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

Robot Components:
- Sensors
- Motor
- Computer

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 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

Social Constructionism
- Focus on interactions
- Use for new topics
- Use where no consensus
- Constructivist Paradigm
- Relativist Ontology & Epistemology
- Collect thoughts, opinions & perspectives

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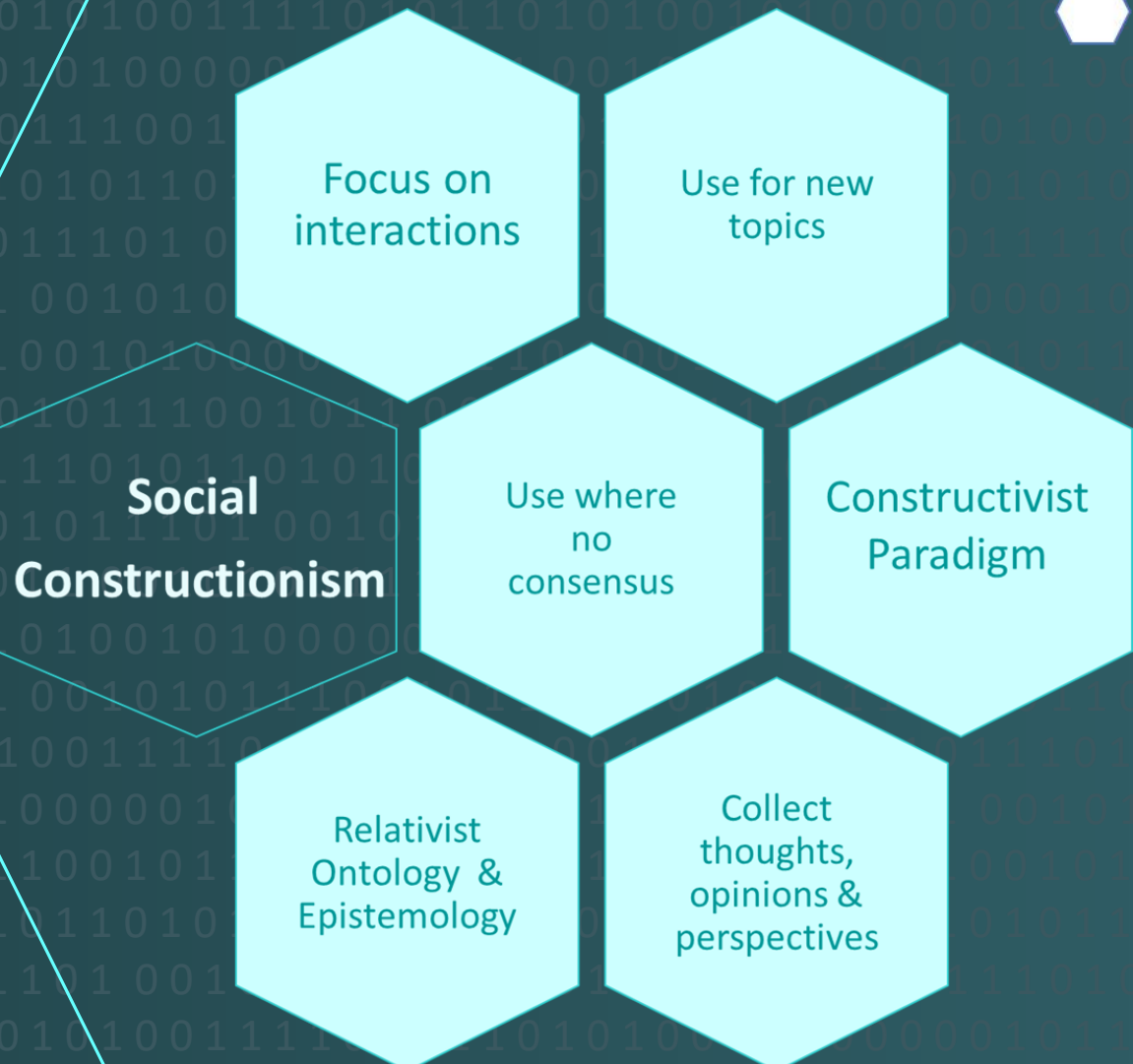
Graphic adapted from SAE Automation levels [2]
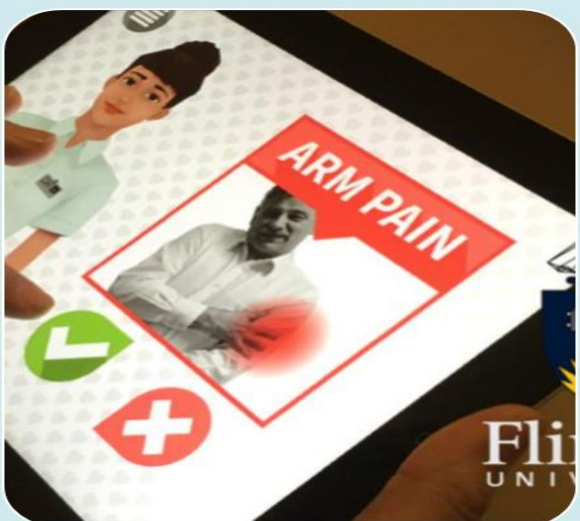
Level 0	Level 1	Level 2	Level 3	Level 4	Level 5
No automation Zero Autonomy Nurse performs all tasks Equipment is directly controlled by nurse or programmed ie Avatar	Nurse Assistance Equipment is controlled by nurse but some nurse assist devices included in design ie sensors	Partial Automation Robot has combined automated functions but the nurse must remain engaged with the nursing task & monitor environment at all times Ie robotic walker	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	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	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 .