



Neuromarketing & Entertainment: Film, TV & Music

Webinar

What do **Friends** and **Breaking Bad** have in common?



FRIENDS



BREAKING BAD

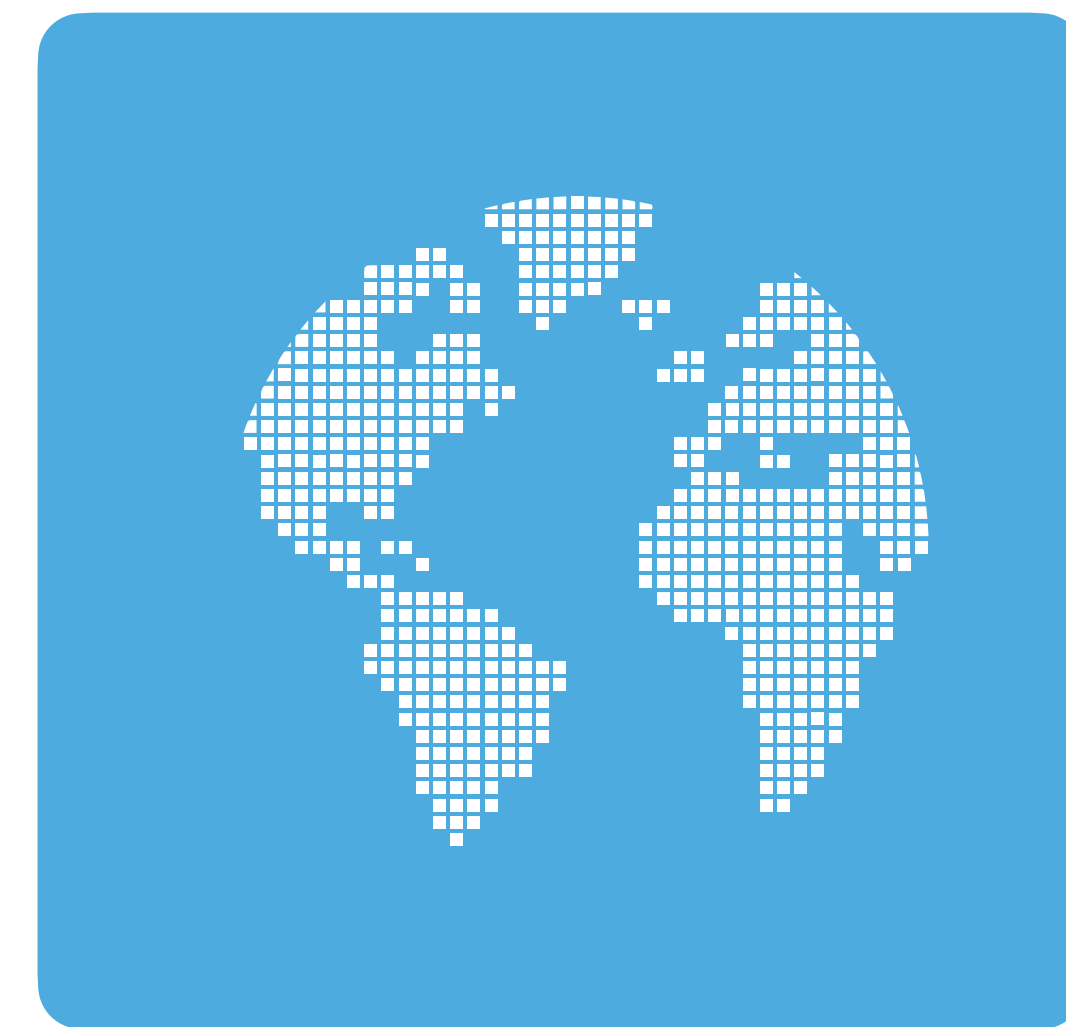


Neuroforecasting.

From brain data to market level outcomes



Biometric data



Outcome on individual or population level

The brain predicts what we buy



The brain predicts what we buy

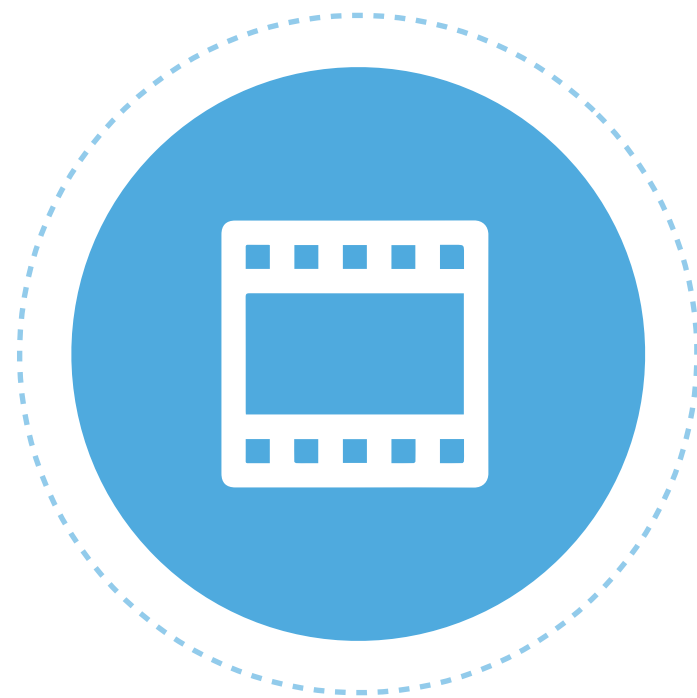
Forecasting Consumer Choice

- ✓ Product preference of **sporting shoes** like/dislike can be predicted with EEG with 94.22% accuracy (Zeng et al., 2021)
- ✓ **Smartphone preference** with EEG op >87% (Golnarnik, 2019)
- ✓ **Investment** prediction with EEG (Di Grutolla et al., 2021)
- ✓ **Popular Fashion** with EEG (Touchette & Lee, 2016)
- ✓ **Holiday destinations** with EEG (Ramsøy et al., 2019)
- ✓ **Food products** with EEG, strong prediction for branded products but weaker for private label products (Ravaja et al., 2013)



Webinar Neuromarketing & Entertainment

Today's Topics



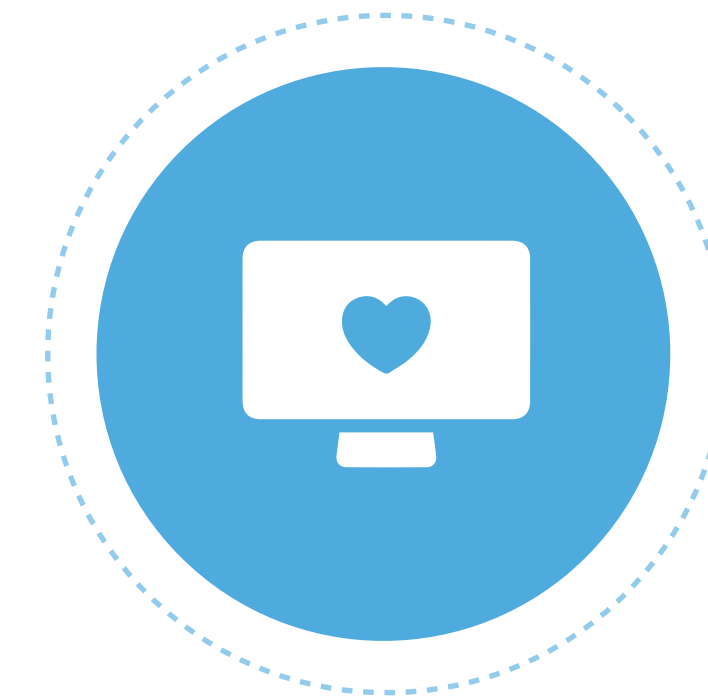
Brain & Film

How to predict box office success and do neural focus groups



Brain & Music

Where's the neural signature of a hit?



Brain & TV / Streaming

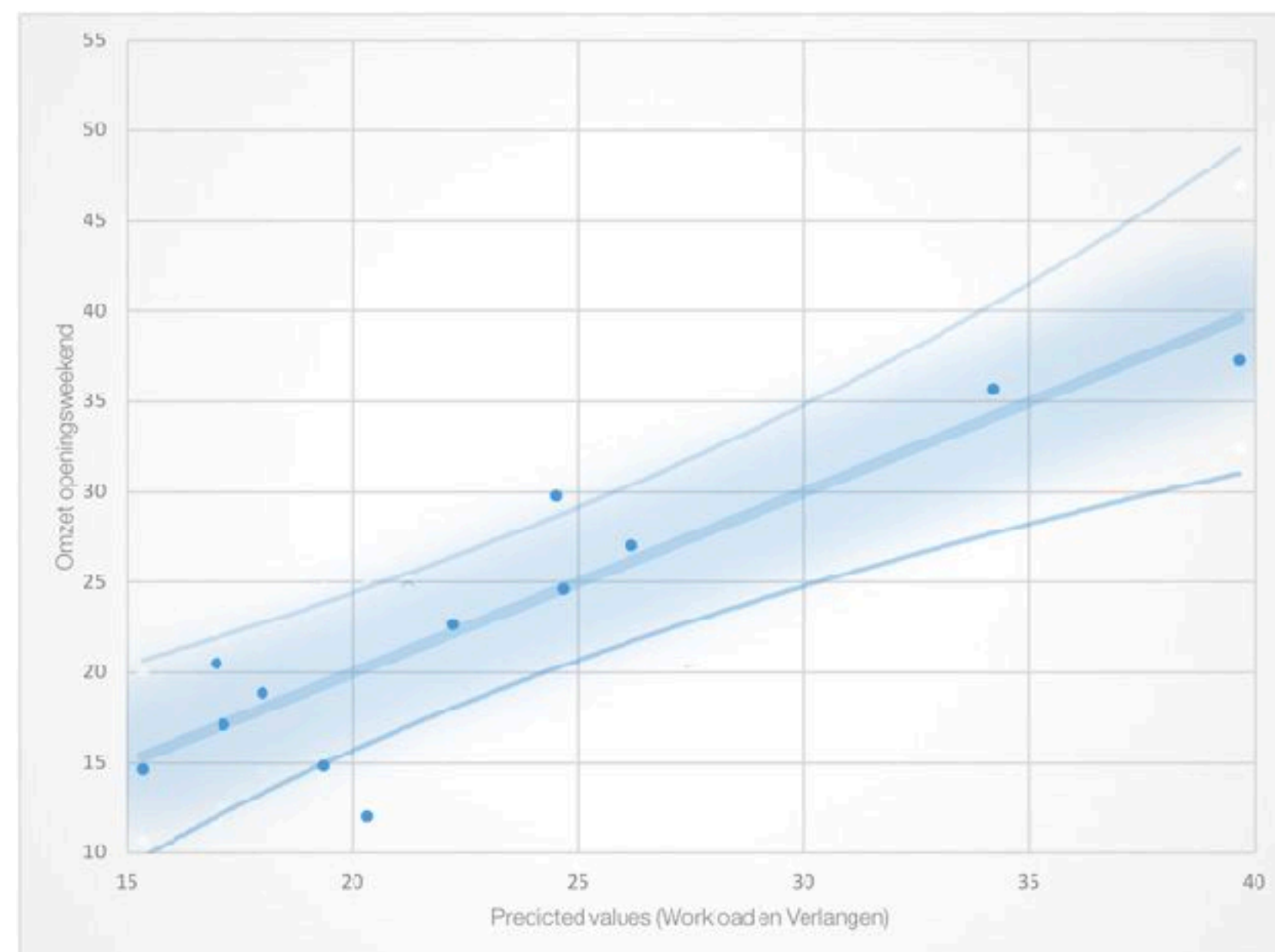
Getting the brain hooked

How to predict future box office hits?



How to predict future box office hits?

Engagement predicts ticket sales



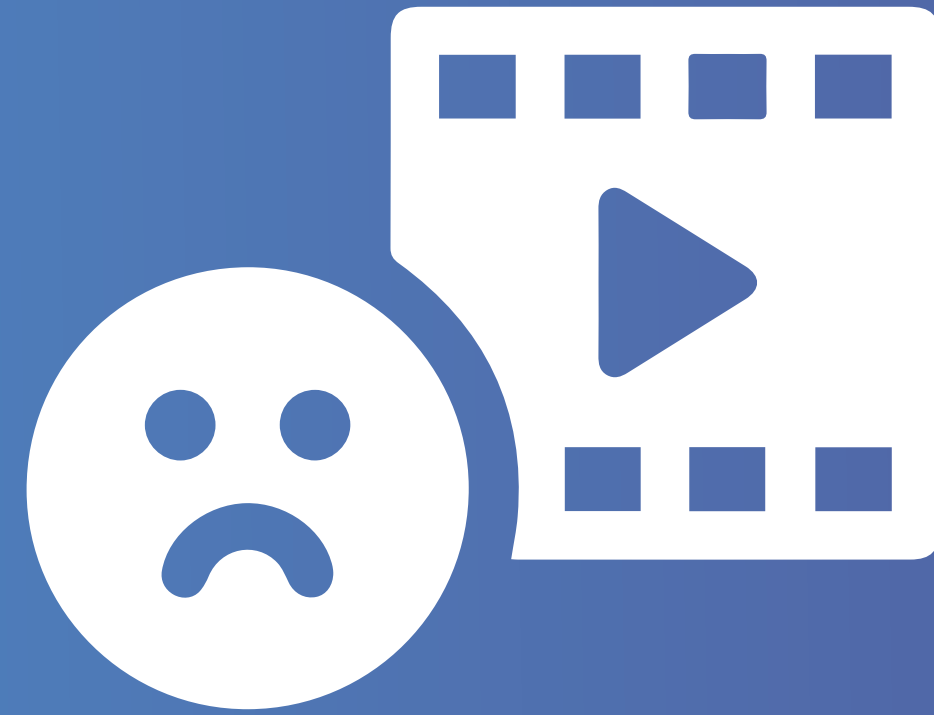
79.7%

Explained
Variance

Metric: Synchronicity

Stated preferences do not correlate
with ticket sales

Boksem & Smidts (2015)
Christoforou et al., (2017)
Barnett & Cerf (2017)
Unravel (2019)



How to

Identify Sales Killers

What Makes a Good Movie Trailer?

- ▶ Bad trailers have lower engagement rates overall
- ▶ Bad trailers especially have diminished attention after cuts, which can be caused by:
 - ▶ Chaotic gaze patterns
 - ▶ Cues associated with closure
- ▶ Good trailers use emotional contrast



SIGNALS

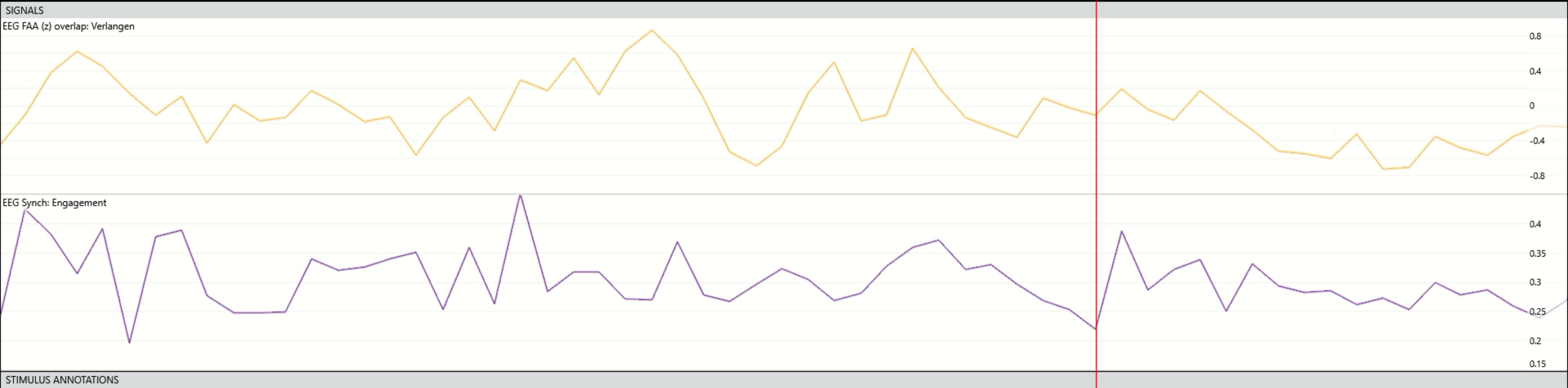
EEG FAA (z) overlap: Verlangen



EEG Synch: Engagement



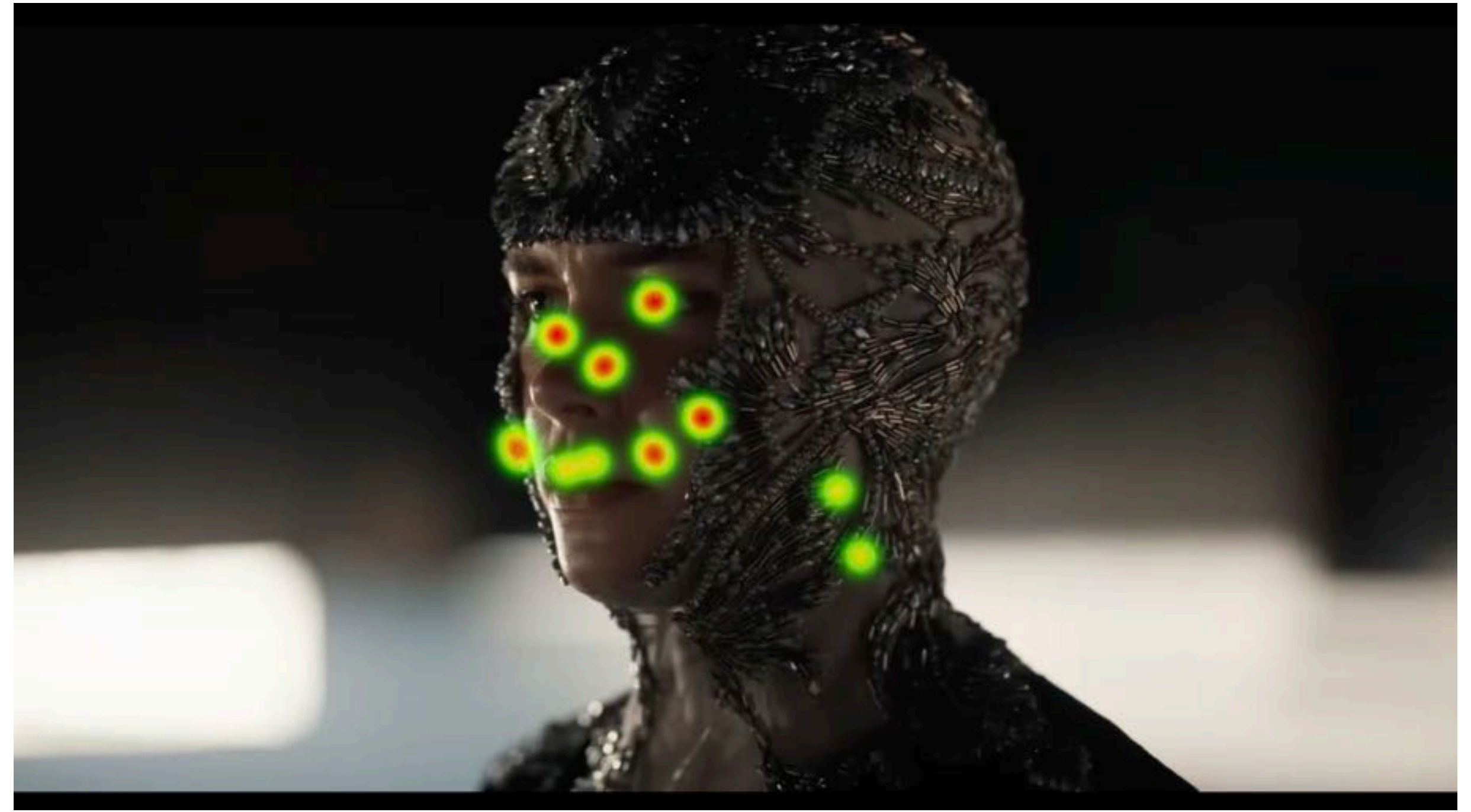
STIMULUS ANNOTATIONS



Optimizing trailers



Brain is bored



Brain is engaged

Unravel at the **Shopper Brain Conference**



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EUROPE

Shopper Brain Conference

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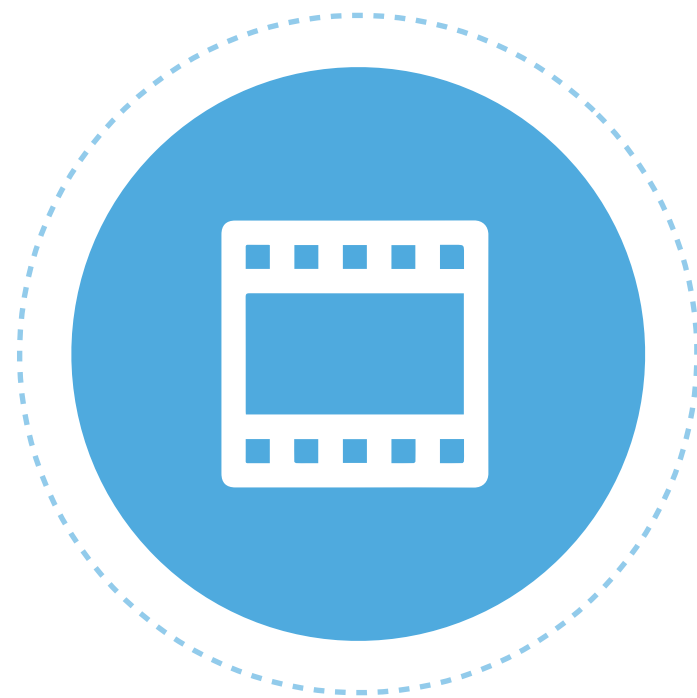
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Webinar Neuromarketing & Entertainment

Today's Topics



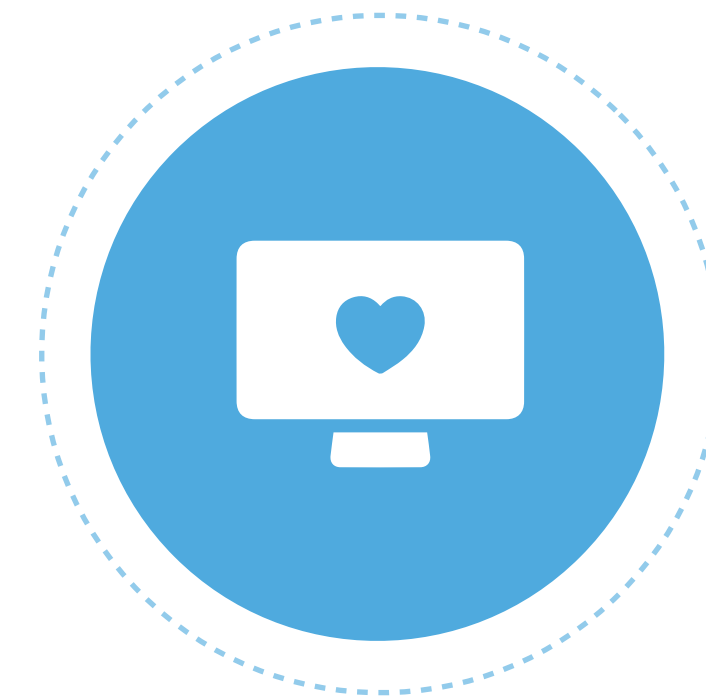
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How to predict box office success and do neural focus groups



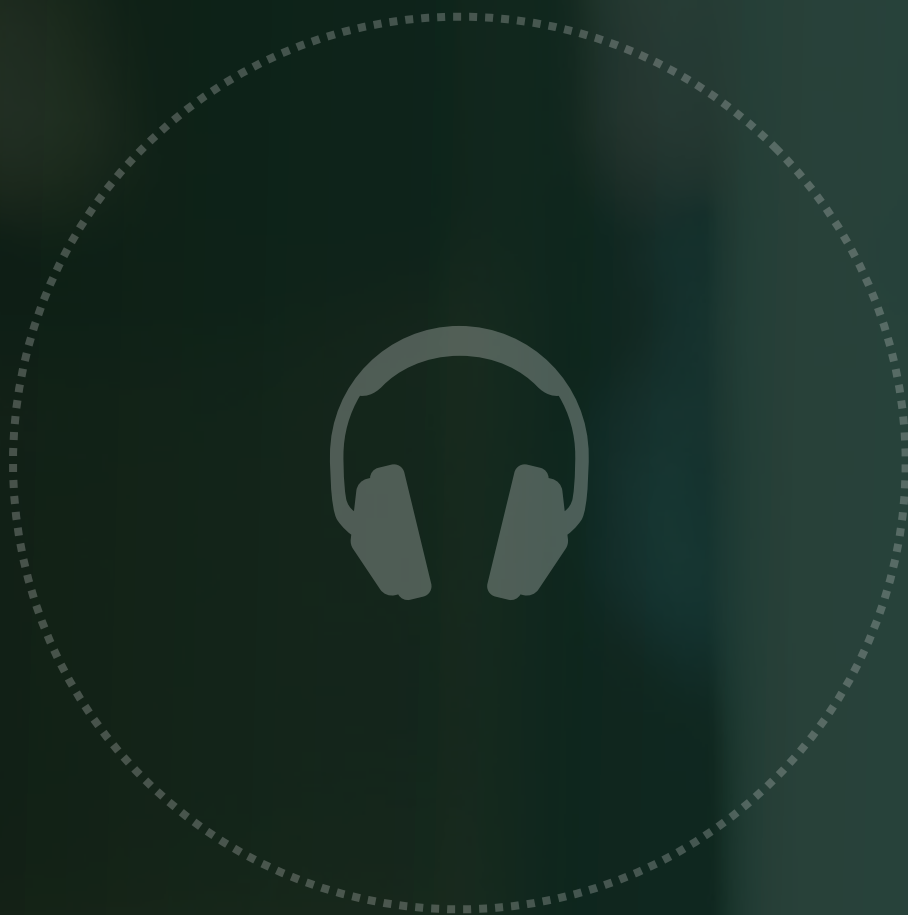
Brain & Music

Where's the neural signature of a hit?

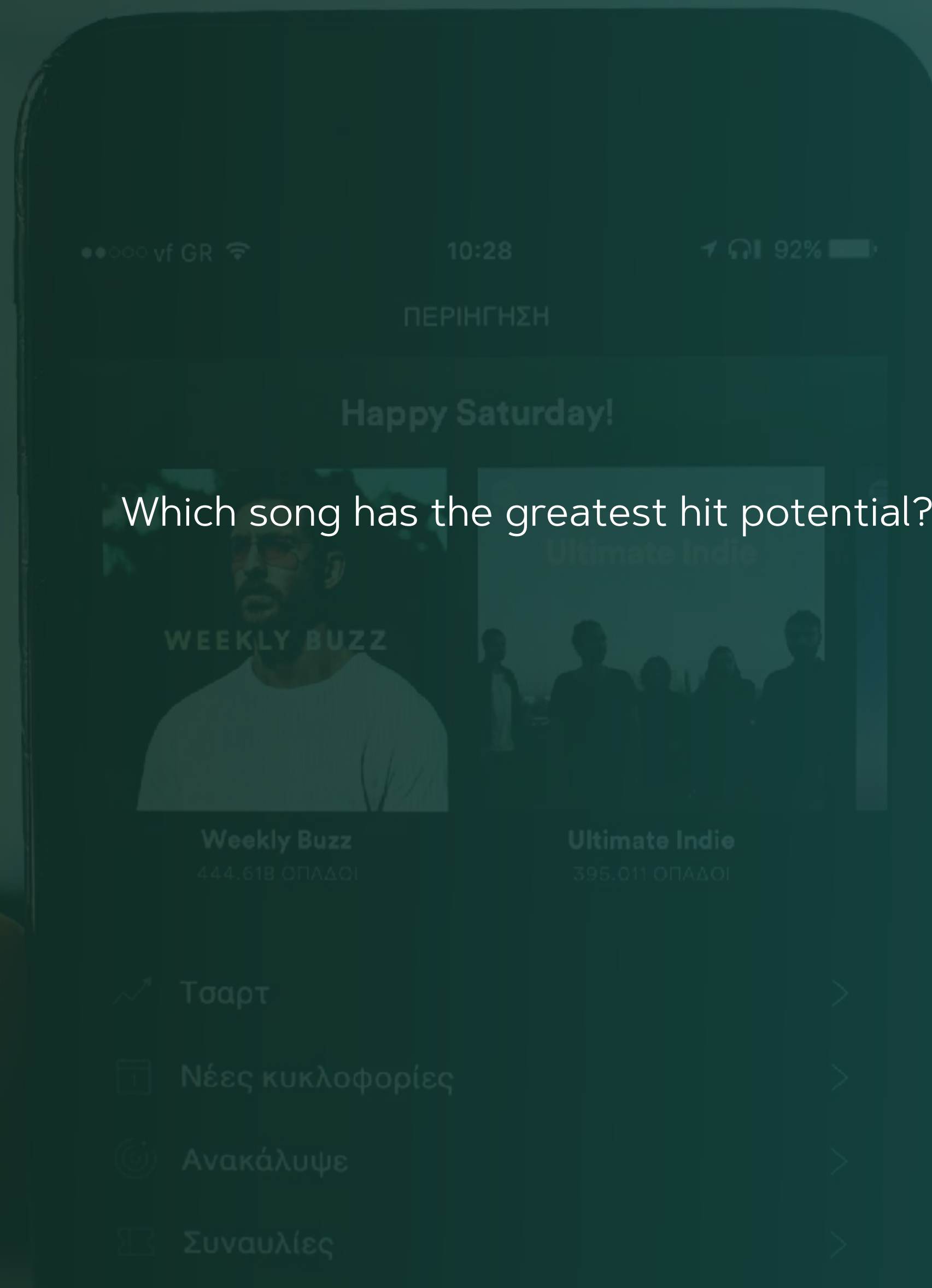
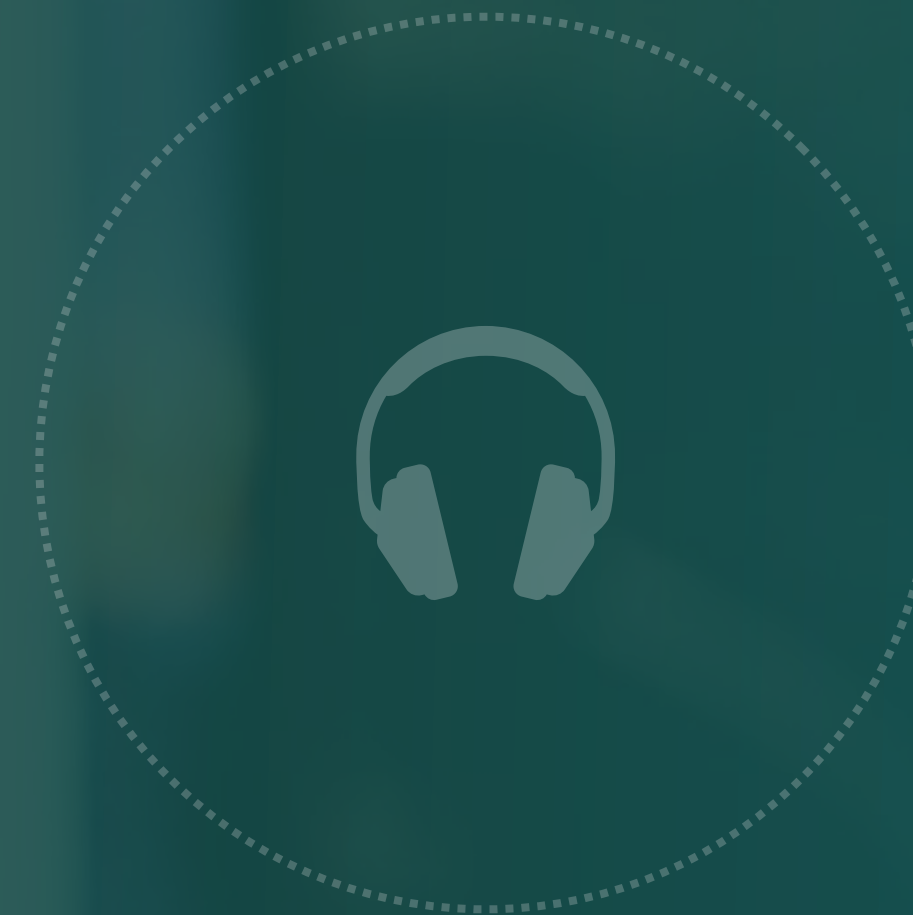


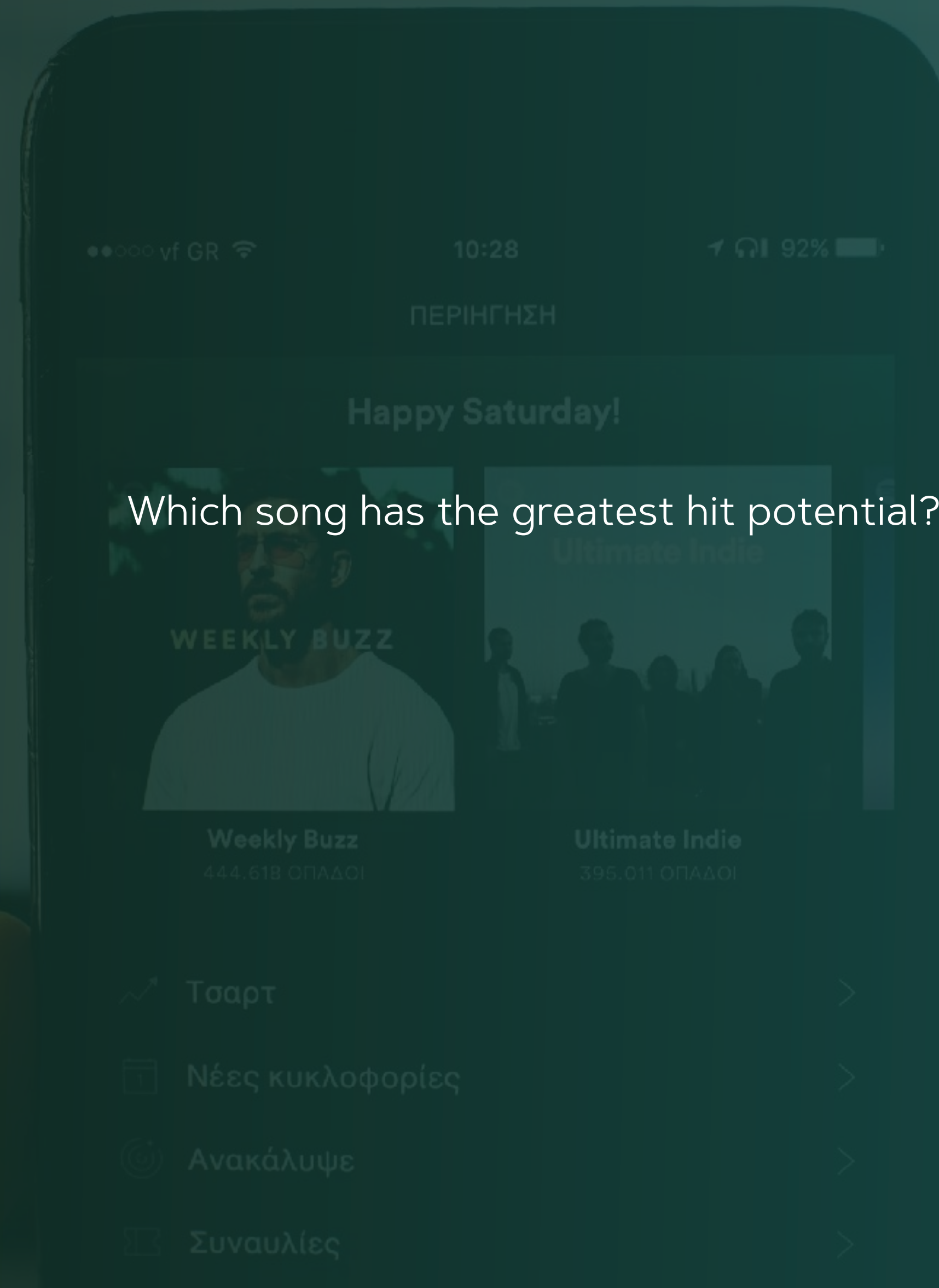
Brain & TV / Streaming

Getting the brain hooked

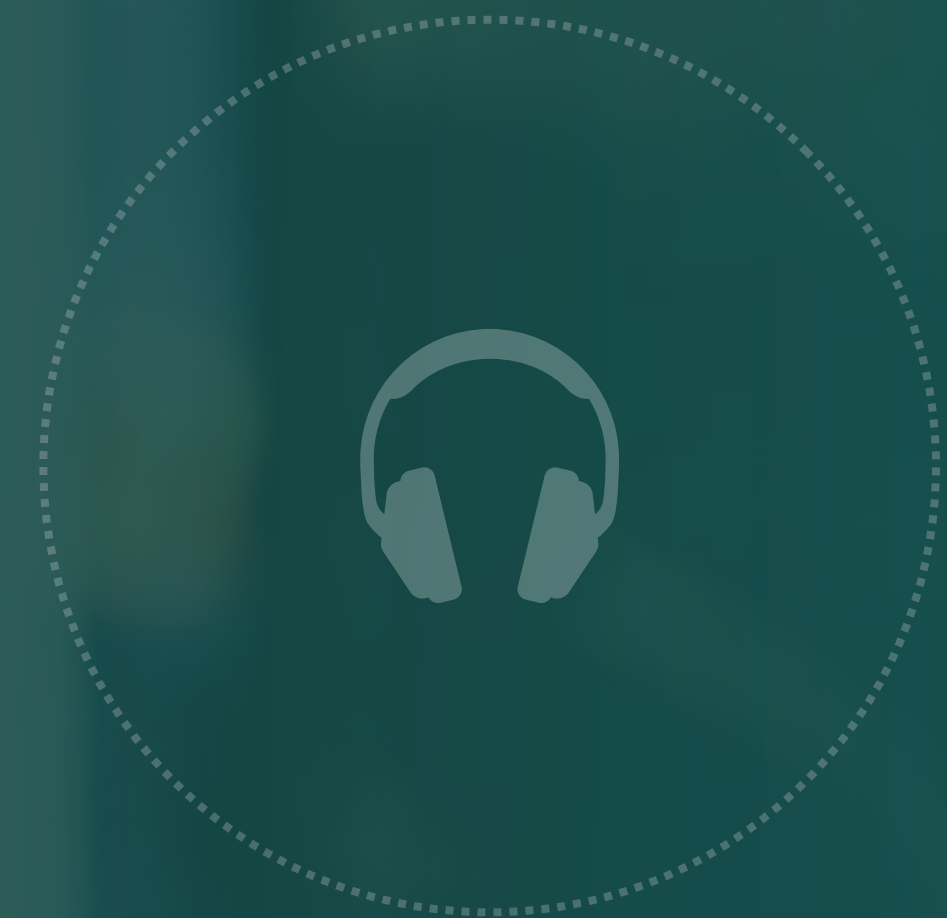


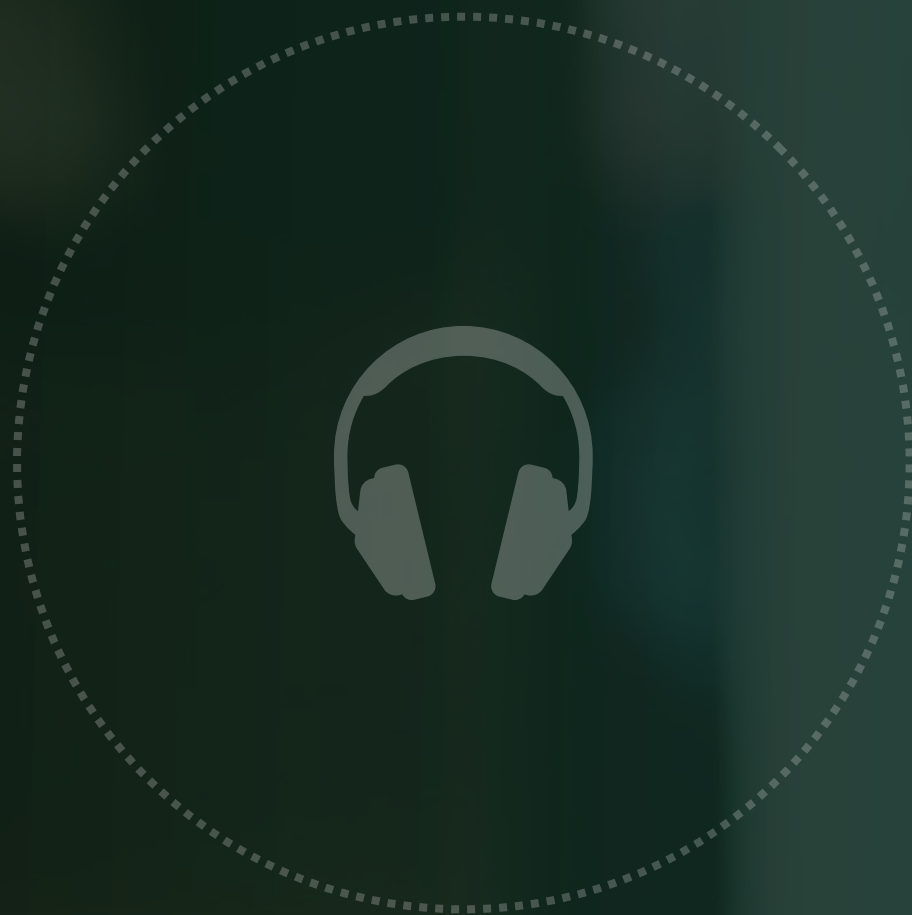
Which song has the greatest hit potential?



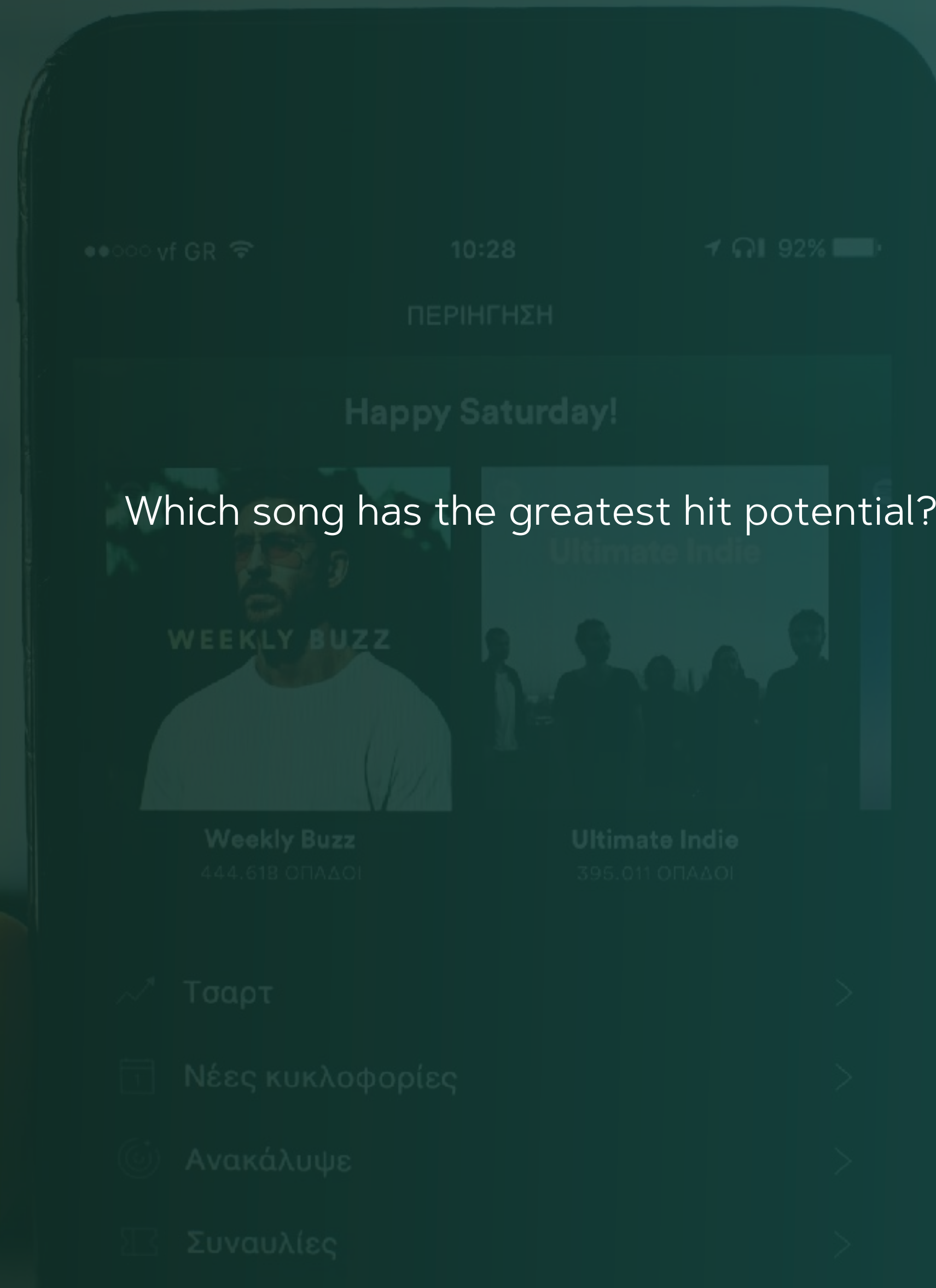


Which song has the greatest hit potential?





Which song has the greatest hit potential?



Predicting upcoming hits



Published by
researchers from
Unravel,
Tilburg University
and **Utrecht**
University



A Sound Prediction: EEG-Based Neural Synchrony Predicts Online Music Streams

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OPEN ACCESS

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Specialty section:

This article was submitted to
Organizational Psychology,
a section of the journal
Frontiers in Psychology

Received: 26 February 2021

Accepted: 05 June 2021

Published: 27 July 2021

Citation:

Leeuwis N, Pistone D, Flick N and
van Bommel T (2021) A Sound
Prediction: EEG-Based Neural
Synchrony Predicts Online
Music Streams.
Front. Psychol. 12:672660.
doi: 10.3389/fpsyg.2021.672660

Neuroforecasting predicts population-wide choices based on neural data of individuals and can be used, for example, in neuromarketing to estimate campaign successes. To deliver true value, the brain activity metrics should deliver predictive value above and beyond traditional stated preferences. Evidence from movie trailer research has proposed neural synchrony, which compares the similarity of brain responses across participants and has shown to be a promising tool in neuroforecasting for movie popularity. The music industry might also benefit from these increasingly accurate success predictors, but only one study has been forecasting music popularity, using functional magnetic resonance imaging measures. Current research validates the strength of neural synchrony as a predictive measure for popularity of music, making use of electroencephalogram to capture moment-to-moment neural similarity between respondents while they listen to music. Neural synchrony is demonstrated to be a significant predictor for public appreciation on Spotify 3 weeks and 10 months after the release of the albums, especially when combined with the release of a single. On an individual level, other brain measures were shown to relate to individual subjective likeability ratings, including Frontal Alpha Asymmetry and engagement when combined with the factors artist and single release. Our results show the predictive value of brain activity measures outperforms stated preferences. Especially, neural synchrony carries high predictive value for the popularity on Spotify, providing the music industry with an essential asset for efficient decision making and investments, in addition to other practical implications that include neuromarketing and advertising industries.

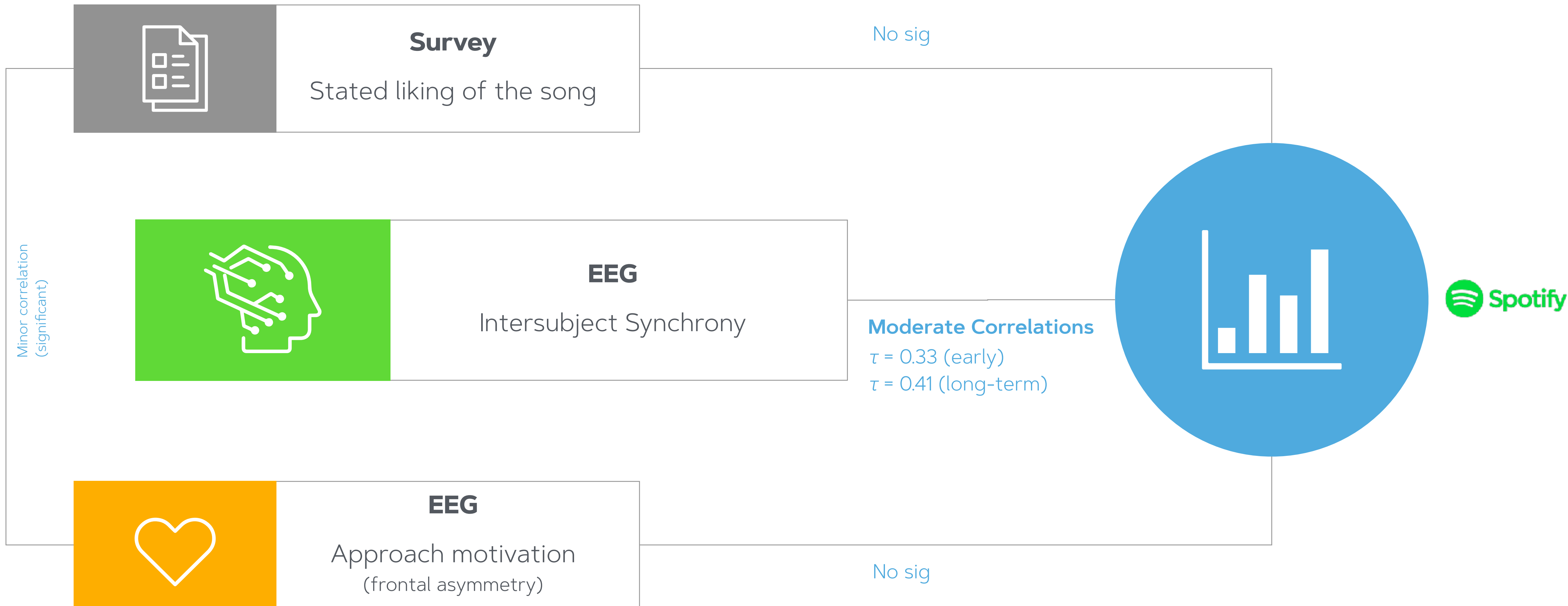
Keywords: electroencephalogram, neuromarketing, neuroforecasting, music, neural synchrony, popularity prediction, inter-subject correlation, EEG

INTRODUCTION

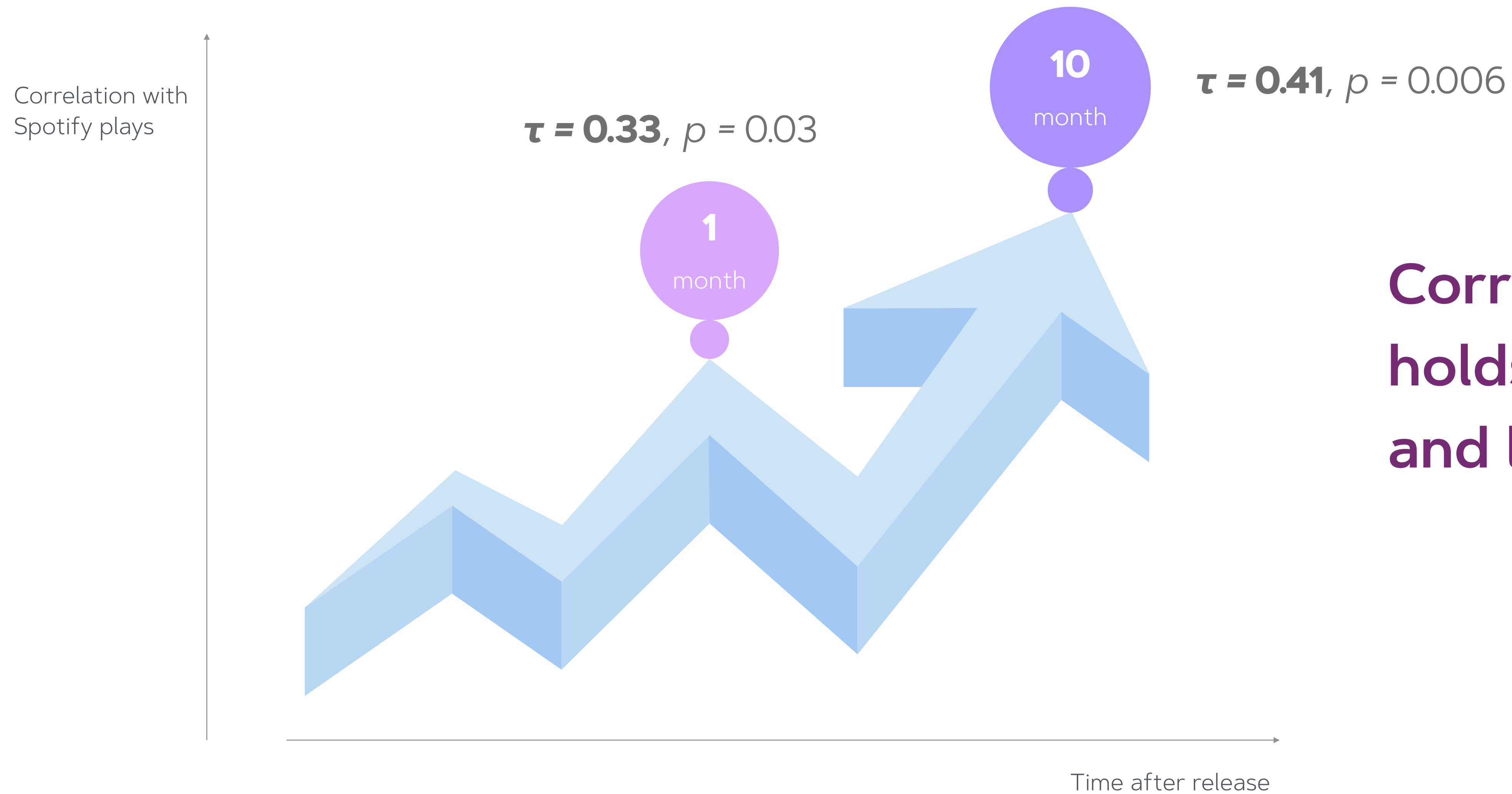
The application of neuroscience methods to marketing could provide marketers with new information that is not accessible by conventional marketing research methods (Ariely and Berns, 2010). This line of thought is also called neuromarketing or consumer neuroscience and has expanded tremendously since its discovery (Plassmann et al., 2012; Alvino et al., 2020). Consumers are often unwilling or unable to correctly express their preferences explicitly.

It's not about liking a song

Liking ≠ Success



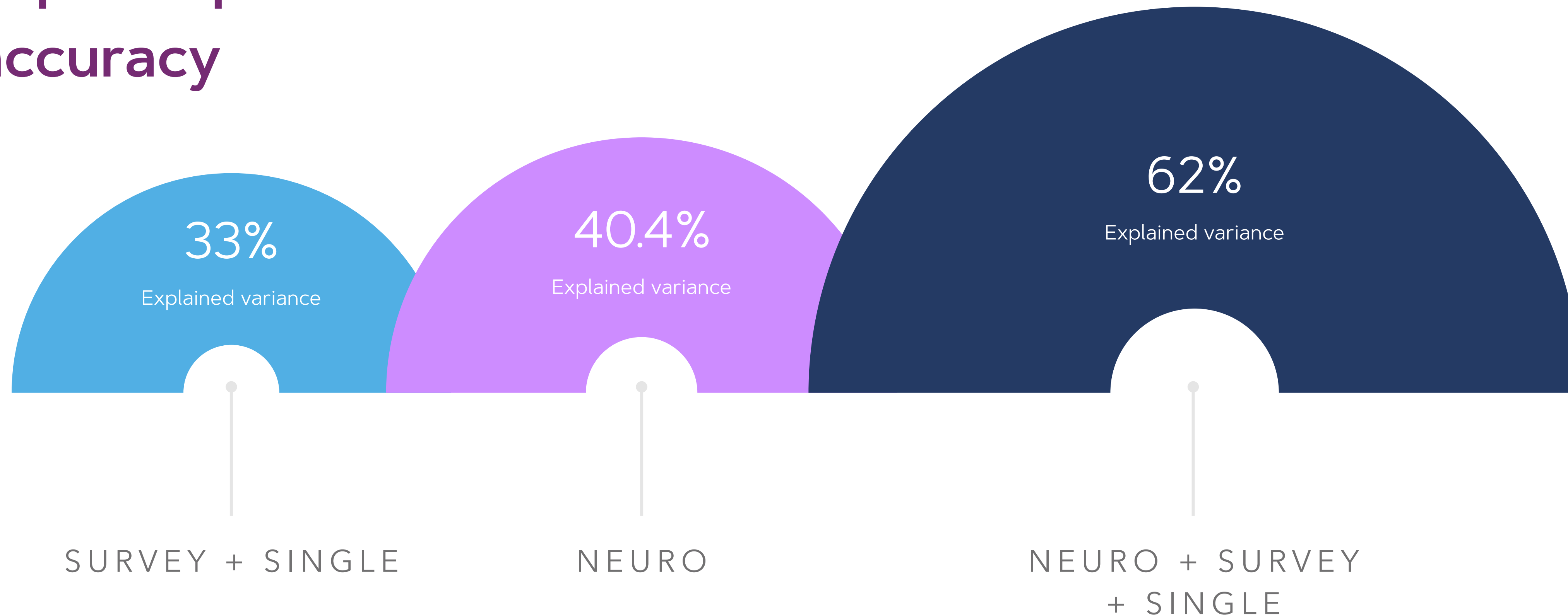
Predicting upcoming hits



**Correlation
holds on short
and long term**

Predicting upcoming hits

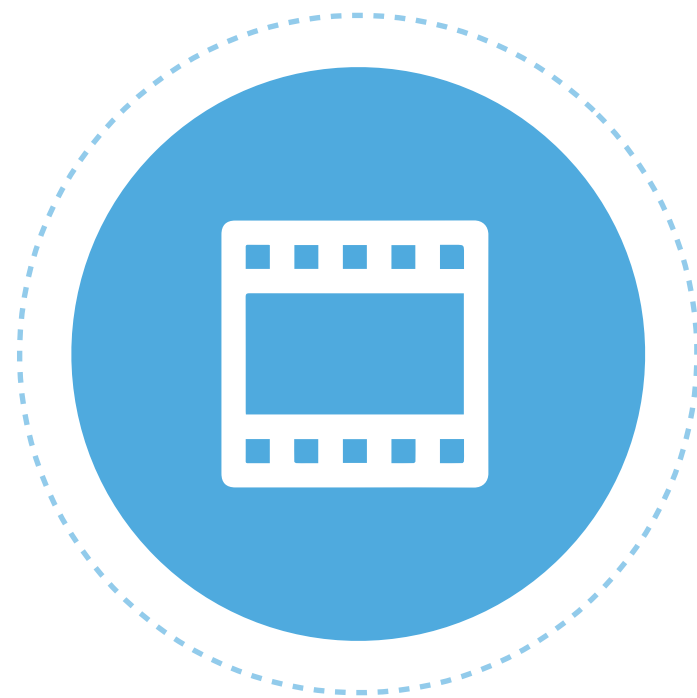
Stack data to
improve prediction
accuracy





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Today's Topics



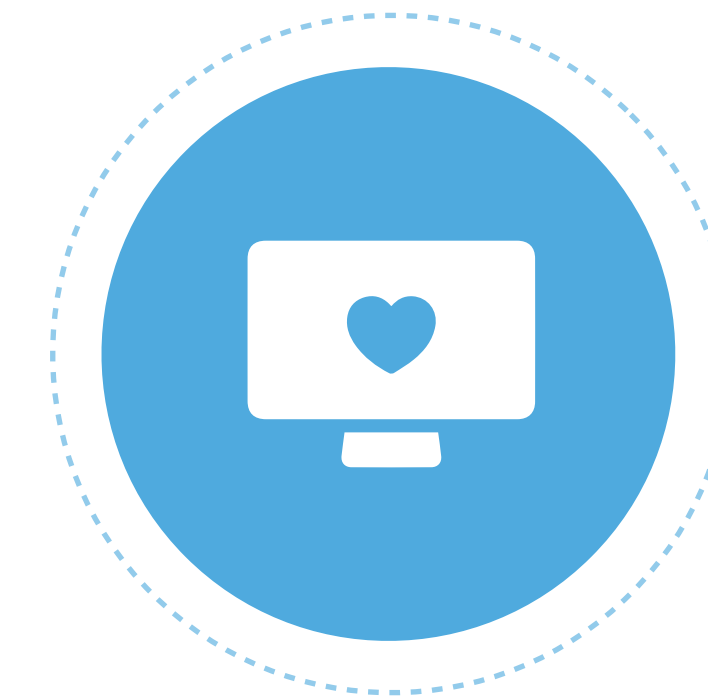
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Getting the brain hooked

PILOT REACTION

"Not very entertaining,
clever, or original"



FRIENDS

PILOT REACTION

Multiple major networks
(including HBO)
rejected the show



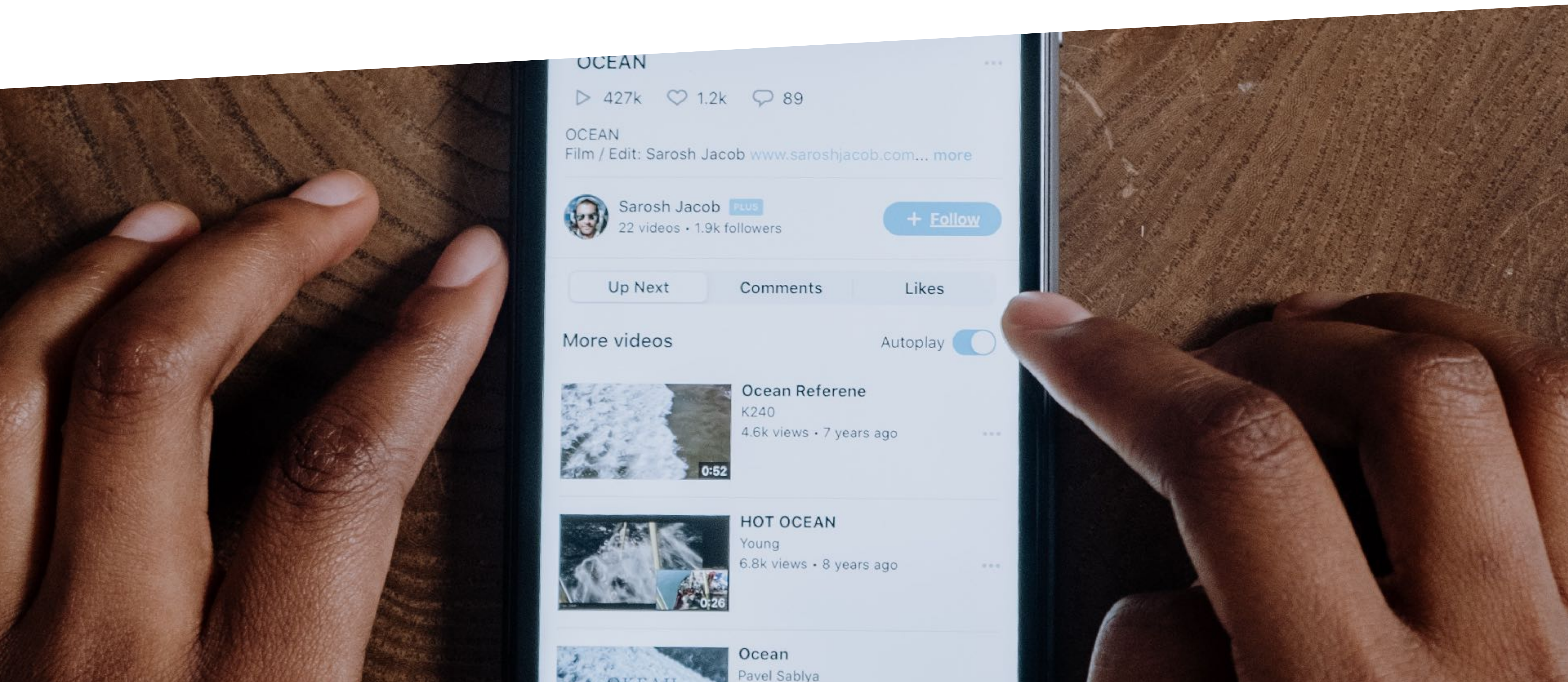
BREAKING BAD



How to

Measure if the brain is hooked

The brain predicts (Online) Engagement



The brain predicts views

Video views



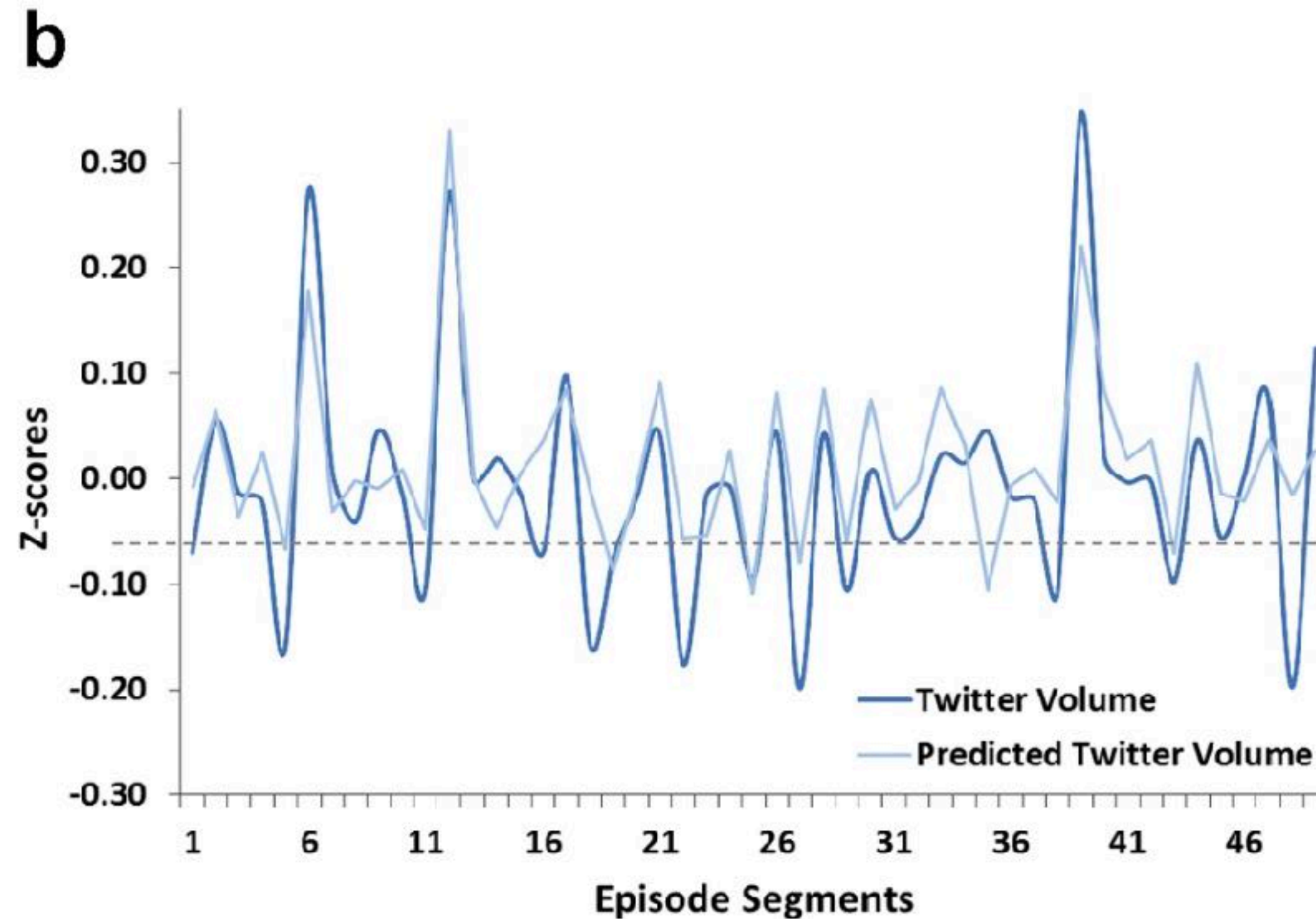
Neuro (EEG) + Machine learning
+ Intentie is best voorspellende
model

Hakim et al., (2021)

The brain predicts TV content highlights

EEG & TV Show Popularity

- ✓ 331 participants
- ✓ 9 TV Shows
- ✓ EEG predicts which scenes viewers talk about

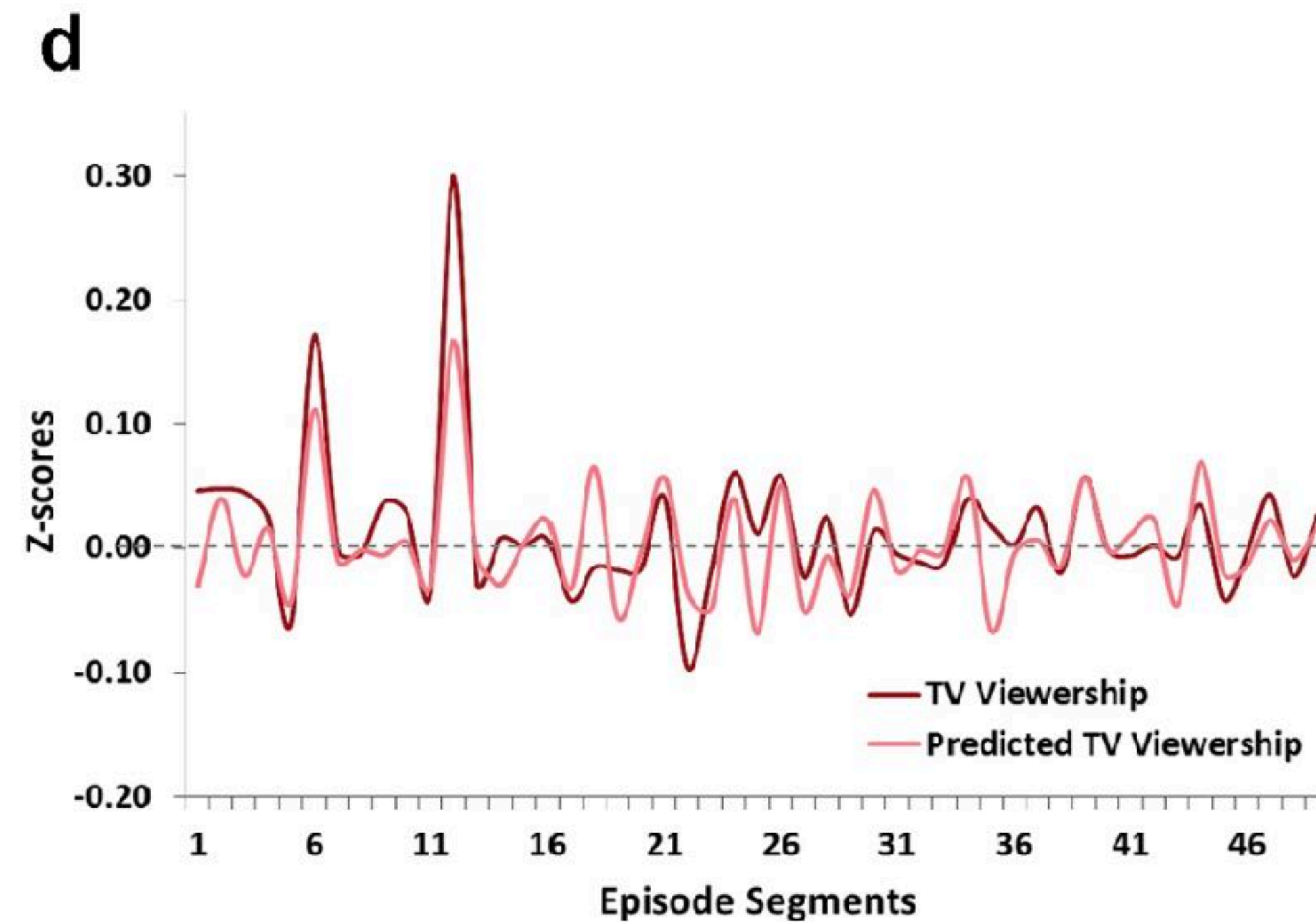


Shestyuk et al., (2019)

The brain predicts TV content highlights

EEG & TV Show Popularity

✓ EEG activity predicts TV viewership



Shestyuk et al., (2019)

From Focus Group to Neural Focus Group



- ▶ Stated preferences



- ▶ Real emotion
- ▶ Real attention

Take-Aways: Neuromarketing & Entertainment

- ✓ **Music.** Neuro predicts music hits and provides a data-driven method to allocate marketing resources
- ✓ **Movies.** Not only does neuro help to forecast box office hits and flops, is also helps identify attention killers and allows to optimize trailers accordingly.
- ✓ **TV & Streaming.** Neuro unearths potential weak moments where people might tune out physically and mentally. More broadly, neural focus groups help to identify top programming during the pilot phase.