Network Science

Music Preference and the Default Mode
The Effects of Music on the Brain

The Default Mode
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The Default Mode

Complex Brain Networks
The Effects of Music on the Brain

The Default Mode

Complex Brain Networks

Networks & Music Preference
The Default Mode Network

Resting state
....the brain At Rest

Introspection
Music and the DMN

What’s **MUSIC** Got to DO WITH IT?
Why Music and Network Science
Music a Network of Vast Complexity.

- Auditory
- Affective
- Visual
- Cognition
- Perception
What is a Network?

Dynamic
Complex
Interconnected
Modeling with networks
The brain is like a symphony .....

Network Theory
Just a Sample of Network Metrics

Degree
Path Length
Path Length
Brain Networks

Time Series

(15,000)

Correlation matrix

Threshold

Brain network

Adjacency matrix
Effects of Music on the Brain

Back to our question: Music Preference and the DMN
6 Songs
5 Genres

Rock - Rap - Country
Classical - Unknown
This is my song
‘Rocks my World’
‘Floats My Boat’
I LOVE THIS SONG!
Default-Mode Network
Musical Network Maps

Favorite music associated with high levels of connectivity in the lateral frontal cortex.
Network Science

Studying the Brain at a SYSTEMS Level

Metrics (Degree-Pathlength–others)

Music Research: An Opportunity
To understand the brain as a complex system through the application and development of network science methods
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