

*Atlantic Fellows*

FOR EQUITY  
IN BRAIN HEALTH

**BASED AT**

Global Brain Health Institute



Trinity College Dublin  
The University of Dublin

# When I'm Sixty-Four - Music and Brain Health

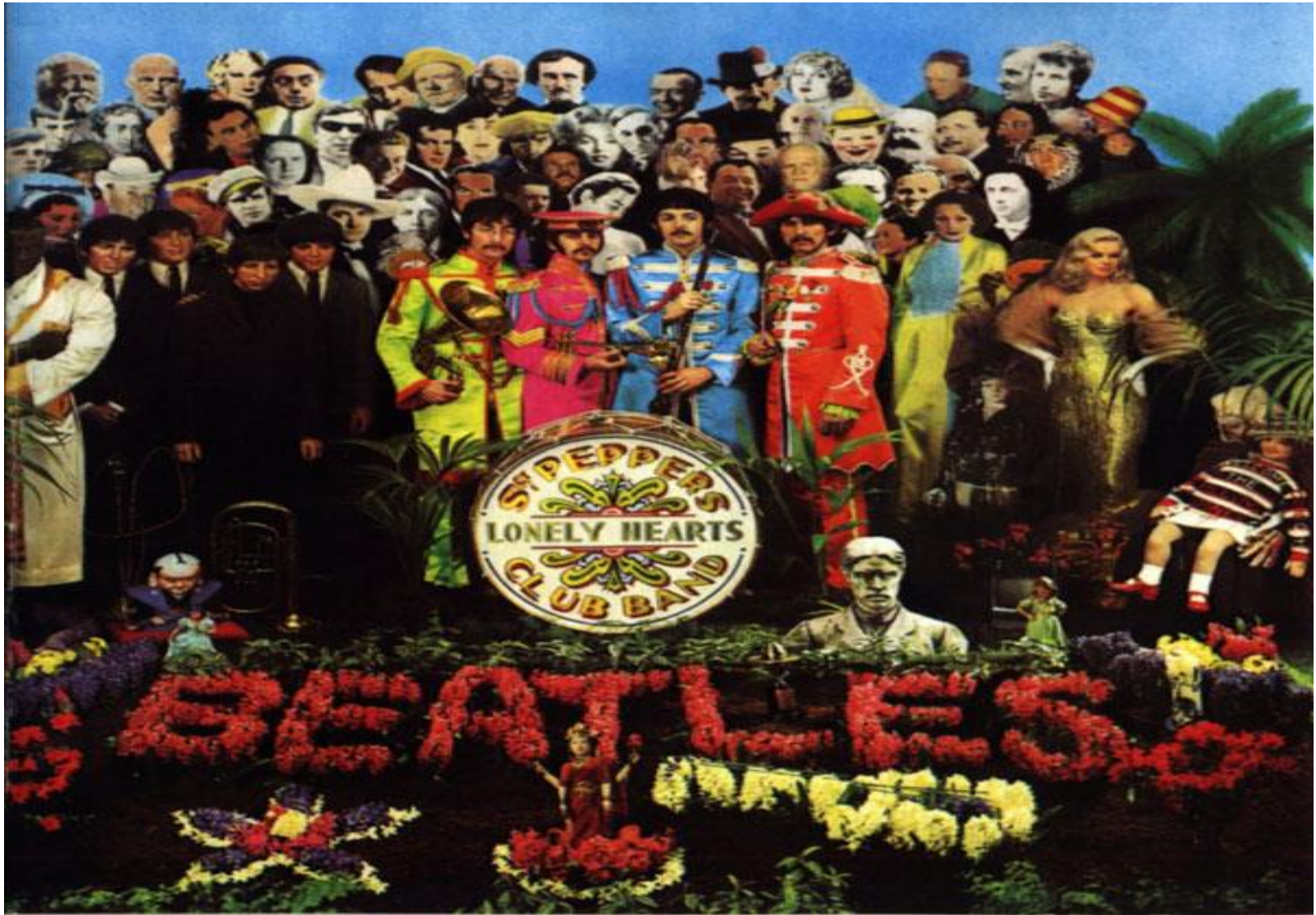
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**Trinity College Dublin**

**Brain Connections**  
**27<sup>th</sup> August 2018**



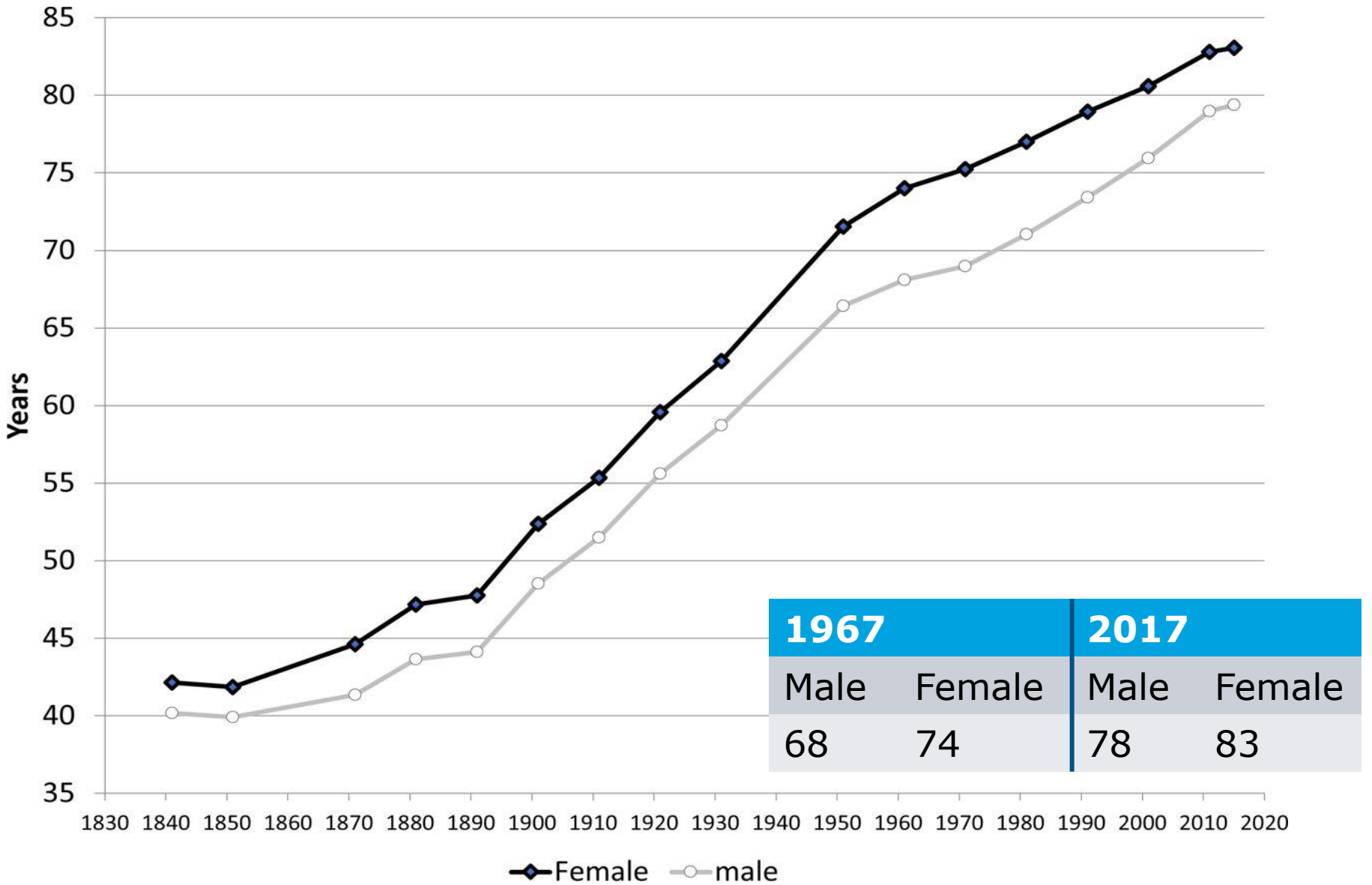
# Overview

- **Music making & the brain**
- **Music making & brain health**
- **Music & dementia**



<https://youtu.be/8AglUMCKyNs?t=4s>

# When I'm Sixty-Four – Life expectancy UK - ONS



# When I'm 64

- **By 2050, older adults will make up 22% of world's total population, 21% in less developed and 12% in least developed regions**
- **Age is the biggest risk factor for the development of dementia**
- **1/3 of dementia is preventable through lifestyle choices**

# ***Music & the brain***

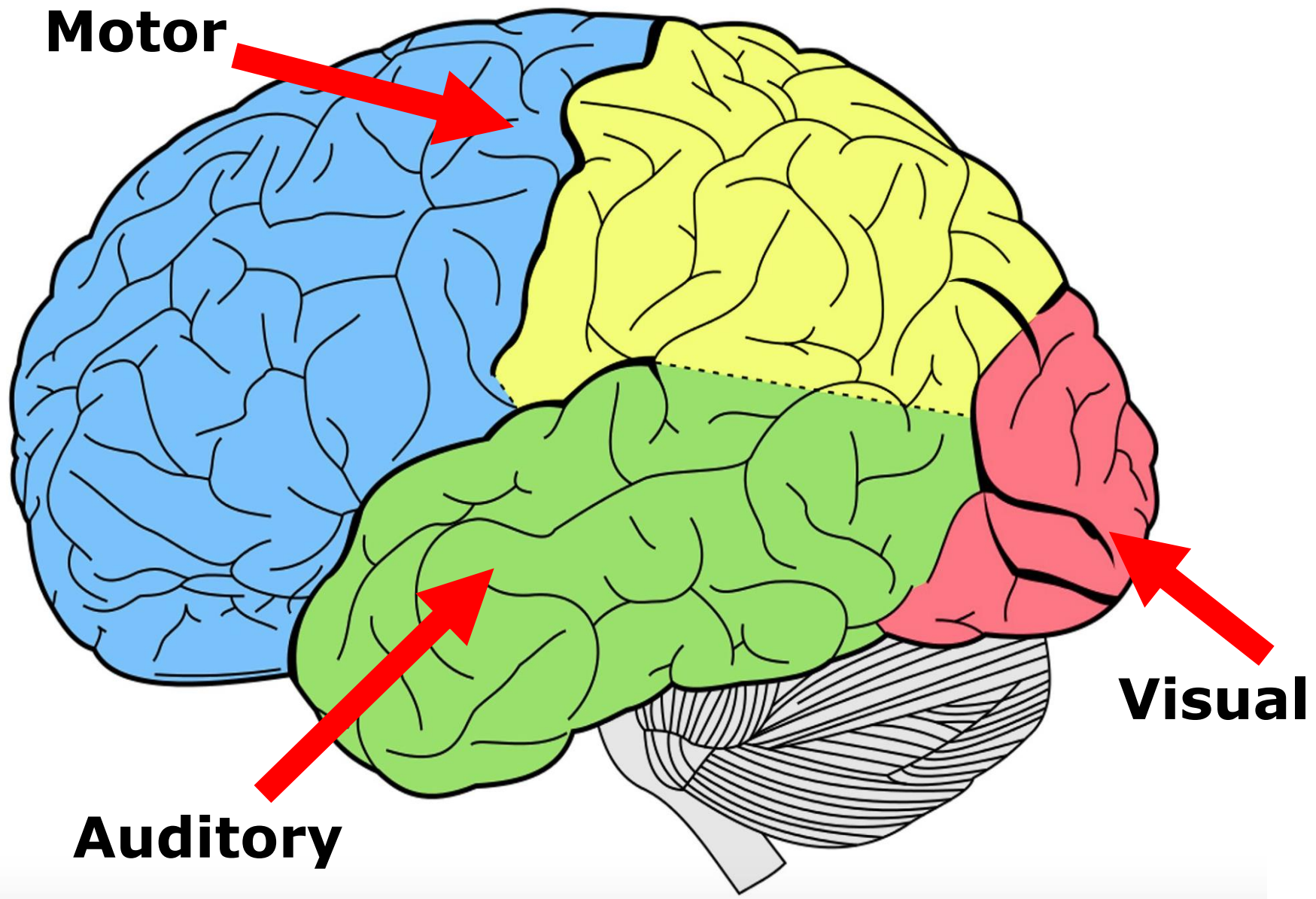
# Music and the brain



***But how is playing a musical instrument  
different?***





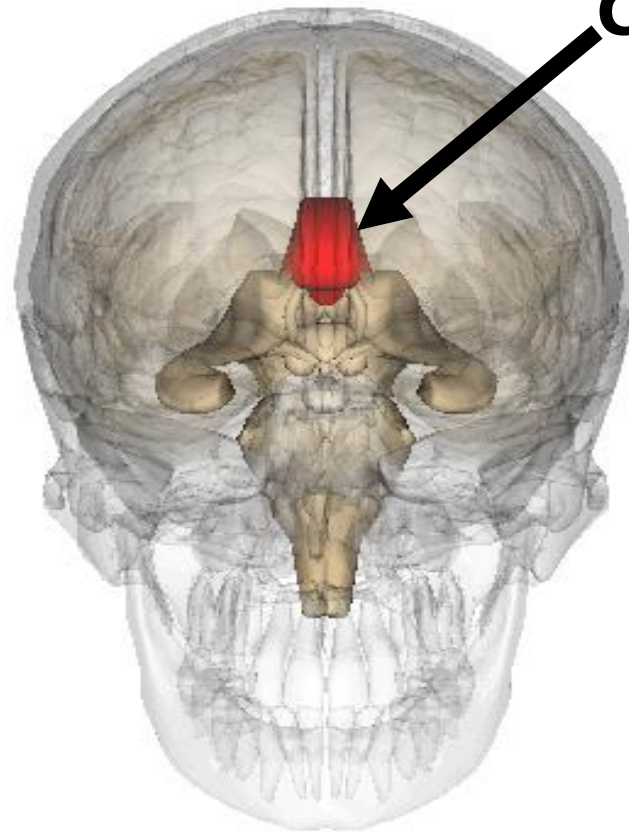


**Motor**

**Visual**

**Auditory**

**Corpus Callosum**



# Music making & Cognition

**Regular commitment to musical activities has been proposed to result in gains to other cognitive domains:**

- Reasoning
- Perceptual Speed
- Working (Immediate) Memory

# ***Can musical expertise keep our brains healthy as we age?***

# Music Making & Cognitive Ageing

## What we know so far...

- Older musicians showed advantages on
  - Executive Function
  - Visuospatial abilities
  - Memory

# Music Making & Cognitive Ageing

## ***Does the duration of the lifetime of music making play a role?***

- After 6 months of piano lessons, older non-musicians showed advantages on tests of Executive Function
  
- ***Music making may 'protect' our cognitive abilities as we age but require much more research***

# Music Making & Wellbeing

**Music Making can provide many elements which promote a high quality of life:**

- **Aid emotional & physical wellbeing**
- **Cognitive Stimulation**
- **Social Engagement**

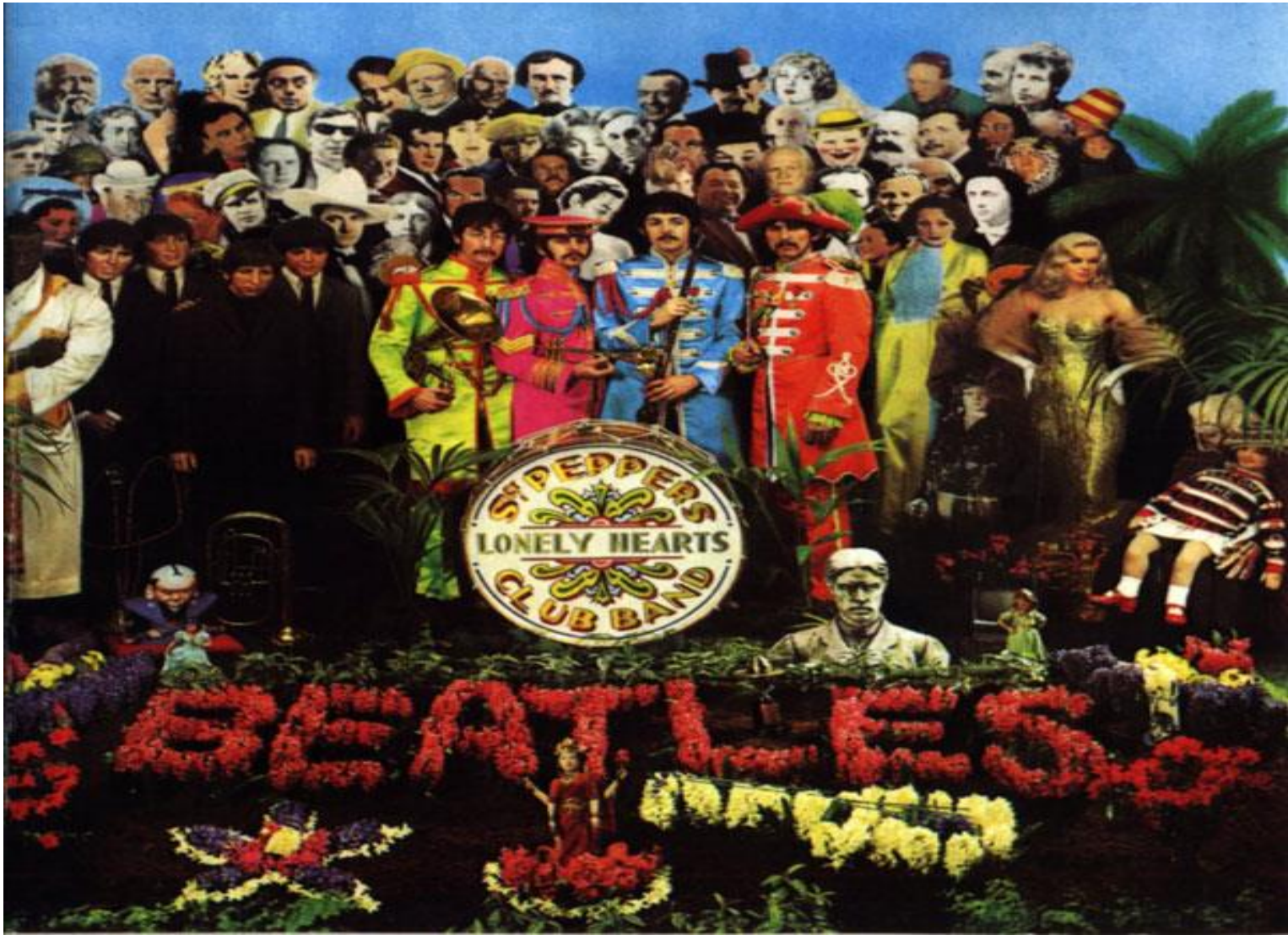


# Music Making & Wellbeing

## Cohen (2007)

### Intervention study: Older adults who participated in an arts programme

- Less decline in Emotional & Physical Health
- Had fewer doctor visits
- Less use of medication
- Fewer instances of falls
- Lower levels of loneliness



# When I'm sixty-four

# When I'm Sixty-Four

*...Will you still need me, will you still feed me  
When I'm sixty-four...*

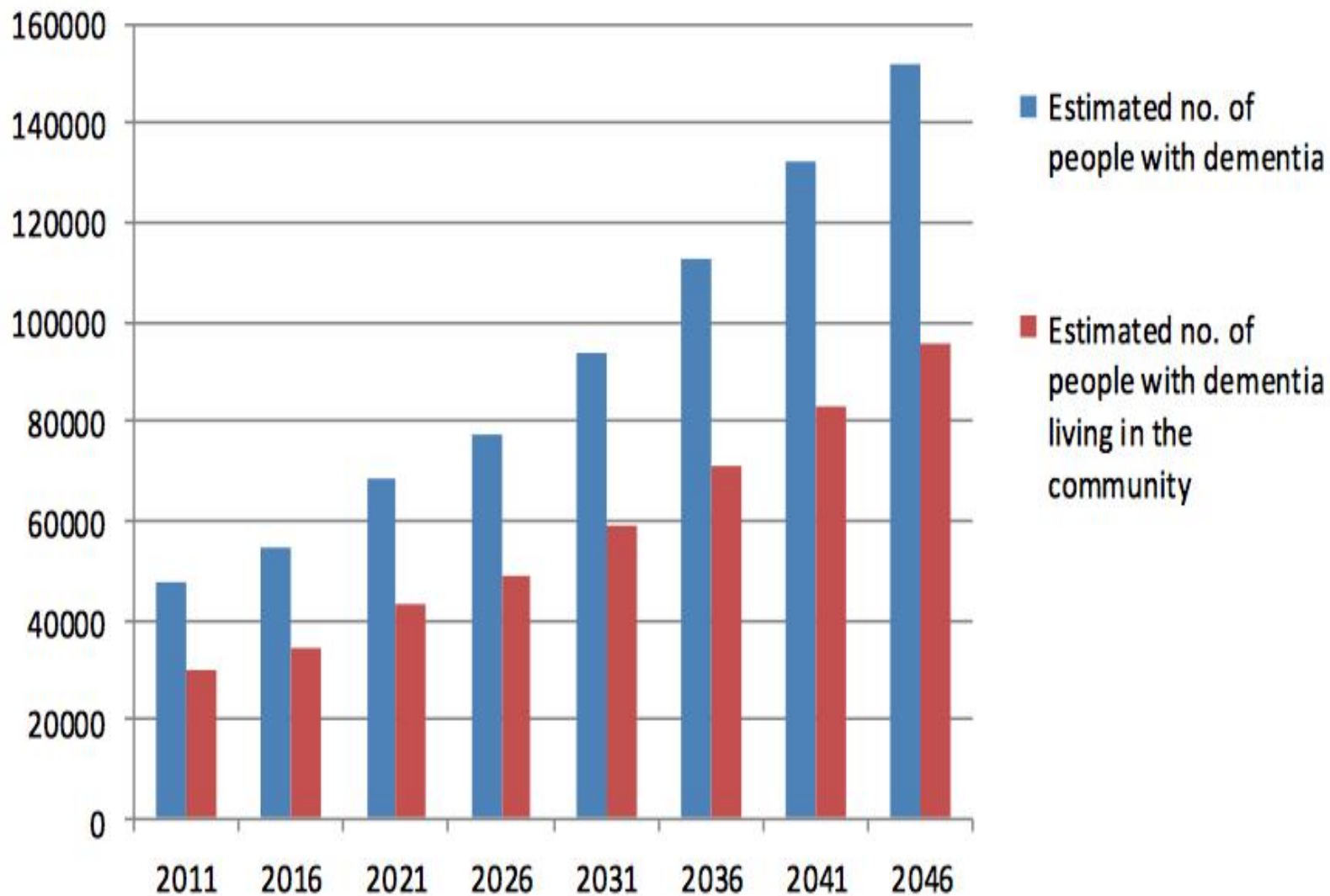
- **Music making can provide a sense of purpose, a sense of achievement, support emotional wellbeing**

*I could be handy, mending a fuse  
When your lights have gone*

- **Music making – full body workout for our brains. It can provide cognitive stimulation**

# ***Music & Dementia***

# Statistics of dementia in Ireland



Pierce, Cahill & O'Shea (2014)

# Music and Dementia

- **Anecdotal reports of the benefits listening to music offers to people with dementia**
- **Music has the potential to decrease stress, anxiety & help regain a sense of self**

## Organisations using familiar music & dementia

- **Music & Memory Project (USA)**  
<https://youtu.be/fyZQf0p73QM?t=2m2s>
- **Playlist for Life (UK)**

# Music & Dementia

- **'The Reminiscence Bump'**: Autobiographical memories are disproportionately recalled for events in late adolescence and early adulthood which is a phenomenon called (Rubin, Rahaal, & Poon, 1998).
- **Music power cue for autobiographical memories**

# Summary

- **Music = “Full body workout” for our brains**
- **Help keep our brains healthy**
- **Can help people living with dementia – lower stress, anxiety and regain a sense of self.**



# THANK YOU

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