

# Real-time streaming capabilities and sound synthesis

Motion and Music Workshop  
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University of Jyväskylä

# The Mockup Ball in E flat



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# Setup

- Control: Qualisys Oqus cameras + Track Manager software in Real-Time mode;  
Transmission via UDP-OSC protocol
  - Mapping: Puredata
  - Synthesis: Puredata

# Cartesian and Enactive Model

- Control: Perception
- Mapping: Cognition
- Synthesis: Action

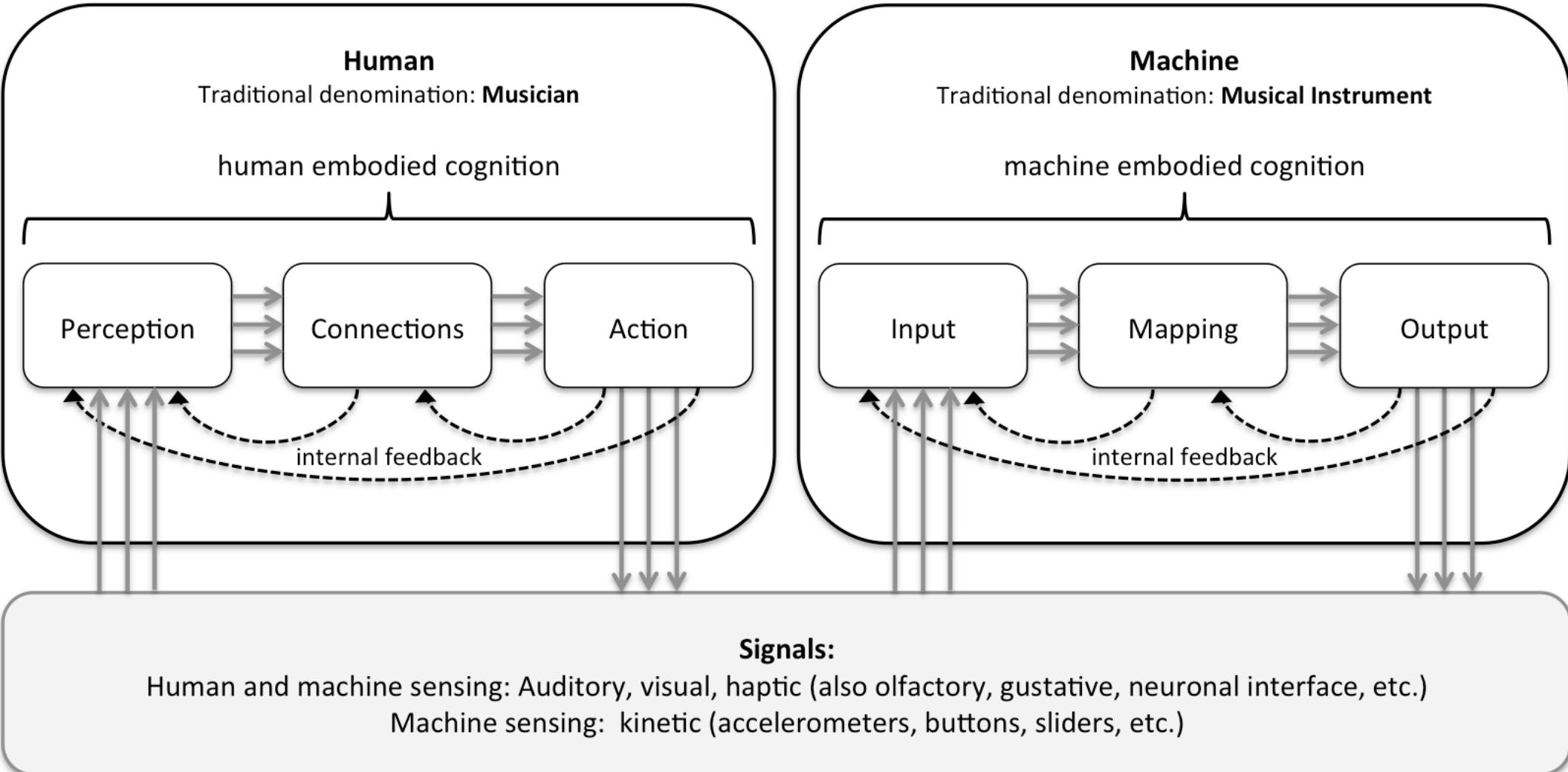
# The Sandwich Model (Hurley, 2002, p. 401)



# Cartesian and Enactive Model

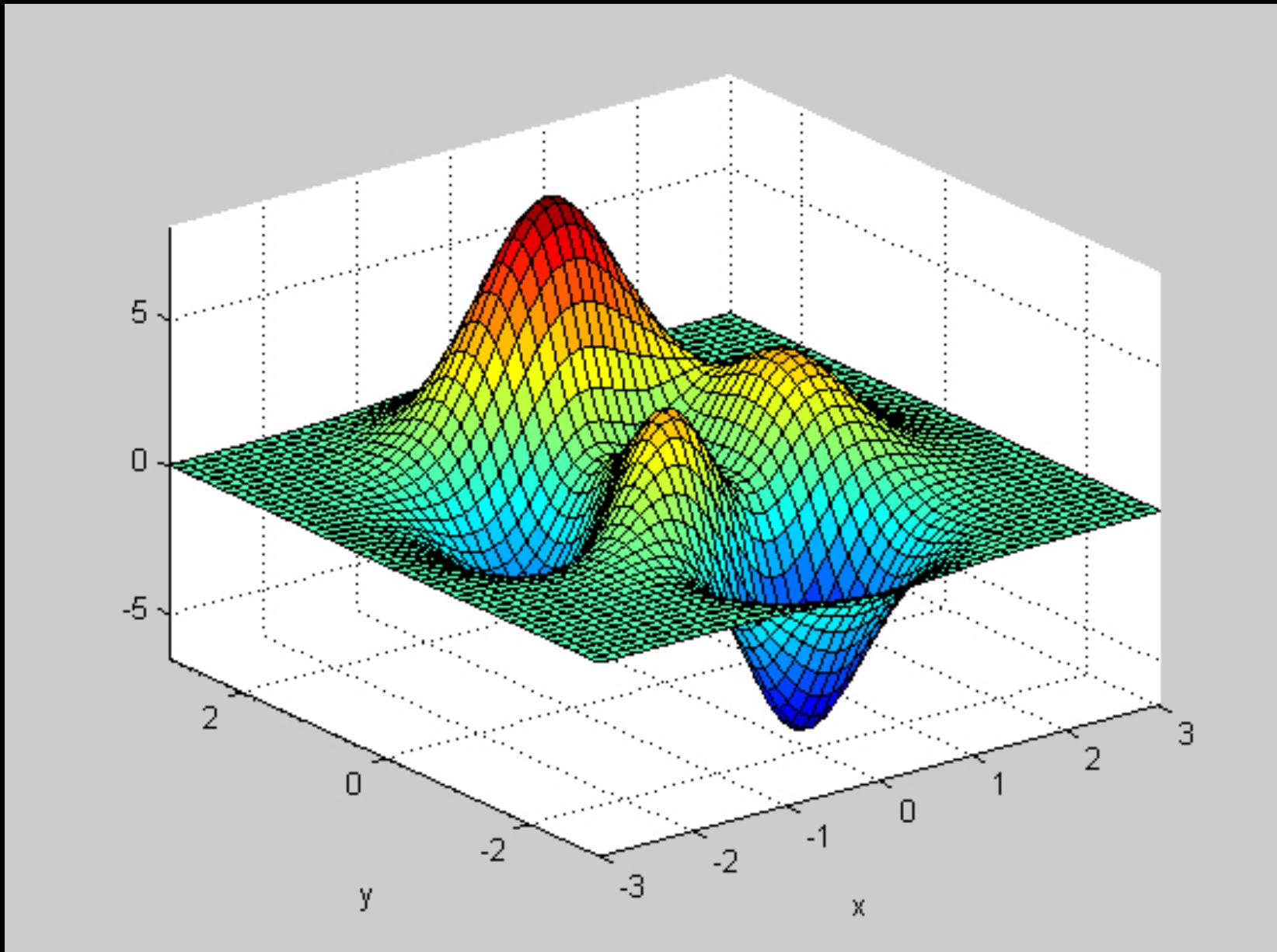
- Control: Perception
- Mapping: Cognition
- Synthesis: Action

# Human-Machine Musical Interaction (Mendoza & Thompson, 2016)



# Gesture Topology

(Mazzola & Andreatta, 2007)



# More Information and Software:

<https://yousource.it.jyu.fi/meetings>

<http://users.jyu.fi/~juigmend/>

<http://users.jyu.fi/~gediapou/>

# References

Hurley, S. L. (2002). *Consciousness in action*. Cambridge, MA, USA: Harvard University Press.

Mazzola, G., & Andreatta, M. (2007). Diagrams, gestures and formulae in music. *Journal of Mathematics and Music*, 1(1), 23–46.

Mendoza, J.I., & Thompson, M.R. (2016). Gestural Agency in Human-Machine Musical Interaction