Multimodal Agents for Ageing and Multicultural Societies

a personal opinion
Agents for aging (&) Multicultural societies

- Agents for the aged (elderly?) or for all?

- Is even Japan a ‘unicultural’ society?
  - (Maybe now the U.S. is trying to become one (???) )

- Agents for A&M societies (distributed/virtual/embodied?)
“Nowadays, intelligent agents are omnipresent and used by almost all generations.

Furthermore, we live in a globally mobile society in which people of widely different cultural backgrounds live and work together.

The number of people who leave their ancestral cultural environment and move to countries with different culture and language is increasing.

This is not free of challenges. (think U.S.A today perhaps? Or me in Japan!)

Especially in the case of care, migrants often face a double challenge: (i) not to speak the language and not to be acquainted with the culture of the resident country, and (ii) be unfamiliar with the care and health administrations of the country.”
• As a consequence, e.g., elderly migrants in care homes suffer from social exclusion, with their relatives also struggling with getting the right information and interacting with the administration.

• Migrants at home are often reluctant to go to see the doctor in case of health issues, a tendency that is often further aggravated by cultural matters. ‘migrant’: complex definition!

• Migrant temporary care workers, face the problem of isolation and deficient communication.
We believe that time is ripe to gather experts with a background in assistive technologies for elderly care, culture-aware computing, multimodal dialogue, social robotics and synthetic agents to learn about their insights and approaches on how to meet the resulting societal challenges.

The overall objective of the meeting is to explore and discuss theories and technologies for the development of socially competent and culture-aware embodied conversational agents for elderly care.

The expected outcome of the meeting is a better understanding of the emerging field and the identification of promising approaches from a variety of disciplines.
As a result of the meeting, a research agenda for main directions and international collaboration for the next three to five years will be defined.

Joint organization of future workshops by the participants in the meeting will be defined with the objective of pushing the state-of-the-art in assistive technologies to a more comprehensive effort for developing a new generation of intelligent assistants.
Pecha Kucha

- Pecha Kucha is a method of PowerPoint that has changed the landscape of presentations. It’s translated as “chitchat,” designed and patented by architects Klein/Dytham in Tokyo in 2003.

- A Pecha Kucha presentation utilizes imagery and efficient use of spoken word to create a seamless, memorable, meaningful and concise presentation. It’s a great method for teaching students how to create their best presentations for class projects.

- Designed to be completed in 6 minutes and 40 seconds, the rules regarding its composition are likened to visual Haiku. 20 images, 20 seconds each, and connected seamlessly with well-developed narration are your only rules.

- Certainly as both you and students acquire more skills, your messages can become strikingly unforgettable.

- Quoted from: https://globaldigitalcitizen.org/how-to-make-great-presentations-with-pecha-kucha
Mecha-kucha! めちゃくちゃ

**Adjectival noun** [edit]

めちゃくちゃ (-na inflection, rōmaji mechakucha)

1. 浄茶苦茶:
   1. absurd, unreasonable, illogical
   2. incoherent, disorderly, messy [quotations ▼]
   3. very [quotations ▼]
   4. reckless, excessive
   5. ruined, destroyed
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Time for thought . . .
My preferred theme:

**Topic 2:** Modeling trust and empathy for socially interactive robots

1. trust and empathy — engagement & interaction dynamics
2. socially interactive robots — non-task-based/affective

- Chat & interpersonal contact ! !
  (sensing cognition)
My assignment:

- **Topic 4**: Multi-party interaction between groups of humans and robots

- Multi-party: (conservatives & liberals? Or just ‘many’?)


- Between groups of humans: (elderly or migrant?)

- & robots: (but NOT between ‘groups of robots’?)
Current SoA: who is doing what?

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  google+, KTH, airports, military, siri, UTwente, pomdp, ... task-based one-to-one is common ...
Multi-party interaction

- So NOT task-based perhaps?
- Social or emergency action?
- Manipulative/persuasive control/guidance?
- Or just ‘hanging out’ together? — amiably time-passing . .
- Imagine a journey to Mars (!) or a care-home (!!)
GROUPS (not one-to-one)

- Street scenes: Flow dynamics
- Pubs & restaurants: Centers of interest
- Parties: Parallel interactions
- Sports and games: Focus of activity
- Society at large (!): Facebook/Twitter/Alexa/Siri/…
- Society in the Home: Interactive CARE/caring
Groups of humans

- Sitting in armchairs?
- Unable to share stories (Alzheimer/Languages/Cultures)
- Physically colocated?? (virtual groups?)
- ‘group’ as entity (bird flocks, ant colonies?)
- IoT -> IoP? Massively interconnected individuals . . .
Humans and robots

- Directionality again!
- Who controls/guides/informs/entertains whom?
- Purpose of interaction(s)?
- Sequences of activity — turn taking (&) queueing
- Receptionist robots/nurses/entertainers/carers/ . . .
Interaction dynamics?

- To distinguish and target/maintain individuals . . .
- To queue others while serving the present needs . . .
- To estimate cognitive states (individual & group!) . . .
- To maintain a ‘presence’ for each individual . . .
- To change character (culture) according to needs . . .
Children’s ‘ageing’

• Learning and growing up in a multicultural society . . .

• Where ubiquitous machines interact freely with all

• Knowledge at their fingertips, but where is wisdom?

• What is the nature of this fragmented society?

• Where is its security? What are the ‘elders’?
Ratting — robot-assisted talk-therapy

- Miro
  From Consequential Robotics
• Many many questions — so much to discuss . . .

• My personal interest: sensing engagement and measuring cognition — *knowing that one is not alone in a conversation* . . . and what to say when ( from a robot’s point of view ;- )