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Human First Innovation:

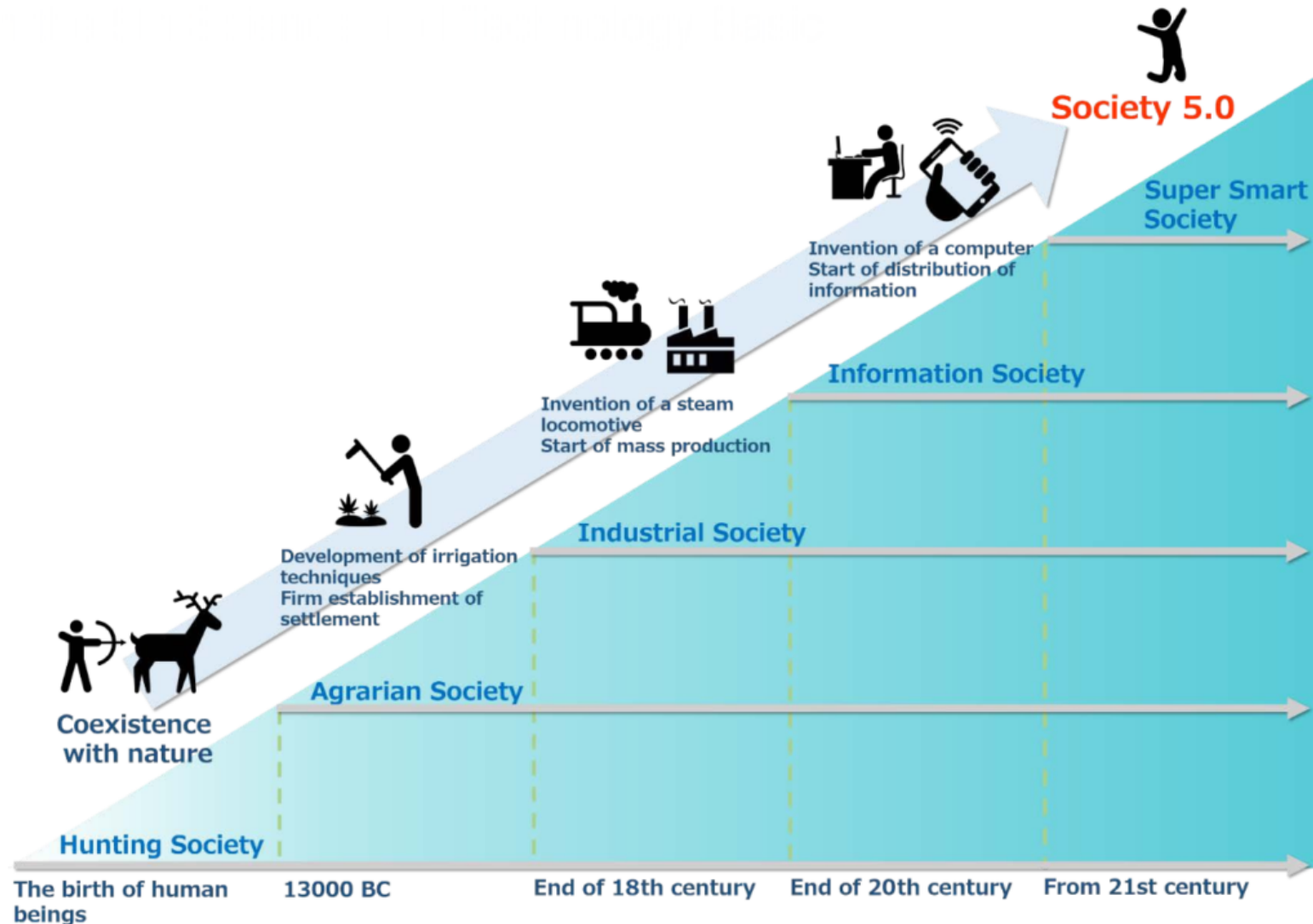
Balancing the Opportunities and Risks of AI

Toshie Takahashi

Waseda Univ & Univ of Cambridge
the technology advisory committee,
the Tokyo Olympic Games 2020

@Japan UK Technology and Humanity in Education, March 1,
2019

Society 5.0: Paradigm Shift of Japan



Theoretical
framework

How can we
understand the
paradigm shift?

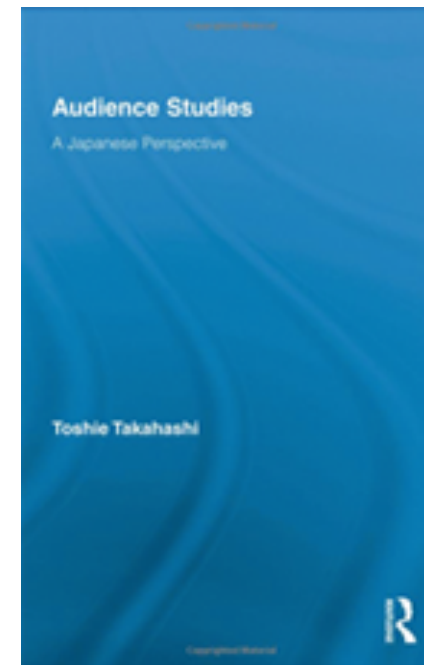
デジタル ウィズダム の時代へ

若者とデジタルメディアのエンゲージメント
高橋利枝

新曜社

“the complexity model of
communication” (2016)

- ☆winning the first prize for the
Telecommunication social
science award



“Audience Studies”
(NY: Routledge, 2009)

The Paradigm of Complexity

- Chaos theory

- ‘butterfly effect’
- Edward Lawrence, meteorologist MIT, in 1963
- “a butterfly fluttering its wings in Peking one day could possibly cause, a month later, a storm in New York.”



The Complexity Model of Communication

Z_n

Y_n

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Y_5

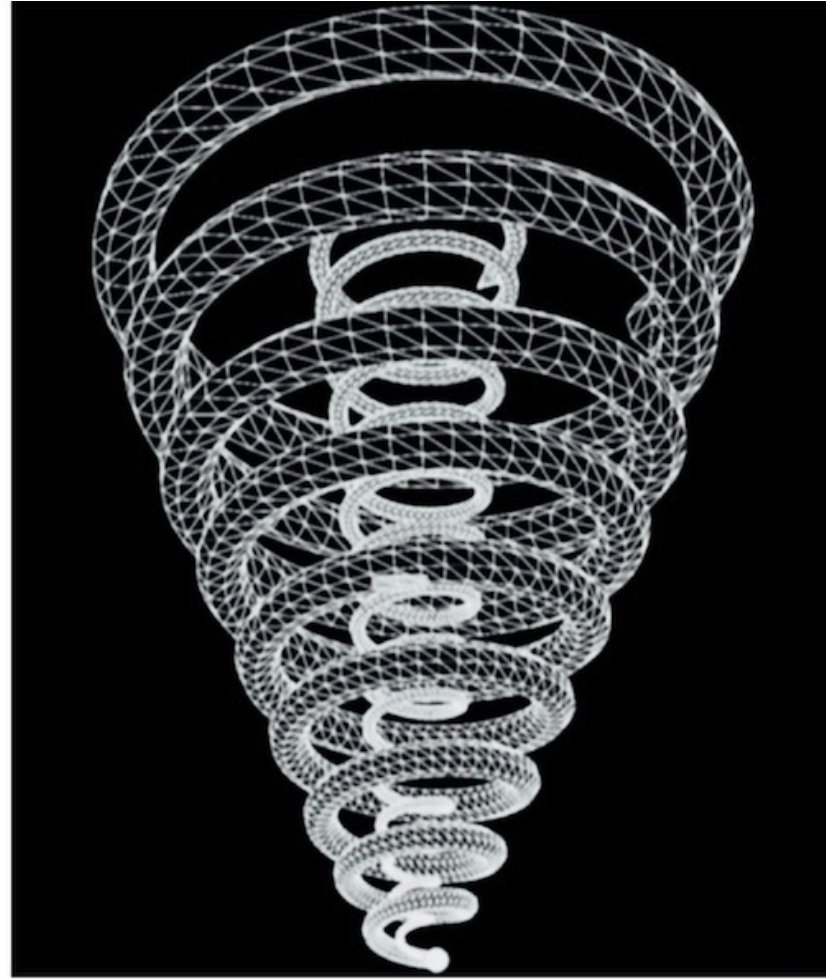
Y_4

Y_3

Y_2

Y_1

X_1



Power from macro-level

1. National
2. Global
3. Communication Revolution



Smart city, community, company, school, home

Power from micro-level

Agency; Empowerment; Engagement with AI/robots



β_n

X_n : 個人 (individuals)

α_n : 力 (power)

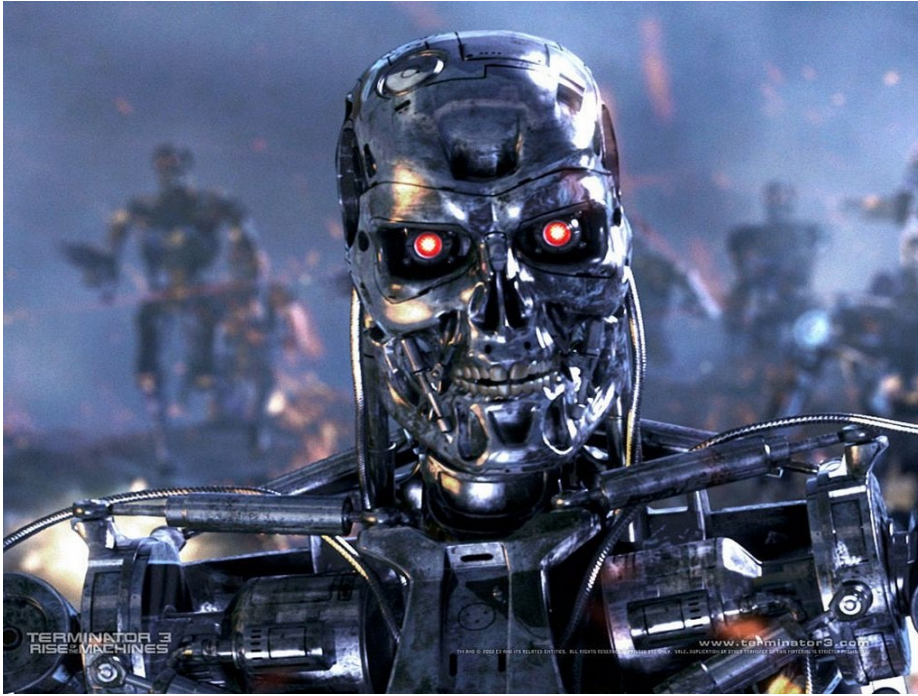
Y_n : 社会集团 (social groups)

β_n : 自己組織化 (self-organisation)

Z_n : 文化 (cultures)

AI Narratives

West (Negative)



Japan (Positive)



The Posters of Baymax

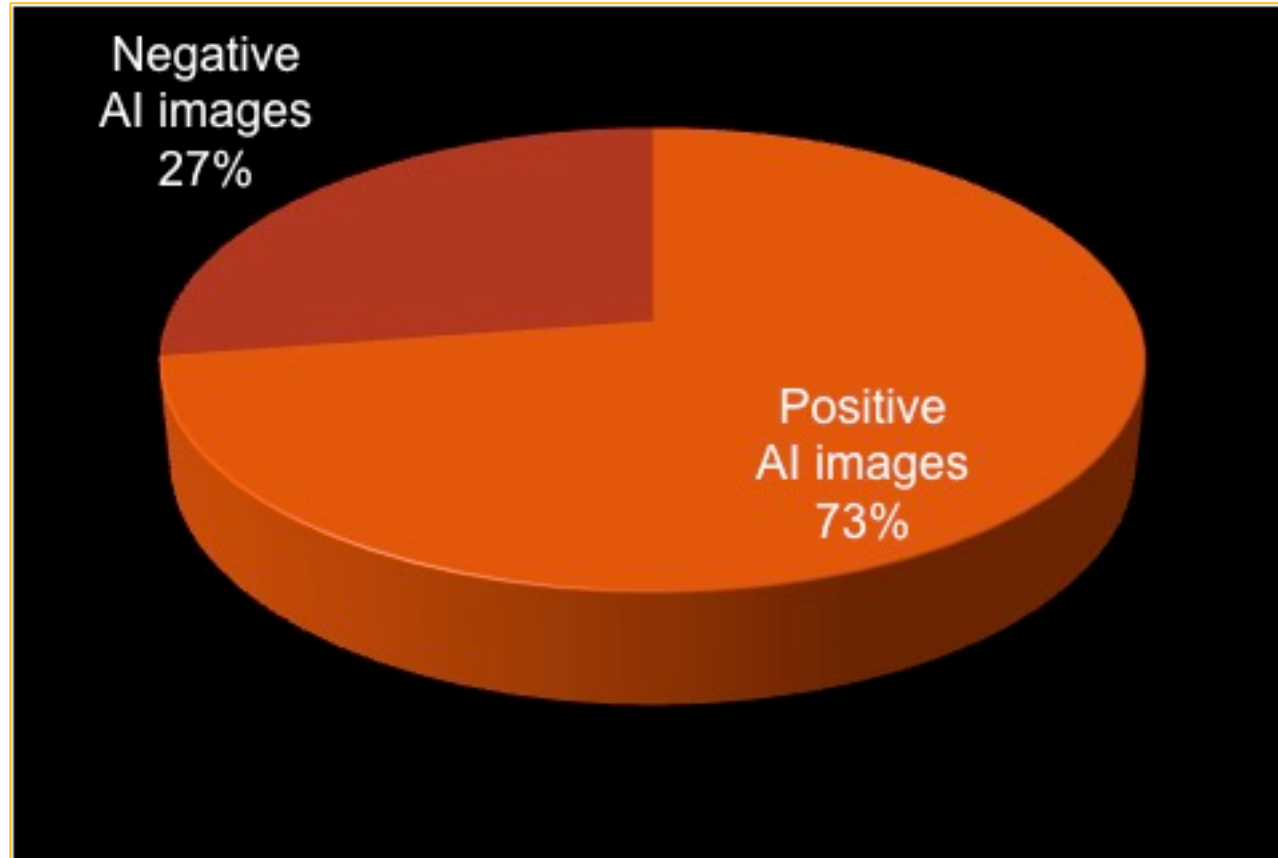
Love & friendship (Japan)



Action & battle (US)

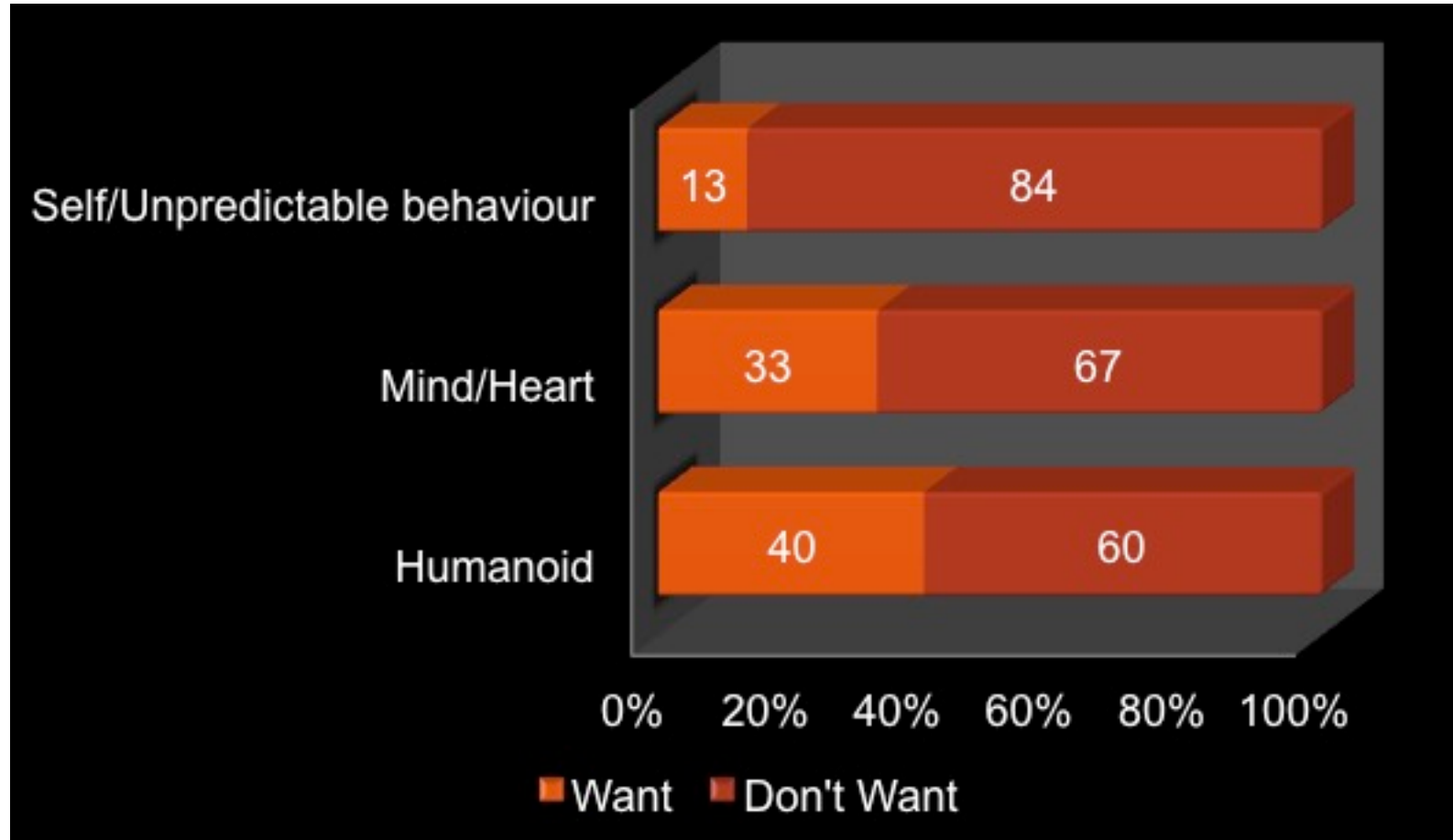


Young people and AI images



Survey: 354 young people (age between 15-29)

Tendencies toward AI/Robots



Survey: 354 young people (age between 15-29)



Robot engagement project
Fieldwork on therapeutic robot, “Paro”
@ nursing home
with Prof Takanori Shibata

Fieldwork on Human-Robot Interaction @ nursing home

Before



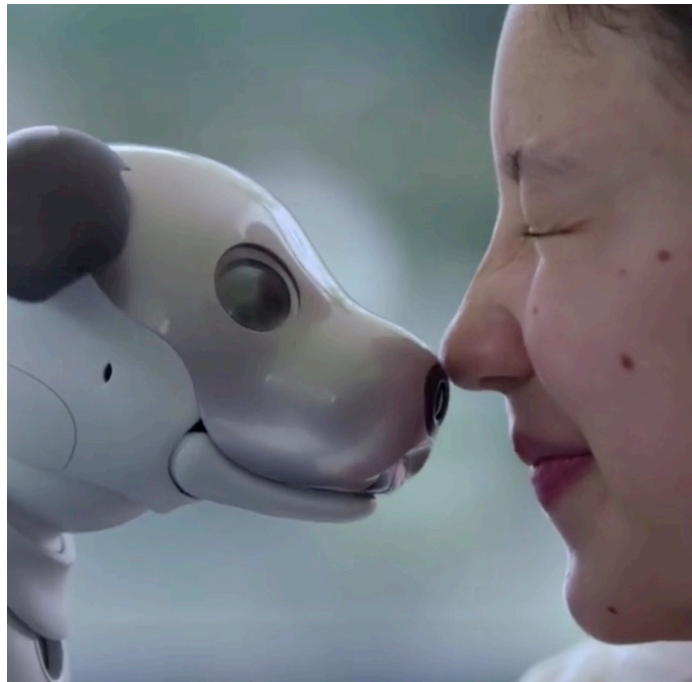
After



Fieldwork on Therapeutic Robot



Internet of Robots and AI



[aibo TV CM](#)

amazon echo

Always ready, connected, and fast. **Just ask.**



Opportunities

Sustainability

Inclusion

Self-creation

Risks

Chaos

Exclusion

Identity crisis

Z_n

Y_n

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Y_5

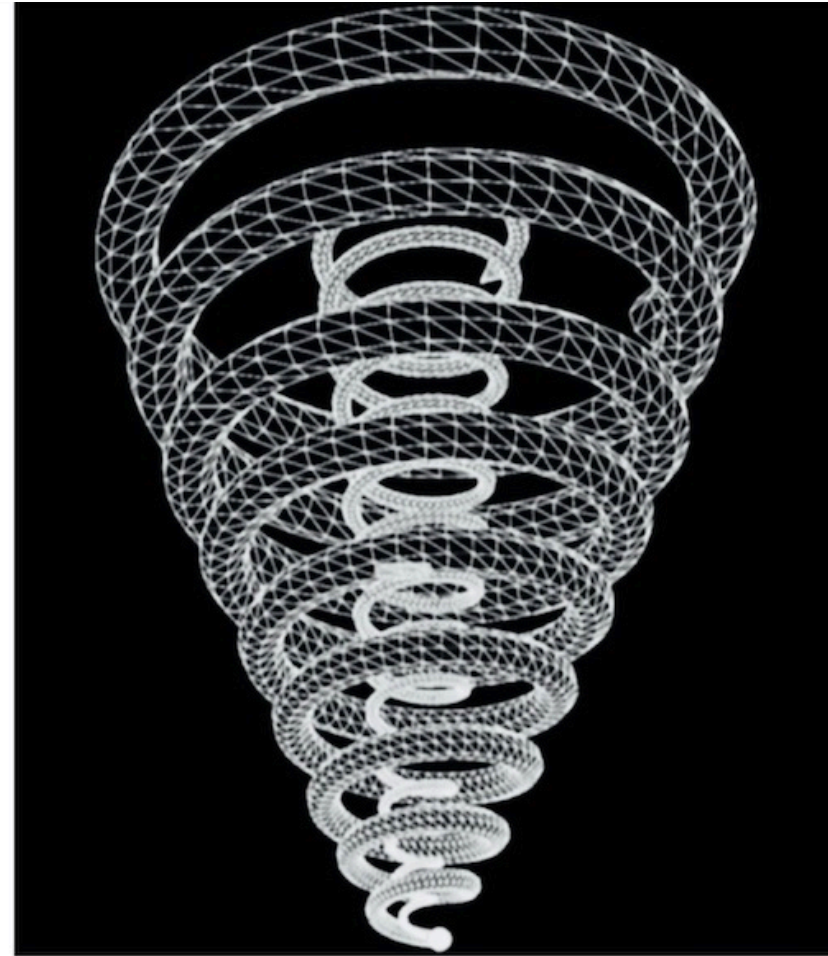
Y_4

Y_3

Y_2

Y_1

X_1



β_n

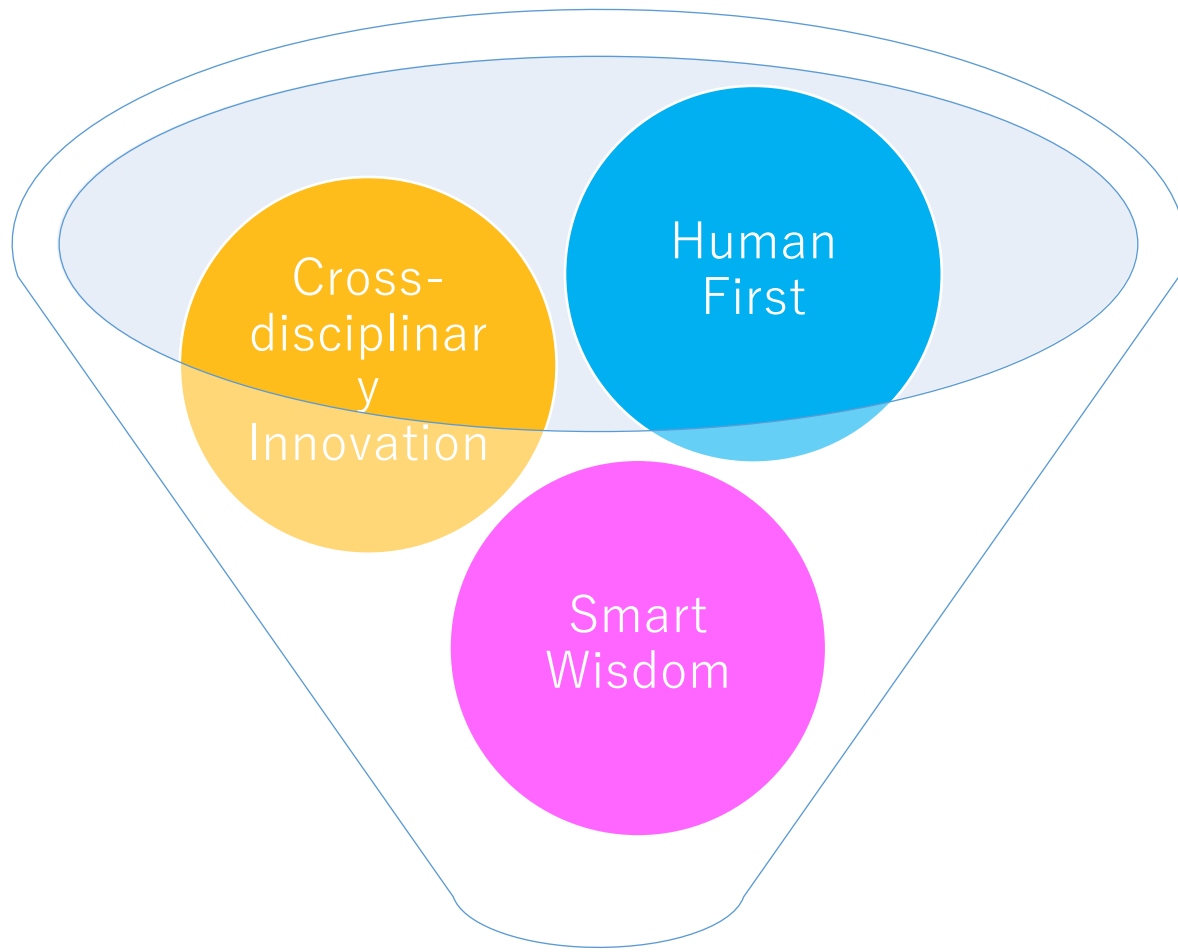
X_n : 個人 (individuals)

α_n : 力 (power)

Y_n : 社会集团 (social groups)

β_n : 自己組織化 (self-organisation)

Z_n : 文化 (cultures)



**Human First
Innovation**



AI ARTIFICIAL
in INTELLIGENCE
ASIA

March 6 & 7, 2017

FOR SOCIAL

at Waseda University

GOOD The AI in Asia series is organised by the Digital Asia Hub, Hong Kong, in collaboration with the Berkman Klein Center for Internet & Society at Harvard University.

For more information about the day's agenda, sessions, speakers and more, visit www.digitaliasiahub.org
Follow #AIinAsia on Twitter



1. From AI First to Human First

“AI for social good”
with Harvard Univ.
Mar 6-7, 2017 @Waseda Univ.



SUSTAINABLE DEVELOPMENT GOALS

世界を変えるための17の目標



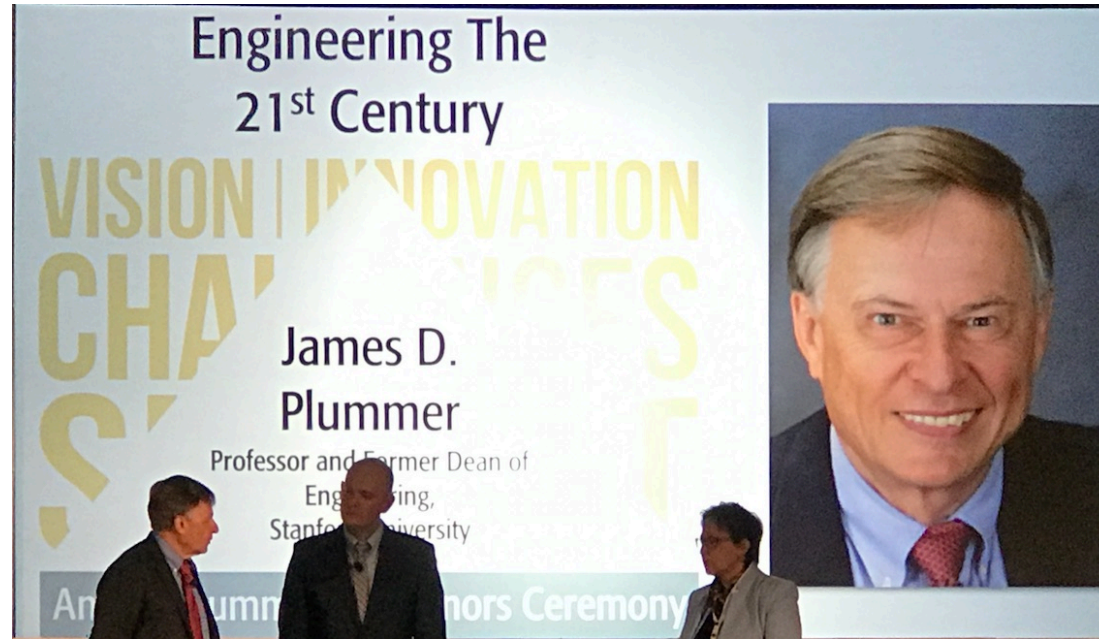
Public Private Action for Partnership!!

SDGsを通じて、豊かで活力ある未来を創る

From Nation First to Human First
the UN's "AI for Good" Global summit (ITU)
@Geneva, May 15-17, 2018

Image: 外務省のHP

https://www.mofa.go.jp/mofaj/gaiko/oda/about/doukou/page23_000779.html



IEEE Vision, Innovation, Challenges Summit
2017

2. Cross-Disciplinary Innovation

Necessity for Life Skill Education
(James D. Plummer, Stanford Univ.)

Stanford's Human-Centered AI Initiative (HAI)

Stanford | HAI

Course Offerings

Education is a central mission for HAI and Stanford as a whole. We offer a growing list of human-centered AI courses on campus and online. Explore some of our course offerings below.

- COMM 154
The Politics of Algorithms
Christin
- COMM 181
Ethics, Public Policy, and Technological Change
Reich / Sahami / Weinstein
- COMM 230
Digital Civil Society
Bernholz / Nothias / Pace / Panezi / Reich

<https://hai.stanford.edu/education/>



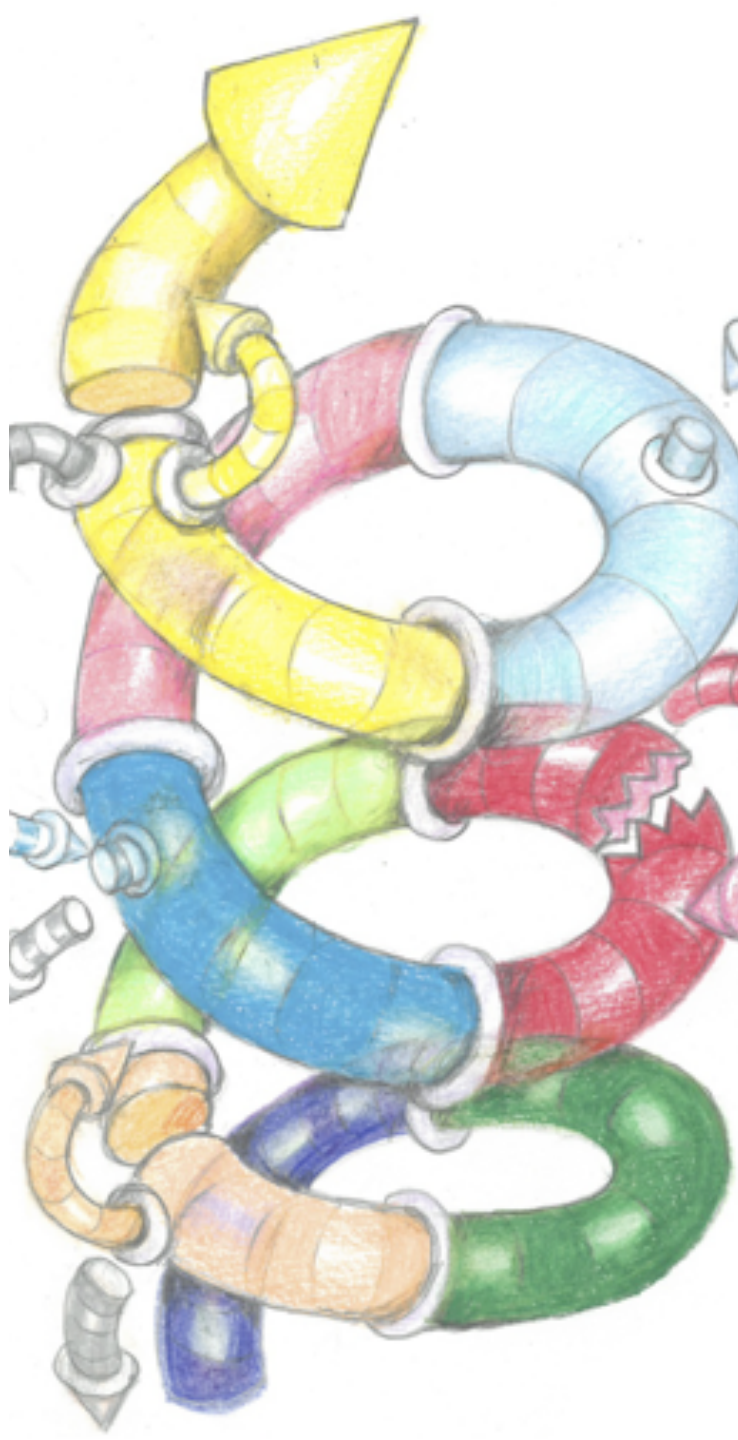
STS forum 2017
“Robotics and Autonomous Systems”(Prof. Paolo Dario)

AI & Robots for Social Good

Cross-Disciplinary Innovation

Yuval
Noah
Harari,
2015

- “the rise of the useless class”
- People will **have to reinvent themselves again and again!**



Self-creation

- Thompson's "self-formation", Giddens' "self-identity", and Hall's "identification"
- **how people create and recreate themselves**, even momentarily, through both mediated and non-mediated interaction, thus **'deserving the name of life.'**

3. Smart wisdom
emerges as people
reflexively create and
recreate themselves as
they make sense of life
and their place in an AI
society,
while appropriating the
power and possibilities
offered by new
technological innovation.

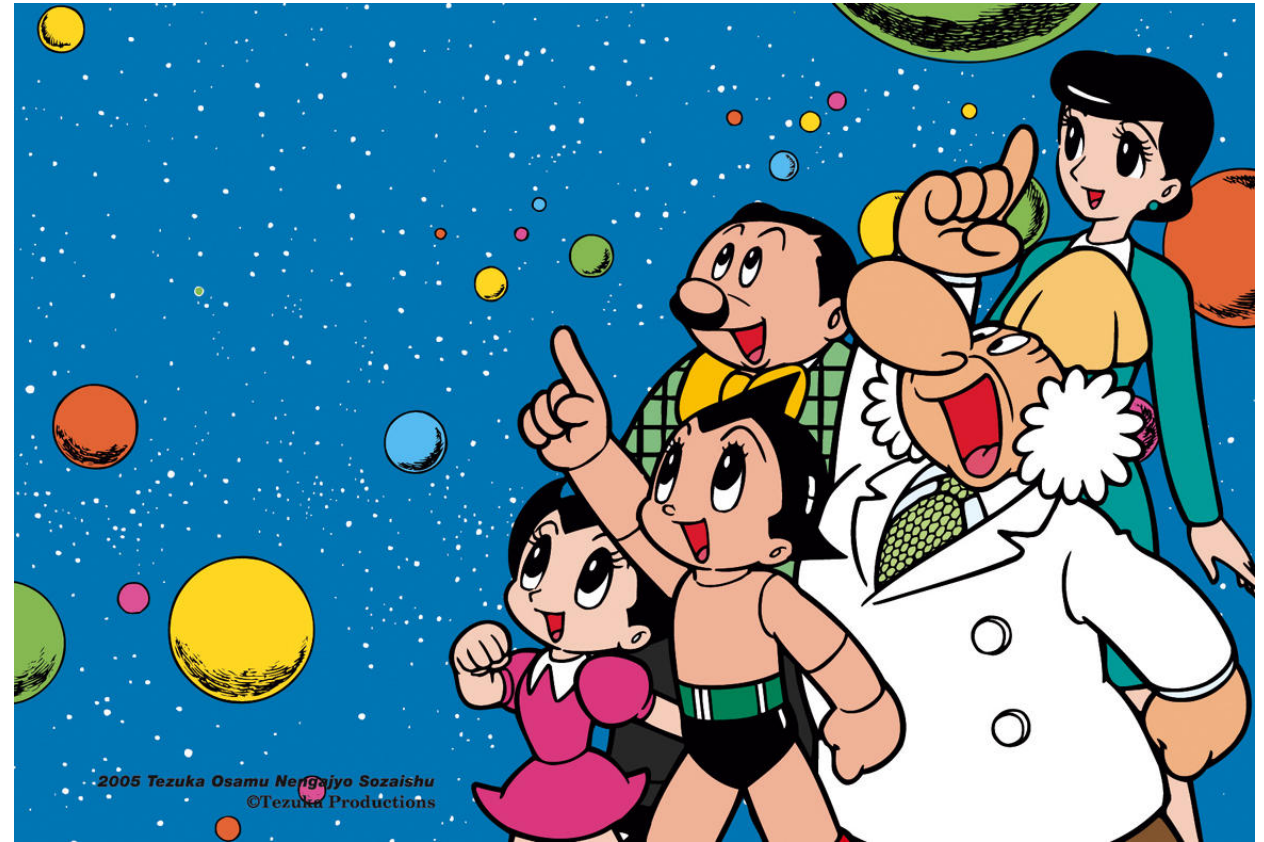


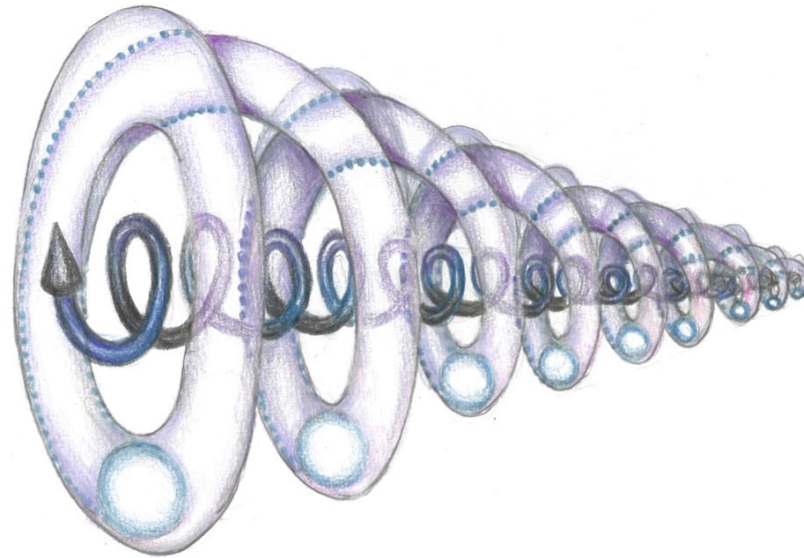
Image: "Astro Boy", one of the most well-known image of robots in Japan, illustrated by Osamu Tezuka from 1952

(2005 Tezuka Osamu Nengajyo Sozaishu ©Tezuka Productions)

Self-organizing Japan 2040



In 2040: Society 5.0
sustainable



Self-organizing
with smart wisdom



In 2019: the
edge of chaos

Thank you!

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