

Time travel in 2023

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From DeLorean to Tesla

Future projections are indispensable both in national policy making and in corporate management. Forecasting is also one of the major roles of think tanks. On the other hand, unless a time machine is invented, it is impossible to perfectly predict what will happen in the future.

Unfortunately, the time machine has not been developed even now in 2023, so let's go on a time travel in a virtual time machine. The time machine featured in the 1985 film "Back to the Future" was a modified DMC-12 sports car model featuring gull-wing doors and was manufactured by DeLorean Motor Company between 1981 and 1982. A good car that can serve as the base for the 2023 time machine might be Tesla's Model X, doors of which also open directly upwards. The DMC-12 is a gasoline-powered car equipped with a six-cylinder SOHC engine with a displacement of 2849 cc, while the Tesla Model X is an electric car equipped with a 407-V lithium-ion battery. The line in the movie was "If you're gonna build a time machine into a car, why not do it with some style?" but if we will build a time machine in 2023, "Why not do it with being eco-friendly?"

Press Conference by US Defense Secretary Donald Rumsfeld

Since the beginning of the 21st century, events labeled as 'unexpected' have frequently occurred. Have the linear predictive methods of modern science reached their limit, or is it that people tend to be caught up in the preconceptions from past experience and knowledge and consider many events as 'unexpected'?

For our time travel, let's make our first stop back to the beginning of the 21st century. In February 2002, a press conference was held by Donald Rumsfeld, Secretary of

Defense of the George W. Bush administration. The terrorist attacks by Islamic extremist groups on September 11 2001, at the beginning of the 21st century, was a shocking event that marked the end of the post-Cold War hegemony of the U.S. Immediately after, the U.S. prepared to invade Afghanistan with the aim of destroying Al-Qaeda's bases of operations and overthrowing the Taliban regime, as well as attack Iraq on the grounds that the Saddam Hussein regime was providing weapons of mass destruction to terrorist groups. When confronted by journalists about the lack of evidence of Iraq possessing mass weapons, Rumsfeld replied:

"Reports that say that something hasn't happened are always interesting to me, because as we know, there are 'known knowns' — there are things we know we know. We also know there are 'known unknowns' — that is to say, we know there are some things we do not know. But there are also 'unknown unknowns,' the ones we don't know we don't know."

Rumsfeld seems to have wanted to convey that in confronting Saddam Hussein's Iraq, we needed to assume the existence of the 'unknown unknown,' and that it would be extremely dangerous not to question the threat posed by Iraq. At the time, his remarks were perceived as an attempt to bemuse the journalists.

Over time, however, Rumsfeld's logic gained recognition among philosophers, psychologists, and sociologists around the world. Slovenian philosopher Slavoj Žižek, in particular, argued that in addition to Rumsfeld's three categories, we must not disregard the fourth category of 'unknown knowns.' This means to ignore what you know, i.e., to shut your eyes to the 'inconvenient truth,' which is something we should never do when dealing with a problem.

Warnings from a quarter century ago

Let's go back further in time before the turn of the century. Towards the end of the 20th century, in 1997, when Japan was in the midst of a financial crisis, Yamaichi Securities, Hokkaido Takushoku Bank, and other financial institutions went bankrupt. On New Year's Day of the same year, the Nikkei Shimbun started a series of articles titled "Warnings from 2020." In this series of articles that lasted for about a year, the journalists first drew the picture of Japan and the world in 2020, and then looked back at the current state of the economy and society.

"By around 2020, one-quarter of the population will be elderly people aged 65 or older, and the declining birthrate will put Japan on the brink of economic decline. Global problems will also become more serious."

"The Industrial Revolution 200 years ago shifted the protagonist for wealth generation from 'fields' to 'factories.' In the new revolution, 'factories' have passed on that leading role to 'knowledge.' It will be an era where knowledge can add more value than the thing itself." Currently, the potential growth rate of Japan is estimated to be around 0.6%^(*1), which puts us exactly on the verge of negative growth. The ratio of the elderly aged 65 or older to the total population is 29.1%^(*2). If we replace the word 'knowledge' with 'information,' we see that the source of added value has also changed drastically. The declining birthrate and aging population and the economic stagnation are not 'unexpected' crises. The future is not an 'unknown unknown' that is unclear and difficult to predict, and although the crisis was recognized, it became an 'unknown known.'

Kenichiro Komai's vision

Let's continue our time travel. Going back further by a quarter century, on June 20, 1973, the opening ceremony of the Hitachi Research Institute was held at the old Shin-Marunouchi Building near the Marunouchi Exit of Tokyo

Station. In October of that year, the outbreak of the Fourth Arab-Israeli War caused oil-producing countries in the Middle East to raise oil prices by 70% and cut their supply. This triggered the first oil crisis. The Japanese economy, which relied on the Middle East for most of its oil resources, was hit hard by 'runaway inflation' due in part to the boom from remodeling of the Japanese archipelago that started the previous year and an increase in prices due to the oil crisis, bringing an end to the post-war high-growth period.

Kenichiro Komai (then Chairman of Hitachi, Ltd.), who proposed the establishment of Hitachi Research Institute, was one of the few Japanese members of the Club of Rome.

The Club of Rome became widely known following a report that it commissioned and published in 1972 under the title 'The Limits to Growth.' The Limits to Growth predicted the possibility of resource depletion in around 20 years if population growth and environmental destruction continue and that the growth of mankind would eventually reach its limits due to environmental deterioration and resource constraints. The report was regarded as a cogent warning to people around the world, which was also reeling from the shock of the first oil crisis.

1973 was also the beginning of the ensuing turbulent period. After the oil crisis in the latter half of the 1970s, the limitations of post-war welfare state policies became clear in developed countries. And by the 1980s, the trend toward neoliberal economic policies by Thatcher (UK), Reagan (U.S.), and Nakasone (Japan) picked up speed. On the other hand, China, led by Deng Xiaoping, had been moving forward with the transition to a socialist market economy under the slogan of 'Reform and Opening-up' from 1978.

Gaining in part from his experience at the Club of Rome, Komai had a glimpse of the turbulent period ahead. Komai left calligraphy called 'Seek out the Truth' for researchers at Hitachi Research Institute. The work of a think tank, which is directly related to national policy and corporate management, requires determination to ascertain the 'truth,' and sometimes it takes courage to face that

(*1) Cabinet Office, "Economic and Fiscal Projections for Medium to Long Term Analysis" (July 25, 2023)

(*2) Statistics Bureau, Ministry of Internal Affairs and Communications, "Current Population Estimates as of September 15, 2022"

‘truth.’ Over the course of HRI’s 50 years of history, the meaning of ‘seeking out the truth’ has become even more profound.

Vantage to 2050

Let’s now leap to the future in our time machine, setting the destination to 2050. The navigator of the time machine shows that there are two major challenges that humanity must address before reaching that year.

One is the global environmental problem. In particular, the devastating natural disasters occurring in various parts of the world have made global warming a stark reality. The Paris Agreement has set out the goal of keeping the global average temperature rise well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C. The global average temperature has already risen by 1°C since the Industrial Revolution^(*3). As temperatures rise further and exceed the critical point of 2°C, reciprocal effects such as the collapse of the north and south ice sheets, the turning of the Amazon rainforest into savannah, and rapid changes in the ocean circulation will become widespread, wherein the ‘Hothouse Earth’ can no longer be reversed. To maintain the 1.5°C defensive line against the critical point, we must halve carbon dioxide emissions by 2030 and reduce net emissions to zero by 2050. The Intergovernmental Panel on Climate Change (IPCC) estimates that there is a 50% chance of reaching the 1.5°C increase between 2021 and 2040. The moment that will determine the fate of the Earth is fast approaching, and there is no ‘Ideal 2050’ if things continue as they are.

Another challenge to overcome is the diminishing advantage of freedom and democracy and democratic capitalism based on the market economy. In the 21st century, the number of democratic states has been decreasing, and the global reality is that there are now more non-democratic countries^(*4). China’s state capitalism, which does not consider freedom and democracy as

(*3) Intergovernmental Panel on Climate Change (IPCC), “Sixth Assessment Report (AR6)”

(*4) V-Dem Institute, “Democracy Report 2021”

universal values, has become a new alternative for developing countries seeking independence in their political systems.

Over the past 50 years, many developed countries have turned to neoliberal policies that place an overwhelming emphasis on efficiency over fairness. While policies such as trade and investment liberalization and deregulation have accelerated economic growth in both developed and developing countries, economic disparities have widened within developed countries. In the U.S., over the course of 50 years from 1970, the share of income held by the top 1% of the wealthiest individuals has nearly doubled, rising from 11% to 19% of the total. If we look at America’s response to Iraq and Afghanistan and the reality of the 2008 financial crisis, the United States, as a proponent of ‘democratic capitalism’, is no longer a universal success model for developing countries, nor is it a power that can be relied upon unconditionally in terms of security.

Global environmental problems and the decline of democratic capitalism are shedding doubts on the validity of the historical view of Western ‘progressivism’ that the ideal future lies beyond growth and development. The ideology of ‘progressivism,’ which constantly pursues more efficient satisfaction of desires, has led to placing utmost priority on economic growth resulting in the depletion of Earth’s resources. Humans do not always act with rationality. There are 193 countries around the world, counting only member states of the United Nations. The diversity of their history, ethnicity, and culture precludes an unconditional acceptance of the theoretical rationality of democratic capitalism.

To a future with hope

If we are ready to face the challenges of 2050 head on, we do not need a time machine anymore. If we have hope, we can change the future.

Hope has two meanings: one is the desire for what you wish to happen, and the other is the possibility that it will come true. Conversely, a mere acknowledgment of the current situation that “we will be fine without doing anything new” or a resignation that “it’s too late to do

anything” in the face of difficulties will undoubtedly lead us to our ruin.

Amid composite crises such as climate change, pandemics, and military conflicts, the world is once again entering an era of division. However, looking back on the past 50 years, we clearly see that there is no other way to steer the Spaceship Earth 2050 except by building a relationship of order between humans, between humans and nature, and between nations through cooperation and collaboration. We must break away from the curse of progressivism and reconstruct new universal values that can be shared by humankind through a paradigm shift toward a view of civilization based on sustainable coexistence with nature and respect for the public good and diversity. Alone, even superpowers cannot solve the crises facing humanity. Now, it has passed fifty years since the establishment of Hitachi Research Institute. The role of the think tank that Komai envisioned has become more crucial than ever.

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Author's Introduction



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Joined Hitachi, Ltd. in 1979. He was appointed Deputy Managing Director of Hitachi Asia Ltd. and President of Hitachi Research Institute. He is currently a Director of NIPPON CARBIDE INDUSTRIE CO., INC., an Executive Board Member of Board of Trustee, J. F. Oberlin University and

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