Social Presence

A media psychology perspective

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CWI
Distributed and Interactive Systems

RESEARCH
SEMESTER
PROGRAMME

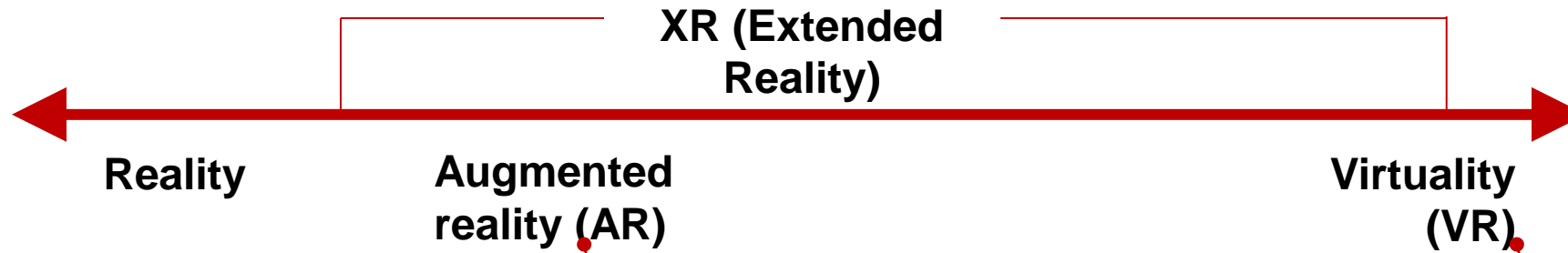Spring School
on Social XR

VU

That's me (t.hartmann@vu.nl)

- Tilo Hartmann
- Prof. Virtual Reality
- Communication Science
- Core interest: Perceptual (social) illusions triggered by media technology

XR Immersive technology Milgram & Kishino (1994)

XR (Extended Reality)

← **Reality** → **Virtuality (VR)**

Augmented reality (AR)

Immersion

Enveloped senses

Tracking

"Predicted" sensorimotor contingencies

Natural input/output mapping

Invisible interface

Presence

Presence

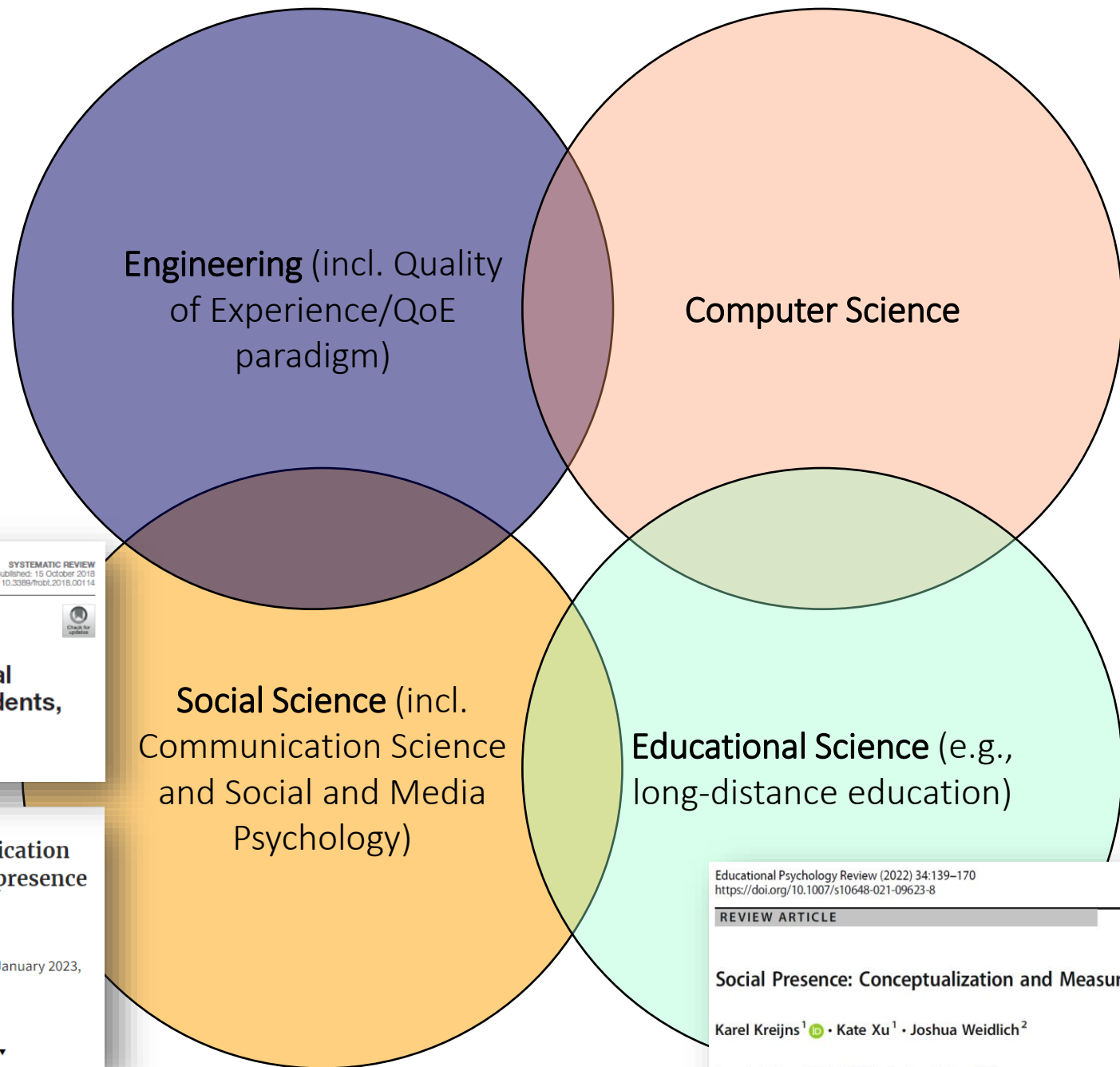| Spatial presence	Social presence	Self presence

I am there!

We are there together!

This is me!
(body-ownership illusion)

Social Presence (Disciplines)

Engineering (incl. Quality of Experience/QoE paradigm)

Computer Science

Social Science (incl. Communication Science and Social and Media Psychology)

Educational Science (e.g., long-distance education)

frontiers in Robotics and AI

SYSTEMATIC REVIEW
published: 15 October 2018
doi: 10.3389/frobt.2018.00114

A Systematic Review of Social Presence: Definition, Antecedents, and Implications

Catherine S. Oh [1]*, Jeremy N. Bailenson [1] and Gregory F. Welch [2]

JOURNAL ARTICLE

Capturing social presence: concept explication through an empirical analysis of social presence measures

James J Cummings ✉, Erin E Wertz

Journal of Computer-Mediated Communication, Volume 28, Issue 1, January 2023, zmac027, https://doi-org.vu-nl.idm.oclc.org/10.1093/jcmc/zmac027

Published: 22 November 2022   Article history ▾

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Educational Psychology Review (2022) 34:139–170
https://doi.org/10.1007/s10648-021-09623-8

REVIEW ARTICLE

Social Presence: Conceptualization and Measurement

Karel Kreijns [1] · Kate Xu [1] · Joshua Weidlich [2]

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Social Presence (immediacy, intimacy, Short et al. 1976)

- "degree of salience of the other person in a mediated communication and the consequent salience of their interpersonal interactions"

- Determined by extent the medium/channel allows to transmit/communicate **immediacy behaviours** (e.g., smiling, nodding, proximity ~social cues) to foster **intimacy** (~warmth)

Social Presence Parasocial Interaction (PSI, Hartmann & Goldhoorn, 2011)

- Mutual awareness
- Mutual attention
- Mutual adjustment

Item	Indirect		Direct		
	M	SD	M	SD	t
EPSI	2.06	1.07	2.49	1.09	3.92**
While watching the video clip, Amy					
1. … was aware of me.	1.88	1.16	2.39	1.24	4.13**
2. … knew I was there.	1.90	1.19	2.51	1.33	4.70**
3. … knew I was aware of her.	2.49	1.47	2.88	1.40	2.70**
4. … knew I paid attention to her.	2.43	1.41	2.92	1.40	3.40**
5. … knew that I reacted to her.	2.05	1.23	2.40	1.28	2.70**
6. … reacted to what I said or did.	1.58	1.01	1.83	1.12	2.31*

Social Presence co-presence (e.g., Hartmann, in prep.)
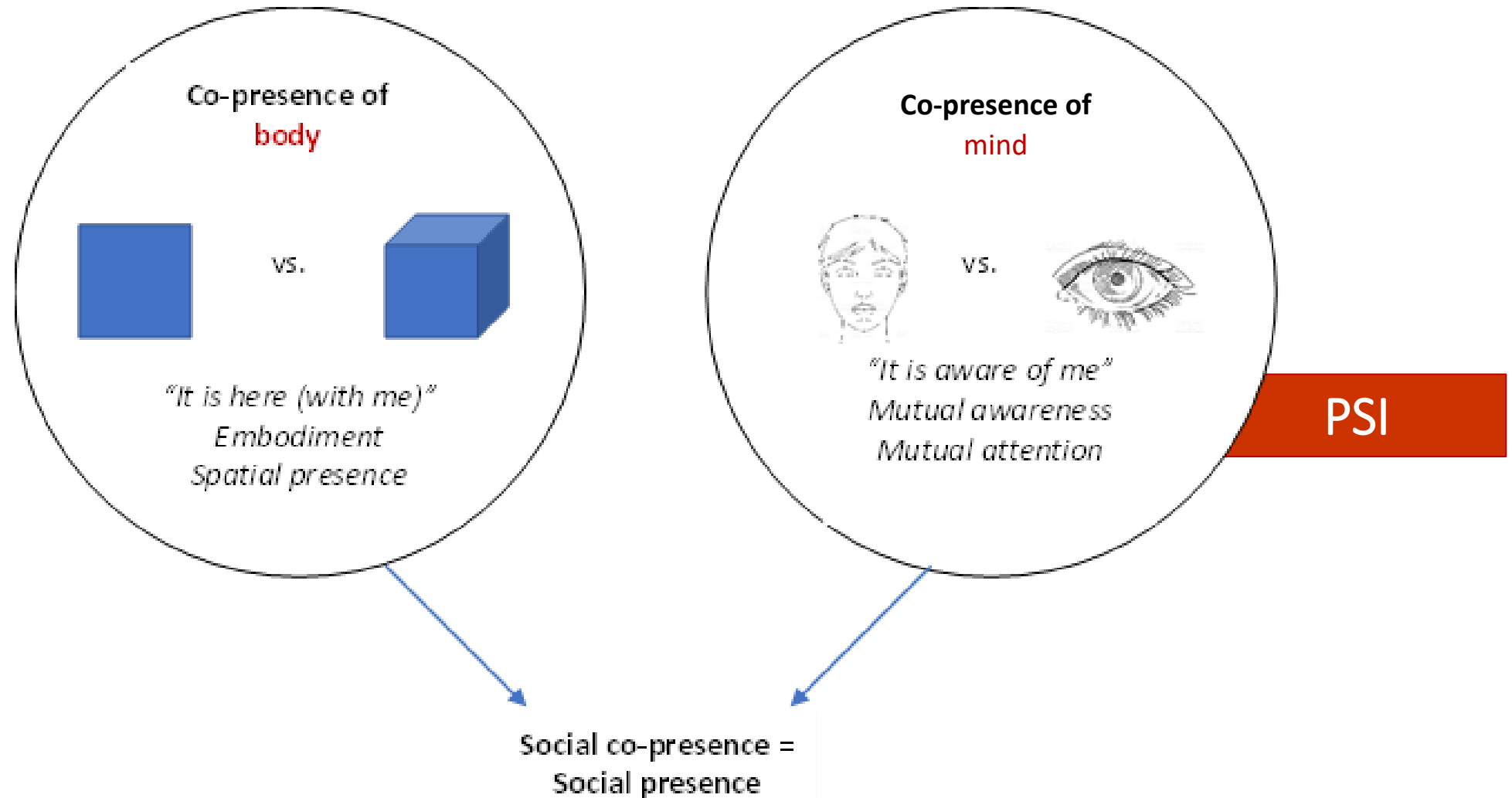
Co-presence: Imagine the impact on the observer… ?

		Body	
		No	**Yes**
Mind	**No**	Nothing is present.	Another object, unintelligible social agent, or mindless social agent is present.
	Yes	Another mind, spirit, intelligence is present.	Another body with a mind (animal, human, social creature) is present.

Social Presence (+Involvement and Engagement, Biocca et al.,)

"A sense of being with another" in the (virtual) environment

1. ### Co-presence
   - Mutual awareness (I was often aware of others in the environment)

2. ### Psychological involvement
   - Mutual attention (The other individual paid close attention to me)
   - Empathy (When I was happy, the other was happy.)
   - Mutual understanding (I understood what the other meant.)

3. ### Behavioral engagement
   - Behavioral interaction (What the other did affected what I did.)
   - Mutual assistance (My partner worked with me to complete the task.)
   - Dependent action (The other could not act without me.)

Rapport

Seeing the other as a real person? Threshold Model of Social Influence, Blascovich et al. 2002

- Confusion since Short et al., 1976: Realness
- Avatars vs. Agents
- Social Influence
  - Avatar = always high (because real human)
  - Agent = depending on behavioral realism/ perceived anthropomorphism
  - Threshold lower for automatic responses, low self-relevance

(Low) self-relevance

(More) automatic responses

Agent

Avatar
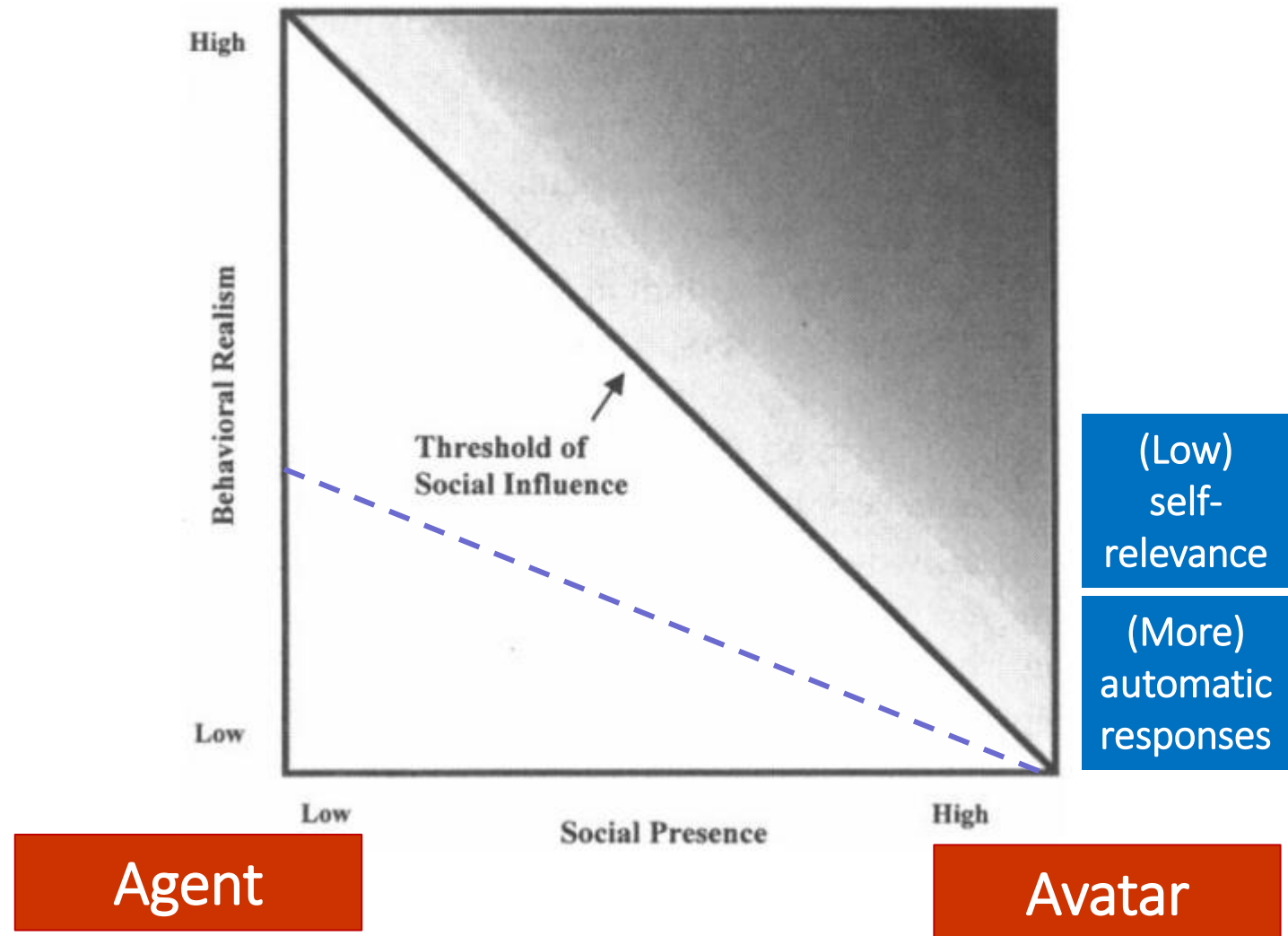
Media awareness (dual account of XR experience, Hartmann & Hofer, 2022)

„I know s/he is not actually here!"

Cognition

Media awareness

contextualizing!

„I feel like s/he is here!"

Perception

Presence

Thank you for joining!

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