

Patient Simulators: the Past, Present, and Future

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How Old is the Oldest Human Simulator?

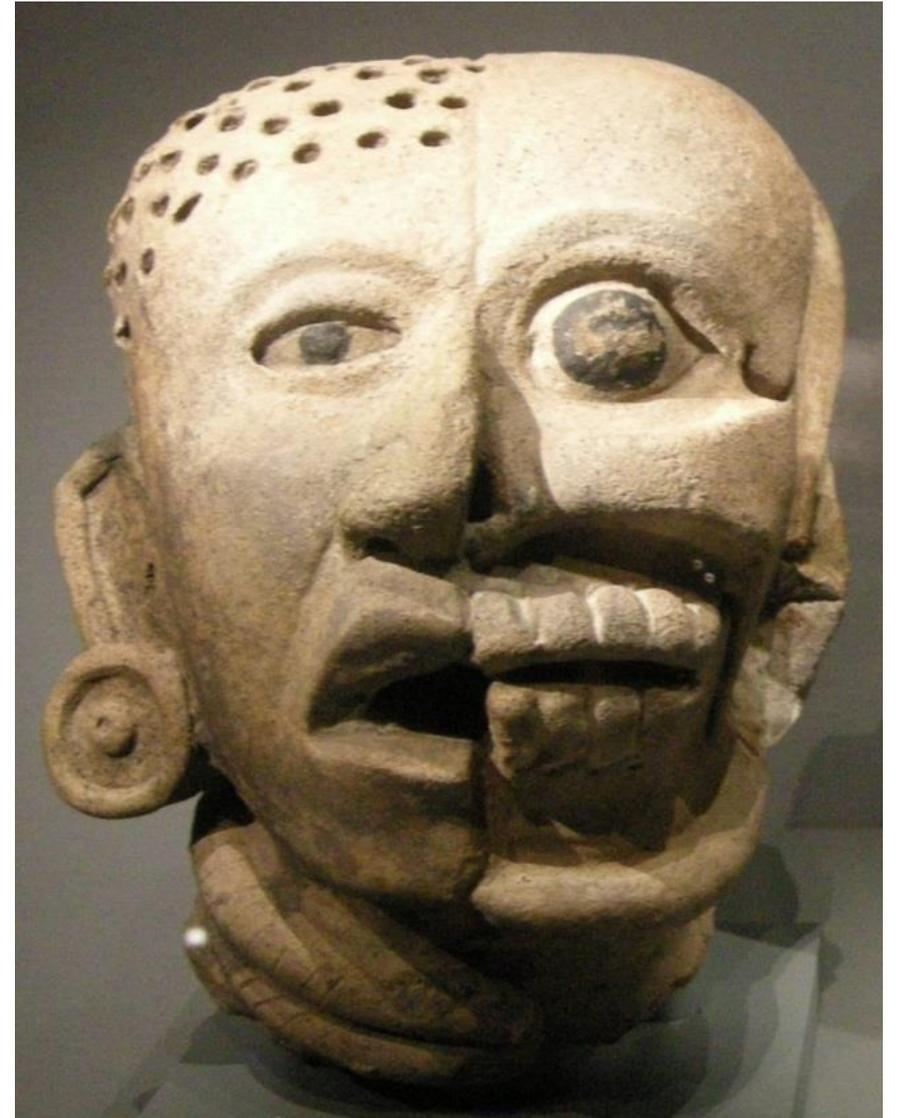
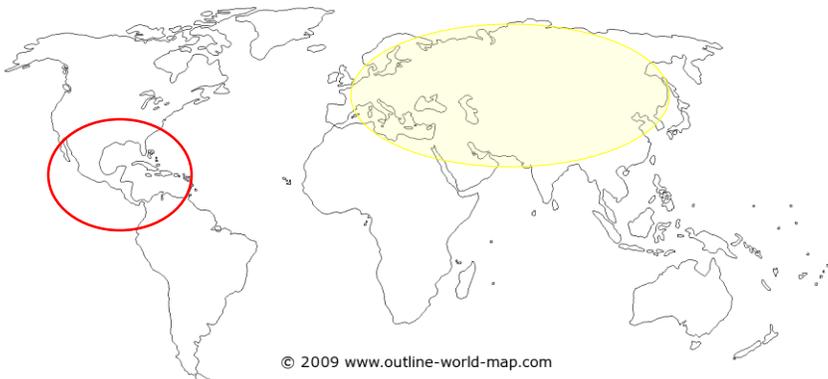
- 24 000 BC – 22 000 BC
- Venus of Willendorf
- Carve Model of Human
- Eurasia



https://commons.wikimedia.org/wiki/File:Venus_von_Willendorf_01.jpg

Memento Mori

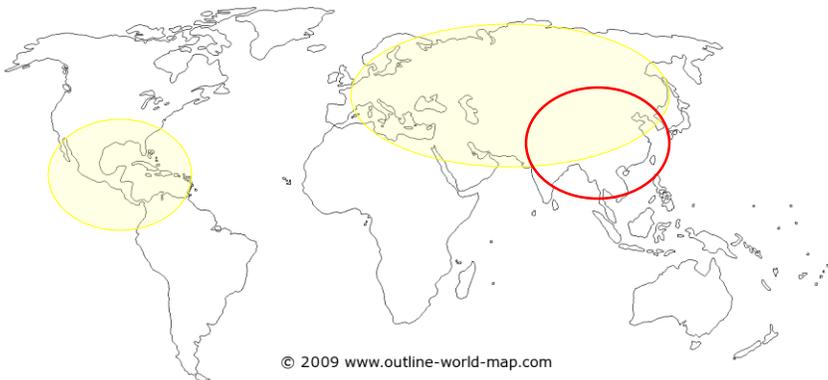
- 300 – 600
- Early Classic Mayan Head
- Carve Human Figure (clay)
- Central America



Mayan Pre-Columbian art in the National Gallery of Victoria Vera Cruz

Acupuncture

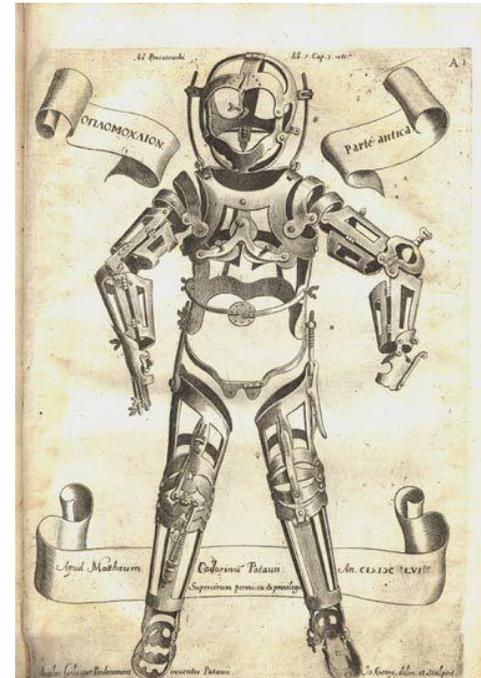
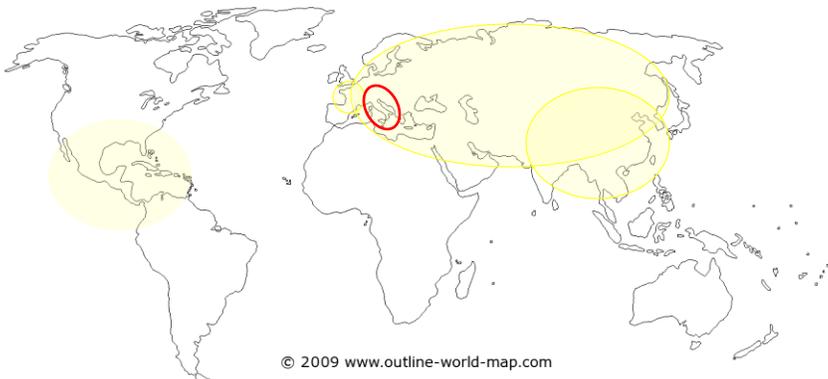
- 987-1067
- Basic Patient Simulator (Bronze Statue)
- China



https://commons.wikimedia.org/wiki/File:Bronze_acupuncture_figure_in_silk_covered_box_bearing_text_Wellcome_L0057614.jpg

Musculoskeletal Simulators

- 1570-1700
- Iron Skeletal Models
- Italy

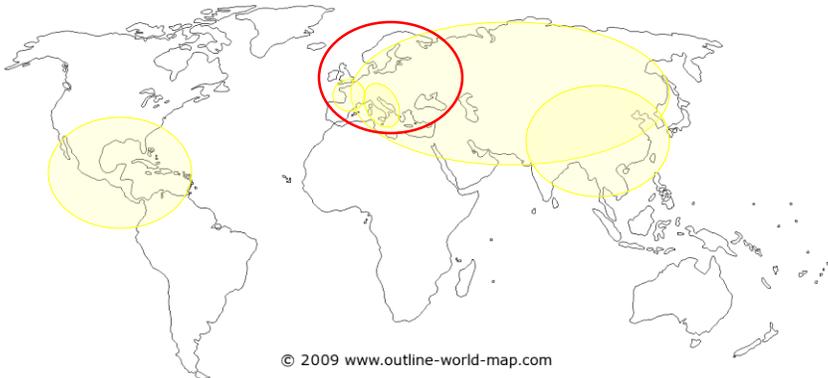


Fabricius' Opera Chirurgica
illustration (1582)

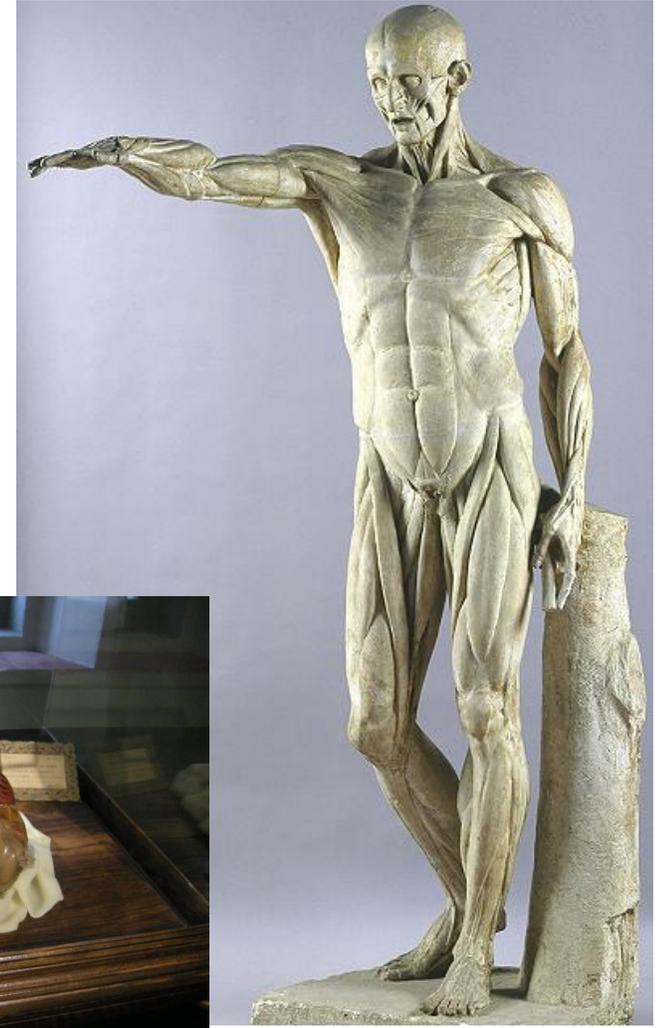


Anatomic Simulators

- 1600-1799
- Flayed Man (écroché)
- Made out of wax
- Europe

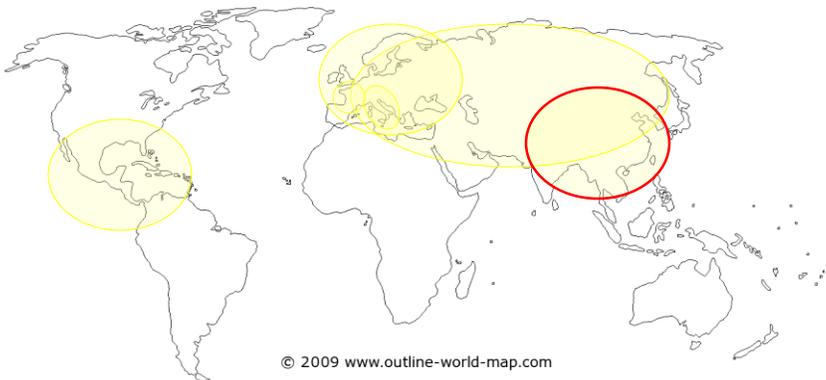


Partially Dissected Head



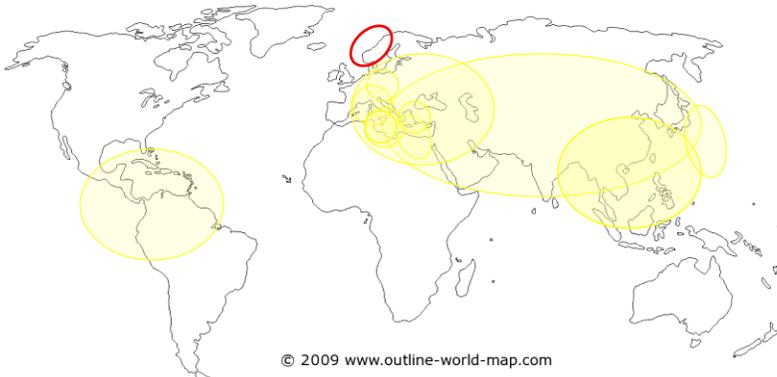
Basic Patient Simulators

- 1644 - 1912
- Doctor's Lady
- China



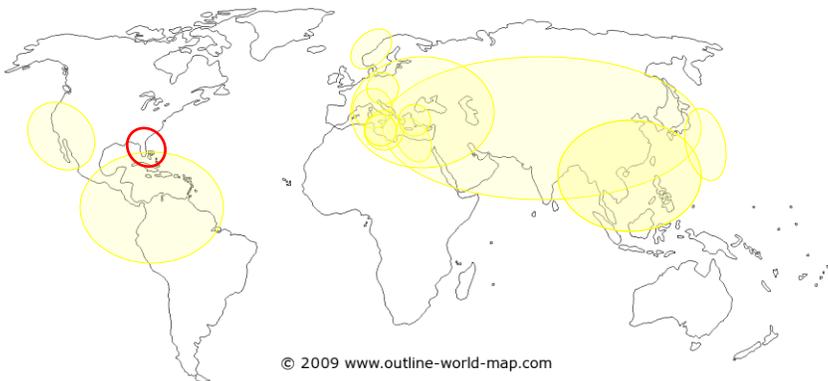
CPR Simulators

- 1960
- Resusci Anne
 - The first CPR mannequin
- Norway



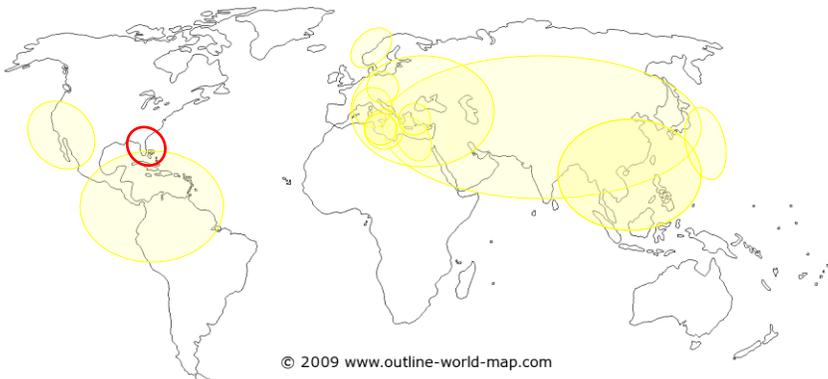
Heart Sounds Simulation

- 1968
- Harvey

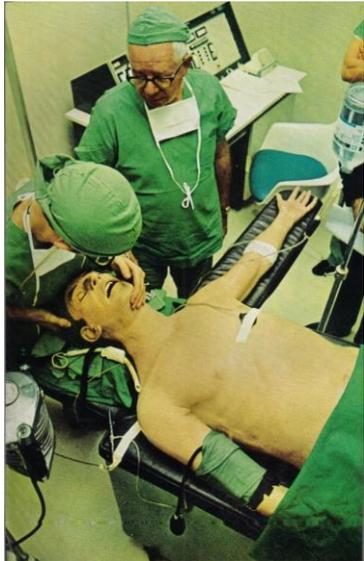


Heart Sounds Simulation

- 1968
- Harvey
 - Can breathe
 - Audible heartbeats
 - Palpable pulses
- FL, USA
 - University of Miami



Anesthesia Simulators



1967, SimOne, CA USA



1990, PatSim, Norway



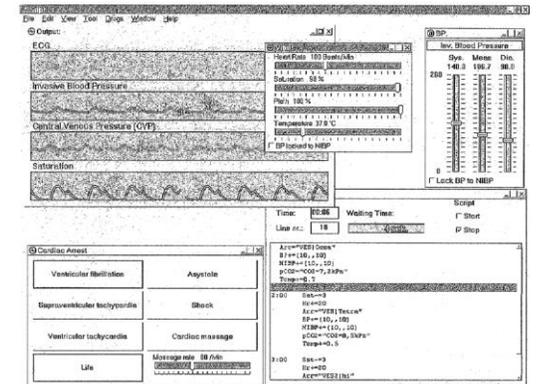
1992, Leiden



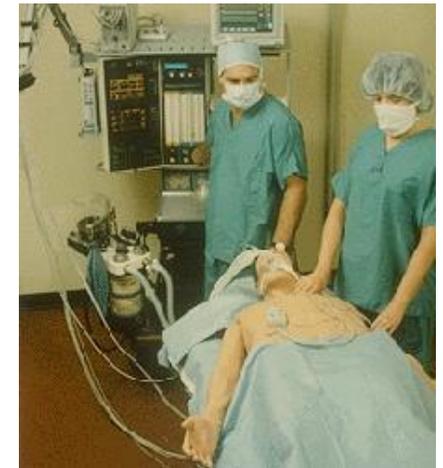
1994, ACCESS, UK



1996, HPS by METI



1993, Sophus, Denmark



1997, MedSim-Eagle, Stanford

Adult Simulators



1995, Code Blue III, by Gaumard



2004, HAL S3000, by Gaumard



2009, ALS Simulator, by Laerdal



2000, SimMan, by Laerdal



2007, iStan, by METI



2009, METI man, by METI



2001, ECS by METI



2008, SimMan3G, by Laerdal



2010, Susie S2000, by Gaumard

Pediatric Simulators



1999, PediaSim, by METI



2009, SimNewB, by Laerdal



2002, PEDI, Gaumard



2004, BabySIM, by METI



2003, Premie, Gaumard



2006, Sim Baby, by Laerdal



2018, Pediatric HAL, by Gaumard

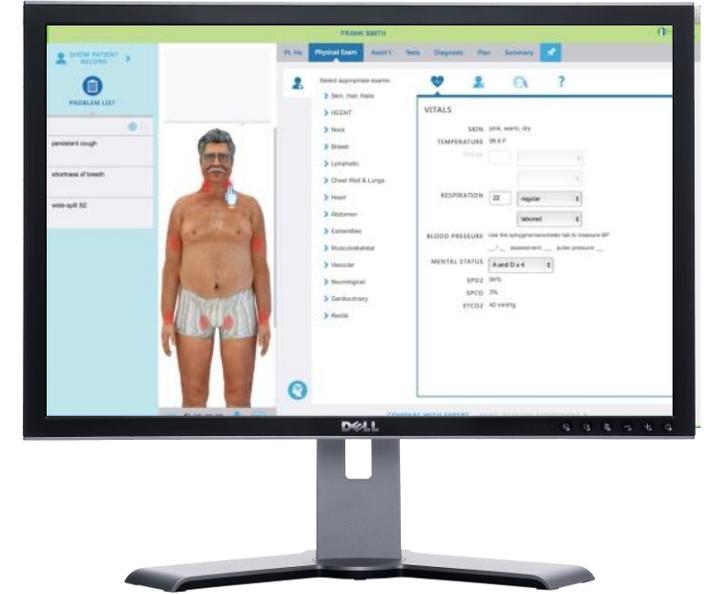
Virtual Simulators



2011, CliniSpace



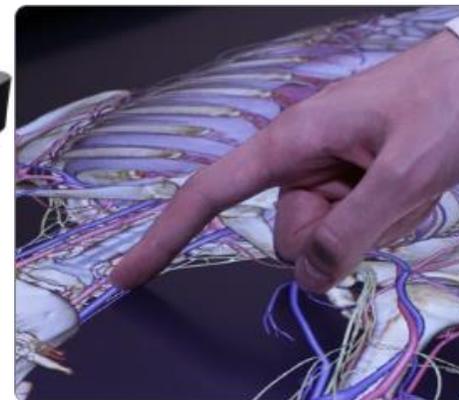
2012, Shadow Health's Virtual Patients



2013, iHuman



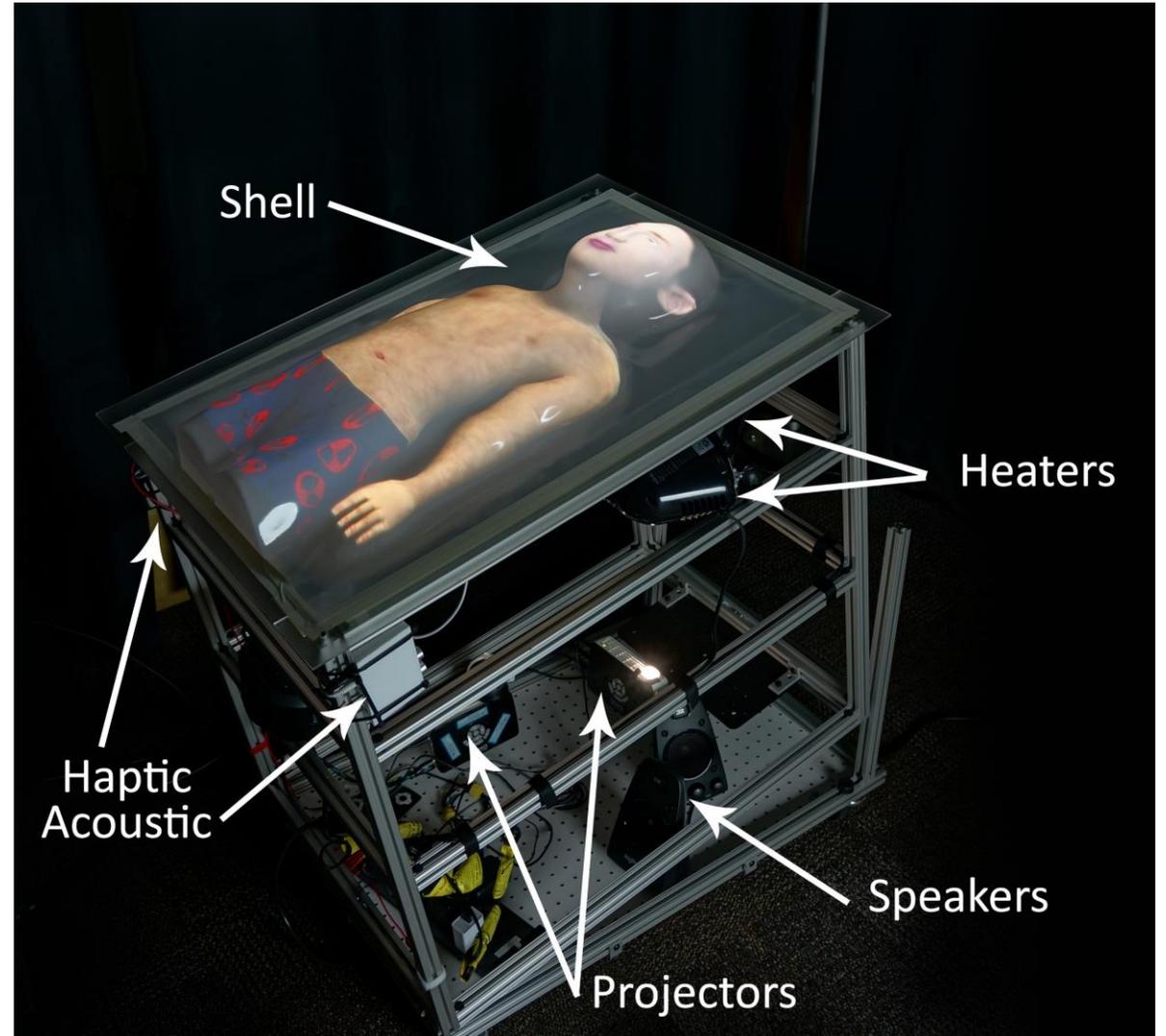
2015, Anatomage Table



Augmented Reality Simulators



Physical-Virtual Patient Simulator



Physical-Virtual Simulator (Video)



Future ?

Future ?

Depends on YOU!!

Questions?