

Japan's Future Imaginaries of Extended Reality

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Imaginaries: Future in the Making

As emerging technologies tend to rely heavily on ideas directly derived from Sci-Fi (Liao/Iliadis 2021), large Japanese tech corporations such as Sony and NTT also increasingly collaborate with Sci-Fi authors. The fact that they even provide short novels on their websites, outlining the impact of future tech innovation on Japanese society, further highlights the **connection between narrative fiction and tech-driven future**.

This connection is analyzed based on the theory of **Sociotechnical Imaginaries** (Jasanoff & Kim 2009) or **Future Imaginaries** (Mager & Katzenbach 2021). Instrumentalized, for instance, by large tech corporations, imaginaries are “collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of forms of social life [...] attainable through, and supportive of, advances in S&T [science and technology]” (Jasanoff 2015: 6). One example for this are imaginaries related to Extended Reality.



Header illustration of NTT docomo's XR City website ©NTT docomo

Extended Reality

Extended Reality (XR) is an umbrella term for technologies which blend into our perception of physical reality to varying degrees:

- **Virtual Reality (VR):** core technology of the Metaverse, replaces physical reality with a digital simulation
- **Augmented Reality (AR):** adds a virtual layer to physical reality, accessible via headsets, AR glasses, smartphone apps

→ both still in nascent stage, but more sociological research on VR



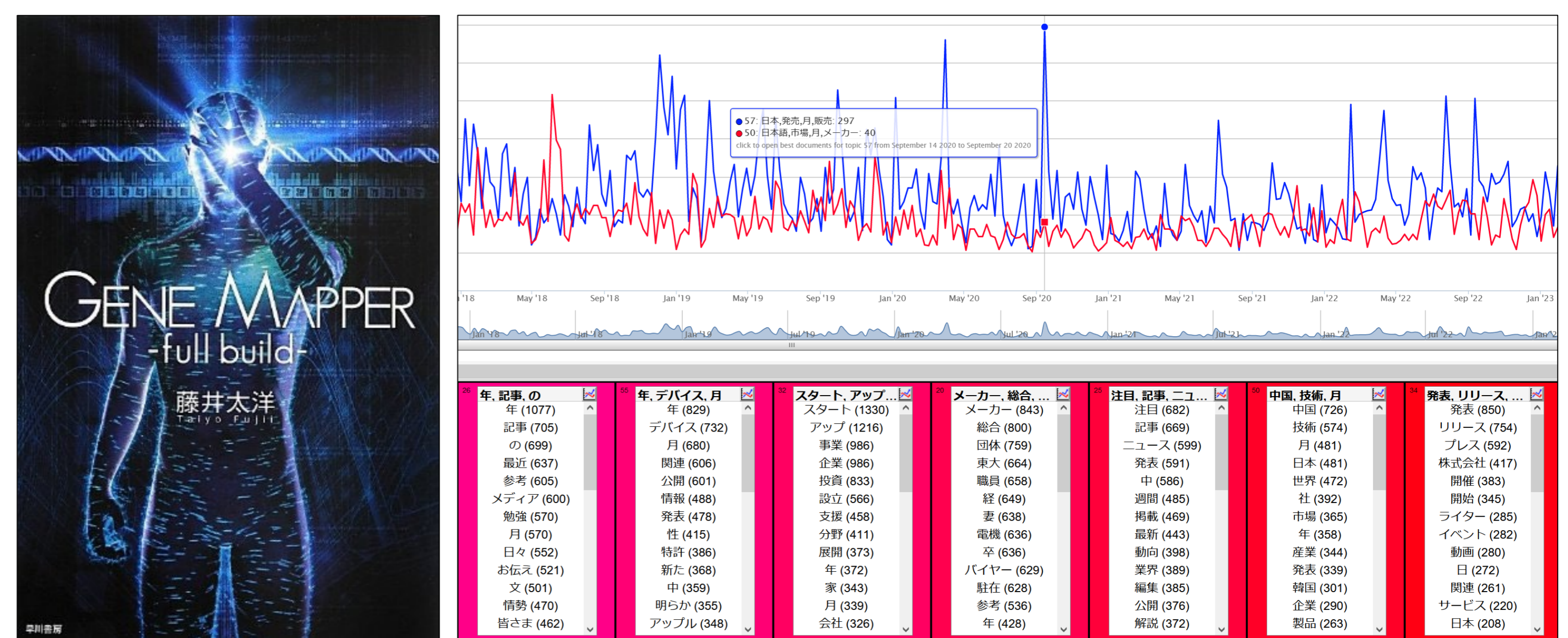
Video screenshot of Mogura VR's "Warp & Dive" event ©Mogura Inc.

Blended Multimodal Corpora

The project combines quantitative & qualitative analysis of two types of corpora:

1. **Narrative-focused corpora:** 30 XR-related Japanese Sci-Fi novels such as Fujii Taiyō's *Gene Mapper* (2012) are analyzed qualitatively. Six of these novels (one also written by Fujii) are part of Sony's and NTT's Sci-Fi prototyping initiatives.
2. **Imaginary-focused corpora:** More than 10000 XR-related news articles from the Japanese news website *Mogura VR*, dating back until 2015, are analyzed quantitatively.

The quantitative analysis is based on the **Topic Modeling** software *Topic Explorer*, i.e. an algorithm which identifies thematic clusters in large text corpora. A multimodal combination with **AI-based image analysis** (Baker/Collins 2023) and **interviews** with Sci-Fi authors are explored as well.



Left: cover of Fujii Taiyō's novel 'Gene Mapper' ©Hayakawa Design
Right: Topic Explorer user interface (screenshot)

Research Questions

- Do AR-related imaginaries/narratives (= almost no previous research) differ from VR-related ones (= extensive research)?
- How do Sci-Fi novels written in collaboration with large tech corporations differ from those written independently?
- Are there characteristics of XR-related imaginaries or fictional depictions which are specific to Japan?
- Does the relationship between fictional narratives and nonfictional imaginaries in Japan differ from other countries?

How does fiction shape future? Does it narrate a tech-driven shiny new world into being? Are problems/challenges also addressed?

References

Topic Explorer: Older versions are accessible via <<https://github.com/hinneburg/TopicExplorer>> (last access 2024/01). They have been customized for this project. An updated version of the software is in development.

Baker, P., & Collins, L. (2023): Creating and analysing a multimodal corpus of news texts with Google Cloud Vision's automatic image tagger. In: *Applied Corpus Linguistics* 3, 1-10.

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Jasanoff, S. (2015): Future imperfect: Science, technology, and the imaginations of modernity. In: S. Jasanoff, and S. Kim (Eds): *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power*. Chicago, IL: University of Chicago Press, 1–33.

Jasanoff, S., & Kim, S. (2009): Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea. In: *Minerva* 47, 119-146.

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