

# Key elements of the neuromatrix paradigm

1. Multiple brain areas ignite together creating neurosignatures
2. The specific tissue injured may not matter for a pain matrix
3. Representations are easily modified
4. Representation smudging

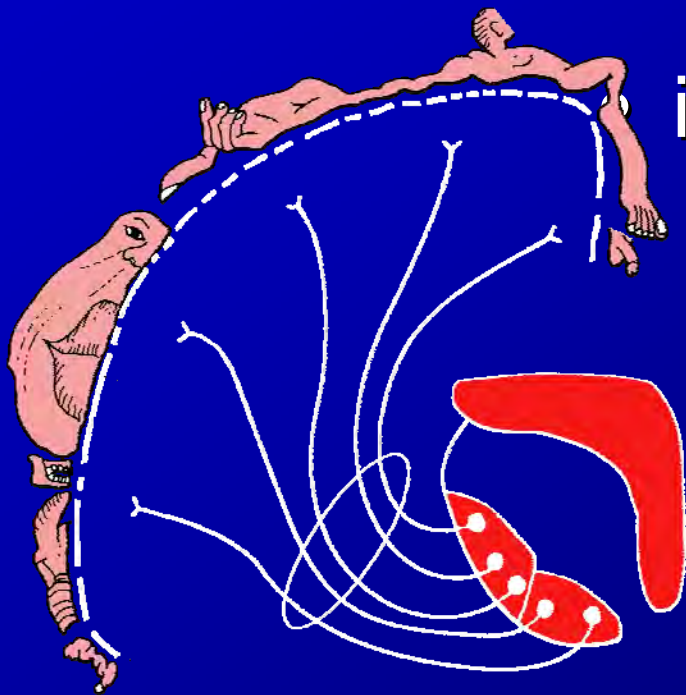




# Smudging/brain change are normal

- Occurs as a normal part of life (musicians, blind persons, breast feeding mice)

ie the “self constructing” brain

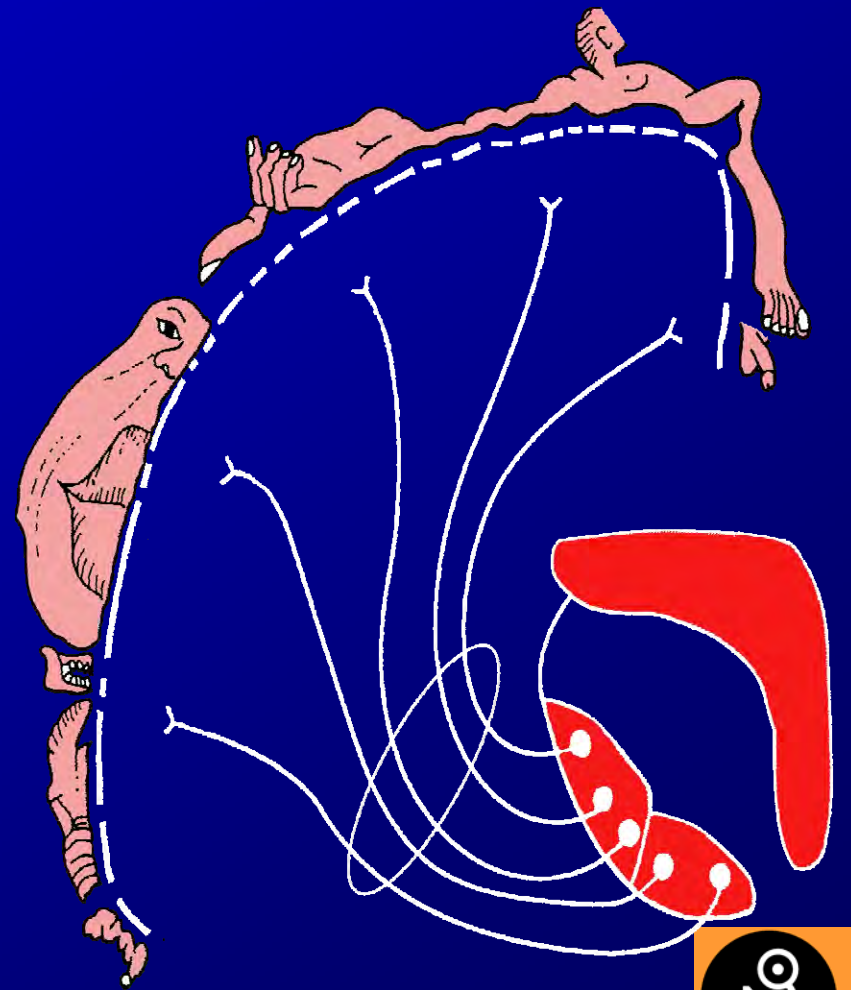


eg. Elbert T et al (1998) Neuroreport  
9: 3571

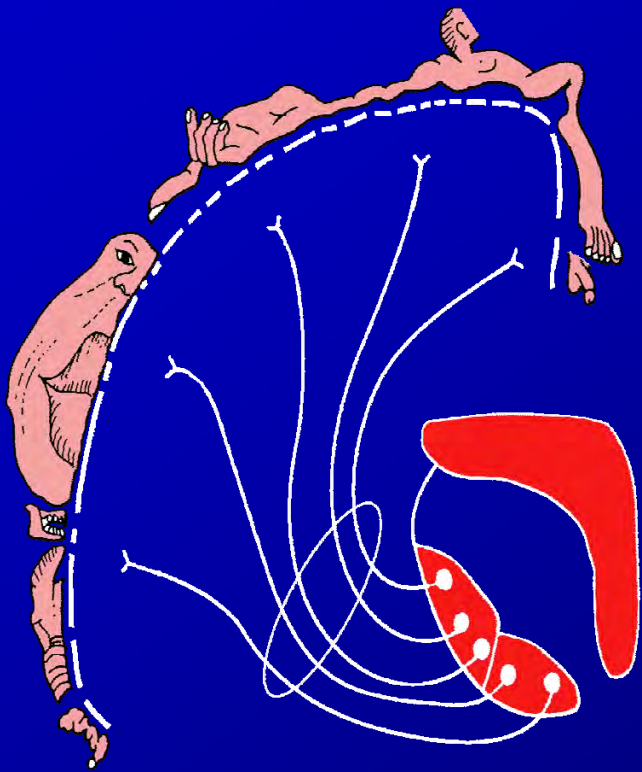


# Smudging and injury states

- Phantom limb stories
- The more chronic and painful a problem is – the more the brain neurosignature is smudged
- “Web fingers”
- On computers – hands grow big and shoulders fade



Some listeners may be interested in the feet as erogenous zones





# More neuromatrix/smudging gifts

- Web four fingers, smudging noted after 30 mins, lasts 2 hours if webbed for 5 hours
  - How about the toes?
  - Motor as well as sensory
- Immune based – makes sense to spread pain or revert to gross movements when the brain thinks you are in trouble



# The immune buffering behaviours

Ability to develop coping skills

Perception of stressor

Social interactions

Belief systems

Exercise

Humour

Intimacy

Diet



# So what can we take from these gifts

1. The obvious – the role of early movement and return to function



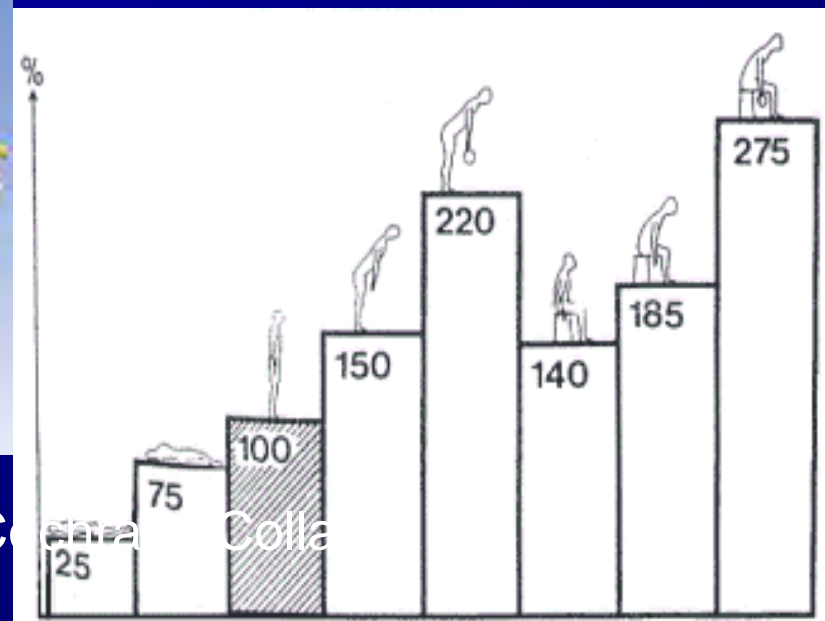


## 2. Therapeutic neuroscience education

Pain as epidemic



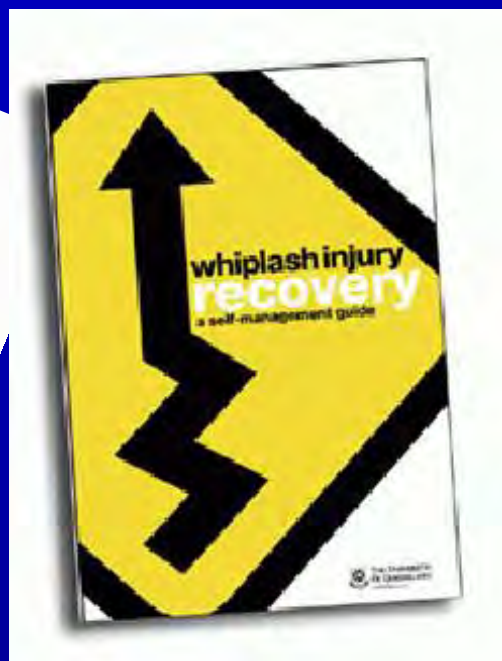
# Structure specific style – “school for bravery”



Does not work. Bombardier C et al 1997 C

Review 22: 837

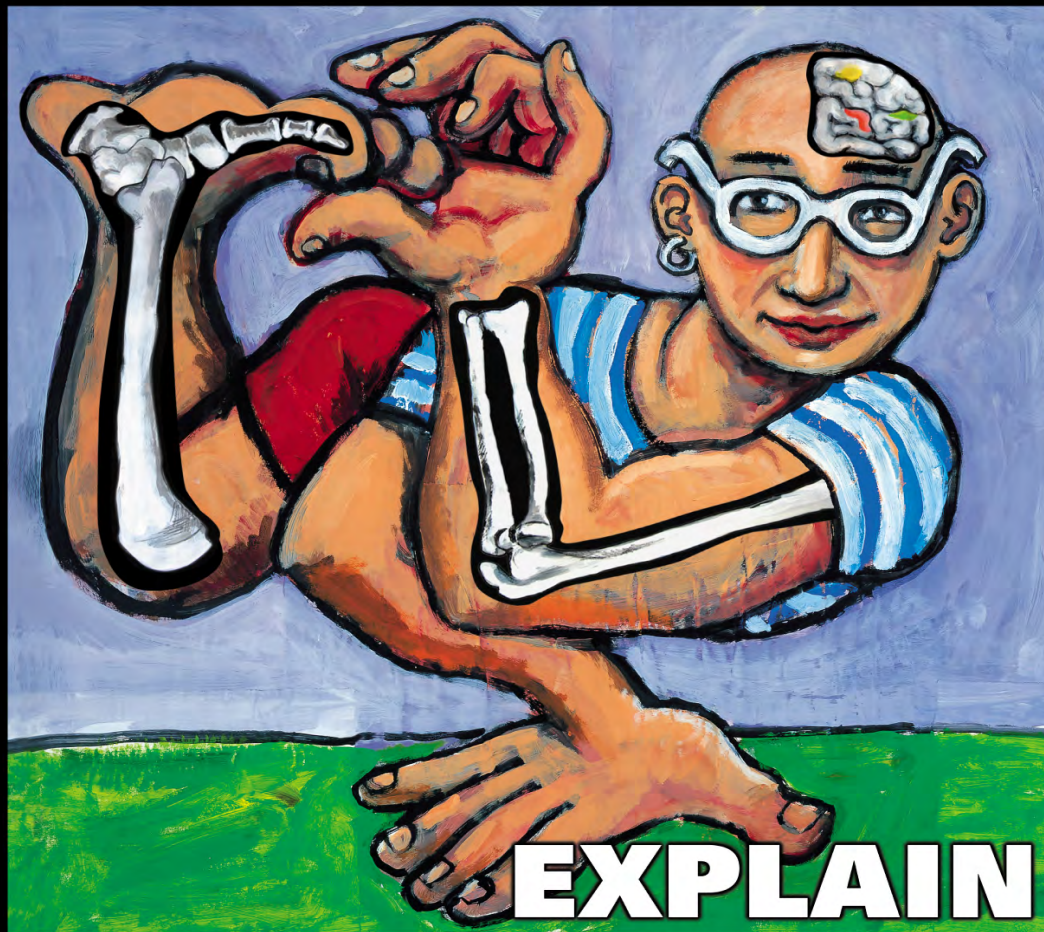
# Psychology booklet based



e.g. McClune T et al 2003 Emergency Medicine Journal 20: 514



# Neuroscience/psychology blended style



DAVID BUTLER | LORIMER MOSELEY | ART BY SUNYATA

# EXPLAIN PAIN

