Entrepreneurial Storytelling and the Rise of Robotics/AI Start-ups in Japan

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Introduction

- With their entrepreneurial narratives, start-ups sometimes address grand challenges like climate change or poverty. In this regard, not only social enterprises matter (Dorado & Ventresca, 2013; Eisenhardt, Graebner, & Sonenshein, 2016; Ferraro, Etzion, & Gehman, 2015) but also **for-profit start-ups that aim to make their start-up narrative more convincing in accord with societal challenges**.

Research question

- **How new ventures in Japan differently related their founding narratives to grand challenges or other argumentations?**

Method

- Entrepreneurial storytelling (Doganova & Eyquem-Renault, 2009; Lounsbury & Glynn, 2001; Martens, Jennings, & Jennings, 2007) was revived as a methodology to better understand the entrepreneurial journey of start-ups in contexts.

- Garud et al. (2014a) point to the potential of this type of constitutive approach.
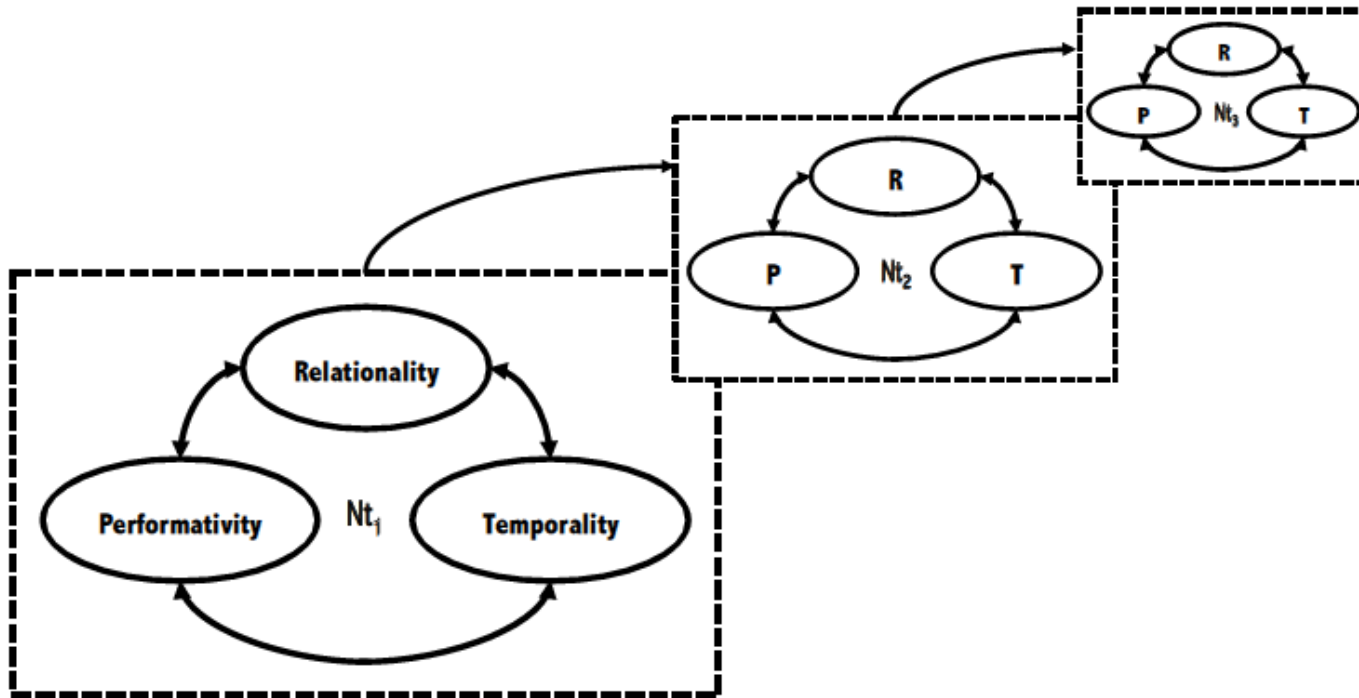
Relationality: Entrepreneurs contextualize by associating with social and material elements
Temporality: Entrepreneurs contextualize by accounting for the past, present and future
Performativity: Entrepreneurs contextualize by performing the conditions required for making progress
Nt., Nt., Nt.: Entrepreneurs contextualize through narratives both in real time and over time (i.e., Nt.)

Garud et al. (2014a:1182)

- *Relationality* refers to the constitution of agency through existing and anticipated relationships across social and material elements

- *Temporality* captures the unfolding of the entrepreneurial journey with respect to time, timing and temporality, including the sequencing, pacing, and entrainment of actions and events.

- *Perfomativity* triggers action as entrepreneurs try actualizing the very arrangements they have proposed in order to generate meaning around their ventures

Case study: CYBERDYNE and Studio Ousia

|	
CYBERDYNE founded in 2004	Capital stock: JPY 26.743 Billion（≒2.08 billion €）(as of June 2, 2016) number of employees: 76 Business line: Research and Development of equipments and systems in following areas; **Medical** / **Welfare**, Treatment device to improve and regenerate the brain-neuro-physical functions, Rescue Supports in disaster sites, Entertainments, **Heavy labor Supports in factories, plants**
Studio Ousia founded in 2007	Capital stock: JPY 185.98 million（≒1.45 million €） Number of employee: 6 core members and a few internship Business line: **QA engine and keyword extraction engine**

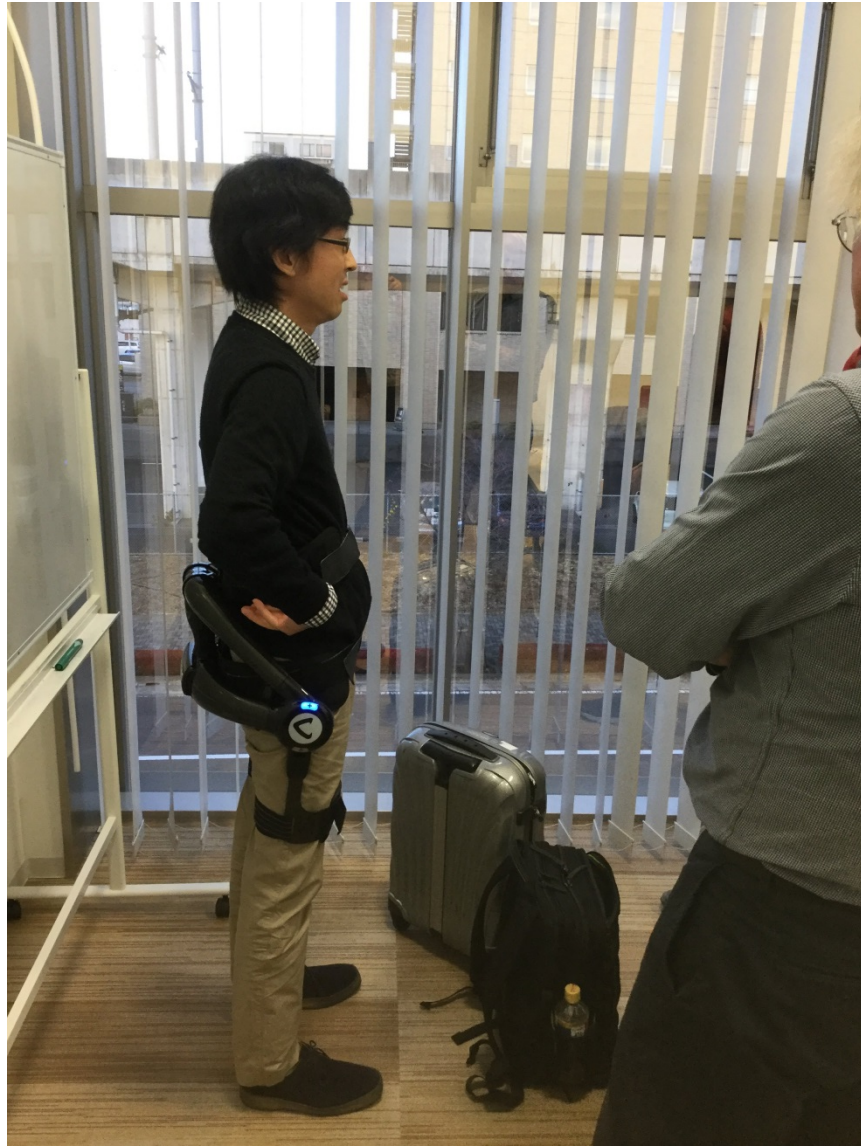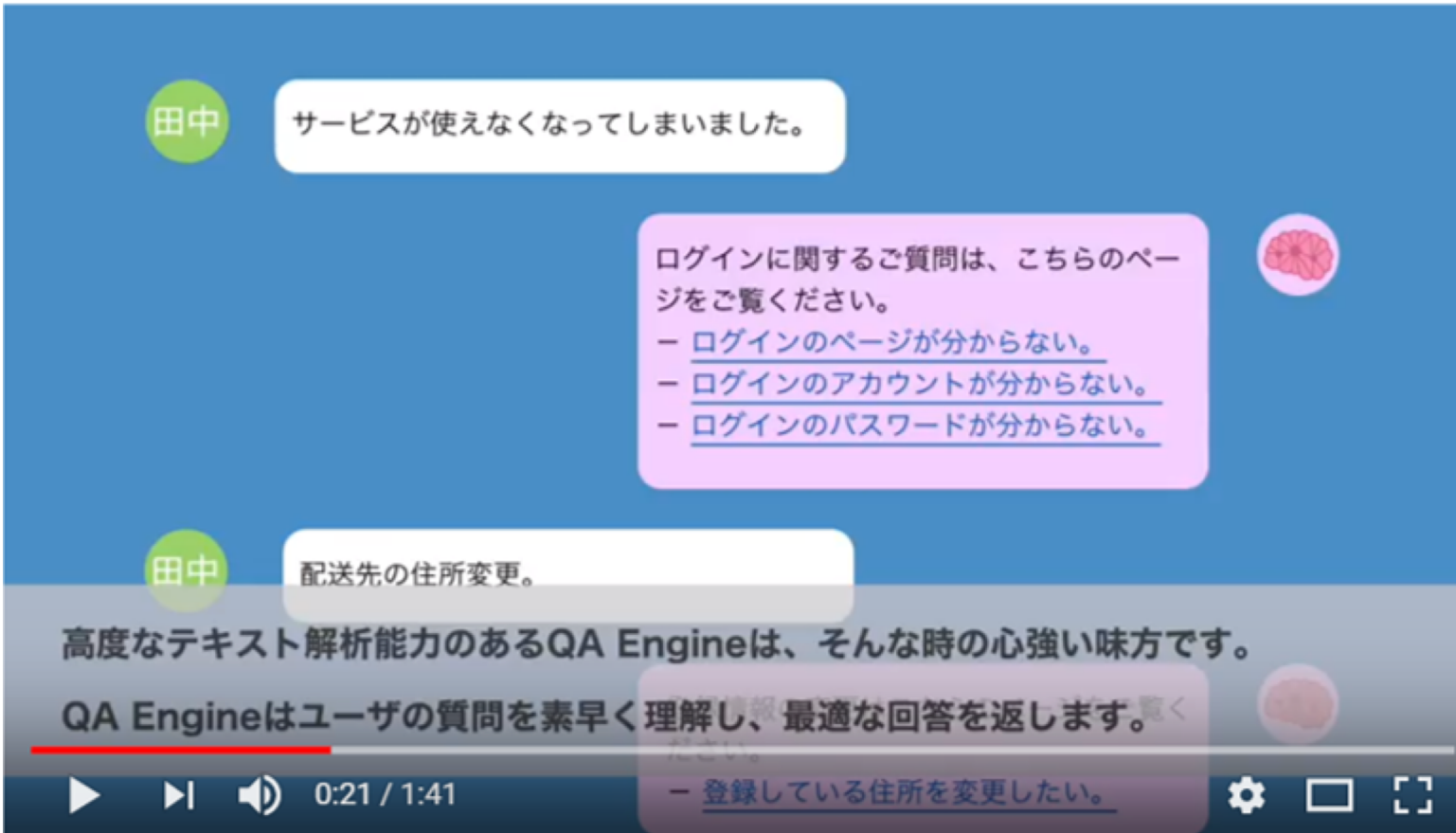Medical HAL   Non-Medical

HAL
CYBERDYNE

Wrong posture

He is lifting bags by his arms despite the device supportting waist movement.

Correct posture
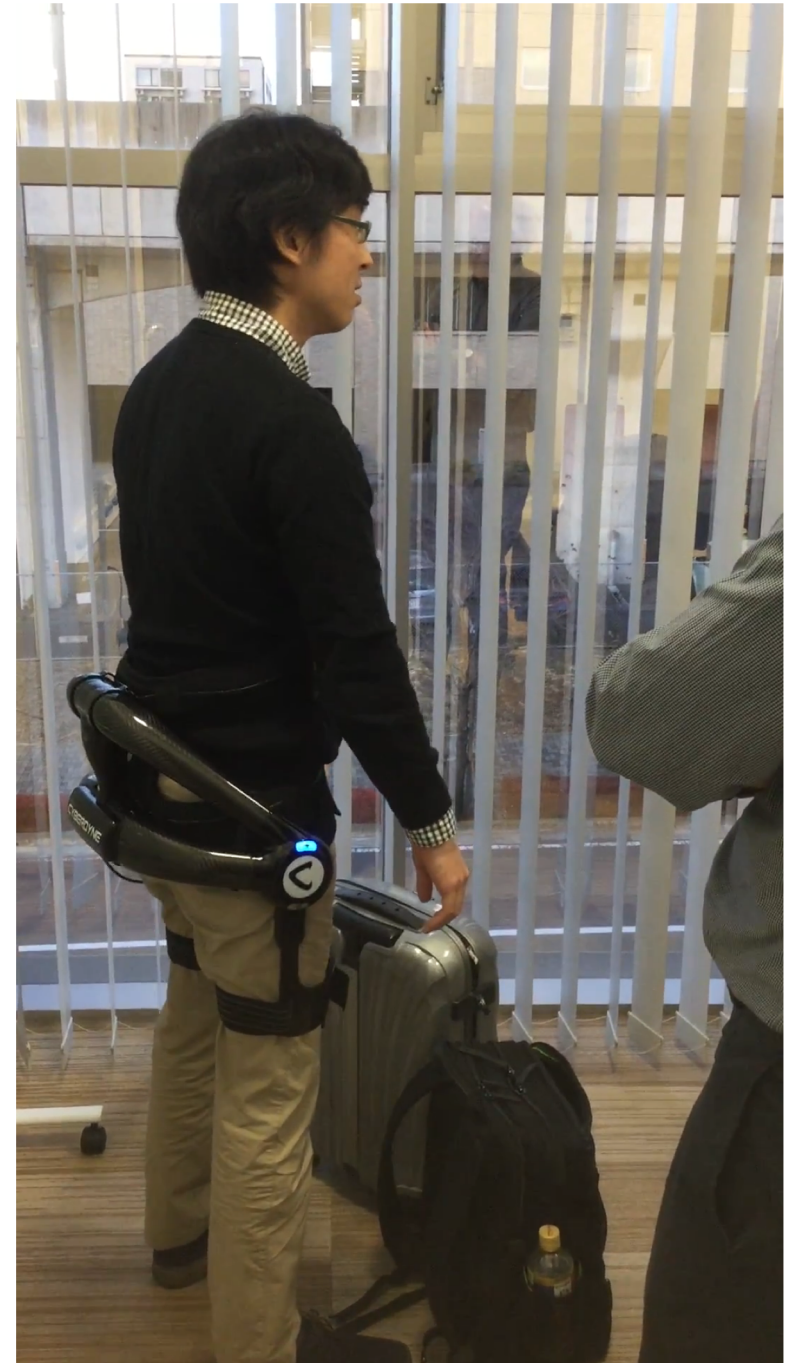
- QA engine
  - Automating helpdesks/chat bots
  - Automatic responses to users' questions natural language.
  - Can also be used as response support system for helpdesk operators.

Studio Ousia: **keyword extraction engine**

Diversity and plurality
EGOS has its identity and intellectual roots in the social sciences. It encourages an analytical and theoretical approach towards organizations.
EGOS embraces diversity of all kinds including a pluralistic approach to understanding organizations from the perspective of the social sciences
(such as sociology, social history, political science, psychology and anthropology) as well as the humanities (such as philosophy, discourse analysis,
literary criticism and rhetoric).

Language: [?]   Confidence: [?]   Helpfulness: [?]

| English ▾ | | 30.00 | | 22.00 |

| Preview Panel | Entity Graph | Mention Table |

Diversity and plurality EGOS has its identity and intellectual roots in the **social sciences**. It encourages an analytical and theoretical approach towards organizations. EGOS embraces diversity of all kinds including a pluralistic approach to understanding organizations from the perspective of the **social sciences** (such as **sociology**, social history, **political science**, **psychology** and **anthropology**) as well as the **humanities** (such as philosophy, **discourse analysis**, **literary criticism** and **rhetoric**).

The facets of the updated entrepreneurial narratives in the two cases

	The Japanese Society 5.0 Narrative (CYBERDYNE)	The Silicon Valley Narrative (Studio Ousia)
Relational facets	Relating grand challenges (e.g. aging society, healthcare) to the new venture's technology (robotics).	Relating the current problems (e.g. easy to use) to the up-to-date technology (AI).
Temporal facets	Acting for the future, i.e. at a critical moment, robotics can be critical to make the workforce healthier and more productive.	Acting at the right point in time, i.e. at the present time, AI can improve various aspects of the society.
Performative facets	The transition can be achieved when Japan's policy-makers and new ventures work together.	The transition can be achieved when new ventures work together with strong partners like VCs.

The origins of the field

- **The domestic narrative: Robotics**
  - Robotics technologies were born from Japanese academia and the long support from national institutions was very successful.

- **The global narrative: AI**
  - AI technologies failed to flourished in Japan in spite of receiving a long and strong national supports similar to robotics.

Case 1: Before establishing CYBERDYNE

- Relationality
  - The founder did not mold or shape reality, but built his narrative into the existing institutions.
- Temporality
  - He followed the **current** national story until the World Expo in 2005. He adjusted his action to the project narratives.
- Perfomativity
  - He did not use his own words on the communication front. He just followed the project aim and helped its narrative to spread.

HAL-5 at the World Expo

- The whole body suits was produced for the purpose of the World Expo, although his research focused on the assisted robot for human limbs.

After establishing CYBERDYNE

- Relationality
  - As a researcher he coined the term 'cybernics' and received legitimacy for it from national support programs. He relates grand challenges (e.g. aging society, healthcare) to his technology.
- Temporality
  - He referred to the **future** of an aging society and stressed that his prototype included key technology for resolving the problems that come along with it.
- Perfomativity
  - He co-created robotics narratives with government and media.

Before establishing Studio Ousia

- Relationality
  - When Dr. Yamada was a high school student, he already became a winner at the international web contest, building a good reputation as a young engineer. He did not use, however, a story of 'youngness' or 'entrepreneur' but of 'technology.'
- Temporality
  - He unintentionally spoke about *his* future in response to the media interview.
- Perfomativity
  - He enjoyed the game with his friends in the business rather than actively doing business. Since they did not intend to expand business so much, they did not receive any investment.

After establishing Studio Ousia

- Relationality
  - He keeps on connecting himself to up-to-date technologies, acting as the CTO in the newly founded company.
- Temporality
  - He explains the present up-to-date technologies for the purpose of solving **current** problems rather than emphasizing his past experience and future designs.
- Perfomativity
  - He used the fact he won at prestigious awards. This fact was connected to his company in the media and VCs became interested in investing.

Discussion and conclusion

- Entrepreneurs often talk and act differently before and after starting up a company.

- Entrepreneurs does not necessarily create his own story to expand business.

- Historical method is useful for understanding narratives.

- Thank you very much!

Method

- Starting with traditional narrative theory (Czarniawska, 1997; Freytag, 1863)
  - **Exposition, tension, new state and Narrative coherence**

- A comparative qualitative case study design (Eisenhardt, 1989; Yin, 2014)

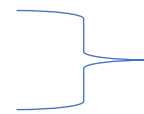# Comparative Case Study: CYBERDYNE and Studio Ousia

- The two case narratives illustrate intertextual links (Garud et al., 2014b) between the start-up and the societal narratives it is "born" into, though in two very distinct ways.

- **The early day**
- **The foundation process**
- **Government support**
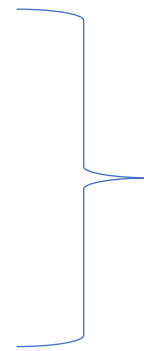
Exposition and Tension

- **The situation today**

New state and Narrative coherence

Case 1: CYBERDYNE

- **The early day**
  - The founder, Professor Sankai, shared a good impression toward a robot since his elementary school days.

- **The foundation process and government support**
  - Sankai had adjusted his technologies to national narratives as a member of the national project. After establishing company, he utilized a national support for creating his own narratives to get a legitimacy. He stressed his equipment could help people live comfortably facing with aging society.

- **The situation today**
  - Sanaki gets a good reputation by using his own narrative. Government and media supports his narratives.

Case 2: Studio Ousia

- **The early day**
  - The founder, Dr. Yamada, was in high school his team won the first and silver prizes in the international website contest ThinkQuest. He founded the first company with the members. He and his colleagues took it easy, participating in corporate activities like a game.
- **The foundation process and no government support**
  - He had no option to connect with a national support system in the early. He started business as a CTO with co-founder who is a CEO. He established his company using capital from VC funds and even received VC investment from outside Japan.
- **The situation today**
  - He developed his technologies with universities. Studio Ousia has won several prestigious awards for its QA engine. His company now receives a lot of attention.