased in recent decades, this does not suggest that the complexity of other musical components—such as the quality or combinations of sounds—has also decreased.

They speculate that decreases in melodic complexity could result from increases in the complexity of other musical elements, such as an increase in the average number of notes played per second, to prevent music from sounding overwhelming to listeners. Additionally, they propose that expansions in the availability of digital instruments may enable musical complexity to be expressed through [sound quality](#), rather than melody.

The findings provide further insight into the evolution of popular music over the past 70 years.

**More information:** Madeline Hamilton, Trajectories and revolutions in popular melody based on U.S. charts from 1950 to 2023, *Scientific*

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