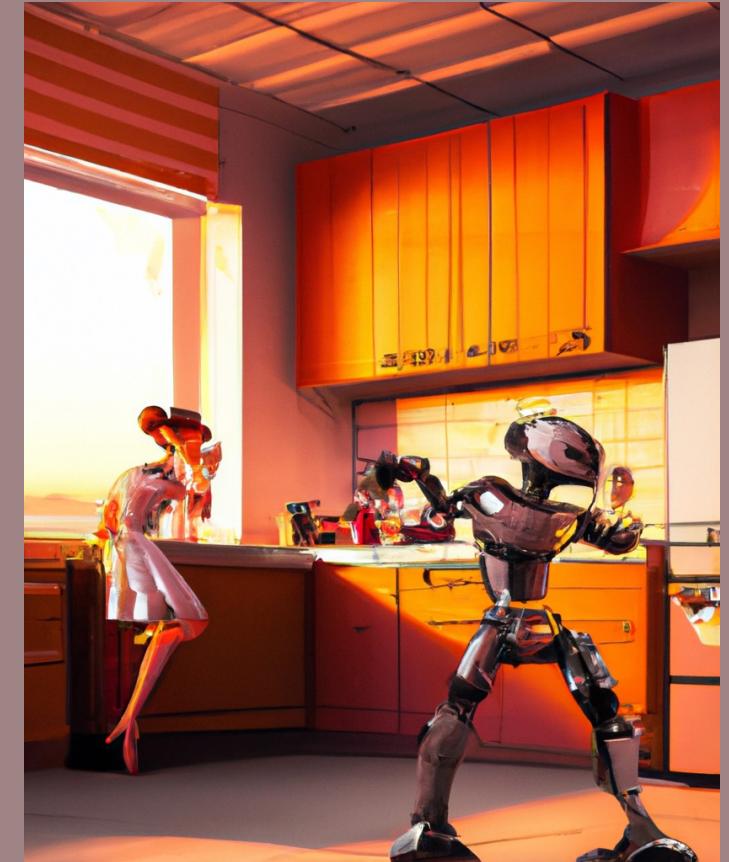

Expanding Performance: Performance, Dramaturgy and Social Robotics

dr. Laura Karreman (Utrecht University)



Schedule Lecture

17:30 - 18:15

- Introduction
- Collaboration VU & UU
- Performance and Social Robotics
- Dramaturgy for Devices

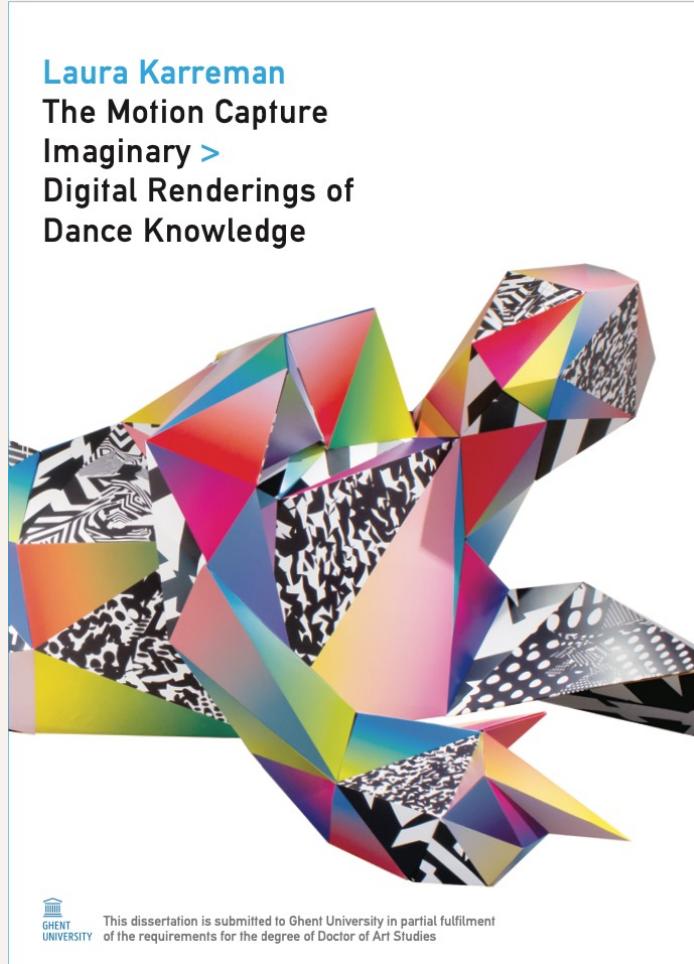
18:15 - 18:30 Break

18:30 - 19.15

- Case study
- Discussion
- Closing and Q&A

Brief Introduction

Dr. Laura Karreman
l.l.karreman@uu.nl



Previously:

- BA Theatre, Film and Television Studies (UU)
- RMA Art and Culture studies (UvA)
- Freelance work: Dramaturg, teacher, critic, art fund advisor, organizer cultural events.
- PhD with grant from FWO (Ghent University)

Now:

- Assistant professor at Dept. Media and Culture studies (UU)
- Programme coordinator RMA Media, Art and Performance studies
- Staff member MA Contemporary, Theatre, Dance and Dramaturgy.



Emergence (2014)
by Steph Hutchinson
and John McCormick

Collaboration UU & VU

- Aim: Providing inspiration, giving feedback, introducing a dramaturgical perspective in HRI design and analysis
- Two lab visits: Groups of UU students visit a selection of VU groups in weeks: 20-24 November & 4-8 December.
- Two assignments: Moodboard (29 Nov.) and Robot Review (13 Dec.)

Visit us at UU!

Meet the Makers:
Public event
with theatre maker
Ulrike Quade on
Puppetry and Robotics
Date and time
To be announced

by Sarah Goorhuis and Eedi Karjalainen

Maaike Bleeker,
Corporeal Literacy:
New Modes of
Embodying
Interaction in Digital
Culture

Perception as an Active Doing

"Perception, as Alva Noë points out, "is not a process of the brain but a kind of skilful activity on the part of the animal as a whole" (Noë, 2004, 2). By means of our perceptual systems, we probe our surroundings as animals. Perceiving therefore is a mode of acting. It is not something that happens to us but something we do. It is something we learn to do. Exploring their surroundings through several perceptual systems (Gibson 1966) simultaneously, children learn to perceive through sight and hearing as well as through smelling, touch, proprioception and kinesthesia. From this active engagement, an experience of these surroundings emerges as both visible, audible, and tangible, and all at the same time." (page 38)

In support of your goal with S.A.M.. To take it further; try to incorporate as many perceptual systems as you can. Can you also involve touch, for

Mirroring

Susan Leigh Foster,
Movement's
contagion: the
kinesthetic impact
of performance

"Strong evidence in support of Barthes's argument that perception simulates action has been provided with the discovery of mirror neurons, located in several areas of the cortex. These neurons fire when the subject performs an action, and they also fire when the subject sees the action being performed. Thus as we watch someone moving, motor circuits in the brain are activated that do not necessarily result in visible movement but nonetheless rehearse that movement. Although the physiological mechanisms underlying this response are not entirely understood, many scientists describe the mutuality of observing and acting as a kind of resonance. As Vittorio Gallese, among others, puts it:

A metaphor that describes well this correspondence between observed and executed biological motions is that of a physical "resonance." It is as if neurons in these motor areas start to "resonate" as soon as the appropriate visual input is presented. This "resonance" does not necessarily produce a movement or an action. It is an internal motor representation of the observed event which, subsequently, may be used for different functions, among which is imitation.

This resonance is responsible for our ability to predict others' actions, and to know what will result if we move in a certain way. It also accounts for "contagious behavior" commonly experienced in our daily life, in which the observation of particular actions displayed by others leads to our repetition of them... including such actions as yawning and laughter." (page 54)

Relatability and Movement



These two robots are so relatable; they have very specific character traits (like hot-temperedness and clumsiness), emotions and goals. This makes them easy for us to connect and stay engaged with. Motivational sentences would also carry more dept if S.A.M. feels less artificial. Think about ways your robot could benefit from some of

World-Building

Maaike Bleeker, A Dramaturgical Mode of Looking (not yet published, handle with sensitivity)

"Take for example the very beginning of Shakespeare's The Tempest. According to Shakespeare's text, someone says "Boatswain!". Someone else answers "Here master: what cheer?" at which the first speaker responds "Good, speak to the mariners: fall to't rarely, or we run ourselves aground; bestir, bestir" (Shakespeare n.d.). With only a few words a world is evoked in which we find ourselves at sea looking at a boatswain and one of his mariners preparing for a storm approaching. Shakespeare's theatre was a theatre of very modest means and it may very well have been that these words and the presence of the two speakers was all that was used to evoke this world and its inhabitants. Other approaches to staging the same scene might add a stage set representing a boat at sea in a storm. Perhaps a wind machine. Or a video projection showing a storm at sea. Perhaps also (or only) the sound of a storm. Or perhaps the boat, the sea and the storm are evoked in a more abstract or symbolic way. Perhaps that what we see contradicts what is evoked by the text or offers a different perspective on the text. Perhaps we see two actors in a sound studio producing a radio play. Perhaps the actors are not on stage. Or... Possibilities are endless." (page 4-5)

There are so many ways of telling a story (as the quote shows). This doesn't have to be only through language at all. If you would add a soundscape of jinglebells to a story about a gorilla, for example, the children might be able to remember the story better and be more engaged and captivated by it. Think about which possibilities of

UU assignment 1: Moodboard

- Based on first VU Lab visit
- UU students identify relevant inspiration materials for the specific interaction problem you are working on
- Collection and explanation of sources that support the next step in your process of designing and programming
- Sent to you on 30 November.

Robot reviews

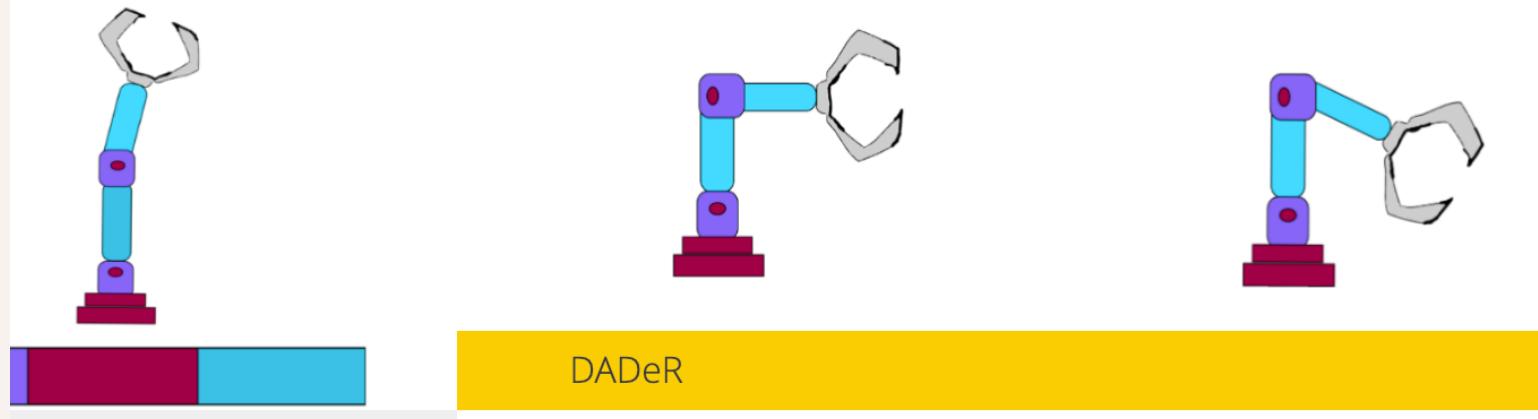


UU assignment 2: Robot Review

- Based on second VU Lab visit
- UU students provide a reflection on the developments they perceive in the design process.
- How does the current design respond to the problem?
- They provide ideas and suggestions for what may still be improved before your final project presentations on 19 December
- Sent to you on 13 December.

Performing Robots

[Home](#) About Documentation [People](#) [Events](#) **DADeR** Contact



DADeR (Dramaturgical Aid for Designing Robots) is a database aimed to present dramaturgical advice with regard to robot design.

The setup of this database builds on the core idea presented in the text “Dramaturgy for Devices” (2021) by Bleeker and Rozendaal who argue that a

UU assignment 3: Final paper

- Entry for DADeR database
- Dramaturgical Aid for Designing Robots
- Presents dramaturgical advice with regard to robot design, based on a specific dramaturgical concept.

<https://performingrobots.sites.uu.nl/dader/>

Why should you participate in this exchange?

- Collaborate and communicate with peers outside of your discipline
 - Learn to articulate and question the why's behind your own approach
 - Learn in practice how each theoretical perspective has usually only a *limited relevance*.
 - Prepare for your professional future: There is a strong incentive from funding structures to initiate interdisciplinary research collaborations.
 - Interdisciplinary research skills often do not receive dedicated attention in higher education programmes. This is an opportunity to acquire such skills!
-

Response of students in exchange evaluation

"We were very inspired by the collaborations. Our input as theatre students seemed to compliment the AI students' way of thinking and approaching a task: they would propose an area of uncertainty, or improvement, of which we could bounce off and formulate a possible solution, and vice versa. Our modes of working intersected at a point which enabled a multitude of creative and practical solutions to be made, thus creating fruitful discussions and encounters!"

The Performing Arts and Social Robotics

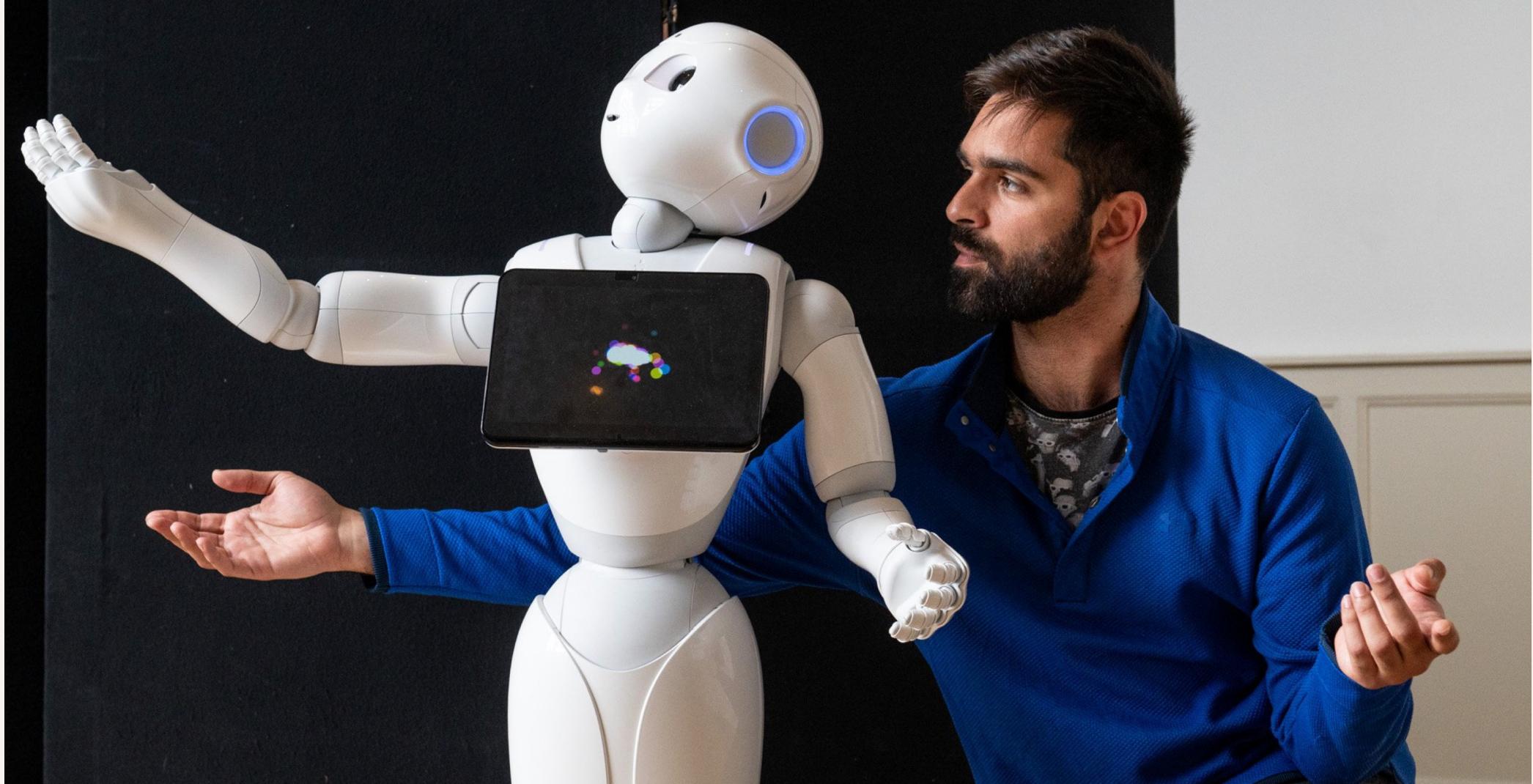
Theatre as a space to explore robot behaviour in:
Jochum and Derkx (2019). Tonight we Improvise!



Research Project: Acting Like a Robot: Theatre as a testbed for the robot revolution

Experiment: Playful Robots



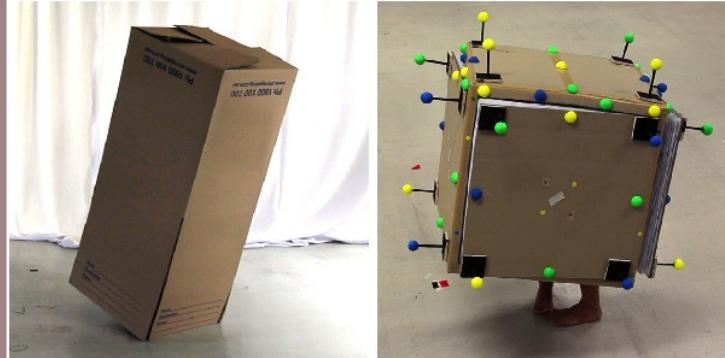


Kim Baraka (Vrije Universiteit Amsterdam) and a Pepper robot in the interactive installation Playful Robots (Kim Baraka and Irene Alcubilla Troughton (UU), SPRING Festival 2022. Part of the research project Acting Like A Robot (2020-2024)

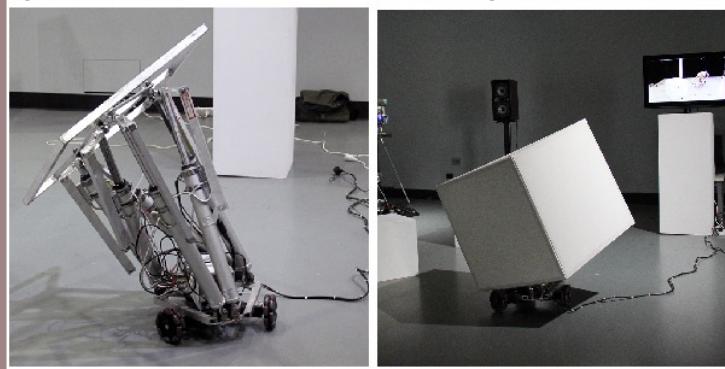
Bram Ellens – Robots in Captivity: Affect and ethics in human–robot interaction



Machine Movement Lab: Relationality in HRI design



(a) Cardboard box inhabited by Linda Luke.
(b) Costume with markers inhabited by Kirsten Packham.



(c) Robot motion testing.
(d) Robot as 'plinth'.

Petra Gemeinboek and Rob Saunders

What is dramaturgy?

“Doing dramaturgy in the context of the theatre involves paying attention to how performances do what they do as a result of how they are constructed”

Dramaturgy:

- Set of tools, terms, and insights
- Thinking through how situations are constructed and how they invite interactions and interpretations (for actors and audiences)

What the authors do:

- Dramaturgical concepts as CONCEPTUAL TOOLS
- Understanding and designing the interaction between smart objects and humans
- How this is embedded in an environment/context/situation

Dramaturgy for Devices

'How can dramaturgical concepts and insights regarding staging situations in the here and now can provide designers with conceptual tools to understand and design the interaction between humans and smart objects embedded in shared environments?'

- Bleeker and Rozendaal, p. 43

Dramaturgy for Devices: Mokkop

Design case: *Mokkop* by Josje van Beusekom.

Aim: A product to support parents of hospitalized children to take time for themselves.

Dramaturgical analytical terms:

- Mise-en-scène
- Performativity
- Presence
- Address



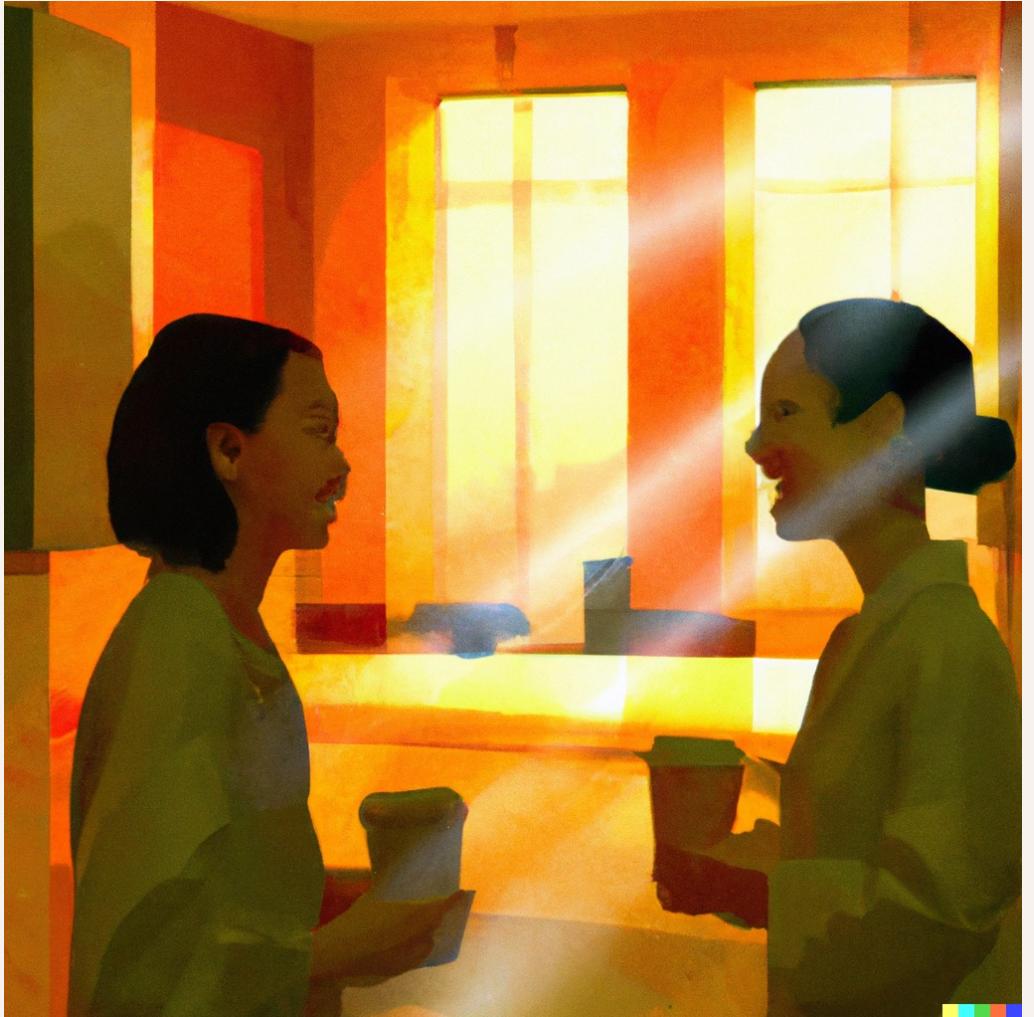
Mise-en-scène



- Arrangement of elements in space and time that invites specific actions, and produces relationships
- **Mokkop:** Layout of the hospital > possible actions. Interviews > Connection of spaces, activities and feelings.

Performativity

- The power of words and actions to bring about a new situation
- **Mokkop:** how and what could the cup do to bring about, in a particular situation/context, the desired action of caregivers



Presence



- A way of captivating the audience, drawing attention to itself
- Mokkop: glowing five times a day (light: non-invasive way of drawing attention)

Address



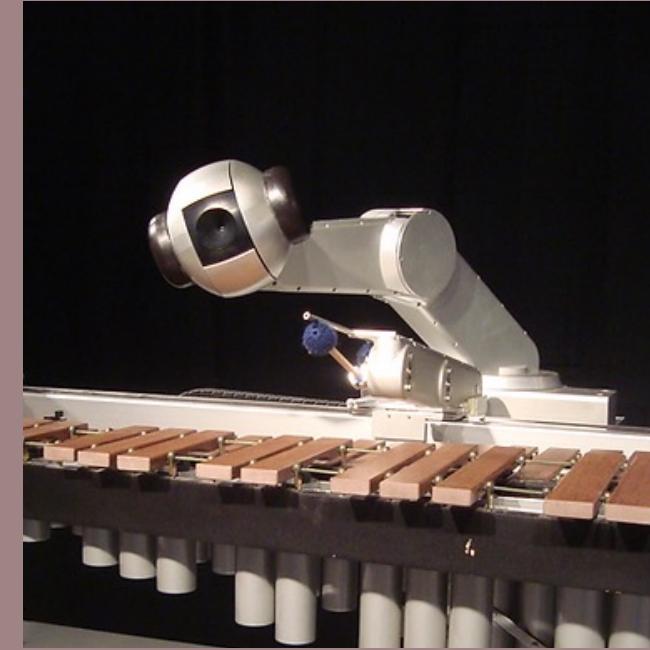
- The way one addresses fellow actors or the audience **invites, triggers ways of responding**
- **Mokkop:** caregivers feel invited to action in specific ways because of the cup's address (shape, material, light, patterns)

-BREAK-

https://www.youtube.com/watch?v=utV1sdjr4PY&ab_channel=TED

08:50-14:54

Example: Shimon,
the Marimba
Player
– Guy Hoffman



Where did you recognize these dramaturgical concepts at work in Shimon?

Mise-en-scène
Performativity
Presence
Address



Dramaturgical analysis of Shimon

- Mise-en-scène: How does the arrangement of elements invite specific actions and relationships?
 - Performativity: What does the robot bring about in this specific context, how does it encourage a specific action and/or produce meaning?
 - Presence: How does it captivate the audience, draw attention to itself?
 - Address: How does it invite a specific response?
-

Digging a little deeper...

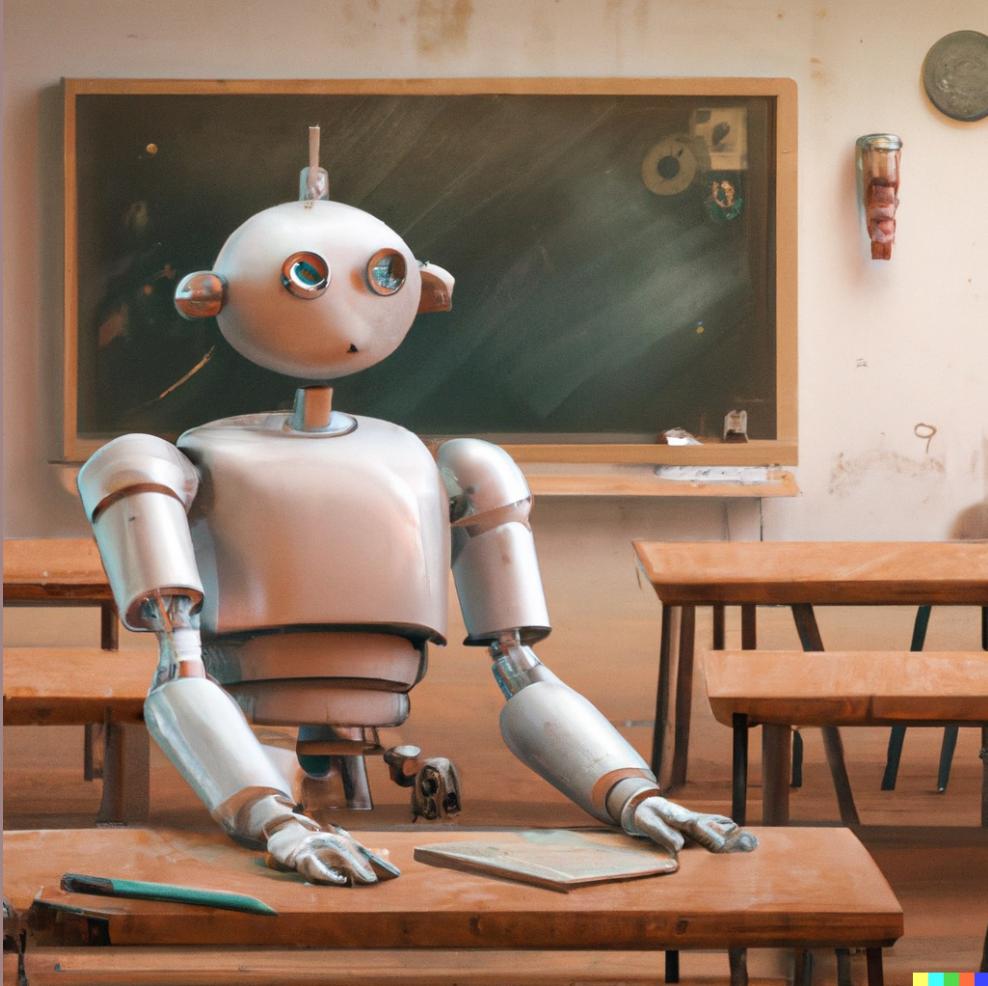
Looking at your notes for each dramaturgical concept:

- Can you deduct what specific choices have been on the level of design and programming in order to achieve these effects?
 - How would the robot have looked differently, if such choices would not have been brought in effect?
 - Can you think of any other choices that would increase these effects, or could have achieved these or other effects in a different way?
-

Dramaturgical sensibility

"Dramaturgical sensibility, as I understand it, is an informed sensibility toward choices that can be made and decisions that can be taken in creative processes, and toward the implications of these choices and decisions."

- Maaike Bleeker, *Doing Dramaturgy* (2023, p. 6)



Discussion & Questions



Awesome! Go ahead.

Sign up for the UU Exchange
by Friday 10 November

Limited availability:
First come, first serve!

Send an e-mail to
Laura Karreman
l.l.kareman@uu.nl

&
Bob Borsboom and
Mark de Brujin in cc

Enjoy your course!

Photo: SIR Final presentations 2021-2022