



Cybernetic Avatar Technology and Social System Design for Harmonious Co-experience and Collective Ability

身体的共創を生み出すサイバネティック・アバター技術と社会基盤の開発

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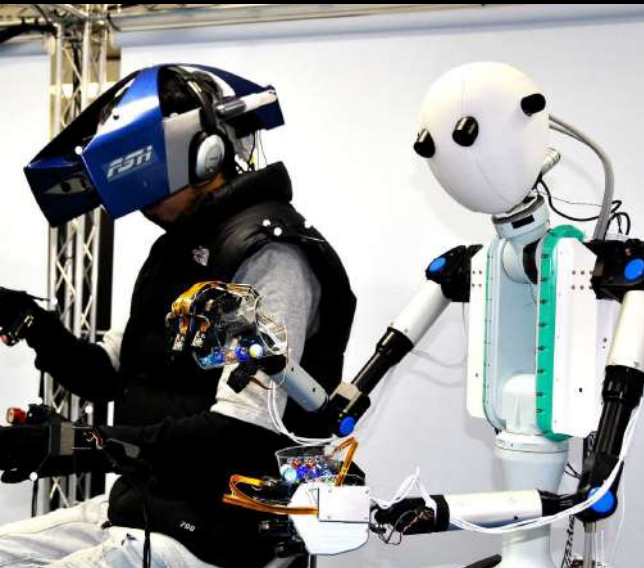
Empower, Enchant and Empathize our Embodied Experiences



EMBODIED MEDIA



KEIO MEDIA DESIGN



New possibilities by Avatars



Cybernetic
being



OryLab, Avatar Robot Café DAWN ver.β, 2019-2020



avatarin, newme, 2020



Virtual avatars on VRChat

We are living in a highly evolved modern society

However, there are still many "difficulties" to live with,

and every person has the possibility of having disabilities for various reasons.

Physical disability, illness, injury, aging, mental health, loneliness
language, culture, race, religion, LGBT, place of residence and social circumstances
Nursing care, childcare, moving out on your own, strengths and weaknesses
Pandemics, disasters, etc.

As eyeglasses and contact lenses have freed many people with "bad eyesight" from disabilities

Cybernetic avatars can be an option to overcome various obstacles that hinder people's "**Well-being**" in the near future



Promote empowerment of all people with CA regardless of age or disability



Toward a society where anyone can work freely and be active through CA



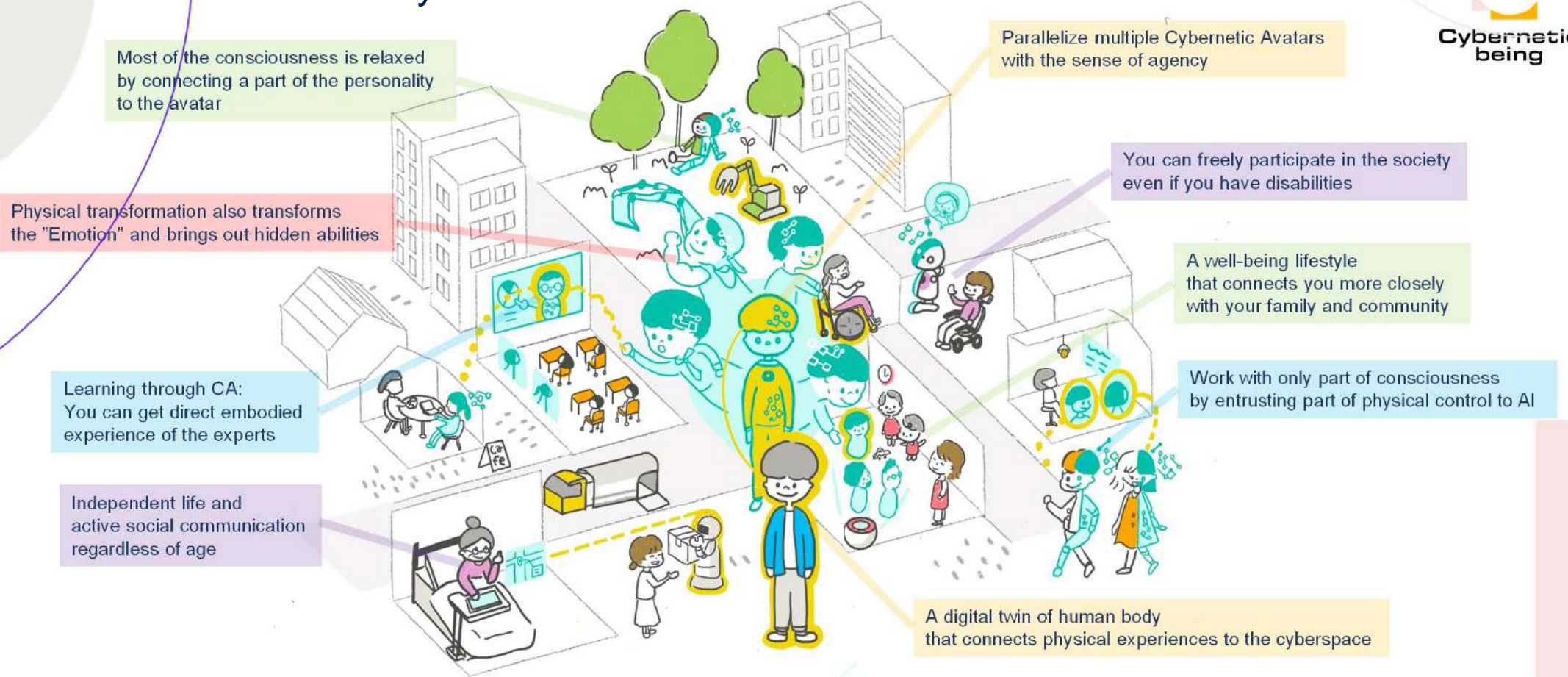
Supporting lifelong growth of people through education and skills transfer by sharing experiences through CA



CA will become a new spatial mobility infrastructure, freeing the region from disparities in distance and mobility.



2050 future lifestyle



A future society in which people can work freely **regardless of their disabilities**, age, or strengths and weaknesses. Everyone can have **Cybernetic Avatar as "another body"** that they can design at will. They can maximize their own abilities with incorporating the skills and experiences of others

Co-creation community



Industry-University Consortium



Social Co-creation WG



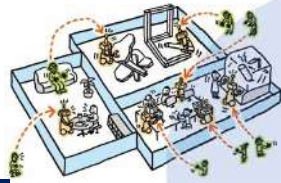
Ory YOSHIFUJI
(OryLab)



Tekshi ANDO
(Panasonic AugLab)



Kzuya OHARA
(FabCafe MTRL)



Kouta MINAMIZAWA
(Embodied Media)



Akira FUKABORI
(avatarin)

Social System WG



H. Shirado
(Computational Social Science)



Ryota AKASAKA
(Robot law)



Arisa EMA
(Social Ethics)

Cybernetic Avatar Platform WG



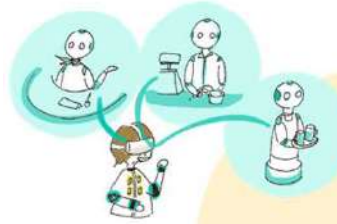
Takuji NARUMI
(VR/Cognition)



Sotaro SHIMADA
(Cognitive Brain Science)



Ryuma NIIYAMA
(Soft-Robotics)



Shunichi KASAHARA
(Superception)



Kazuhisa SHIBATA
(Neuroscience)



Hiroataka OSAWA
(HRI / AI)



Kai Kunze
(Physiological Sensing)



Yoshihiro TANAKA
(Haptic Cognition)



Charith Fernando
(avatarin)



Cognitive Augmentation WG

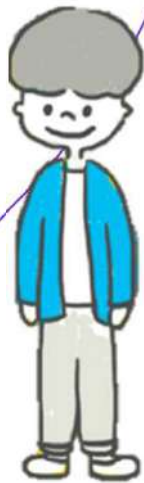
Experience Sharing WG

Collective Skill WG

Expansion of the "Concept of Self"



Cybernetic being



Individual

One body
One name
One identity



Multiple SNS Identity

Virtual YouTuber



Slash Career



Organization < Community



Own < Share
Economy < Wellbeing



Express various "self"

Share experience and skill

Expand the diversity of life

CA as "Another body"

Ref: ミレニアル世代 / Z世代の価値観の変容
from 経済産業省ELPIS ELPIS

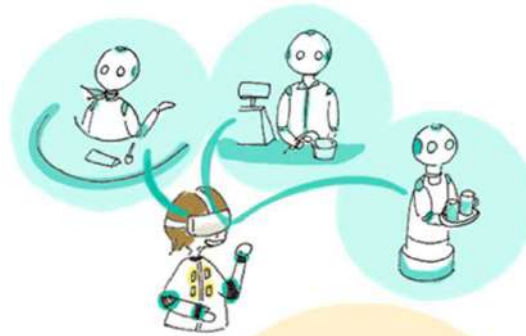


Designing Cybernetic Avatar as an "another body"



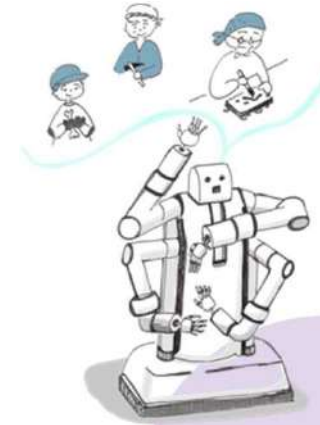
Cognitive Augmentation

A body that can freely draw out its own potential according to the situation and environment



Parallel Agency

A body that can perceive and act in different spaces at the same time by juxtaposing its own physical experiences.



Collective Ability

A body that can integrate its own and others' skills to go beyond individual capabilities



R.S. Rosenberg, 2013



Mel Slater, 2016



Mel Slater, 2018



Shunichi Kasahara "Parallel Eyes"



Yamen Sarajji "Layered Presence"



Takuji Narumi "On the Body training"

Next-gen social infrastructure people are connected through cybernetic avatars



Cybernetic
being



CA-cloud platform

Building a Next-Generation CA Platform
for "Digital Twin of the Body"
and People to Freely Share Experiences
and Co-Create Skills

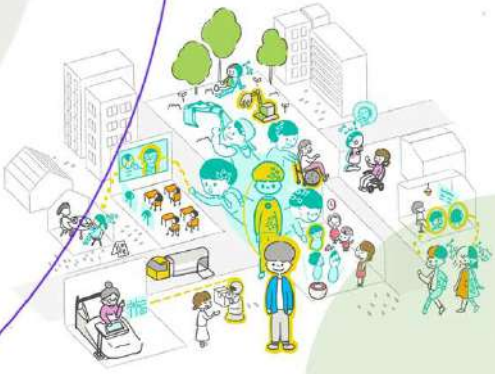


Newme & avatarin cloud





Co-creation of future life and social rules with cybernetic avatars



Social Co-creation

Creating a Well-being Lifestyle to Overcome Disabilities with CA



Ethics & Policy design

What kind of social rules and ethical norms do we need in a future where people's bodies are augmented with CA?



Avatar Caf éproject



Positive Aging project



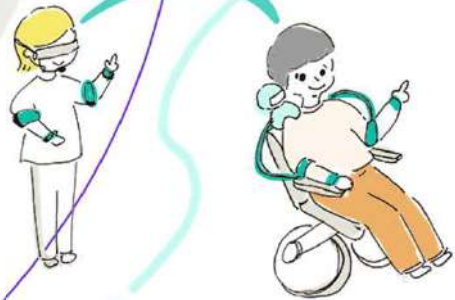
Robot Law Committee / AI Social Theory Research Group



Cybernetic Avatar Technologies to be Realized in 2025



Cybernetic being



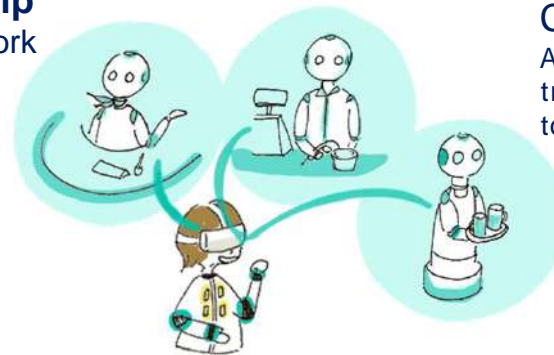
Body-sharing platform for mutual help

People with disabilities are able to act and work freely with a little help from supporters.



Integration of various skills

Collaboration through the body of the CA by combining a variety of skills.



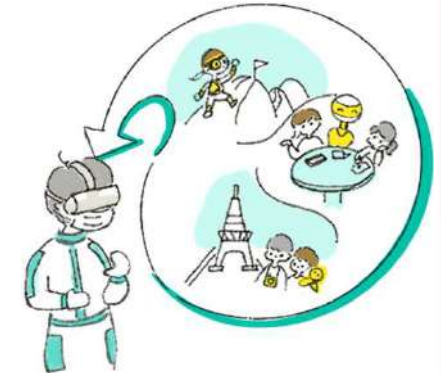
Simultaneous action with three CAs

Simultaneous action with three CAs



Cyber-sports with CA body-sharing

A superhuman CA player who fuses various human abilities, transforming their physicality at will to surpass the avatar controlled by a single individual.



Sharing Experiences Across Time and Space

be able to relive the experiences you and others have had through CA and be able to acquire physical tips and skills at high speed.

Cybernetic being Project Vision



Cybernetic being: Toward the future society where people can overcome their disabilities and freely co-create and enjoy a variety of experiences and skills, and gain more diverse and fruitful life experiences.

From Quantitative human augmentation to Qualitative human augmentation

Expand the concept of "Self" through Cybernetic Avatar

Expand the quality & diversity of experience one person can gain in a lifetime

