

UKSS Conference Bournemouth 2020

Can complex handicrafts help prevent dementia?

By David Powell

INTRODUCTION

Can complex handicrafts prevent dementia?

AGENDA

- ❖ BACKGROUND

- ❖ FIELD RESEARCH

- ❖ DEMENTIA, HOW AND WHY IT IS PREVENTED

 - ❖ RAILWAY MODELLING AND ITS CHARACTERISTICS

 - ❖ UNDERSTAND HOW IT PREVENTS DEMENTIA

- ❖ WHAT HAPPENED NEXT?

- ❖ REFLECTION & FURTHER RESEARCH

- ❖ Q&A

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CAVEAT

Many forms of Dementias

Concentrating on Alzheimer's disease

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WHY ME?

This afternoon's Exam Question:

**RAILWAY MODELLERS AVOID DEMENTIA –
DISCUSS?**

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BACKGROUND

- ❖ **Dementia, a significant and growing cost in social and economic terms, both nationally and globally**

The research idea

- ❖ **Isolate a social group that appears to avoid dementia**
- ❖ **Look for relevant common factors/characteristics.**
- ❖ **What was the catalyst?**

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BACKGROUND

- **Concern about future for an aging pastime**

The First Paper, early 2015

- **Proposed a new direction in dementia research,**
- **Find a social group avoiding dementia,**
- **Circulated to government and academia**
- **The result was stunning silence.**

So – better do something about it! - GET SOME DATA!

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FIELD RESEARCH

- ❖ 2015 National Model Railway Exhibition
- ❖ Interview 20 model railway clubs representing 1,100 modellers
- ❖ Average age then of around 64
 - ❖ Source Scalefour Society (3,000 members)
- ❖ The sample's demographics should result in 80 cases.

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FIELD RESEARCH

- ❖ Sample demographics for 1,100 modellers average age 64 should have included up to 80 cases of dementia.
- ❖ Finding:

❖ **3** cases in the 1,100

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FIELD RESEARCH FINDINGS

Active members of UK Model Railway Clubs do appear to be avoiding dementia compared with expectations

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HOW AND WHY DEMENTIA IS BEING PREVENTED

- ❖ Railway Modelling
- ❖ What are common characteristics
- ❖ What do they tell us

Can handicrafts prevent dementia? – RAILWAY MODELLING



Can handicrafts prevent dementia? – RAILWAY MODELLING



Can handicrafts prevent dementia? – MODEL ENGINEERING



Can handicrafts prevent dementia? – MODEL ENGINEERING



Can handicrafts prevent dementia? – RAILWAY MODELLING



Tony Gee operating
Leighton Buzzard
(Linslade),
Buckingham Branch
Late
Rev Peter Denny

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THE NEC RESEARCH

- ❖ Members of Model Railway Clubs:
- ❖ Railway Modellers.
- ❖ Common Characteristics
- ❖ Dexterity

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❖ **Railway Modellers and Dexterity.**



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HOW AND WHY DEMENTIA IS PREVENTED

- ❖ It can't be just dexterity?
- ❖ Musicians? Glen Cambell? Aaron Copeland, Malcolm Young (AC/DC)
- ❖ Musicians need dexterity yet succumb to dementia?

Why!

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HOW AND WHY DEMENTIA IS PREVENTED

- ❖ The Eureka moment!
- ❖ Django Reinhardt 1910-1953
Belgian-born Romani French
jazz guitarist and composer



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HOW AND WHY DEMENTIA IS PREVENTED

- ❖ Solution:
- ❖ Specific dexterity plus only intermittent application
- ❖ The essential dexterity motor control rarely migrates from neocortex to limbic
- ❖ If you don't use it – you lose it
- ❖ Atrophy of the neocortex – Alzheimer's Disease
- ❖ If you do use it – neocortex stays healthy!

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HOW AND WHY DEMENTIA IS PREVENTED

- ❖ For modellers, the essential dexterity motor control rarely migrates from neocortex to limbic
- ❖ Review this idea using systems concepts
- ❖ The body – purposeful complex of organized interconnected components
- ❖ Most components sophisticated clockworks

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- ❖ But for physical environmental interaction – the hands, fingers & thumb – complex motor controls
- ❖ With feedforward and feedback control loops
- ❖ Responding to sensory (especially visual, sound & tactile data inputs)
- ❖ Plus some form of linking mechanism to transfer repetitive activities from neocortex to limbic system for motor control.
- ❖ Systems metaphor: front office – back office.

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HOW AND WHY DEMENTIA IS PREVENTED

- ❖ But for physical environmental interaction – the hands, fingers & thumb – complex motor controls
- ❖ With feedforward and feedback control loops
- ❖ YOUR TURN – PARTICIPATION TIME.

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- ❖ Added following feedback and further thinking/research
- ❖ The NEC Data – NOT just Railway Modellers
- ❖ Active members of **Model Railway Clubs**
- ❖ Is social group participation a significant common factor?
- ❖ If so, how significant?

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- ❖ Significant social interaction at meetings and running events (exhibitions)
- ❖ Exercising body language and communication skills to encourage cooperation, minimize conflict especially in voluntary groups
- ❖ These skills linked to significant neocortex activity
- ❖ Intermittent
- ❖ As with dexterity control continue to exercise the neocortex

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- ❖ After the NEC Data collection – what happened next?
- ❖ Article in April 2016 Railway Modeller
- ❖ Positive feedback, including non club modellers
- ❖ But did raise social group aspect
- ❖ Mayo Clinic study Rosebud Meredith
- ❖ REVISED PAPER circulated in May 2016
- ❖ Results - Nothing
- ❖ Except Health – spending millions to develop inoculation!

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REFLECTION (Apply Systems Failures Methodologies?)

- ❖ Two key barriers to acceptance and progress
- ❖ Dominance of the pharmaceutical and health care sectors in sponsoring and setting priorities.
 - ❖ No potential benefits (profits) to these sectors.
- ❖ The academic research paradox
 - ❖ New research has to reflect existing research.

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PRESSING ON

- ❖ Talks, articles
- ❖ Intervention to comment where appropriate
- ❖ Being here at UKSS Conference and explore the opportunity of a new avenue into academia
- ❖ Suggestion of a New Scientist Article – next initiative

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OTHER ISSUES / RESEARCH OPPORTUNITES

(If not time please take away and ponder:)

- ❖ What other handicrafts have similar characteristics – and should provide dementia preventing benefits?
- ❖ Crafts no longer taught or needed
- ❖ If idea accepted – is late to do anything about it?
- ❖ Dementia an unintended consequence of ‘progress’
- ❖ Demise of ‘front office’ tasks, reliance on ‘back office’
- ❖ Priority - what other handicrafts/pastimes could work?
- ❖ Need data – medical record keeping

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SUMMARY

- ❖ (Hopefully) accept idea that railway modellers, especially members of model railway clubs are avoiding dementia.
- ❖ The result of intermittent involvement in a wide variety of complex dexterity related tasks
- ❖ This should be happening in other crafts and activities
- ❖ The good news is that dementia need not be an inevitability of aging
- ❖ The bad news is that it may be too late to reverse
- ❖ The dream: one day the crafts have same status as arts!

Can handicrafts prevent dementia YES!

Q & A?

