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

CAVEAT

Many forms of Dementias Concentrating on Alzheimer's disease

WHY ME?

This afternoon's Exam Question:

RAILWAY MODELLERS AVOID DEMENTIA – DISCUSS?

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?

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.

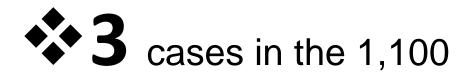
So – better do something about it! - GET SOME DATA!

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.

FIELD RESEARCH

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



FIELD RESEARCH FINDINGS

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

HOW AND WHY DEMENTIA IS BEING PREVENTED

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

Can handicrafts prevent dementia? - RAILWAY MODELLING

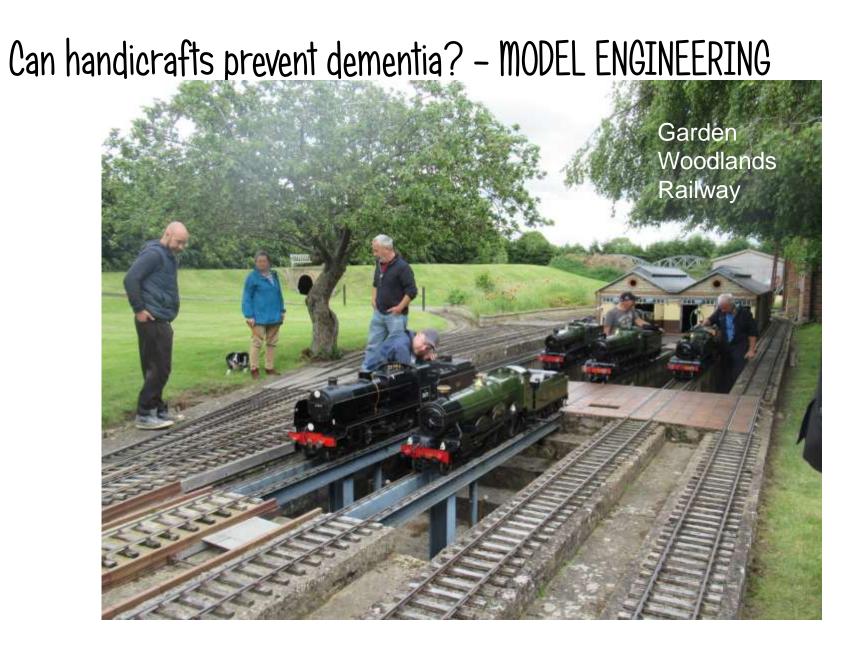


Can handicrafts prevent dementia? - RAILWAY MODELLING



Can handicrafts prevent dementia? - MODEL ENGINEERING





Can handicrafts prevent dementia? - RAILWAY MODELLING



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

THE NEC RESEARCH

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

Railway Modellers and Dexterity.



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!

HOW AND WHY DEMENTIA IS PREVENTED

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



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 loose it
- Atrophy of the neocortex Alzheimer's Disease
- If you do use it neocortex stays healthy!

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

- 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.

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.

- 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?

- 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

- ✤ 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!

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.

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

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

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!

Q & A?

