CHURCHILL MEMORIAL TRUST

Robots in Nursing
False rhetoric or future reality?

Winston Churchill Travel Fellowship

Approach
Participative Qualitative Exploratory research using Focus Group method informed by Social Constructionism[1]

Research Question
What do nurses think the future role of robots could be in assisting the delivery of therapeutic nursing care?

Insights from Thought Leaders & Robotocists

2030-2035

Focus on Autonomous technology

Robots cannot replace nurses in next 10-!5 yrs

Robot development inhibited by physical demands

Nursing needs to be clear when to deploy

Deploy robots to reduce risk

Robot Components:
• Sensors
• Motor
• Computer

Robot to Human Handover most risky time

Robots increase human to human interaction

A higher expectation of accuracy?

Digital capability should include skills in capability and flexibility
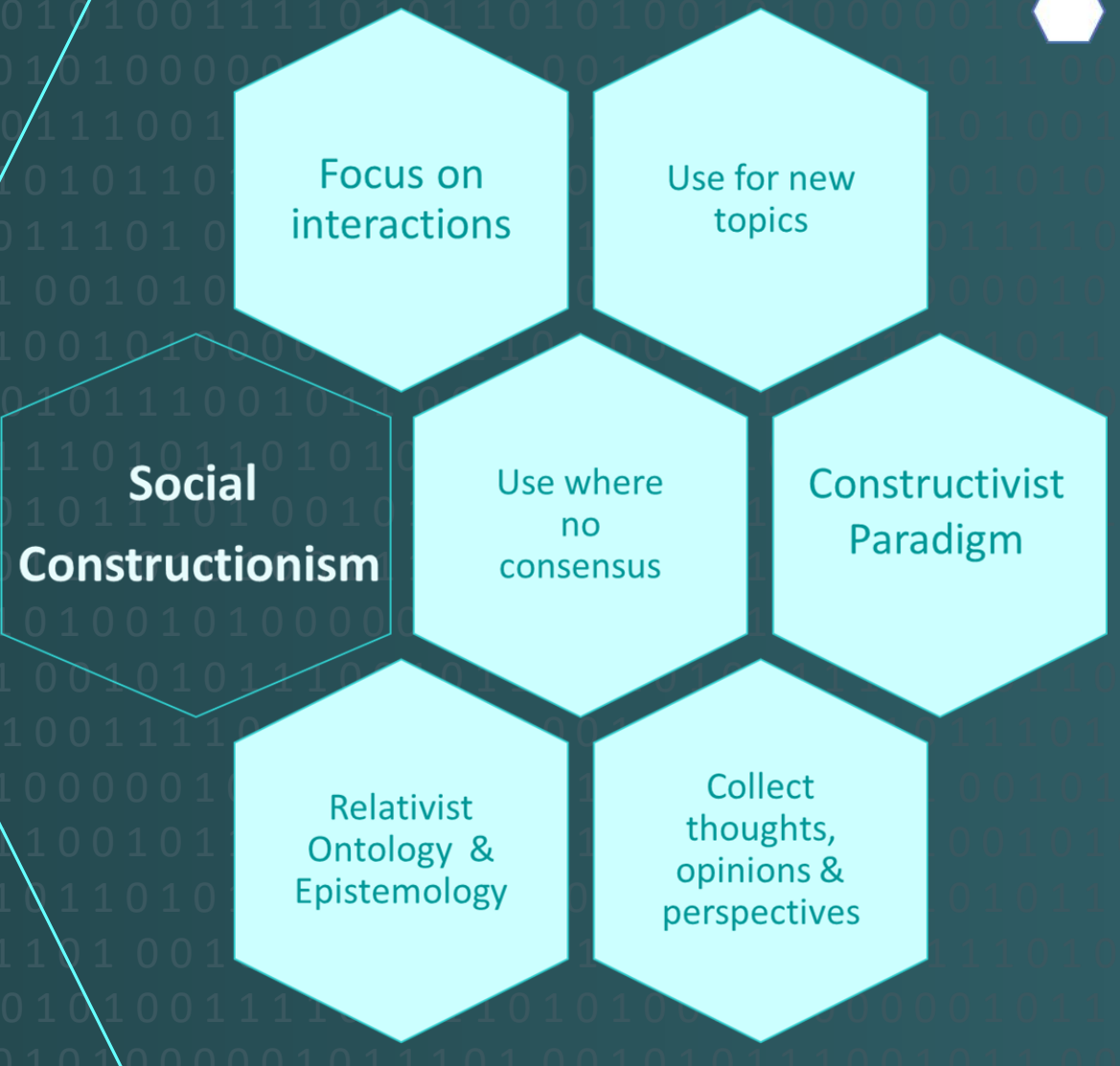
AI capability exceeds humans in imaging

Robots anticipate human behaviour

Nursing needs to clearly articulate nursing

Focus on interactions

Use for new topics

Social Constructionism

Use where no consensus

Constructivist Paradigm

Relativist Ontology & Epistemology

Collect thoughts, opinions & perspectives

Elaine Strachan-Hall
RGN, MSc, MBA
Prof Doc Student @
Oxford Brookes University. Contact:
Elaine.strachan-hall-2017@brookes.ac.uk

Graphic adapted from SAE Automation levels [2]
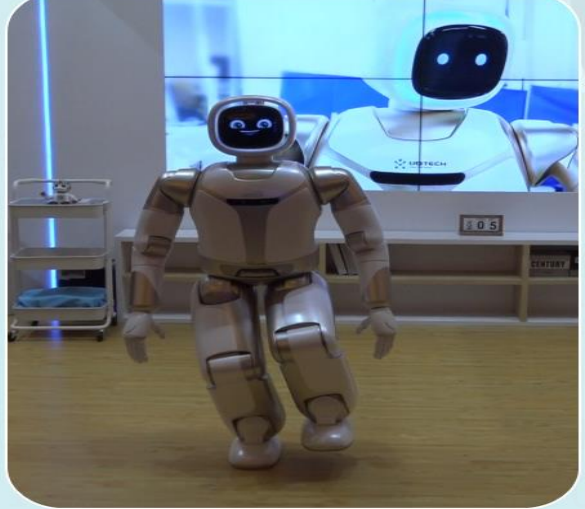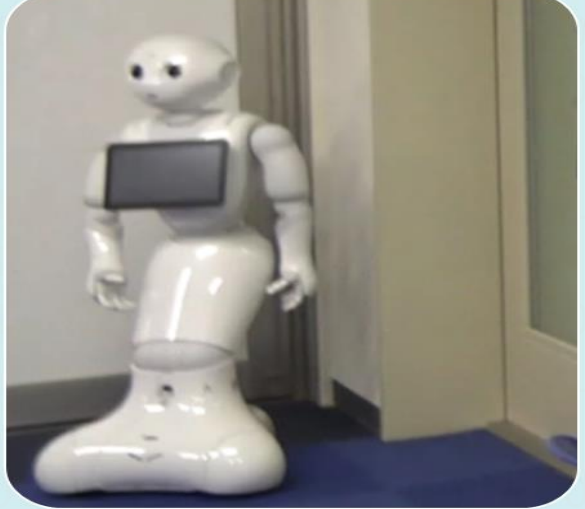
Level 0
No automation
Zero Autonomy
Nurse performs all tasks
Equipment is directly controlled by nurse or programmed ie Avatar

Level 1
Nurse Assistance
Equipment is controlled by nurse but some nurse assist devices included in design ie sensors

Level 2
Partial Automation
Robot has combined automated functions but the nurse must remain engaged with the nursing task & monitor environment at all times
Ie robotic walker

Level 3
Conditional Automation
Nurse is a necessity for decision making but not required to monitor the environment
Nurse must be able to take over control with notice
Ie Telemedicine

Level 4
High Automation
Robot is capable of performing all nursing functions under certain conditions
Nurse must have the option to control robot and decide the intervention

Level 5
Full Automation
The robot is capable of substitution for a nurse /carer
The nurse may have the option to control robot

Reference: 1. Gergen KJ *(2009) An invitation to social construction.* Los Angeles: SAGE .