



Enhancing health and wellbeing through music

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‘Talking about music is like dancing about architecture’

A miscellaneous quote attributed to many people

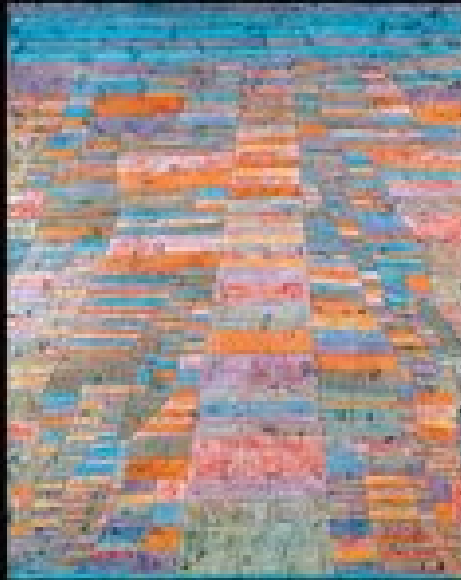


Including Elvis Costello

OXFORD

Strong **Experiences** **with Music**

Music is much more than just music



Alf Gabrielsson

Translated by Rod Bradbury

‘I love music and I love science. Why would I want to mix the two?’

Levitin (2006) *This is Your Brain on Music*



Why music in particular? Is it unique?

Music is ubiquitous

Rapid technological developments have made it instantly accessible and constantly available to us

We can choose what we want to hear



Music is emotional

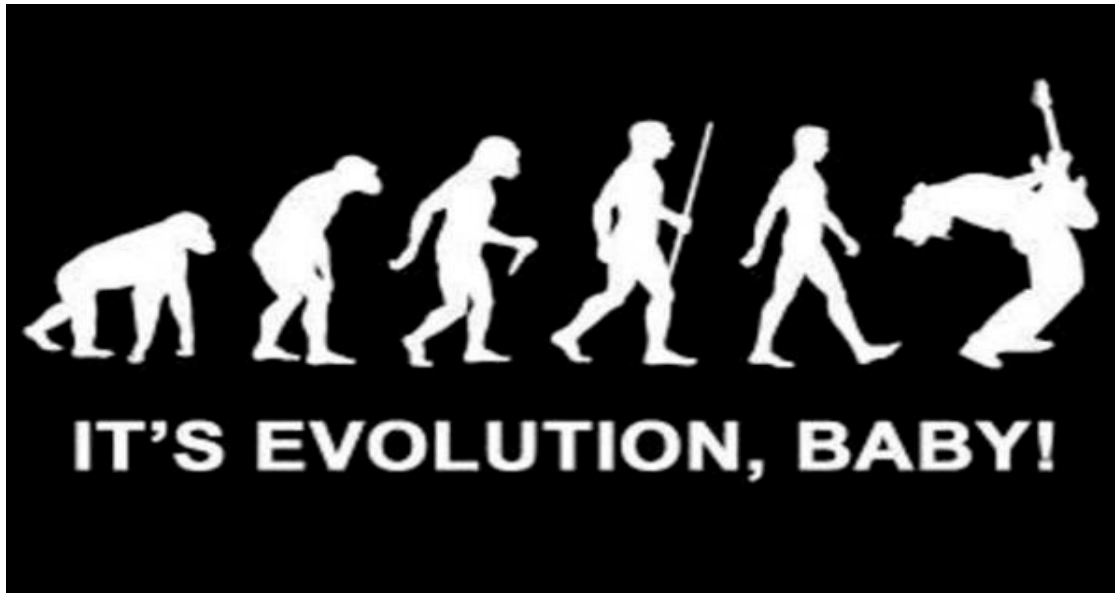
We are sophisticated listeners and select music deliberately in a goal-directed manner

‘We use music as self-administered emotional therapy’

Sloboda (2003)

Music is communicative and social

We share and connect through music even when language is a barrier



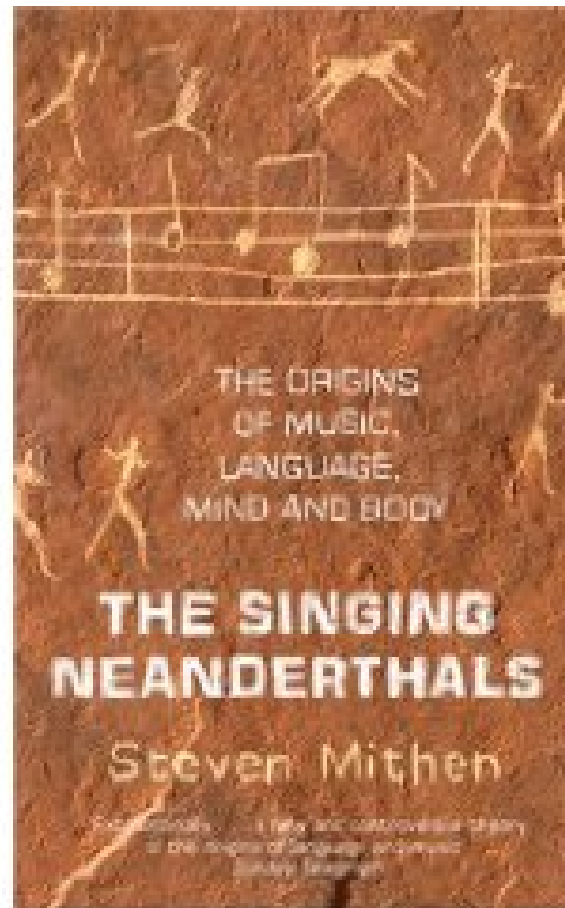
Music in our evolution



Social

Infant bonding





Our early vocalizations were likely very musical



Music and health through history

Important role for music in ancient cultures:

- Egyptian use for magical, religious and physical healing
- Greek holistic approach for harmony between body and mind



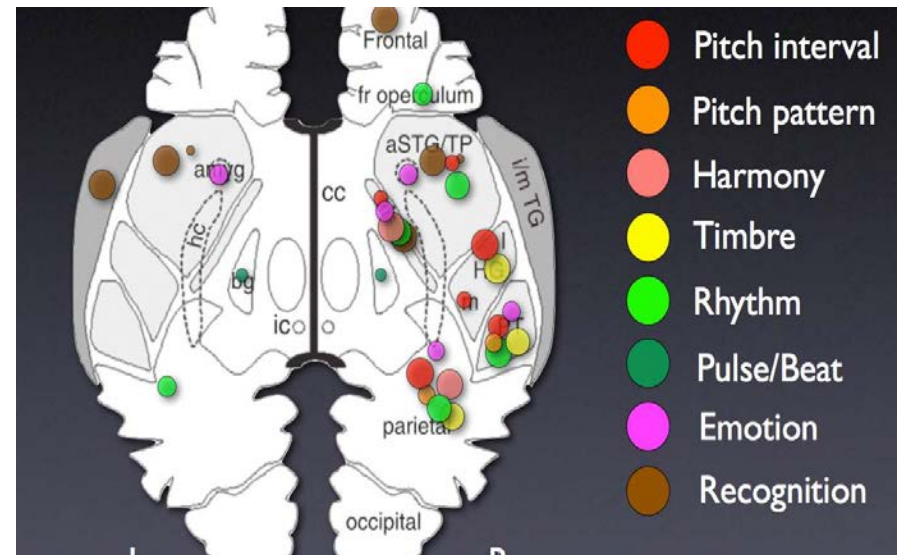


American Idol



Music engages the whole brain

Music processing is distributed across both hemispheres; the right dominant for pitch, and the left for rhythmic skills



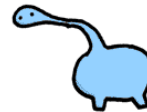


Wow, Bieber's new stuff is really complex

Music listening releases reward chemicals similar to other euphoria-inducing stimuli

Studies show dopamine release to underpin feelings of craving we get for music

SEROTONIN & DOPAMINE



Technically, the only two things
you enjoy

Summary so far:

We now know that music influences how we think, feel and behave

There is growing recognition of the potential benefits of music (playing **and** listening) for health in the general population, i.e. not just musicians

Music listening benefits in chronic illness

Cancer care - reduction in nausea during chemotherapy and reduced fatigue

Stress reduction for surgery

Parkinson's disease

Improvement in motor movements through *rhythmic cueing*



Studies show that when familiar songs are played to advanced dementia sufferers, they can sing along equally well as non brain-impaired people

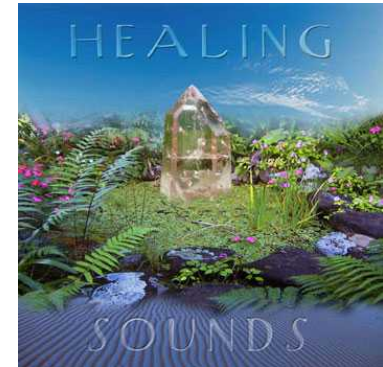
Using music optimally for pain and health conditions



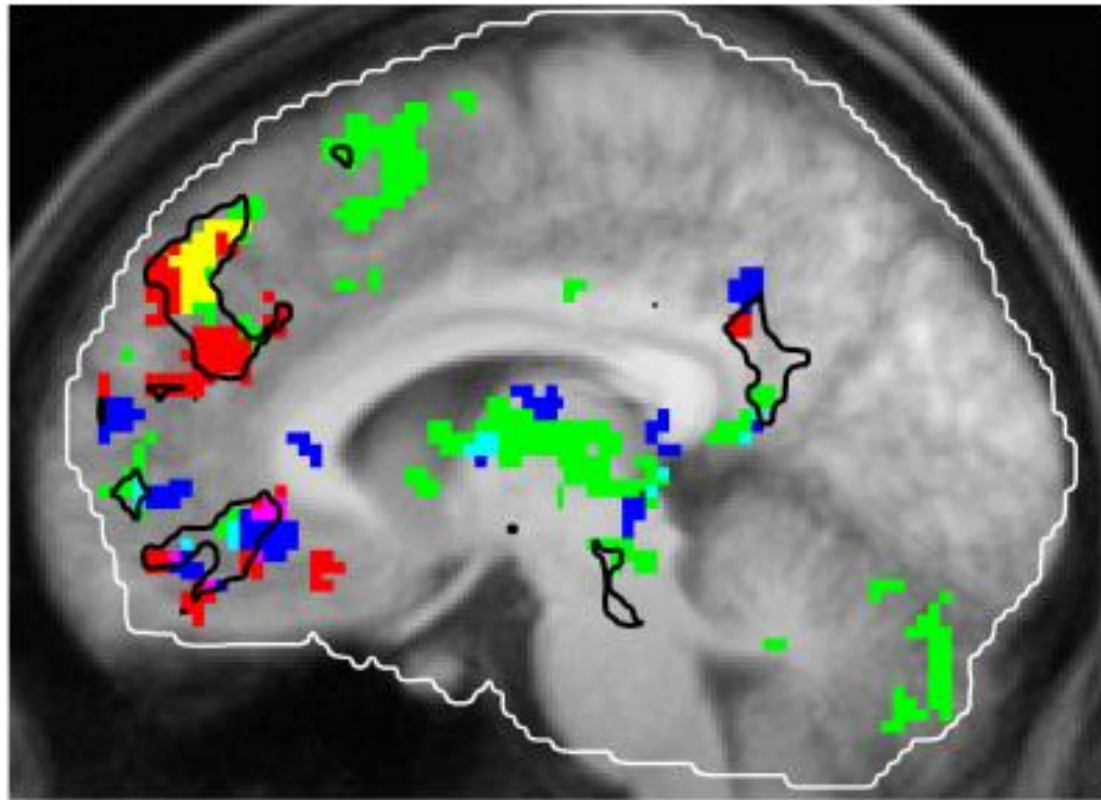
‘Audioanalgesia’

Appears to work because of the ability of music to

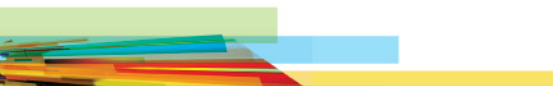
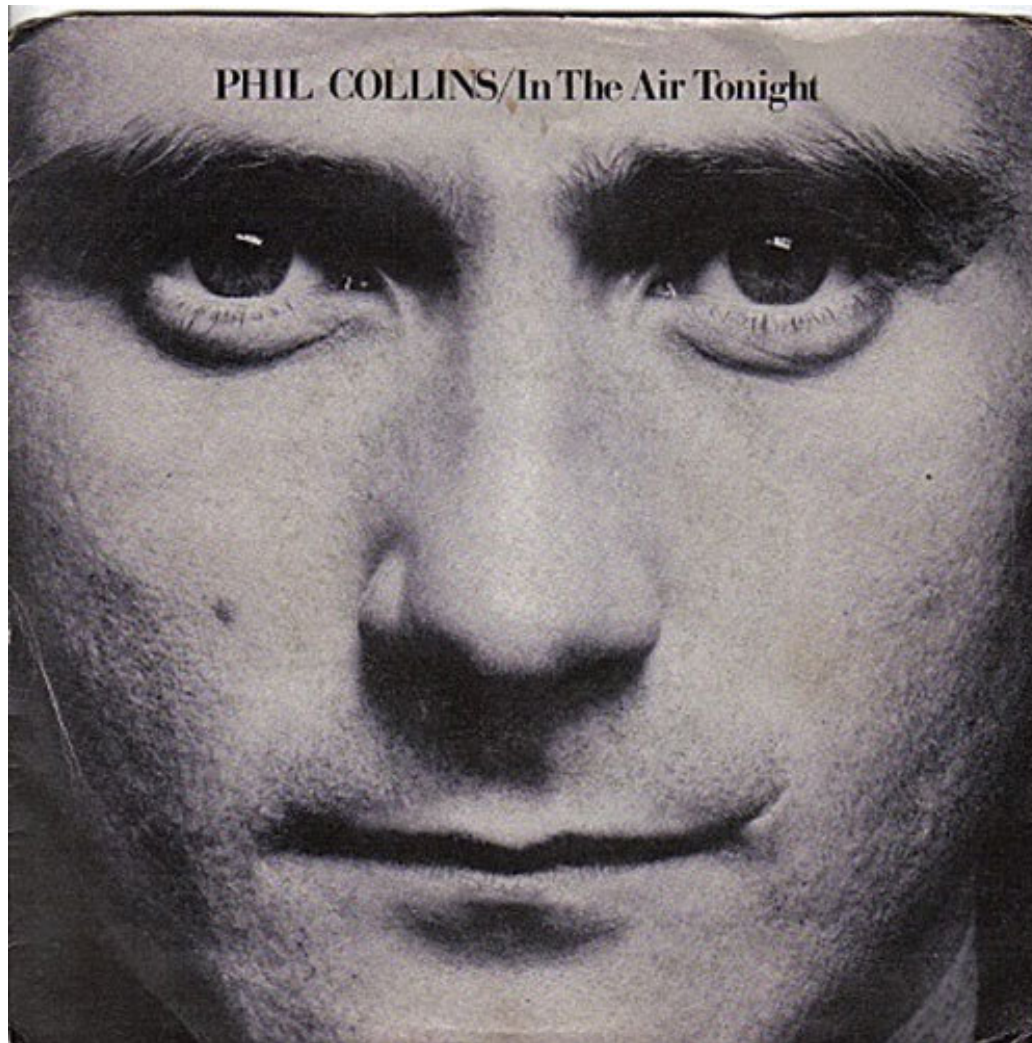
- Attract and hold attention
- Induce positive emotions
- Help us feel in control



But is there one style of music ‘best suited’ to pain relief?



Green areas for familiar songs, red for autobiographical memories, blue for enjoyment, yellow area is mPFC which responds to both autobiographical memory and familiarity (Janata, 2009)



Singing for health

Singers report

- stress and tension release
- better breathing, lung capacity and posture

Physiological measures show

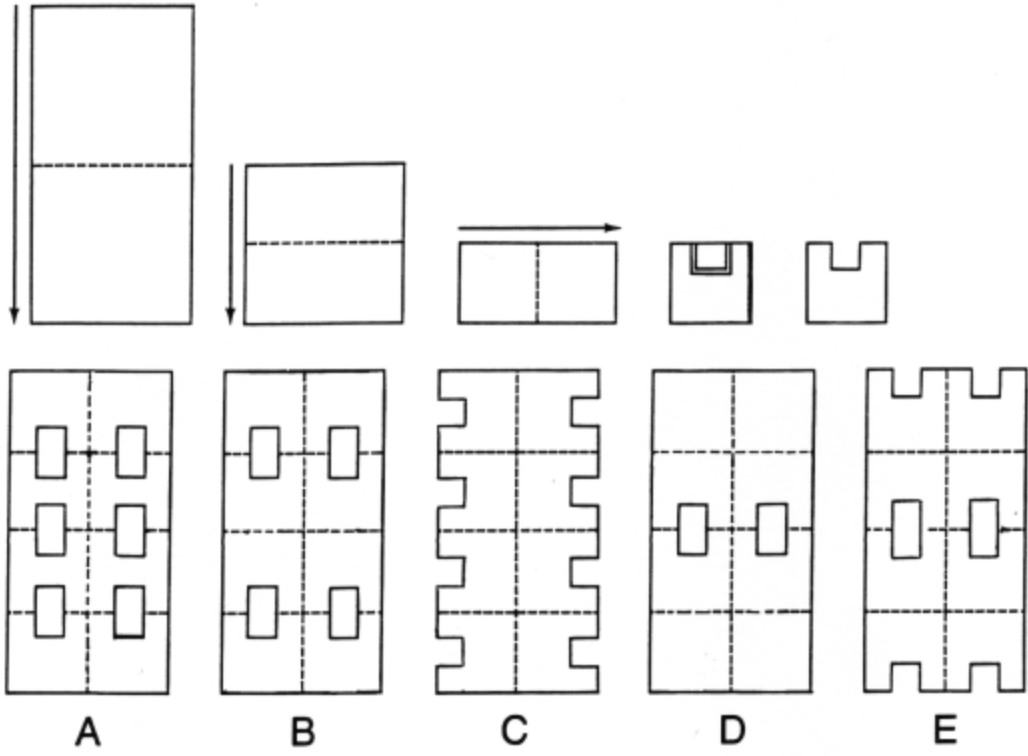
- increased immune function
- cardiovascular benefits



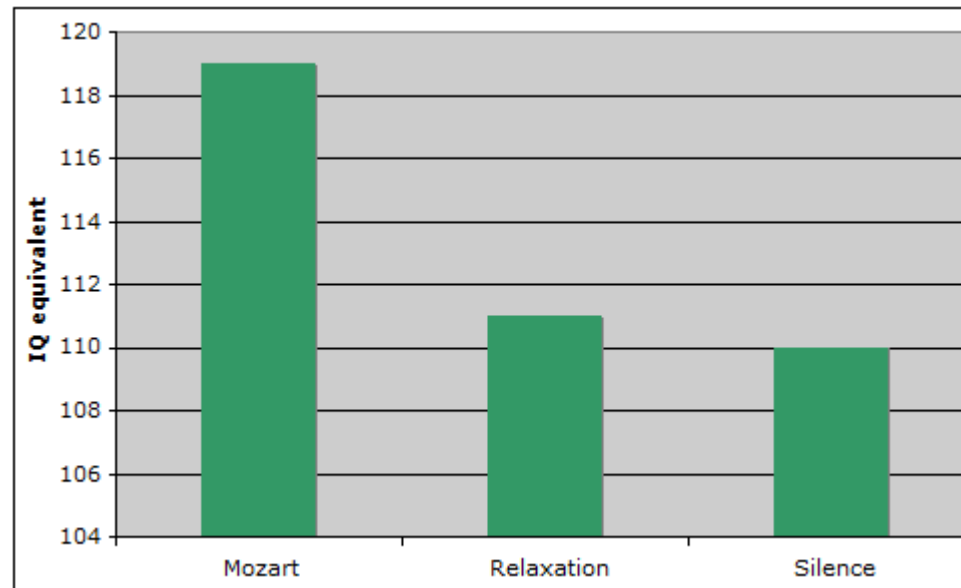
Using music optimally for cognition

Positive arousal and mood induced using music does have beneficial cognitive effects.... it just doesn't have to be Mozart

But distracts attention? – good for simple repetitive work, too much for complex thinking?



In 1993, *Nature* published University of California (Irvine) study showing increase in spatial IQ after just 10 minutes of listening to Mozart



Optimal musical experiences: The theory of flow

Intrinsically rewarding experience from being deeply involved in activities (such as music) named the *flow state* (Csikszentmihalyi, 1990)

What happens: Your actions become automatic and attention natural, lose self-consciousness and time perception

Increasing musical engagement

Being receptive to music:

Take time out just to listen. This is something we rarely do!

Get back into musical activity:

Music lessons, volunteer in the community, or join a choir

There is considerable growing evidence for the use of music applied in health care

Music is not the ultimate panacea; but it has multiple positive effects on everyday health and well-being



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