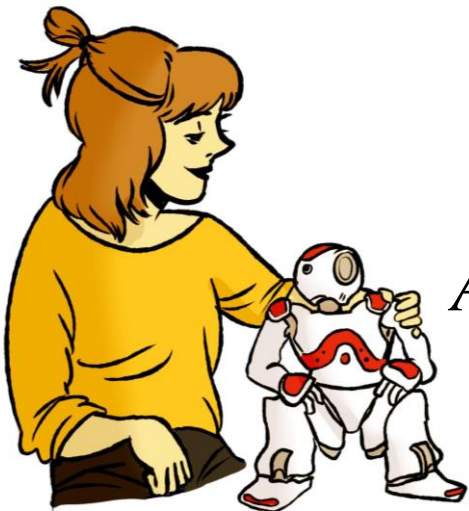


Are social robots also smart robots?



Anna Henschel, Doktorandin, University of Glasgow

Hallo.

Hallo.

Anna Henschel

Institute of Neuroscience & Psychology

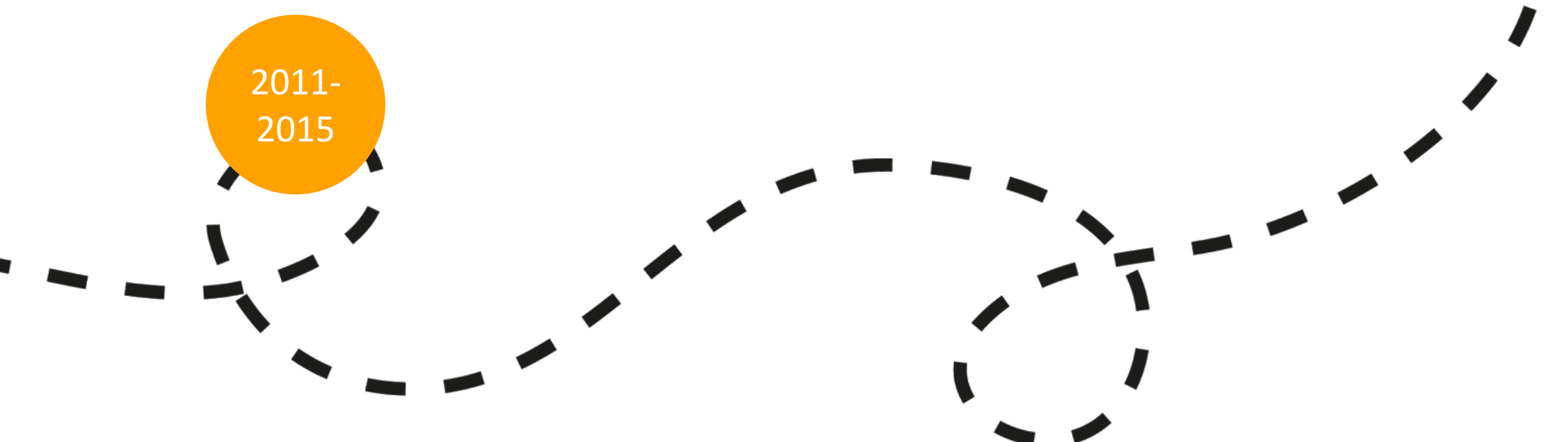
University of Glasgow

Social Brain in Action Lab

BSc Psychologie

- Universität Konstanz
- Praktikum UCI, California

2011-
2015



BSc Psychologie

- Universität Konstanz
- Praktikum UCI, California

2011-
2015

2015-
2017

MSc Kognitive Neuropsychologie

- Vrije Universiteit Amsterdam
- Social Brain Lab

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PhD Soziale Roboter & Neurowissenschaften

- University of Glasgow
- Research Fellow MARCS Institute Sydney

2017-
heute

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- University of Glasgow
- Research Fellow MARCS Institute Sydney

2017-
heute

2020?

2015-
2017

MSc Kognitive Neuropsychologie

- Vrije Universiteit Amsterdam
- Social Brain Lab



Glasgow



Pint of Science





*Im Schottischen
Parlament*



Goethe Institut Glasgow:
„Aesthetic Glitches,
Enhanced Performances“





@WeAreRLadies
FEATURED CURATOR
 September 30 – October 5, 2019



What they do

PhD Candidate, University of Glasgow

In R

"Right now I am mainly working on data analysis for various PhD related projects, but I also like to use R for more playful things, such as visualizing data from Spotify and Twitter. At the moment I am reading Colin Gillespie's 'Efficient R programming'."





Wissenschaftsjahr 2019

KÜNSTLICHE INTELLIGENZ

22.05.2019

Von Menschen und Maschinen



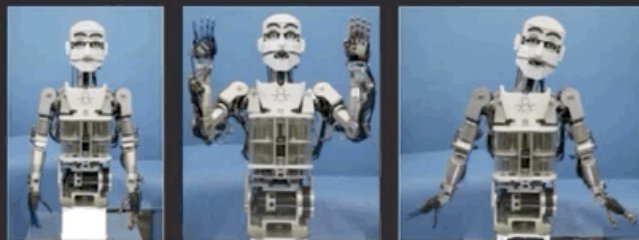


SOCIAL ROBOTS

A EUROPEAN RESEARCH COUNCIL FUNDED SOCIAL NEUROSCIENCE RESEARCH PROJECT

ONGOING RESEARCH

The Social Robots Team proudly presents the exciting research taking place in the lab! Below you can find a short description of ongoing research and the current stage of the project. If you want to know more please contact one of the researchers involved. Please check back for future updates.



Perception of emotion in artificial agents

In this review article, Ruud, Felix and Emily discuss how humans perceive and react to emotions expressed by robots and other artificial agents. You can read the pre-print at PsyArXiv using the link below.

[PRE-PRINT](#)

[ARTICLE](#)

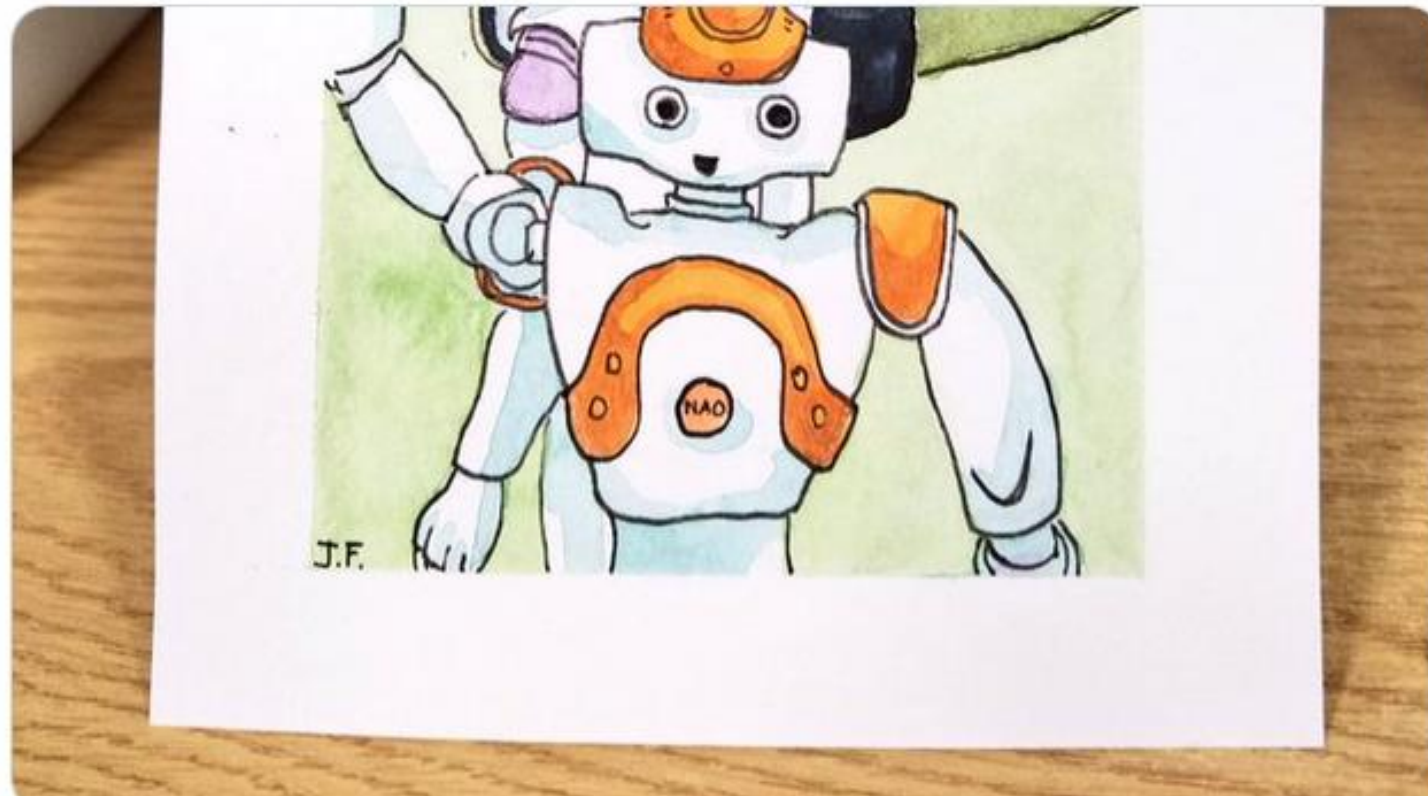


Wir haben einen Hashtag!

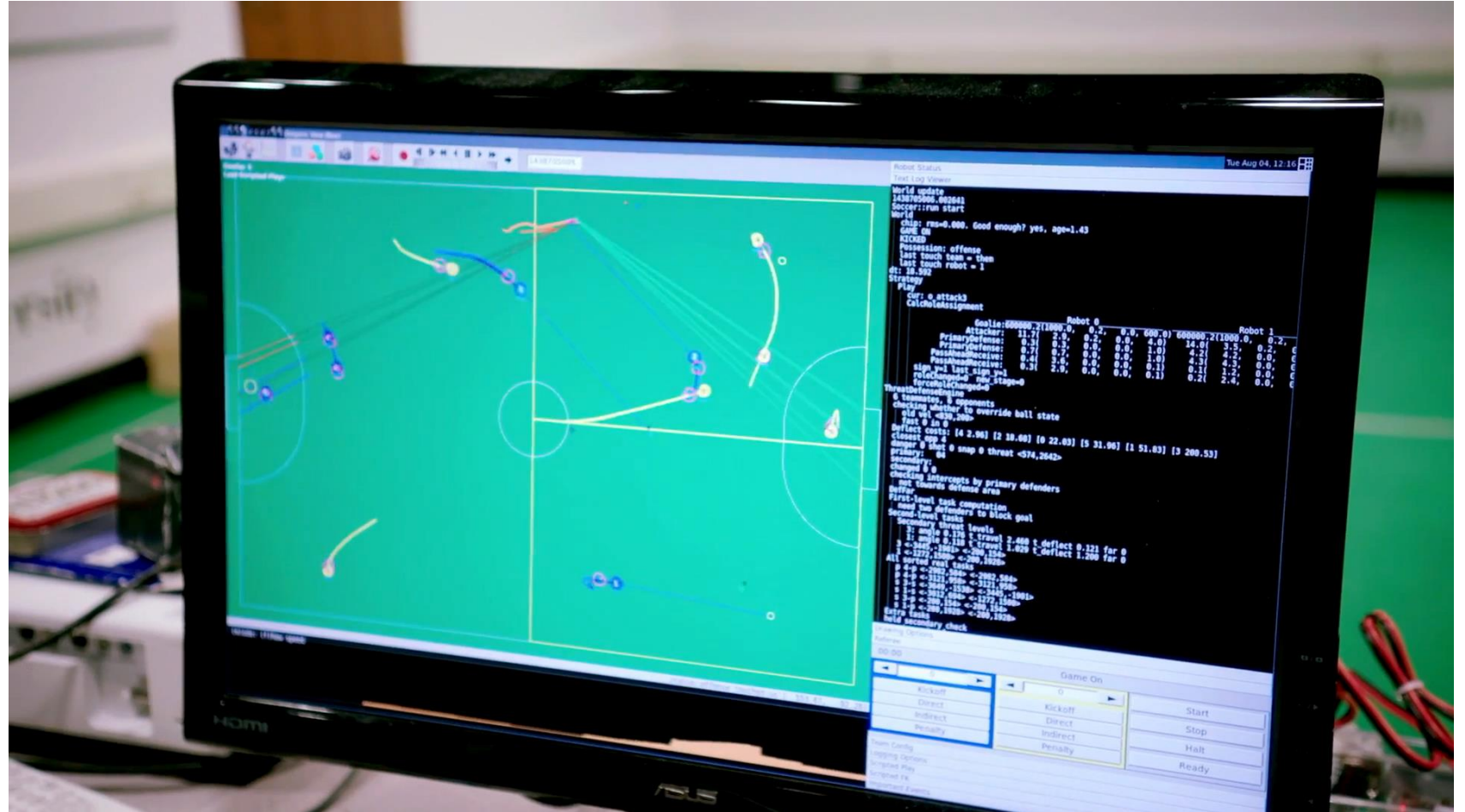
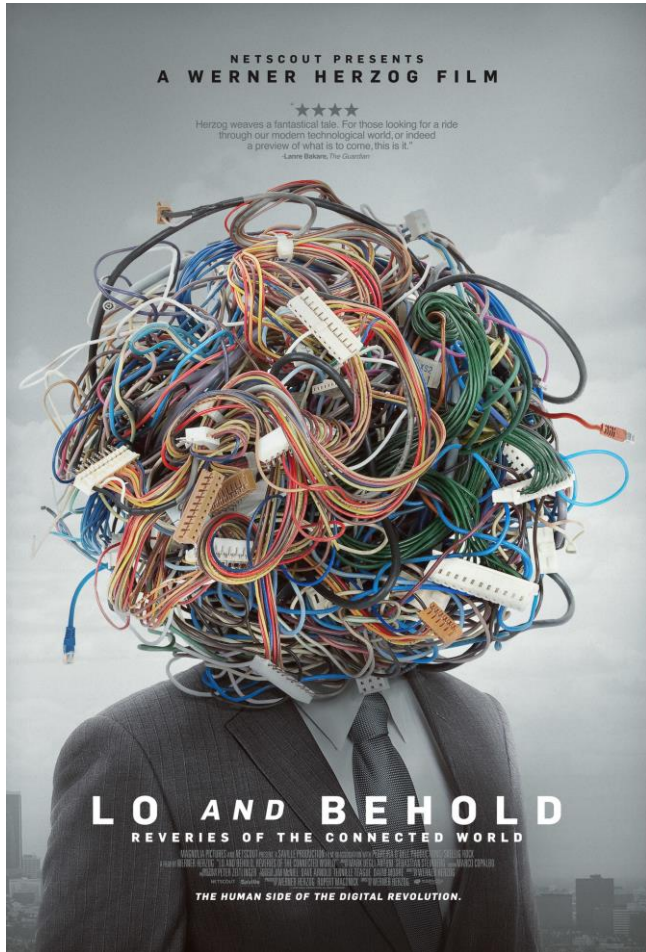


Anna Henschel @AnnaHenschel · Nov 11

Convinced now, there is nothing **#TeamSoBots** interns cannot do 🥰❤️ Sadly my intern is leaving today, but she'll be working on exciting new 🧠 projects in Germany. Look out, science! @UofGlasgow @UofGPsychology



Was sind soziale Roboter?



<https://www.youtube.com/watch?v=NSx3qE5Vr60>

Soziale Roboter =

Roboter, die den Menschen auf einer sozialen Ebene ansprechen.

Soziale Roboter =

- *Emotionen*

Fong, Nourbakhsh, & Dautenhahn, 2003

Soziale Roboter =

- *Emotionen*
- *Kommunikation*

Fong, Nourbakhsh, & Dautenhahn, 2003

Soziale Roboter =

- *Emotionen*
- *Kommunikation*
- *Beziehungen*

Fong, Nourbakhsh, & Dautenhahn, 2003

Soziale Roboter =

- *Emotionen*
- *Kommunikation*
- *Beziehungen*
- *Gestik/ Mimik*

Fong, Nourbakhsh, & Dautenhahn, 2003

Soziale Roboter =

- *Emotionen*
- *Kommunikation*
- *Beziehungen*
- *Gestik/ Mimik*
- *Soziale Kompetenz*

Fong, Nourbakhsh, & Dautenhahn, 2003

Wir tragen eine “anthropomorphe” Brille



Heider & Simmel, 1944



<https://www.youtube.com/watch?v=VTNmLt7QX8E>

Heider & Simmel, 1944

Dreieck Nummer-Eins schließt die Tür (oder besser gesagt Linie) und die zwei unschuldigen jungen Dinger treten ein.

Liebhaber in einer zwei-dimensionalen Welt, kein Zweifel; kleines Dreieck Nummer-Zwei und der liebe reizende Kreis.



Dreieck Eins (im folgenden 'der Bösewicht'), sieht das junge Glück.

Heider & Simmel, 1944

In der Altenpflege

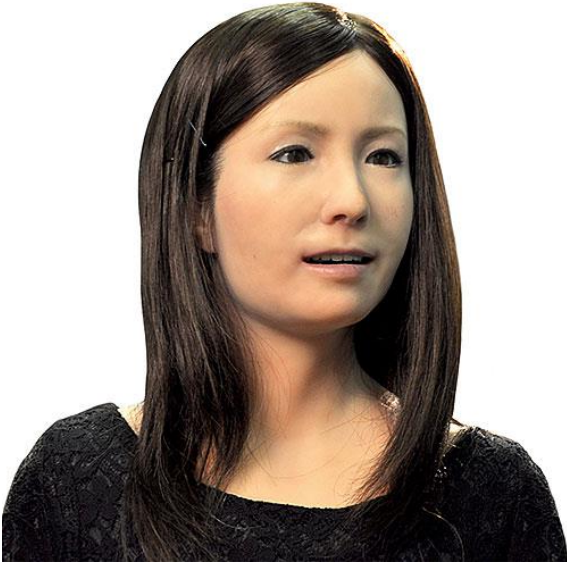


Social Skills Training

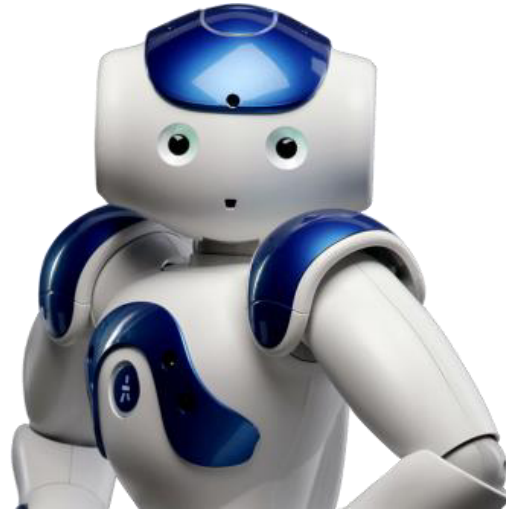


In der Rehabilitation





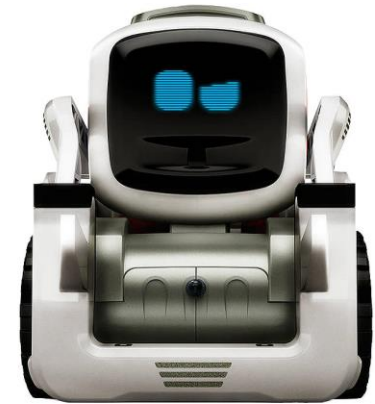
Android



Humanoid



Tier



Wall-E?

Hallo Cozmo!

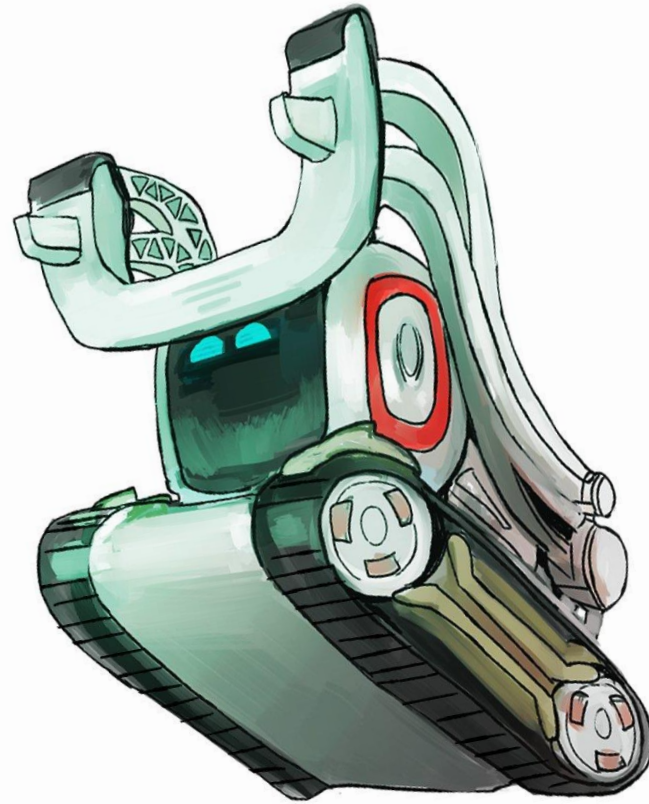


Illustration:  [@MandyNorrbo](https://twitter.com/MandyNorrbo)

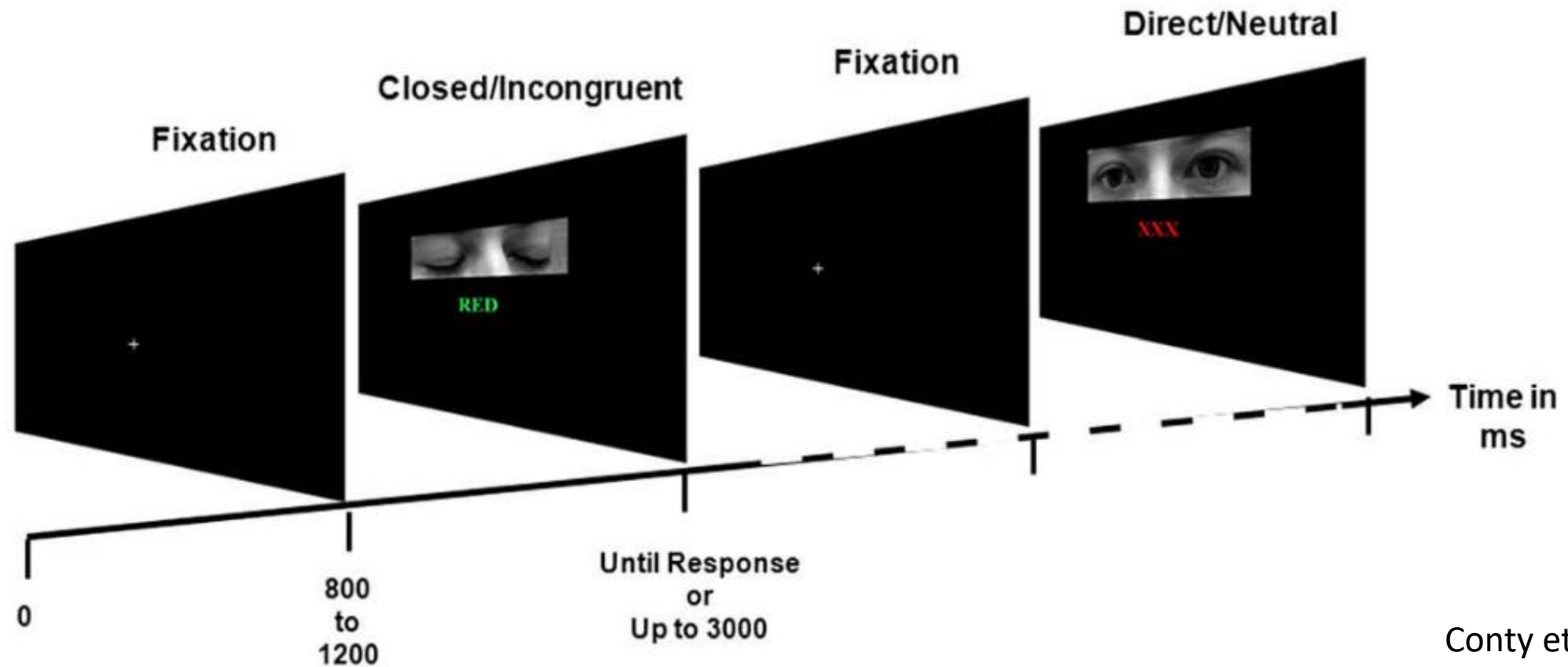
Was forsche ich an der University of Glasgow?



Blickkontakt ist ein wichtiger ‘sozialer Hinweis’.

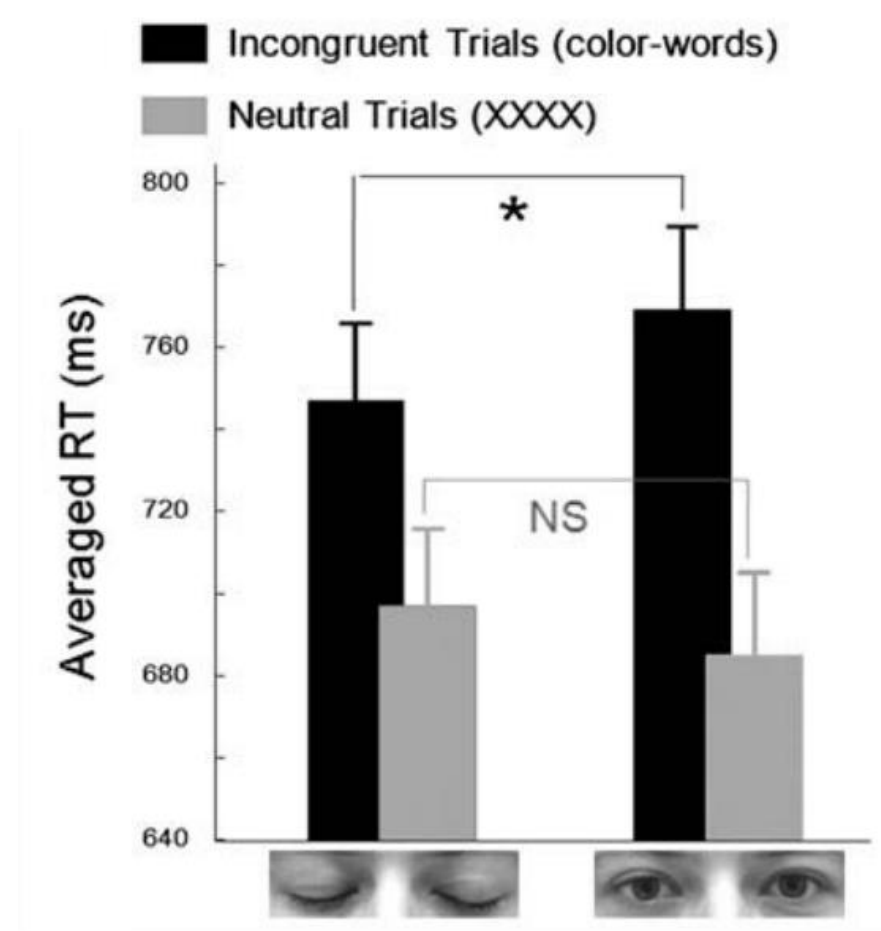
Schilbach et al. (2010)

Direkter Blickkontakt lenkt ab!



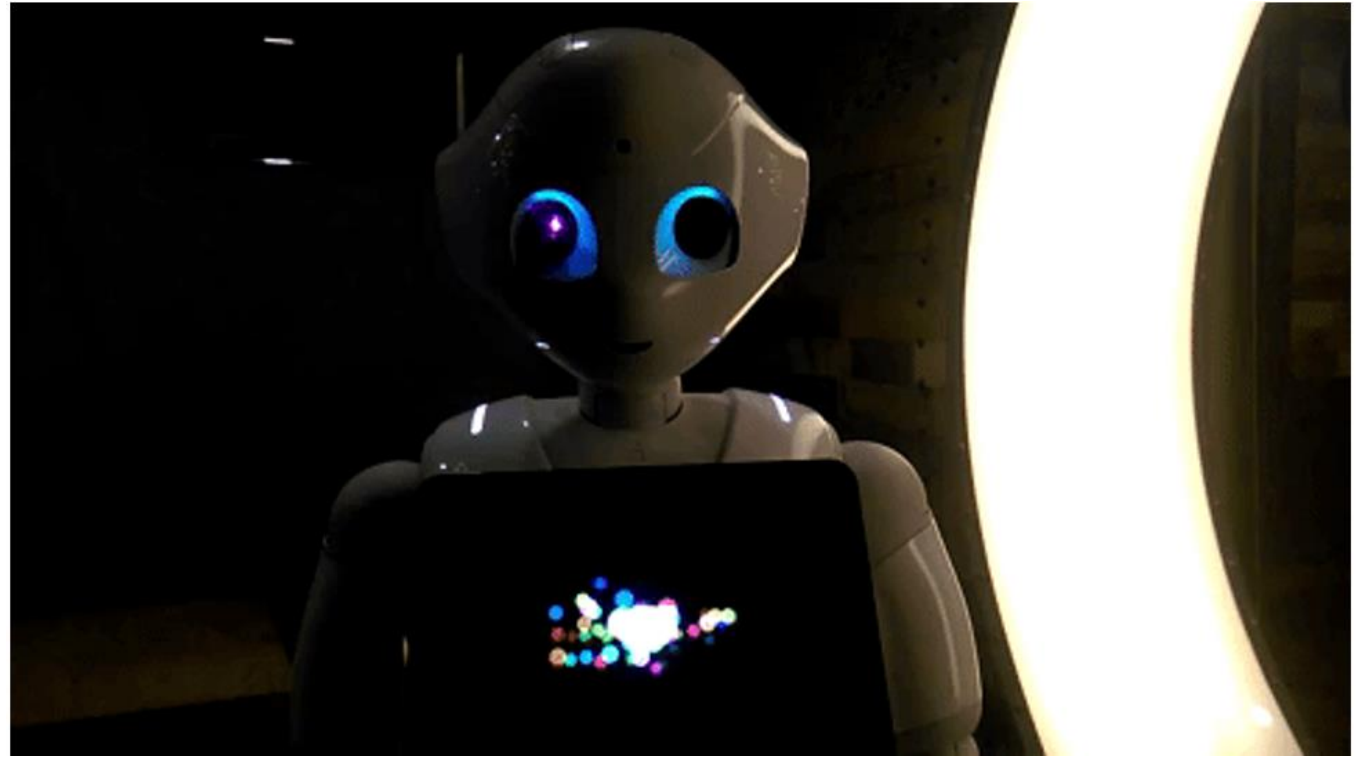
Conty et al. (2010)

Direkter Blickkontakt lenkt ab!

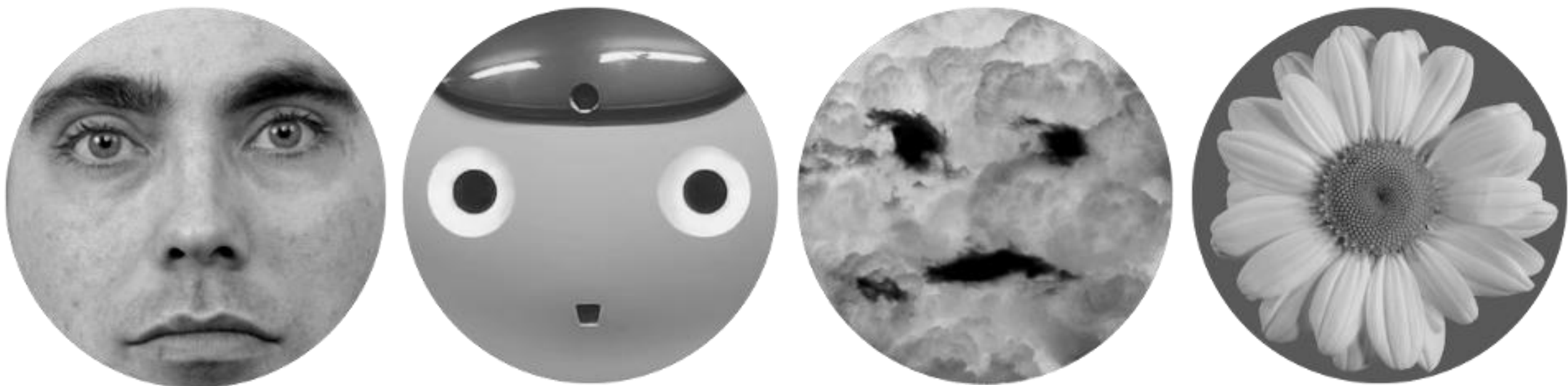


Conty et al. (2010)

Oder hier?

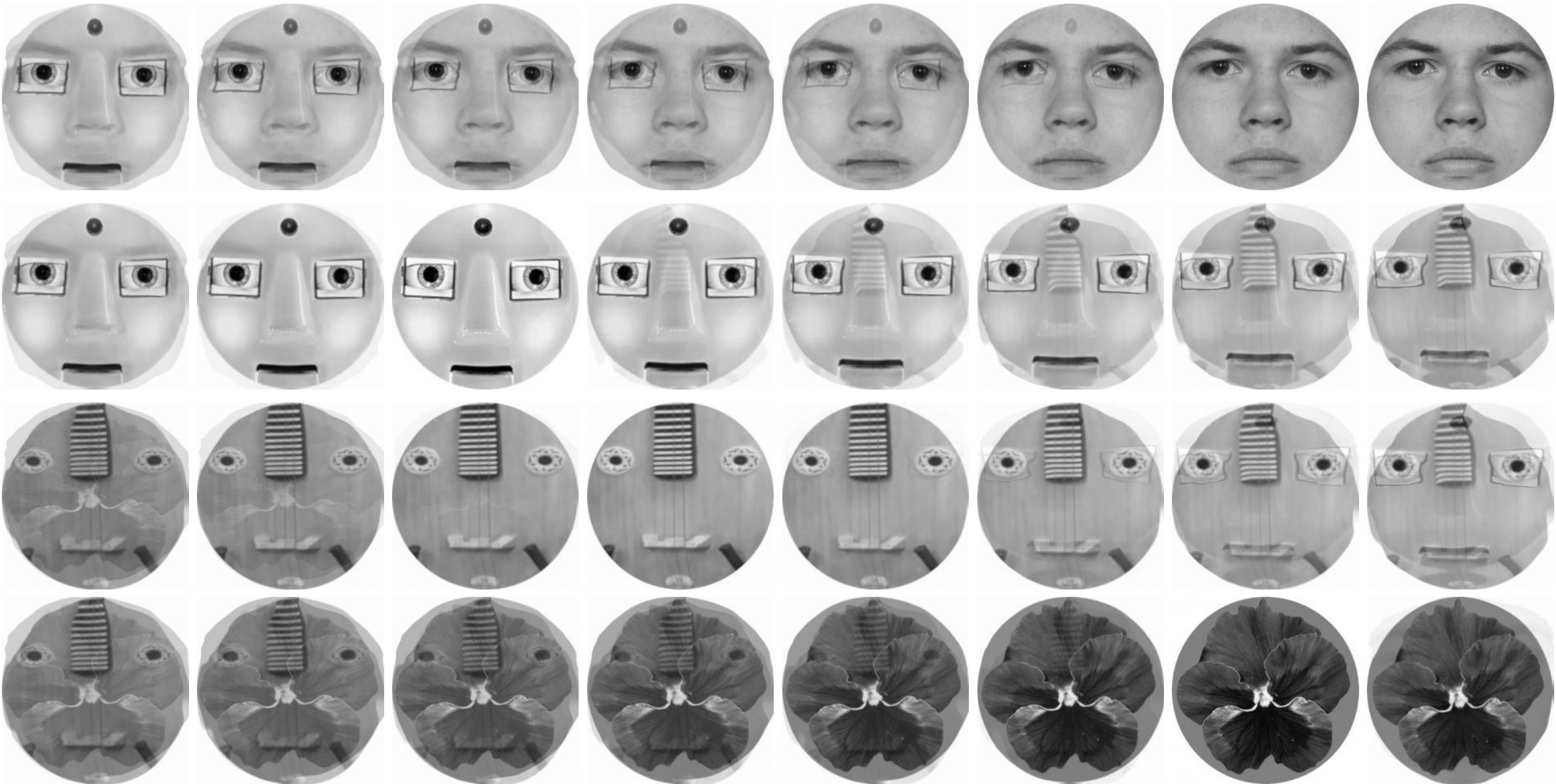


Was passiert hier?

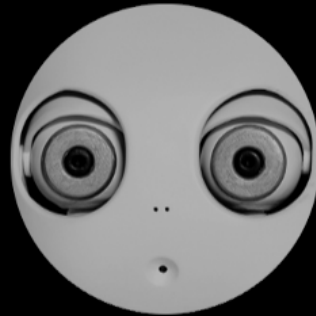


DeBruine & Jones, 2017; Langner et al., 2010; Liu et al. (2014)

Gesichter: DeBruine & Jones, 2017; Langner et al., 2010; Morphs: Hortensius, Manoli, & Cross, 2019



Der "Social Stroop"



XXX

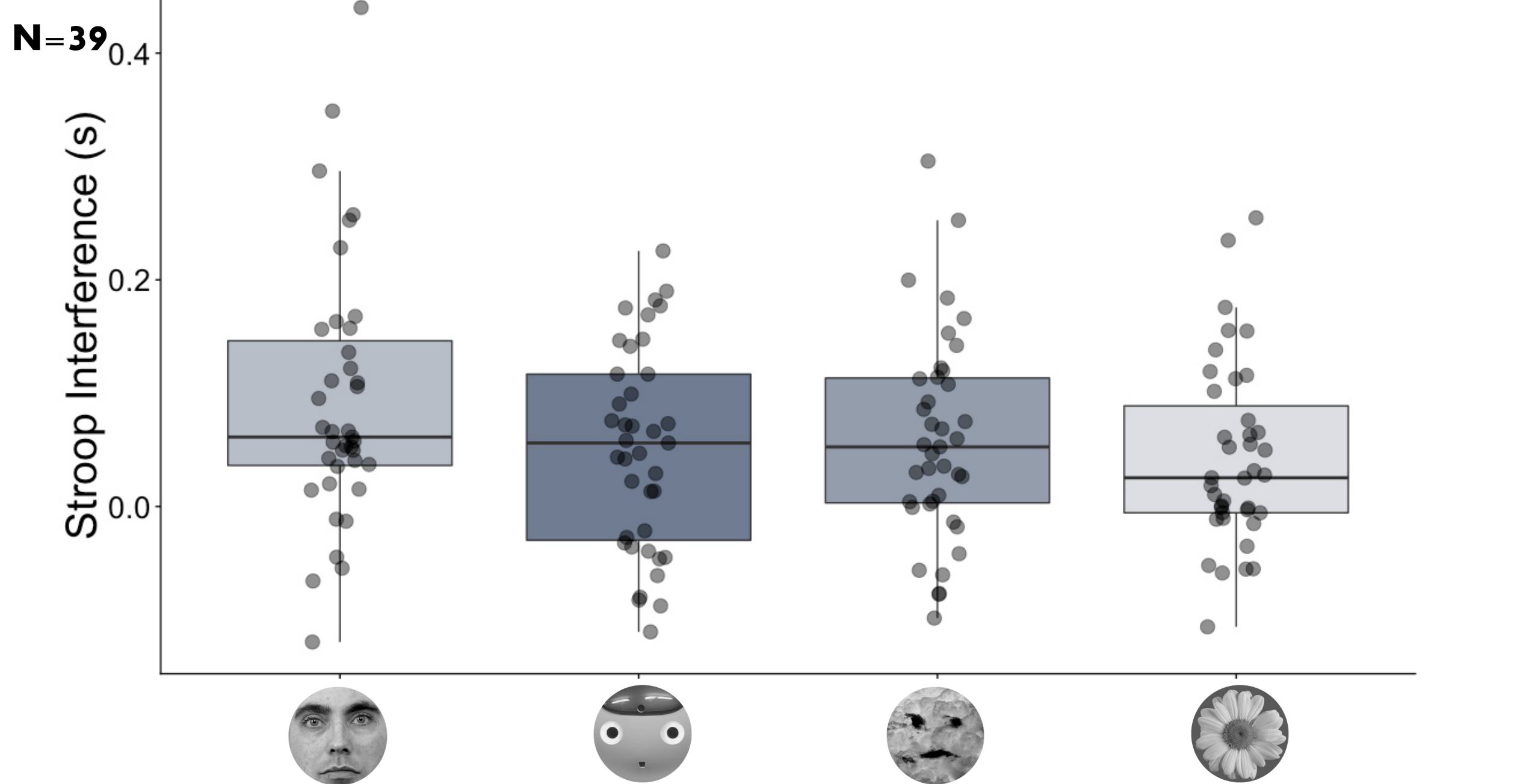


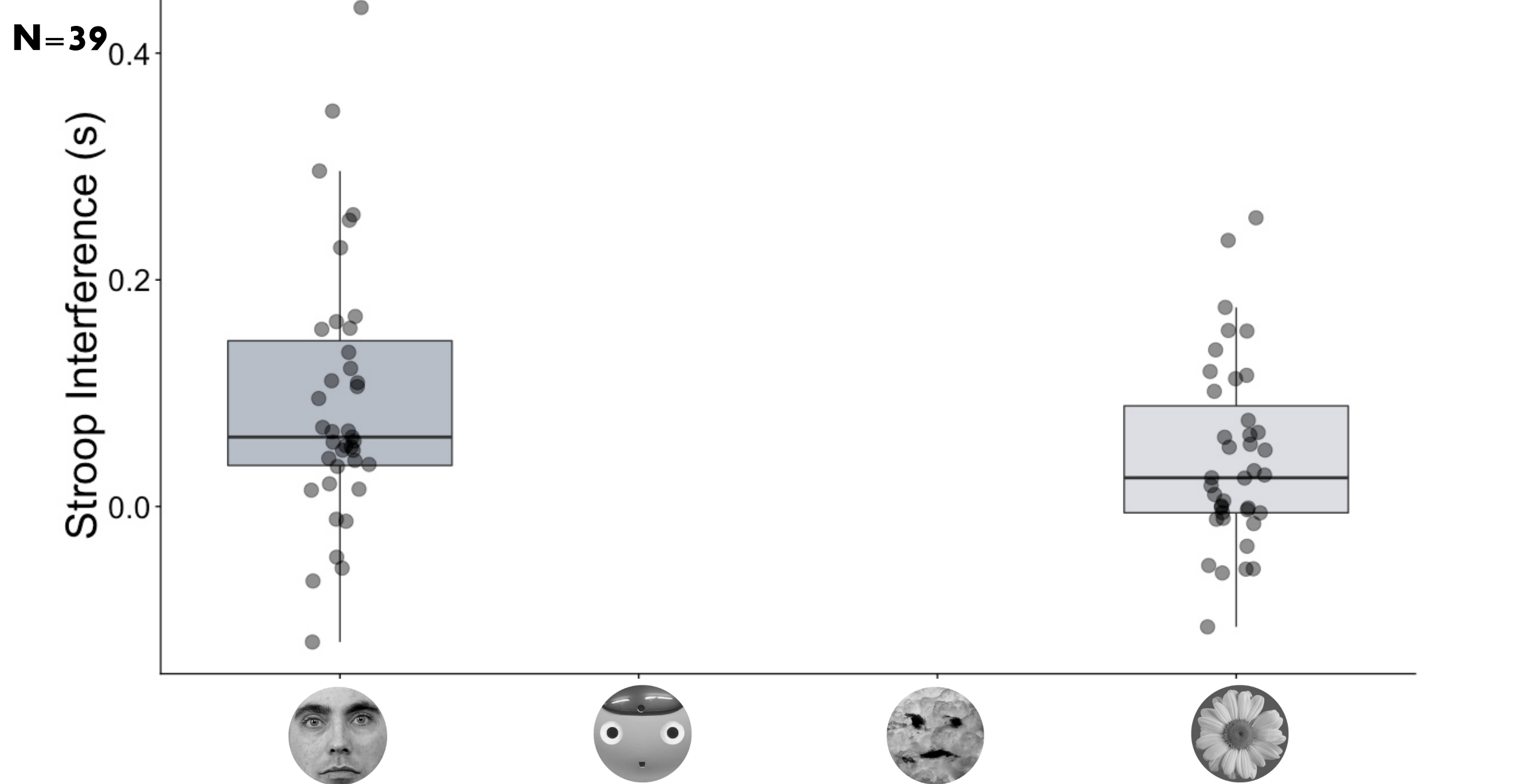
***Email an
Anna.Henschel@glasgow.ac.uk!***

 *Pre-registration, Daten
und Code via*
<https://osf.io/xyz4m/>.

Lenken menschliche Gesichter unsere Aufmerksamkeit?

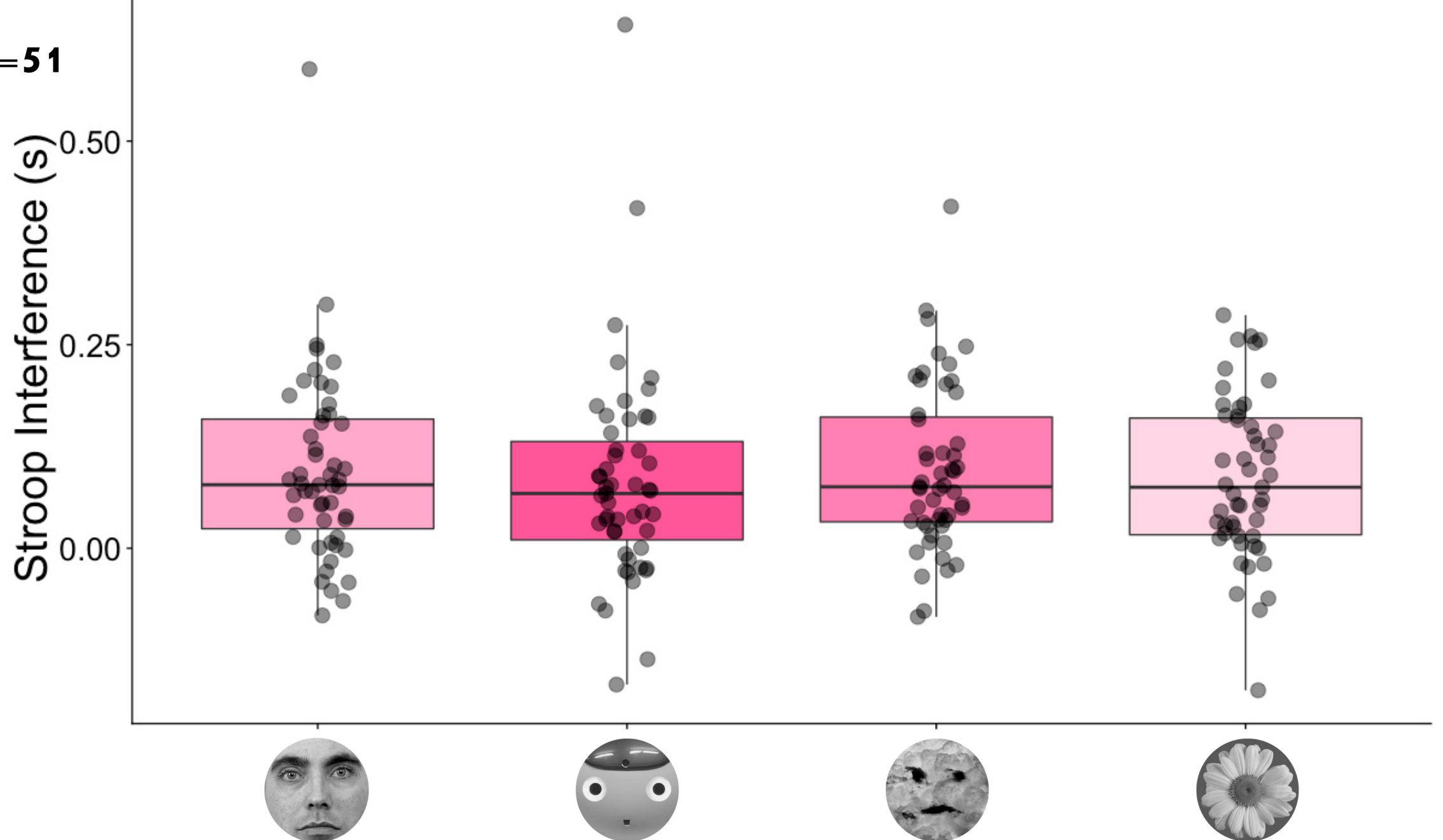




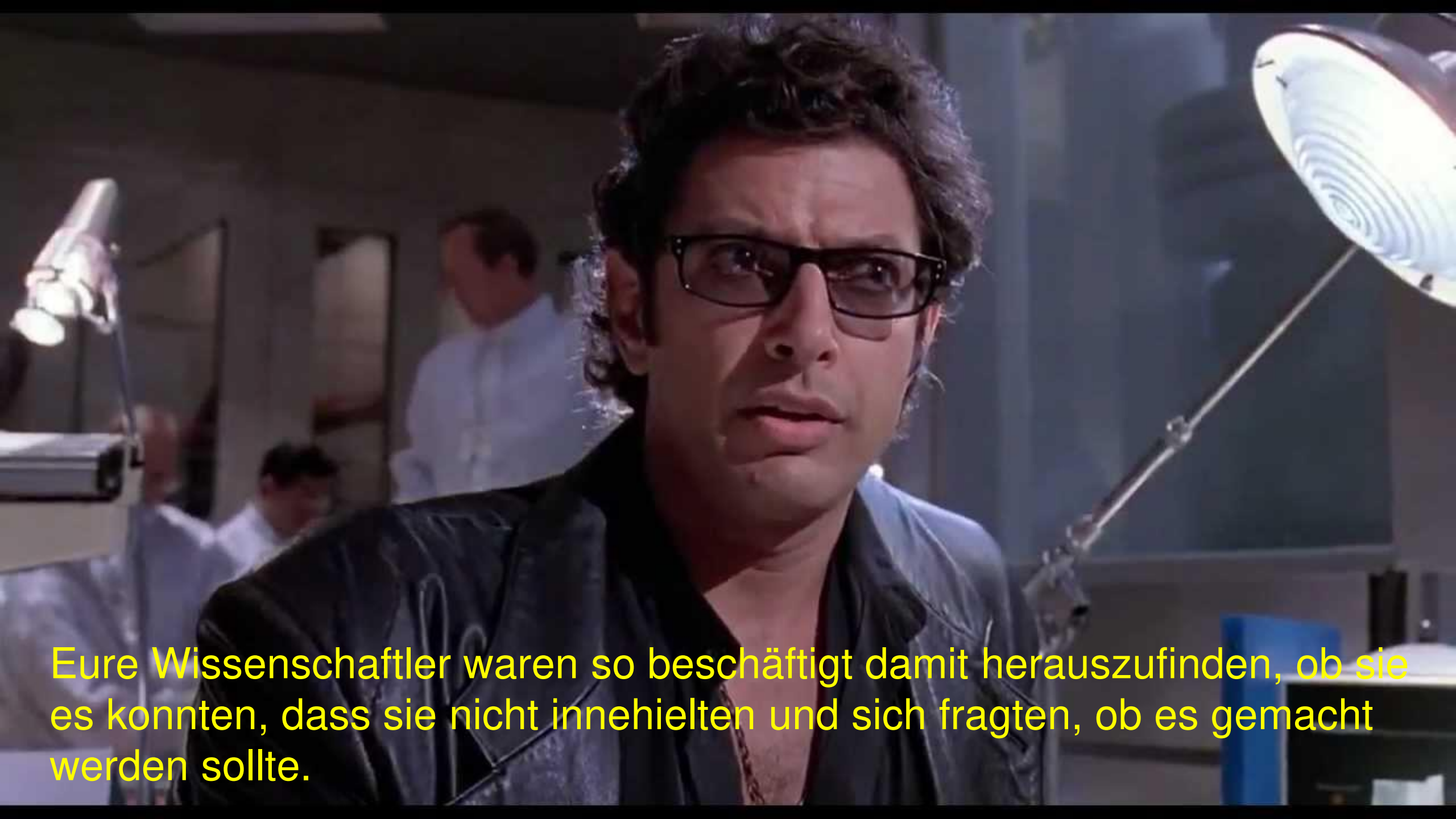


Kann dieser kleine Effekt repliziert werden?

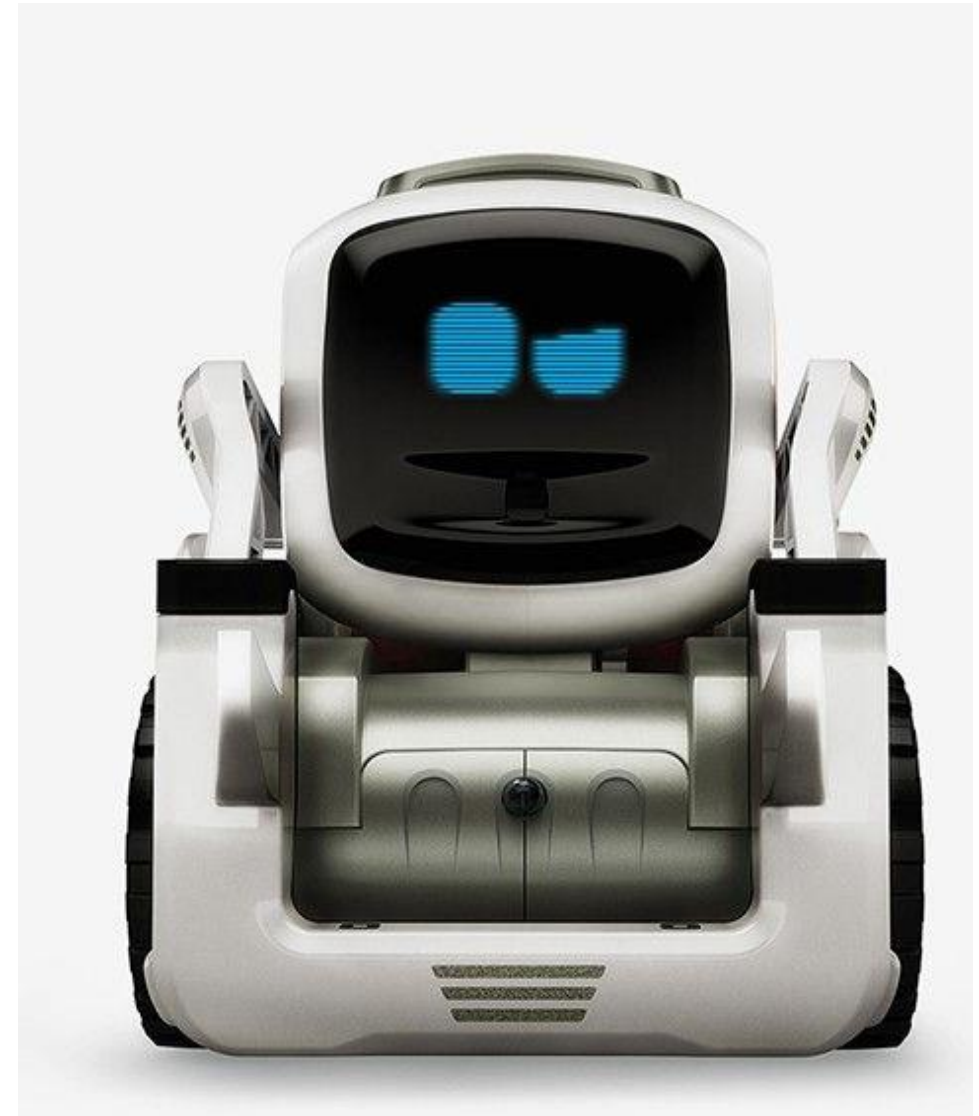
N=51



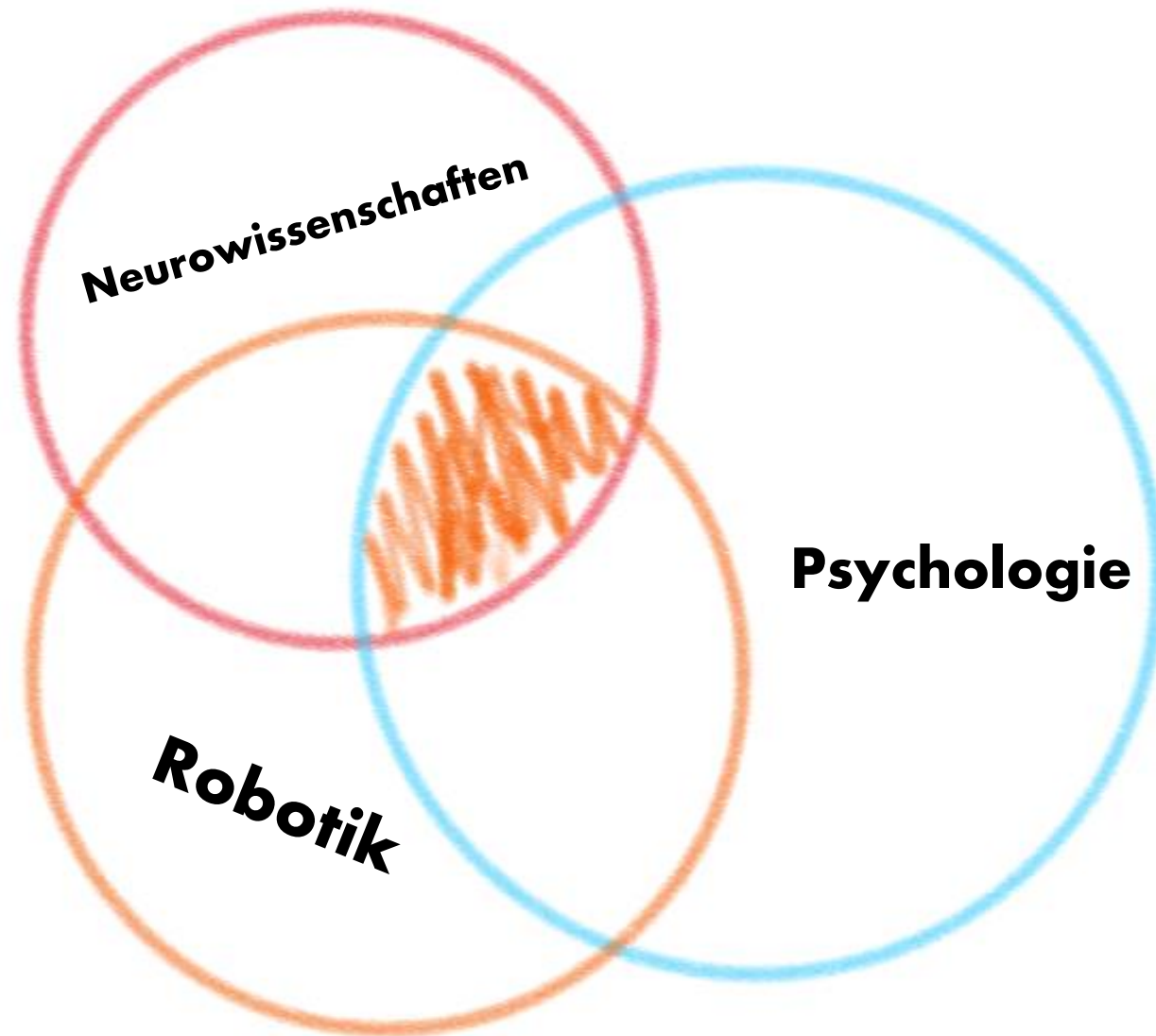
Was bedeutet das für die Roboter?



Eure Wissenschaftler waren so beschäftigt damit herauszufinden, ob sie es konnten, dass sie nicht innehielten und sich fragten, ob es gemacht werden sollte.



Wie können wir einen Dialog fördern?



Wie können wir einen Dialog fördern?

PHILOSOPHICAL
TRANSACTIONS B

royalsocietypublishing.org/journal/rstb

Introduction



Cite this article: Cross ES, Hortensius R, Wykowska A. 2019 From social brains to social

From social brains to social robots: applying neurocognitive insights to human – robot interaction

Emily S. Cross^{1,†}, Ruud Hortensius^{1,†} and Agnieszka Wykowska^{2,†}

¹Institute of Neuroscience and Psychology, School of Psychology, University of Glasgow, 58 Hillhead Street, Glasgow G12 8QB, UK

²Istituto Italiano di Tecnologia, Via Morego, 30 16163 Genoa, Italy

 ESC, 0000-0002-1671-5698; RH, 0000-0002-5279-6202; AW, 0000-0003-3323-7357

<https://royalsocietypublishing.org/doi/pdf/10.1098/rstb.2018.0024>

Wie können wir einen Dialog fördern?



<https://royalsocietypublishing.org/doi/full/10.1098/rstb.2018.0034>

Cross, Riddoch, Pratts, Titone, Chaudhury & Hortensius, 2019

Wie können wir einen Dialog fördern?

SOCIAL

UKRI CENTRE FOR DOCTORAL TRAINING IN SOCIALLY INTELLIGENT ARTIFICIAL AGENTS

HOME • PROGRAM • PROJECTS • APPLICATION • PEOPLE • BLOG

<https://socialcdt.org/>

Anna Henschel



@Anna Henschel

<https://doi.org/10.6084/m9.figshare.11284334>

Wie können wir einen Dialog fördern?

- *Gemeinschaftliche PhD und Masterprogramme*

Wie können wir einen Dialog fördern?

- *Gemeinschaftliche PhD und Masterprogramme*
- *Neurowissenschaftliche Erkenntnisse für die Soziale Robotik*

Wie können wir einen Dialog fördern?

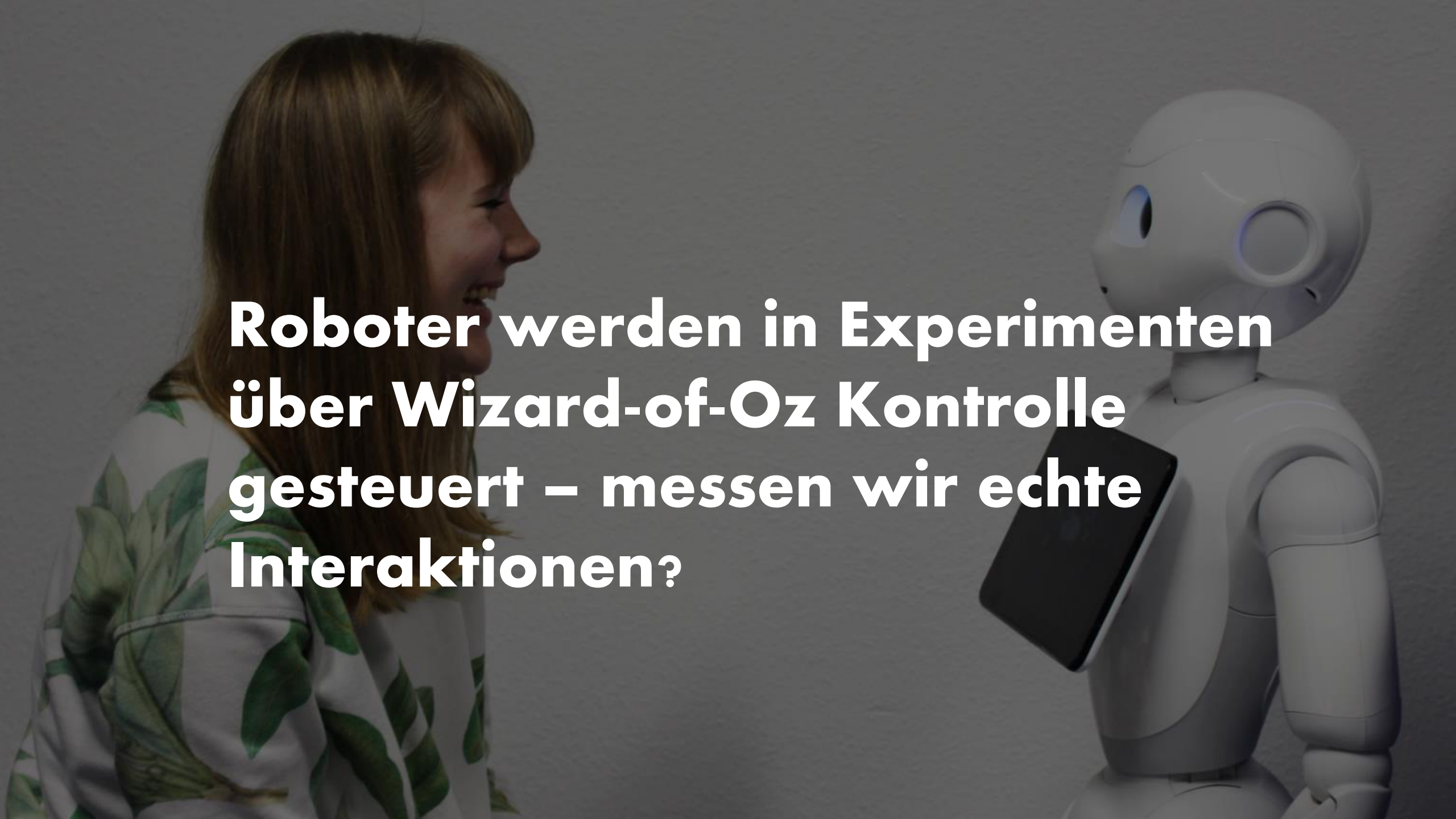
- *Gemeinschaftliche PhD und Masterprogramme*
- *Neurowissenschaftliche Erkenntnisse für die Soziale Robotik*
- *Kollaboration zwischen Computerwissenschaftlern und Experimentleitern*

Künstliche Intelligenz in der Sozialen Robotik

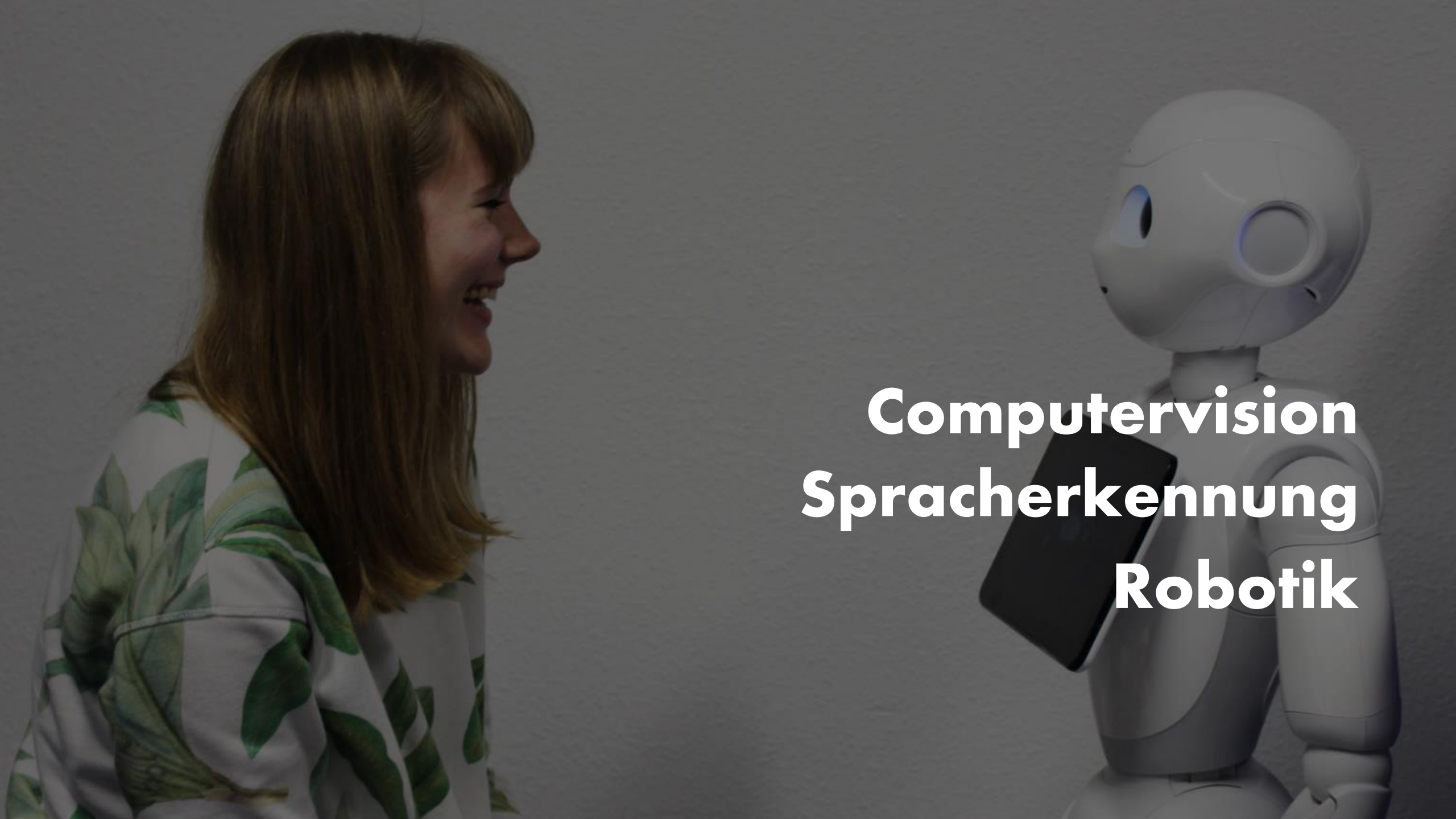


You are not a wizard, Harry.



A woman with long brown hair, wearing a white shirt with a green leaf pattern, is smiling and looking towards a white humanoid robot. The robot is holding a black tablet in its right arm. The background is a plain, light-colored wall.

**Roboter werden in Experimenten
über Wizard-of-Oz Kontrolle
gesteuert – messen wir echte
Interaktionen?**

A woman with long brown hair, wearing a white sweatshirt with a green leaf pattern, is smiling and looking towards a white humanoid robot. The robot is holding a black smartphone in its right hand. The background is a plain, light-colored wall.

Computervision Spracherkennung Robotik

**Komplexes menschliches
Sozialverständnis**

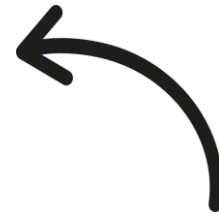


**Computervision
Spracherkennung
Robotik**





Die Zukunft: funktionelle Nahinfrarotspektroskopie



#BOLDlight

Künstliche Intelligenz in der Datenanalyse

- *Matlab*
- *JASP*
- *R*

A hand-drawn title card with a white background. At the top, there is a large, irregular green brushstroke. Below it, the text "SUPERVISED MACHINE LEARNING" is written in a bold, dark blue, hand-drawn font. Underneath that, "CASE STUDIES IN R" is written in the same style. At the bottom of the card, there are several vertical green wavy lines, resembling grass or a stylized background.

SUPERVISED MACHINE LEARNING CASE STUDIES IN R

<https://supervised-ml-course.netlify.com/chapter1>

1 Making predictions using machine learning

Fuel efficiency

From the [US Department of Energy](#)

```
> names(cars2018)
```

OUTPUT

```
[1] "Model"           "Model Index"  
[3] "Displacement"    "Cylinders"  
[5] "Gears"           "Transmission"  
[7] "MPG"             "Aspiration"  
[9] "Lockup Torque Converter" "Drive"  
[11] "Max Ethanol"      "Recommended Fuel"  
[13] "Intake Valves Per Cyl" "Exhaust Valves Per Cyl"  
[15] "Fuel injection"
```

<https://supervised-ml-course.netlify.com/chapter1>



SOCIAL BRAIN IN ACTION
LABORATORY

HOME

RESEARCH

PUBLICATIONS

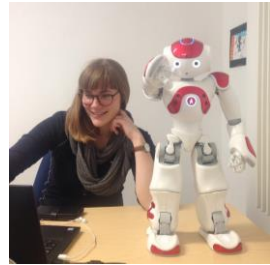
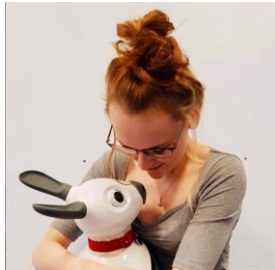
PEOPLE

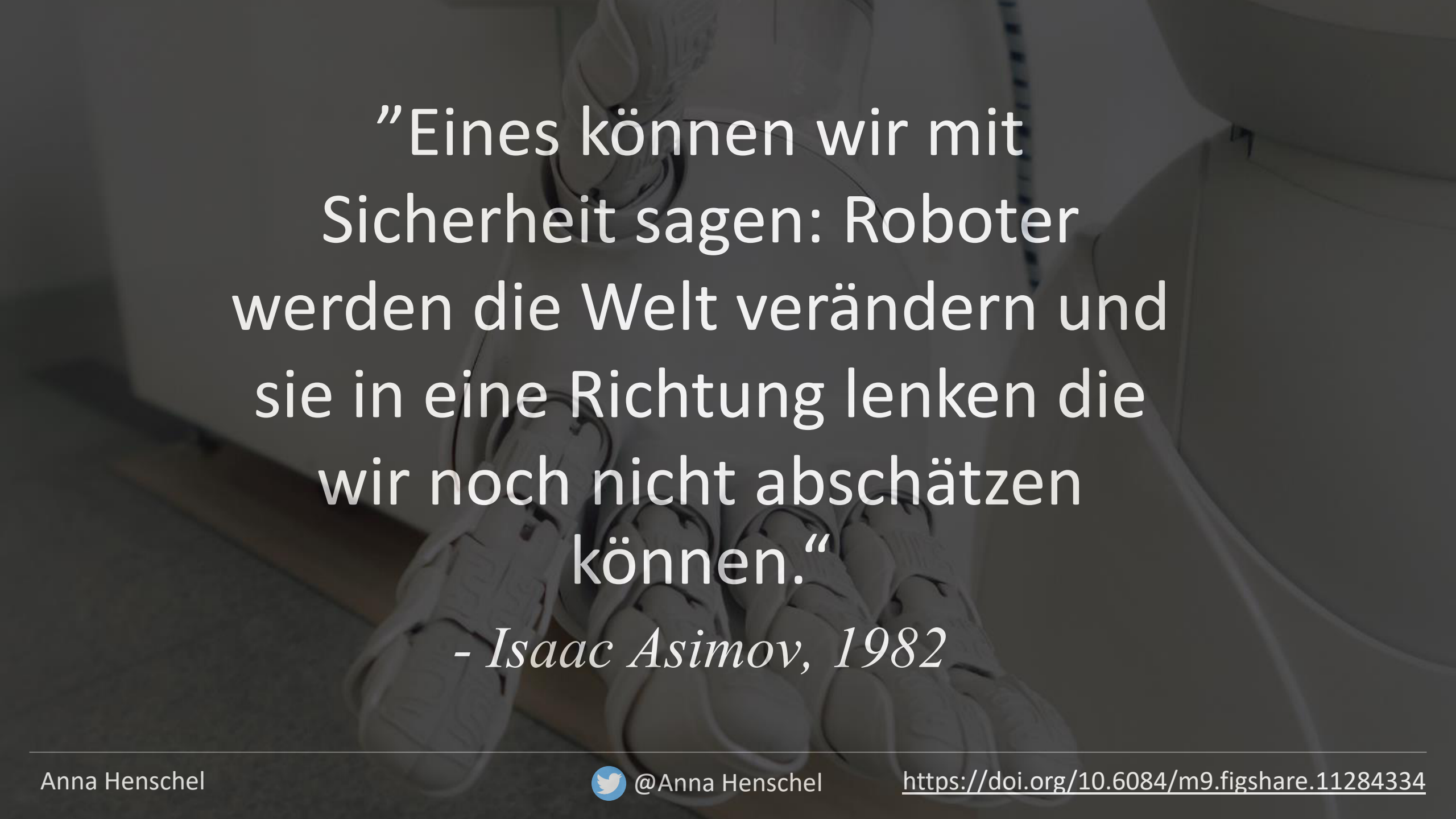
ENGAGEMENT

OPEN SCIENCE

CONTACT

Research in the SoBA Lab explores how we perceive and interact with other agents in a social world, under the direction of Dr. Richard Ramsey & Professor Emily S. Cross





”Eines können wir mit
Sicherheit sagen: Roboter
werden die Welt verändern und
sie in eine Richtung lenken die
wir noch nicht abschätzen
können.“

- Isaac Asimov, 1982

Q&A

Offene Fragen?



Anna Henschel @AnnaHenschel · Nov 21

Me, a scientist, objective, not easily fooled.

Also me: why are you sad, Cozmo? 💔



Keep in touch!

 www.linkedin.com/in/anna-henschel/

 Anna.Henschel@glasgow.ac.uk

 [@AnnaHenschel](https://twitter.com/AnnaHenschel)

 doi.org/10.6084/m9.figshare.11284334



Danke [@MandyNorrbo!](https://twitter.com/MandyNorrbo)