Don’t mention the machine - the #awkward future of human sign language interpreting

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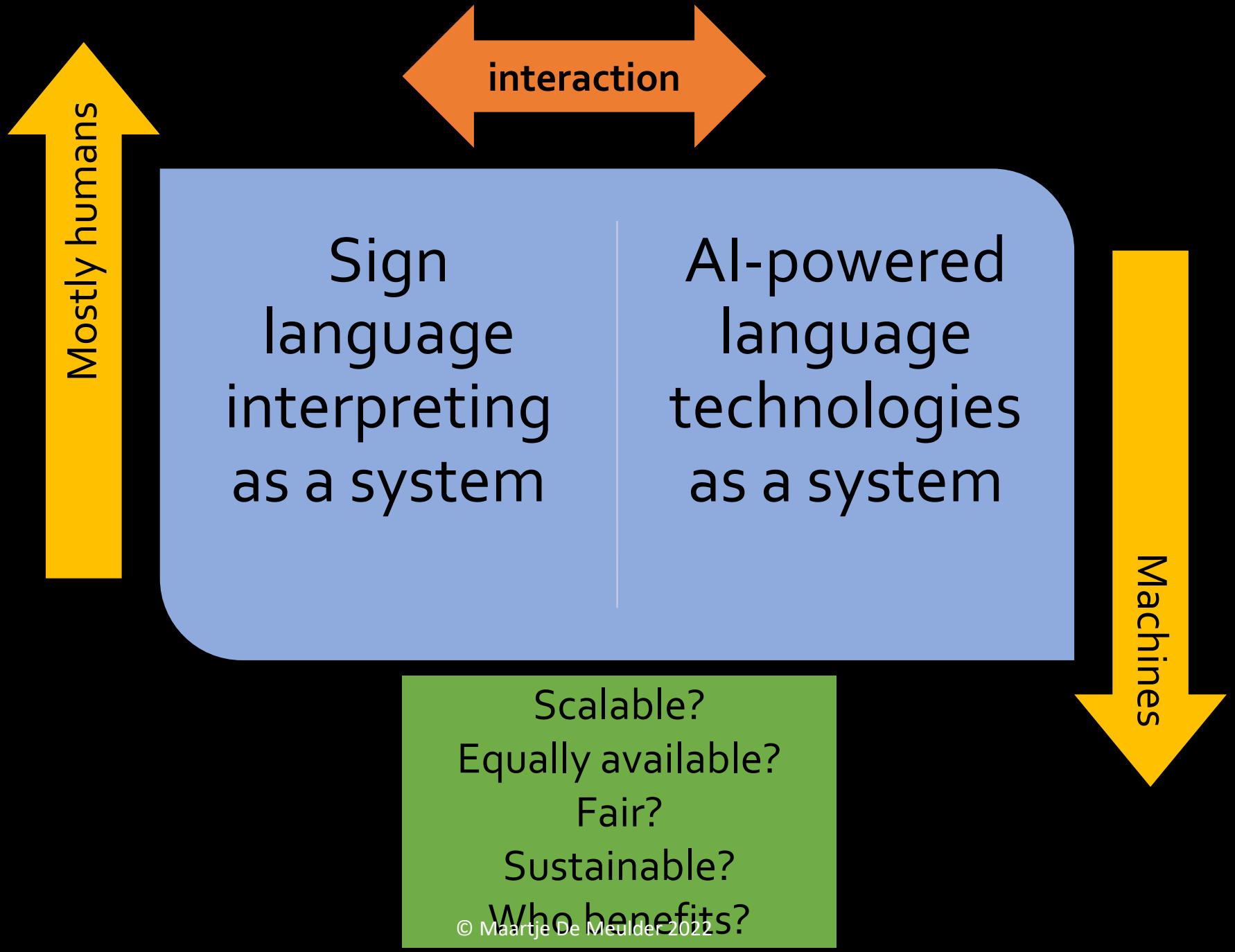
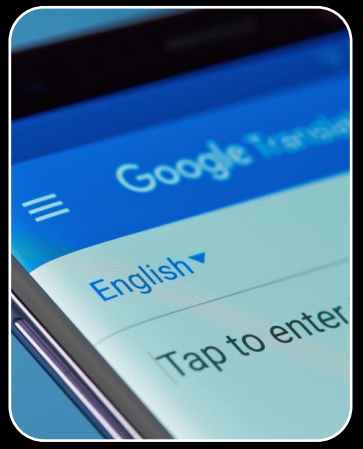
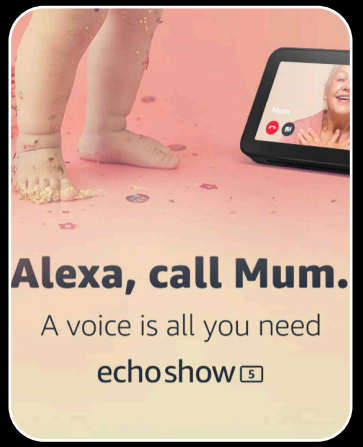
efsli #awkward conference

4 September 2022



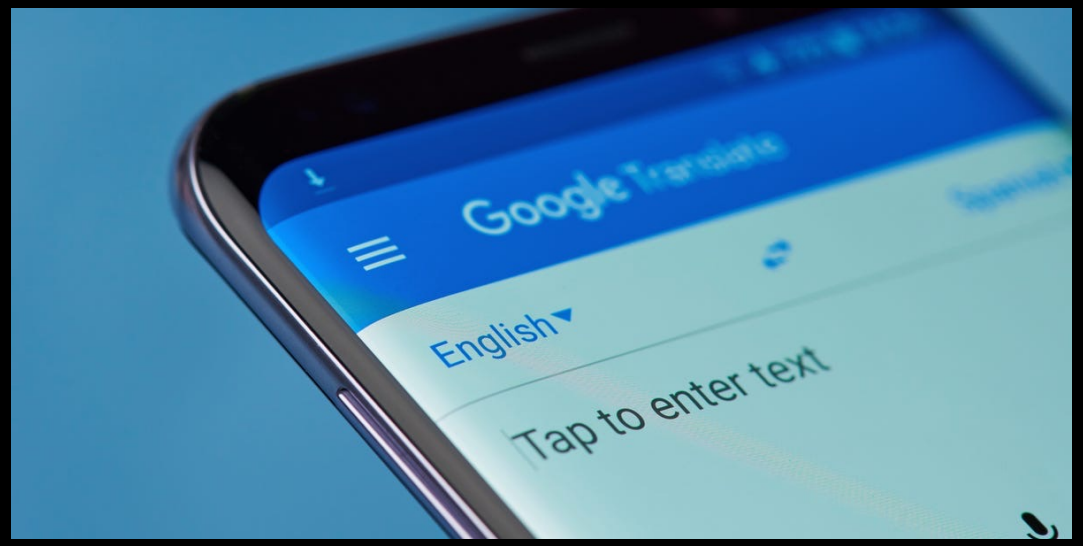


Communication through machines



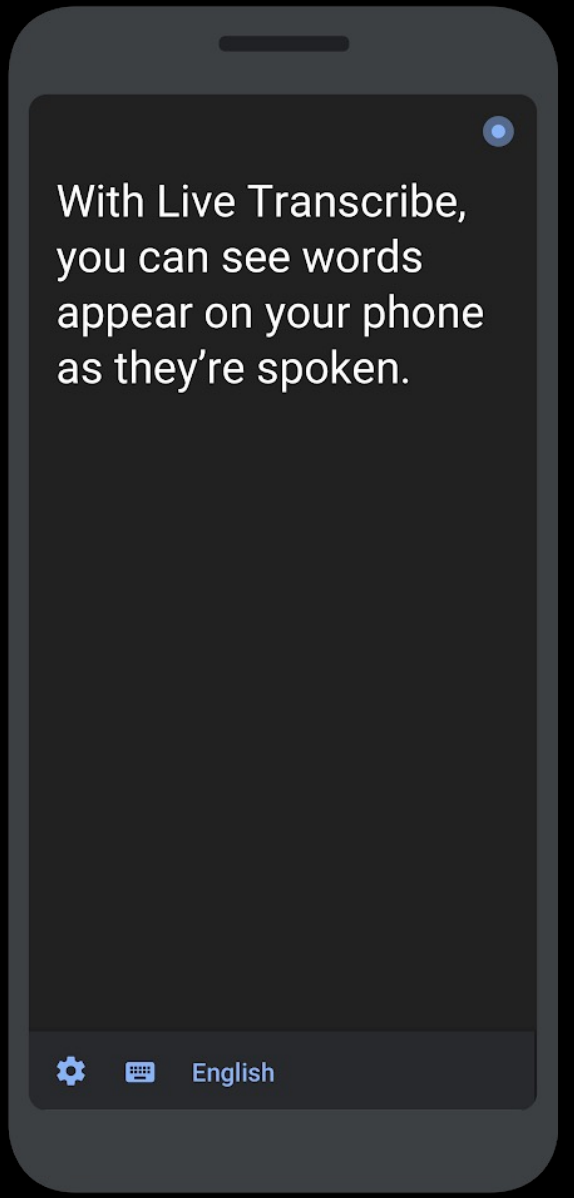
Communication with machines

Communication *through* machines



Speech-to-text
(and vice versa)

Machine learning
Natural language
processing



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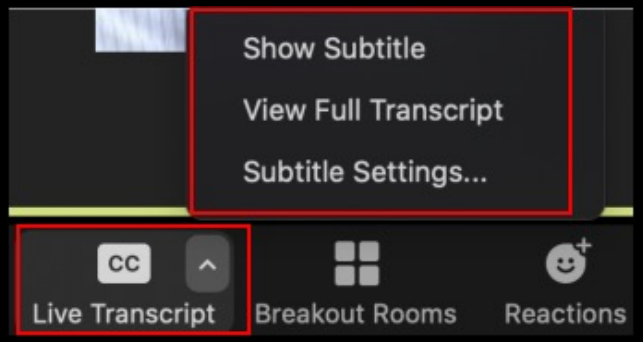
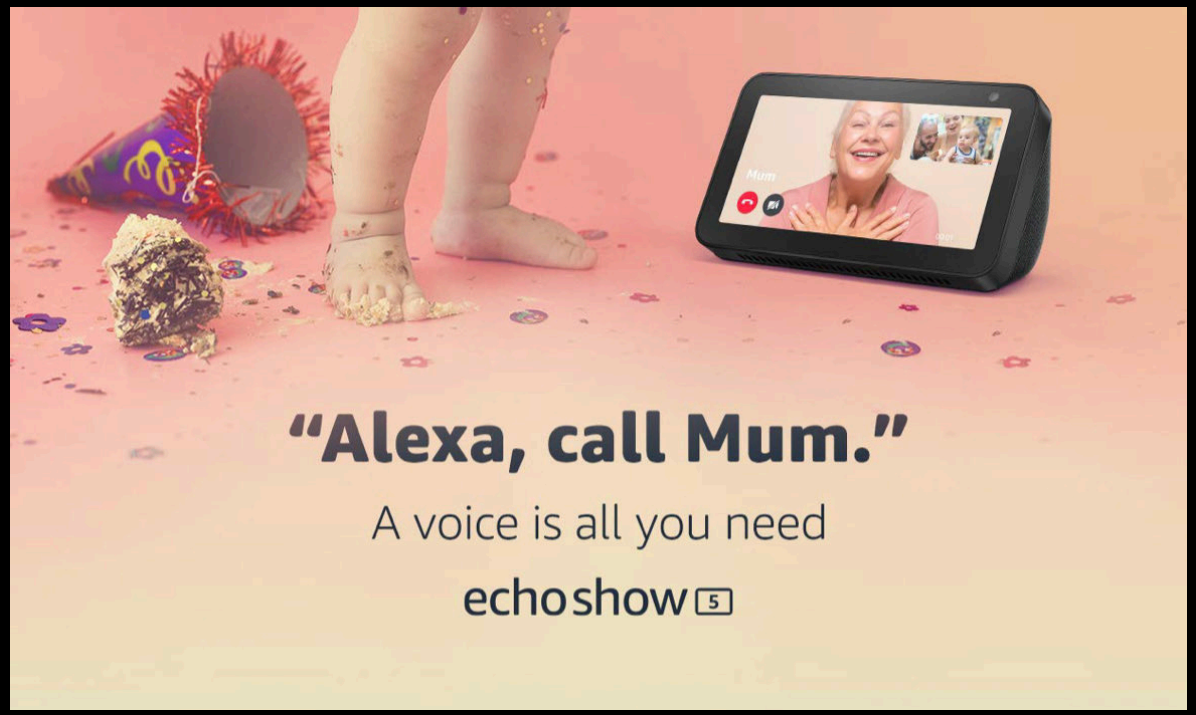
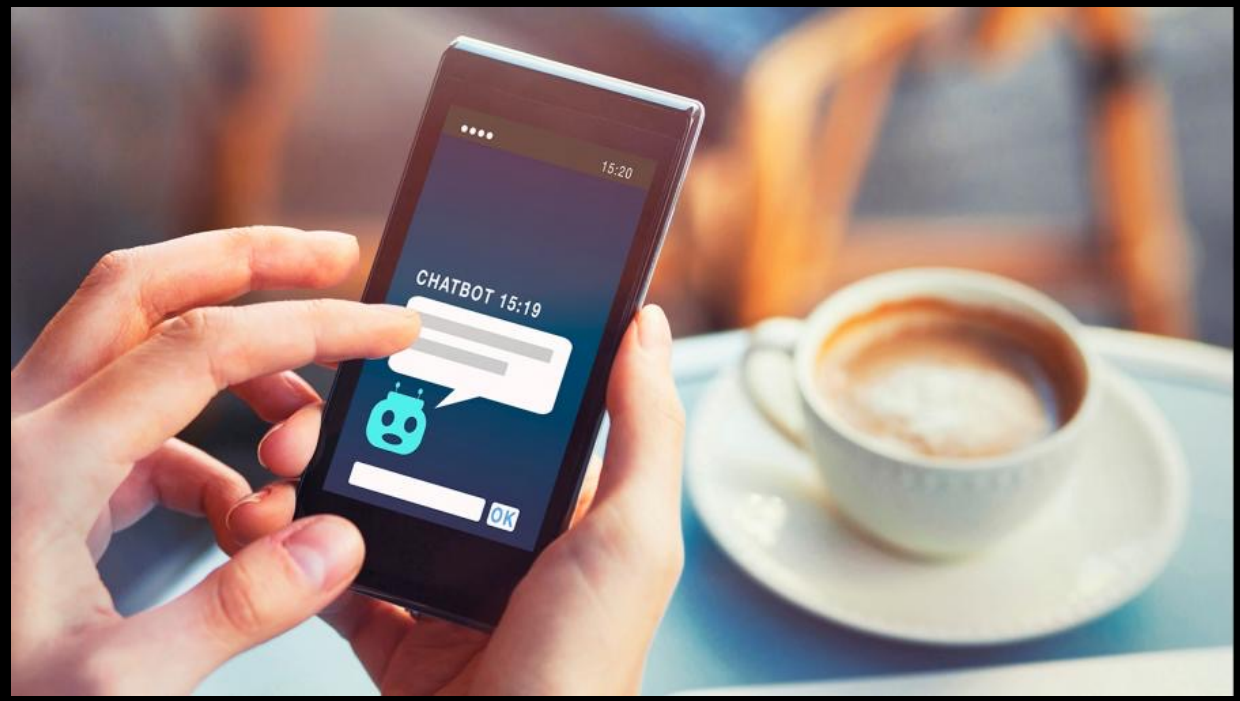


Communication *with* machines

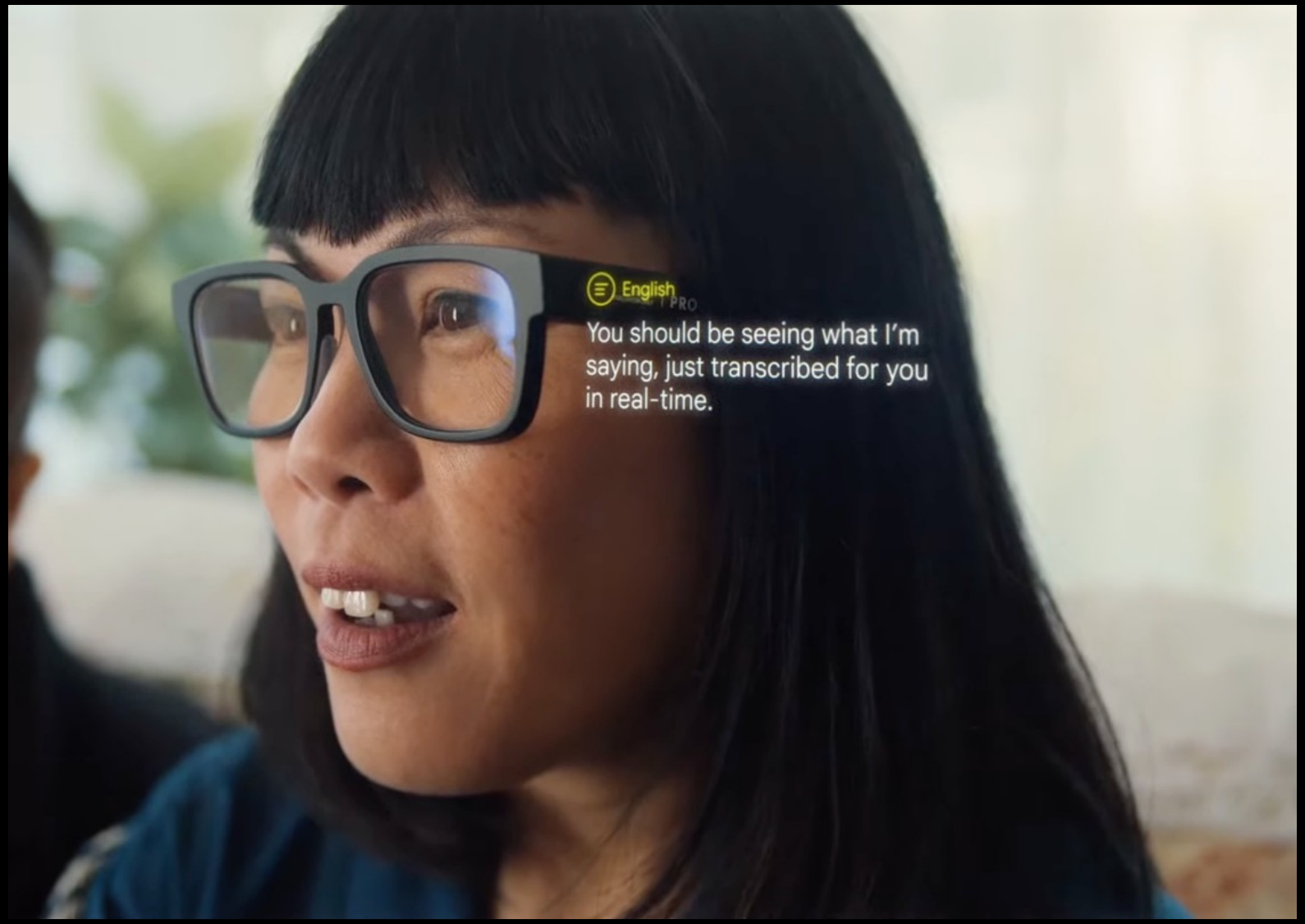




Awkward for deaf people?

=> Yes, but so is having a third human in the room (interpreter)

=> People are increasingly used to talking to machines

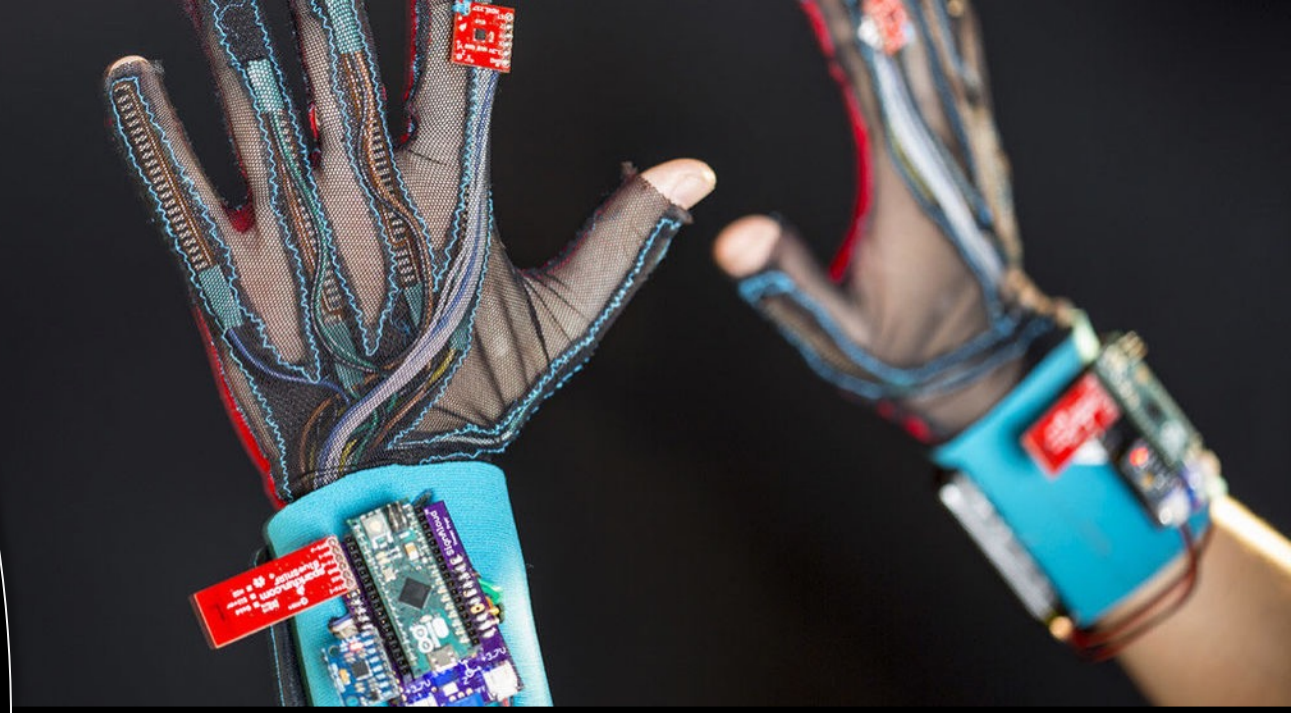


Language technologies

- Increasingly through augmented reality where technology fades into the background - and moves from our hands to our eyes and ears (Sayers et al. 2021)
- Includes increasingly complex algorithms and neural networks so as to get closer to human thinking

AI-driven language technologies

- #awkward because not good enough yet (especially text/speech-to-sign)
- “Will not take over our jobs”
- But are improving very quickly
- Feed on our data and use



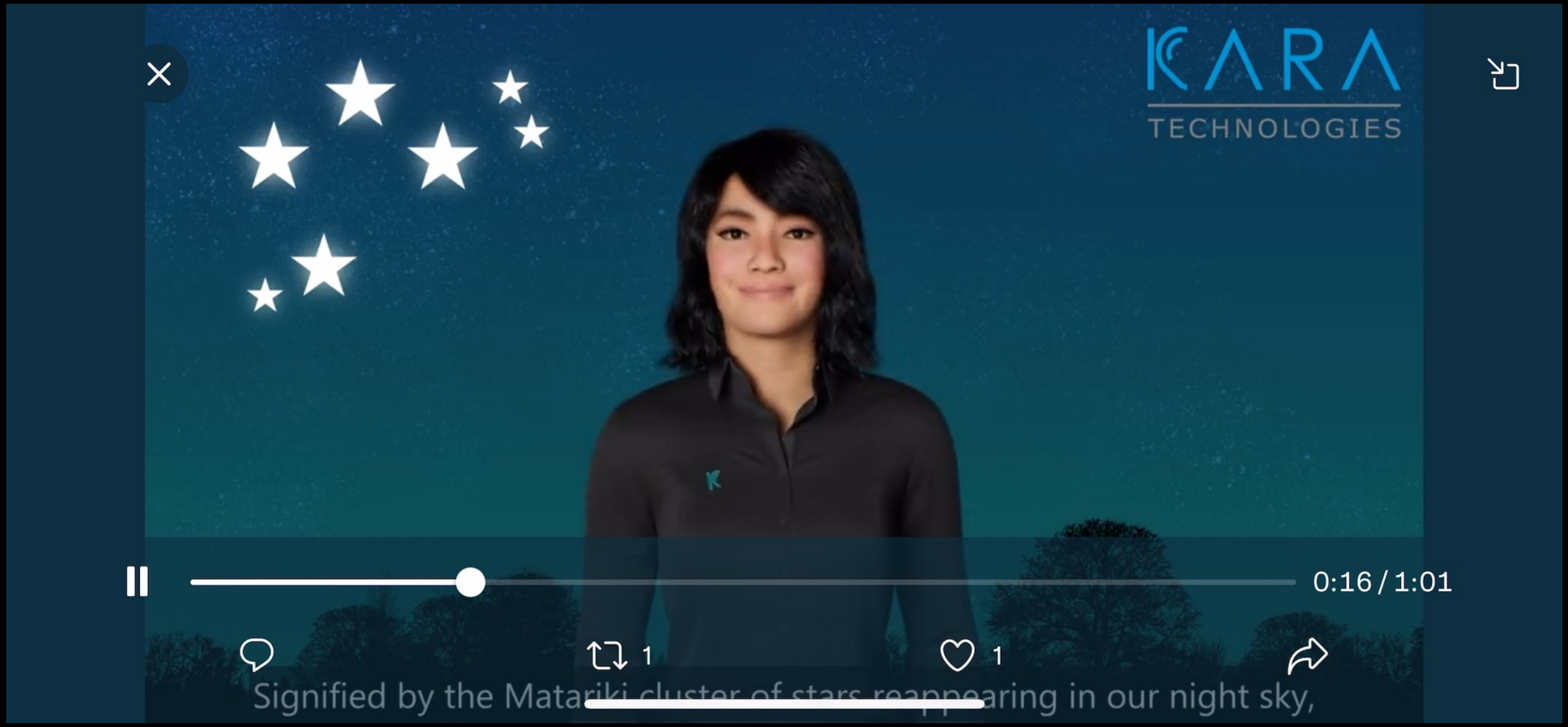
The metaverse

- Avatars and immersive VR headsets critical because the internet will change
- From 2D to 3D (the metaverse)
- Living in virtual worlds rather than aided through digital devices
- Parallel plane of existence atop our digital and physical worlds (Ball, 2022)

Sign language avatars

- Created through different processing pipelines which each have their own procs/cons
  - Motion capture
  - Computer synthesis (coding)
  - Combination (increasingly)
  - Recently: motion transfer (video-to video translation)

"Dimensions" (short 3D animated film)
Motion Light Lab, Gallaudet University (2022)



les Républicains

ROSETTA
accès multilingue

The president narrowly derived
the government action,

1:02 / 1:18

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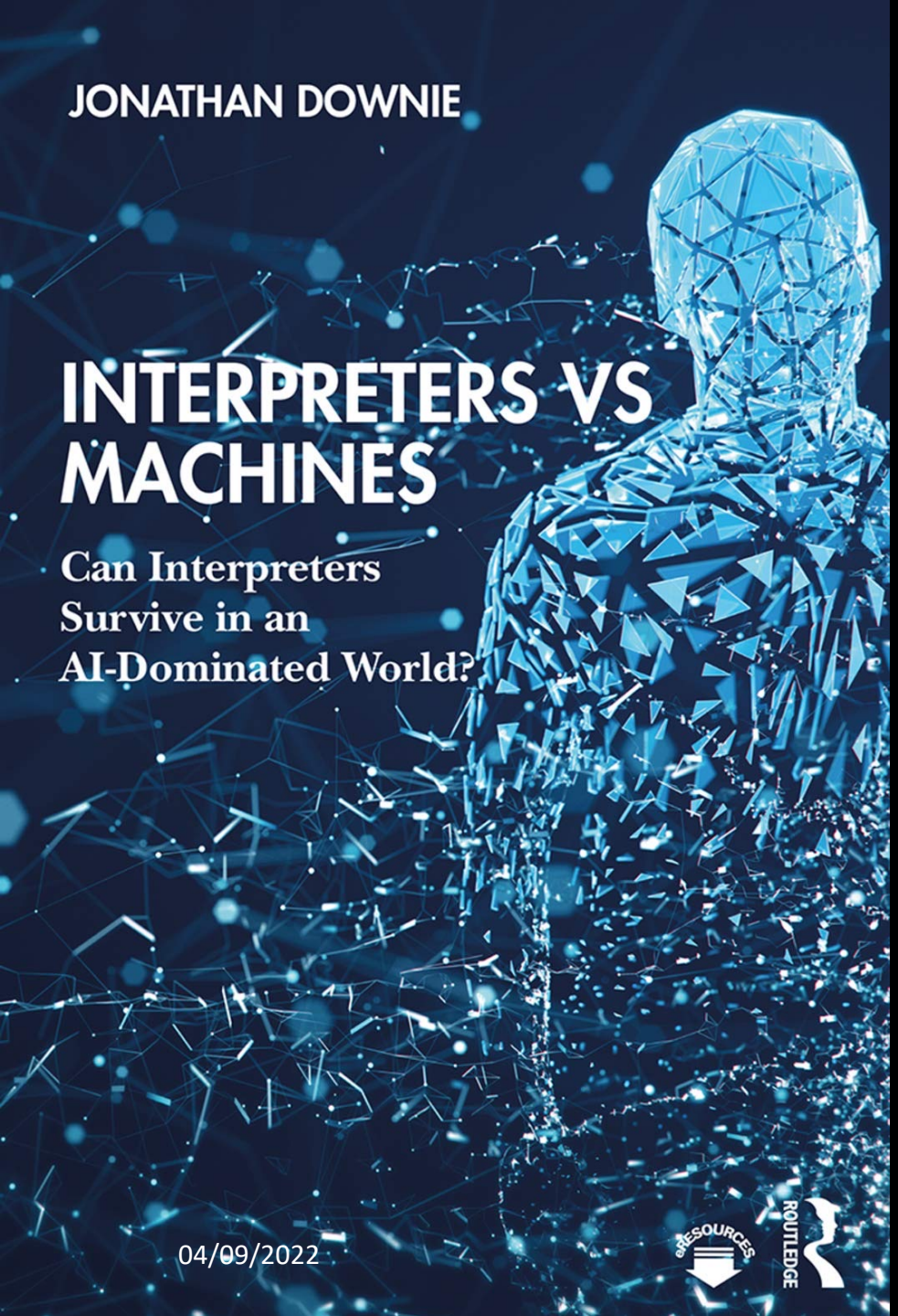
Healthcare demo (SignLab, University of Amsterdam, 2022)

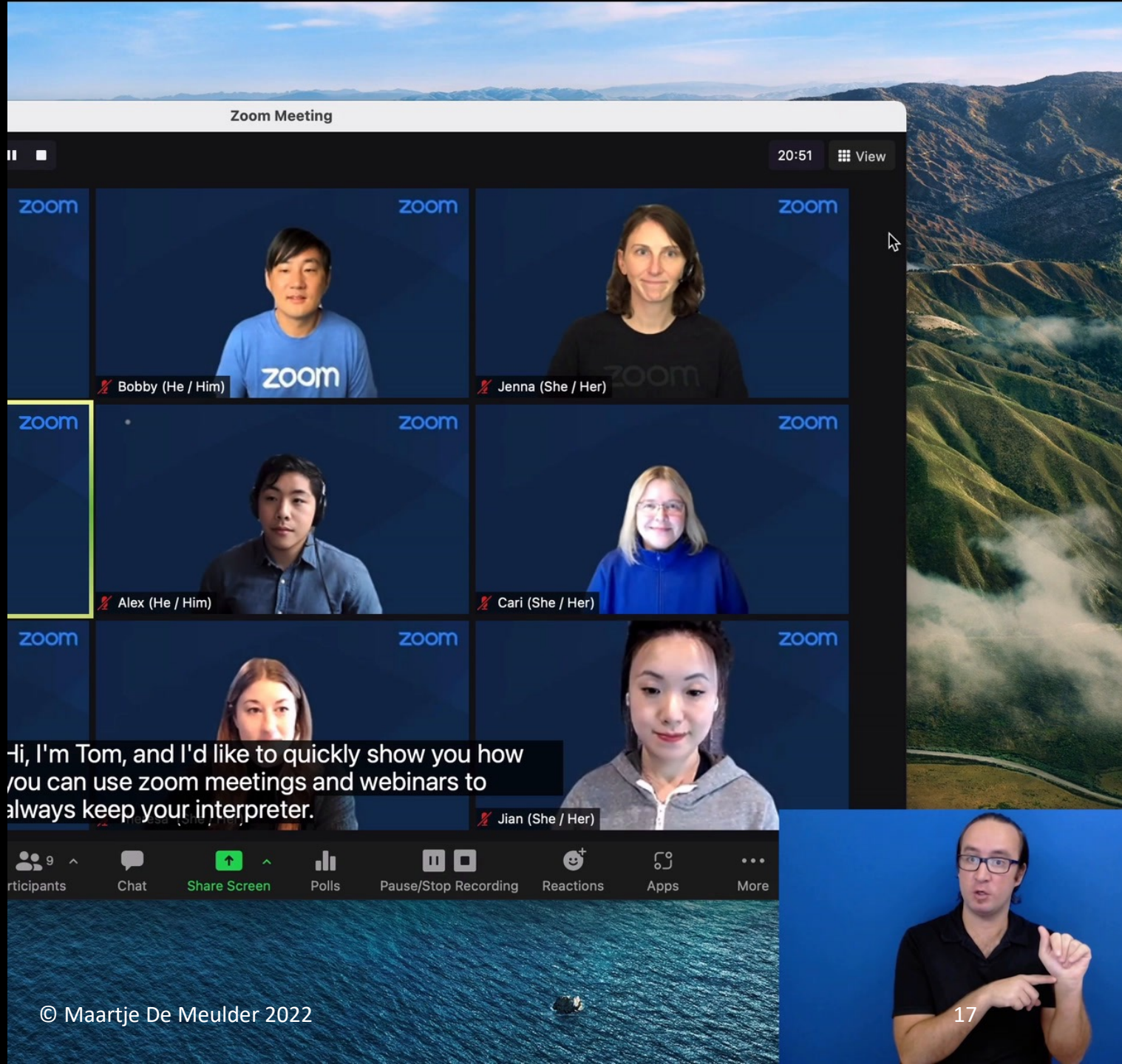
SL avatar applications

- Public spaces (railway, airports, hospitals)
- Customer interaction
- SL interactive/immersive learning
- Providing anonymity (e.g. judicial domain, social media)
- Minimize number of people involved in sensitive situations
- Situations where interpreter is a token (performative)



- Technology needs more work (especially text/speech-to-sign)
- Technology now where speech recognition was 30 years ago
- But working practices of SL interpreters are not unchangeable and are already changing now
- Broader reality for Interpreting Studies and practice (Downie 2020)

- SL are *already* working with or alongside machines e.g. Zoom transcripts
- Speech-to-text apps are, for some deaf people in some situations, taking over some of the work SL interpreters (could) do
- SL avatars will take over more work



Awkward?

- It shouldn't be.
- Language technologies more scalable than SL interpreting services, and more equally available (??)
- But systems/technologies are never neutral

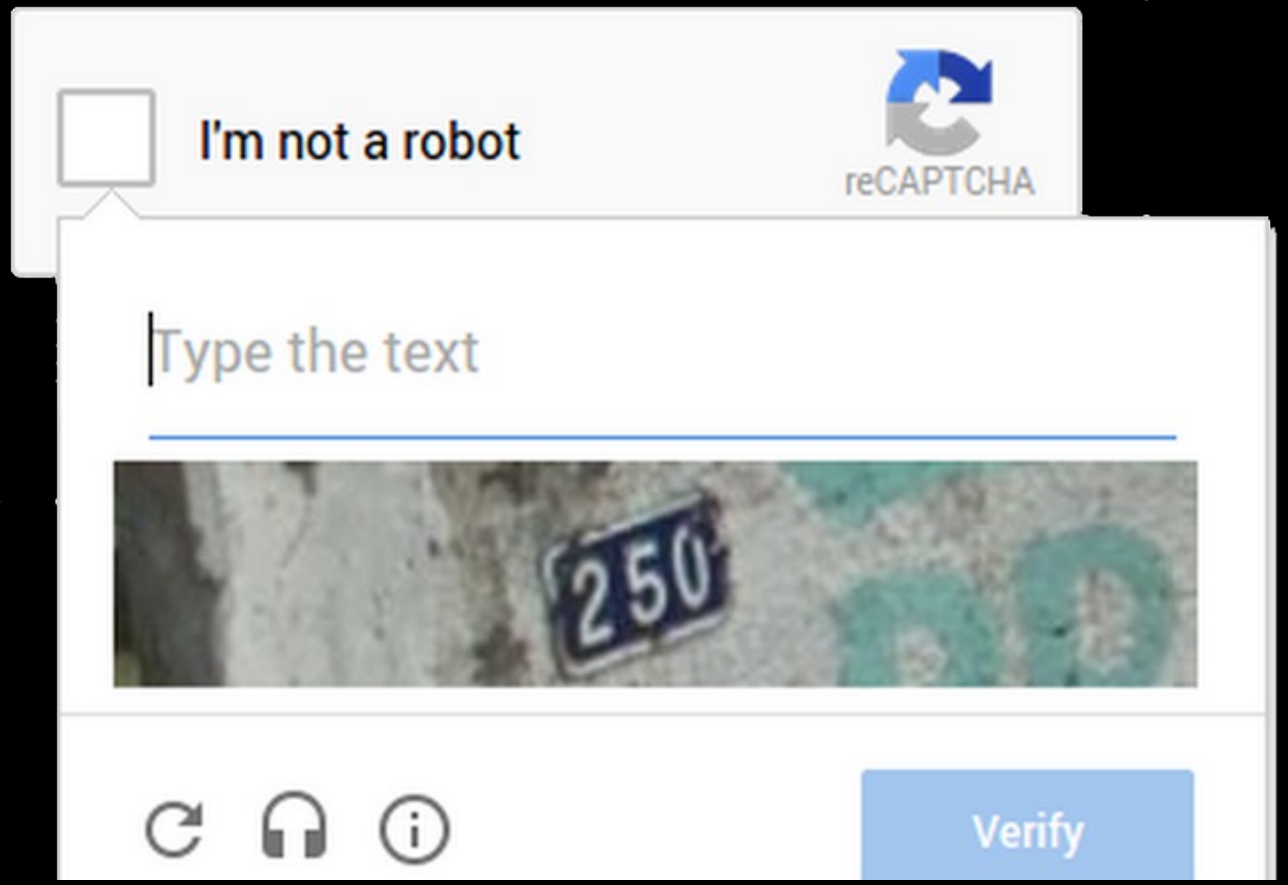
Some awkward questions

- What do we train the AI on?
  - Bias in data sets/interpreters have bias too
- Who benefits?
  - Tech-related privileges/interpreter-related privileges
  - How will this change the role of human interpreters/mediated communication?
- Implication for language rights?
  - Access = being understood by AI? / access is already 'being understood by interpreters'

De Meulder, 2021

What does this mean for SLI training programs?

- Learn how to work with language technologies and to use them to your advantage
- Learn how language technologies work
- Specialization will become a necessity – machines can do that one-size-fits-all (Downie, 2020)
- Learn how to be HUMAN in the age of the machine (Fry, 2018)



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