

Anticipations for the New AI Society

- Challenging to Meta Quest 2
and Chat GPT –**

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Introduction

With the ongoing pandemic of the novel coronavirus and the conflict in Ukraine causing continuous concerns, I found myself emotionally down, wondering how our society will transform in the future. However, since last autumn, various tools have emerged that allow us to experience virtual spaces, such as the VR goggles called "Meta Quest 2" and the AI-generated text software called "Chat GPT," signaling the arrival of a new era. While young people easily master these tools, it proves challenging for the elderly.

As we age, our reflexes in vision and hearing decline, and even the strongest individuals experience physical deterioration. In the world of the metaverse, where one can engage in social life using avatars, it feels like a borderless society is within reach, enabling the elderly to express their thoughts without worrying about age limitations.

Eager to explore the virtual realm, I promptly purchased the VR goggles, "Meta Quest 2" However, I faced confusion as there was no Japanese instruction manual, leaving me at a loss about how to operate the device. Fortunately, I discovered that my niece's family in Osaka was

skilled in its operation, and they kindly came to my house to teach me.

Another tool, the AI-based text generation software called “Chat GPT,” is said to assist university students in writing reports and can provide answers when given specific tasks. It is a tool that surpasses traditional search engines, and it has become a topic of discussion as we take another step closer to singularity.

When I attempted to access Chat GPT, I encountered difficulties connecting. According to online posts, as of February 2023, there was no official Japanese website, and there were no plans to provide one in the future. Just as I was preparing to patiently wait until a Japanese version became available, a piece of advice from a friend of my middle and high school days allowed me to step into the world of Chat GPT.

With the help of reliable people in my life, I became able to utilize these new tools. Even with convenient tools at hand, taking the first step is crucial. If my experiences can serve as motivation for those who are about to embark on using VR goggles or Chat GPT, I would be delighted.

With gratitude to my wife, Michiko, who always tolerates my whimsical dreams.

June 2023

Chapter 1: Challenging to Meta Quest 2



The term “metaverse” is a coined word that combines the Greek word “meta,” meaning “transcendent,” with the word “verse,” meaning “world.” The metaverse refers to a virtual space created on the internet, where users can freely control their own avatars and engage in various activities within a constructed world.

When it comes to virtual spaces, I used to think of them in the context of science fiction, games, art, and music. Games like the popular “Animal Crossing: New Horizons,” where you create your own character and freely manipulate them within a virtual space, serve as examples of its practical application in recent years.

Episode 1: Purchasing VR Goggles, Meta Quest 2

Having purchased VR goggles, the Meta Quest 2, I found myself in a predicament as there was no instruction manual and I didn’t know how to operate the device. Even the tech-savvy individuals around me, who were knowledgeable about IT, had never experienced using VR goggles, leaving me at a loss.

One day, I heard that my niece’s family, who lived in Osaka, was enjoying VR experiences. I immediately sent out an SOS signal, and she

graciously came to Kobe with her son, who was more knowledgeable about VR than she was, to provide hands-on guidance.

My niece's son, a university student, patiently explained things to me, despite my elderly confusion and sweaty forehead. However, I struggled to operate the controller skillfully with my hands. Nevertheless, I received guidance on setting up the Meta Quest 2 and managed to enter the Japanese Tutorial World. (This world was the only one where Japanese was understood.)

Upon entering this world, avatars started approaching one after another and speaking to me in Japanese. They were enthusiastic in their speech and kindly responded to my inquiries. However, as a newcomer, I couldn't understand the meaning of the terms they used, which left me bewildered. With the help of my niece, I managed to get through the first day of lessons somehow.

Thanks to my niece's tutorial emails, I was able to create my own avatar and move around within my virtual room. Despite participating as an avatar, which should make my age indeterminable, it seemed that I couldn't hide my age, and I was immediately identified. My niece warned me that having an avatar dressed in a cute dress would make everyone assume I'm a woman.

Occasionally, when I entered new worlds that were not in Japanese, various avatars would approach me and try to communicate. However, since they spoke languages other than Japanese, I couldn't understand them at all. The avatars would then make a bored expression and leave in front of me.

Episode 2: Exploring World Heritage Sites with Meta Quest 2

VR (Virtual Reality) is a "technology" that allows us to experience virtual worlds. By wearing VR goggles, we can immerse ourselves in virtual environments and have experiences that feel like reality.

In VR, similar to YouTube, we can access various websites. These websites project immersive and powerful visuals in a 360-degree, 3D world.

Among the sites I've visited so far, the "Ancient City of Petra in Jordan" was the most awe-inspiring. It made me feel as if I were actually standing there in person. It was also the first time I experienced the brilliance of 8K images.

The VR goggles turned out to be a perfect gift for my wife, who loves watching the "World Heritage" program that airs on TV every weekend.

Initially, my wife was reluctant to wear the VR goggles, but she quickly learned how to operate them. When she saw the 3D world unfold before her eyes, she was deeply moved.

Episode 3: Granddaughter's Gaming Enjoyment

My sixth-grade granddaughter visited me right away, eager to try out VR. For her, VR goggles were a completely new experience, but she quickly mastered the complex controller operations. She was playing a Star Wars game, swinging her arms up, down, left, and right. Young people who are familiar with smartphone games can skillfully move their fingers and quickly adapt to using VR.

As for me, it seems that playing games is not an option. My niece also warned me not to stand and operate the controller as an elderly person. I'll simply sit on the sofa, leisurely traveling through the virtual world and enjoying conversations in the virtual room. However, I need to find VR companions to engage with.

Episode 4: Attempts in the Medical Field with the Metaverse

At the Japan Clinical Pathway Society conference held in Gifu City in

November 2022, “Future of Metaverse Medicine” was the theme of a symposium.

Led by Dr. Shigeru Yoshida, a former colleague from Kobe University’s Pediatrics Department, the symposium was titled “The Future of Medicine Brought by AI: Angel or Devil? (For Doctors/For Patients).” Unfortunately, I couldn’t attend in person, but I watched it through on-demand streaming. Dr. Yoshida appeared as an avatar representing a specialist in enuresis (bedwetting) treatment.

Although the discussion is currently based on data gathered from human populations, when Dr. Yoshida’s avatar, “Shigemaru,” is projected onto the massive screen in front of the audience, it becomes compelling as he discusses the potential for metaverse-based medical treatments in the near future.

If AI-based medical consultations can be conducted through avatars, patients would no longer need to physically visit specialized clinics. Multiple patients could be examined simultaneously. Renowned specialists might have patients flooding in not only from within the country but also from all over the world. It seems like the world is becoming quite perplexing.



Episode 5: Developmental Disorders and the Metaverse

When searching for developmental disorders and the metaverse, I came across the term “neurodiversity” or “Neurodiversity.” Although it was unfamiliar to me, the Ministry of Economy, Trade, and Industry’s website posted an article titled “Promoting Neurodiversity” on April 8, 2020.

Neurodiversity is a concept that combines the words “Neuro” (brain/neuron) and “Diversity.” It advocates for perceiving the various differences in individual-level characteristics of the brain, nerves, and their derivatives as a form of diversity and respecting and harnessing those differences in society.

Rather than viewing phenomena arising from developmental disorders such as autism spectrum disorder, attention-deficit/hyperactivity disorder (ADHD), and learning disabilities as deficiencies or superiorities

in abilities, the concept of neurodiversity sees them as “natural and normal variations in the human genome.”

The Ministry of Economy, Trade, and Industry considers embracing neurodiversity as a growth strategy, aiming to provide certain considerations and support to enable individuals with developmental disorders to utilize their characteristics and become assets to companies.

However, within the realm of developmental disorders, there are groups with high IQ and low IQ, resulting in significant differences in social life. Many of the developmental disorder children typically seen by pediatricians belong to the low IQ group, making it doubtful whether the term “neurodiversity” as defined by the Ministry of Economy, Trade, and Industry can be applied uniformly.

Nevertheless, it can be expected that individuals with autism traits or ADHD, who struggle with face-to-face communication, may find it easier to interact with others in the metaverse. I believe that providing a metaverse environment as a platform for communication for individuals with developmental disorders is highly meaningful.

In a social welfare corporation in Kobe City, they provide a platform for faculty and staff engaged in supporting students with disabilities at

local universities and disabled university students to engage in company introductions and free talk sessions. All these interactions take place in the VR space online, and during the free talk sessions, participants can directly ask working professionals with hearing impairments, mental impairments, and developmental disorders about their own working styles and occupations. The fact that such conversations can be facilitated in VR through avatars presents significant advantages, as it allows for discussions that would be difficult to have in conventional settings.

Episode 6: Apple to Release New VR/AR Goggles

On June 5, 2023, Apple announced the “Vision Pro,” an augmented reality (AR) device. When worn on the head, it combines the real world with digital screens, creating a sense of a vast display in front of the user. It is set to be released worldwide by the end of next year, with a price of 480,000 yen.

When connected to an iPhone or iPad, it can also run apps specifically designed for those devices. Instead of using controllers, it can be operated through eye movements, gestures, and voice commands, allowing users to enjoy a range of activities from work to entertainment in a 3D space. Reports suggest that it will revolutionize the world of

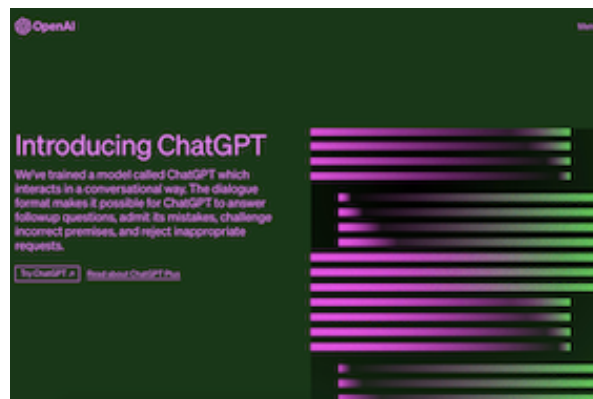
computing, shifting from “mobile” to “spatial” through augmented reality (AR) and mixed reality (MR) technology.

As people age, their finger movements may become less precise, and dry fingers may lead to unresponsive smartphone interactions. This new device may eliminate the need to enlarge the screen on an iPad using finger gestures while reading, for example.



From Apple’s announcement

Chapter 2: Challenging to Chat GPT



Chat GPT is an AI chatbot and text generation software developed by OpenAI, released in November 2022. With its impressive text generation capabilities, it has caused a sensation worldwide. In order not to fall behind the times, I attempted to download it, but I encountered some difficulties. When I consulted with a friend from my junior and senior high school days who is also my pen pal, he kindly sent me a PDF guide on how to use Chat GPT.

As I followed the instructions, I realized why I was having trouble. Up until I entered "Chat GPT" in a Google search, everything was fine. However, I had overlooked "Introducing Chat GPT" that appeared at the top and instead accessed websites written in Japanese from the second search result onwards.

After successfully installing it, a familiar screen appeared on my computer, just like what I had seen on TV. As I started using it, I realized that the interface was entirely in English, so I thought I should ask questions in English. I asked, "I am Japanese. How to use Japanese?" and the response was, "Hello! If you want to use Japanese, there are several ways you can do it, depending on your goals and interests. Here are some suggestions: Learn the basics: If you're new to Japanese, start

by learning the basics of the language, such as hiragana...” In summary, it recommended me to study Japanese more, starting from hiragana. Feeling that this wouldn’t be useful, I decided to ask again.

I rephrased my question as “I am a native Japanese speaker, and it is difficult for me to ask in English. Can I ask you in Japanese?” The response was, “Yes, of course! Please feel free to ask in Japanese if you have any questions. I’ll do my best to assist you.” It was a polite response in Japanese.

After that, when I asked, “What is the distance to the moon?” the AI not only provided the distance but also answered various other things it knew. From that point on, I realized that I needed to improve my skills in asking questions effectively.

Episode 1: Translating my own essay into English

I discovered that Chat GPT had an English translation feature, so I decided to try translating my recent essay, “Healing Adults with Babies: A ‘Manakai’ Experience.” I was amazed by the instant output of the translated English text. It accurately and quickly translated the content, which is often not easily understood even when spoken verbally.

While I thought this would be useful, I had some lingering concerns. I

consulted a friend from high school who is proficient in English and French, via email. She quickly responded with the following message: "Since it was translated by an intelligent AI, I think it should be fine. However, I feel a little uneasy because I have been interested in children and have been exposed to your ideas, so it feels a bit unreliable. While the AI can translate the text correctly, it might not fully grasp the knowledge and emotions of the author. What do you think?"

Her comment reminded me of my experience studying in Paris 50 years ago. In my second year, I was told to write a research paper in French. I desperately wrote it while holding a Japanese–French dictionary and brought it to my boss. As soon as my boss saw it, he said, "I understand the meaning of the sentences you wrote, but this is not a French research paper." In the end, the paper became completely unrecognizable. Comparing that experience to the AI-generated text this time, I strangely felt satisfied that the AI's text was far better than my French writing at the time. As long as I checked for major mistakes in the overall meaning of the English text, it was much better than my own English.

Furthermore, I attempted to use Chat GPT for English translations of more than ten of my recent essays. For texts exceeding 1,000 characters,

the translation sometimes took several minutes or the AI wouldn't respond at all. However, as long as the main theme of the text remained consistent, it translated longer texts well.

In my essays, I express my thoughts as they come to mind, so there are instances where I address two different topics within a single sentence. While I intended the "turning point" of the story during writing, if it became too excessive, the AI would find it difficult to understand the context. After careful consideration, the AI would remove the unnecessary parts and deliver a clear and refined text. It felt more like receiving a check on my Japanese writing rather than a translation.

Episode 2: AI-generated texts may not always be accurate

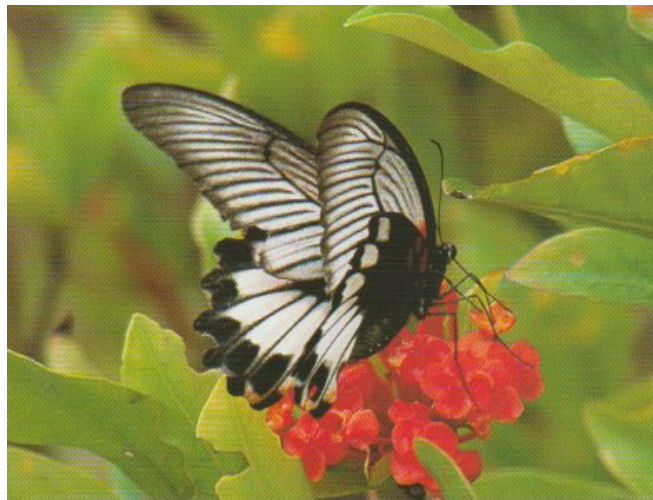
When I asked about "kernicterus," a cause of neonatal brain damage, from my area of expertise, it was mistakenly translated as "nuclear icterus," and the explanation provided was completely unrelated.

The texts generated by Chat GPT are based on processing a large amount of training data and outputting "plausible answers" based on probabilities. If there is insufficient information in the database or if a large amount of misinformation is fed into it, it can create incorrect

content and lead to confusion in the world.

AI-powered text generation software is just a tool, and its usefulness depends on how it is used. We humans must not neglect our intellectual training to surpass computers.

Chapter 3: From a Fluctuating Society to a New Society



From K.Ajimine' s “Okinawa Butterfly Story, 1996”

The song "Shinjidai (A New Era)" by Ado, which is popular among teenagers and those in their twenties, was awarded the Excellence Award at the Record Awards and was also performed at the year-end Kohaku Uta Gassen in 2022.

Although I had never been interested in pop music since my younger days, I heard this song for the first time at the end of the year and felt a strong impulse like never before with its rhythm. The tempo is fast, and it's difficult to catch the lyrics, so I looked it up on the internet and found the word "metamorphosis" in the lyrics.

Lyrics of "Shinjidai":

The new era is this future

If we can change the whole world, change it

Get rid of annoying things and stuff

Let's transform this world

The music, the magic you create

.....

From the word "metamorphosis" that appears in these lyrics, I

recalled a slide I used in my lectures at Kobe University 25 years ago, titled "Metamorphosis of Civilization."

Episode 1: Metamorphosis of Human Society

A butterfly gradually transforms its larval body structure inside the pupa and emerges as a beautiful adult capable of flying. The pupa undergoes metamorphosis, changing its form and behavior, rather than simply growing. Mammals like us do not have this kind of metamorphosis process as individuals.

The human society during the period of high economic growth could be compared to the process of a butterfly's metamorphosis, starting from a hatched egg and steadily growing into a pupa. However, at a certain stage of growth, it becomes like a pupa, motionless and trapped inside a rigid shell.

From the late 20th century to the present, over the past 30 years, human society has remained in a "fluctuating society" where old and new characteristics coexist, similar to a pupa trapped in a rigid shell. Now, there are many things that cannot be contained within the previous mindset, and it seems that we have entered a transitional period towards a new society.

Episode 2: Perceptions of Modern Society by the Younger Generation

There are words frequently used recently, such as “individualization” and “diversification.” These words seem to be understood at first glance but are actually difficult to grasp.

It is certain that society is no longer characterized by uniformity and homogeneity as in the past, but the meanings of these words are not clear. The lyrics of “Shinjidai (A new era)” clearly convey the expectations of the younger generation for their future.

With the spread of the COVID-19 pandemic, remote learning has increased, and schools have rapidly become more digitalized. My sixth-grade granddaughter is much more adept at using smartphones than I am and effortlessly works on homework using the computer provided by the school.

The issue of school refusal is not due to problems with the children themselves but rather lies in the outdated educational methods. It is understandable why children do not want to go to school. The ones facing difficulties seem to be the young teachers themselves. Despite being from Generation Z, they seem to be caught between outdated

teaching methods imposed from above and the expectations of their students, who regard them with indifference.

Episode 3: The Future Society with Generation Z at the Center

Generation Z is not precisely defined but generally refers to those born between approximately 1995 and 2012.

Generation Z grew up surrounded by the internet, computers, and smartphones, making them digital natives. Many of them spend their time on information gathering and communication through the internet, such as YouTube and social media, and as a result, their TV viewing time has decreased.

Generation Z tends to prioritize “time performance” over “cost performance” and uses simplified expressions for social media. They even watch movies at double speed.

They focus on how efficiently they can acquire information within limited time and the level of satisfaction they can derive from it. Listening to their conversations, it is impossible for me to understand what they are talking about.

In today’s world, where AI has advanced to this extent, relying solely

on experience widens the gap between us and the younger generation. To create a vibrant nation, it seems most effective for young people to actively participate and have their voices translated into action in all fields, including politics and the economy.

Conclusion

The Children's Basic Law, which was enacted in April of this year, states that "every child should have opportunities to express their opinions and participate in various social activities related to themselves according to their age and level of development." Our human society is like a butterfly that has completed its larval and pupal stages and is now taking off into the sky, undergoing a great metamorphosis, anticipating the arrival of a new society.

I owe my ability to interact with the latest devices to my friends and acquaintances. Without their advice, I would not have been able to achieve this. The elderly population in our country has exceeded 30%. The challenge is how to utilize AI for these elderly individuals. In order to strive for a borderless society, it is essential to develop AI tools while also fostering connections between people.

If this booklet can be even slightly helpful as we aim for a borderless society in the new era, I would be delighted. Finally, I would like to express my gratitude to my friends, particularly Mrs. N. Okada, and former colleague, Dr. H. Nishio, a pediatrician, for their valuable advice.

July 7, 2023.