The future of cities, depicted through creativity and lifestyle

City, Art, and Innovation

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Introduction

"Let's host a 'Cultural Davos' in Tokyo" — This was the starting point of the Innovative City Forum (ICF).

The ICF was launched in 2013, the tenth anniversary of Roppongi Hills. Evident problems at the time included economic stagnation and other challenges to Japan's postwar economy, which had developed primarily through mass production, and the collapse of the bubble economy and its aftereffects. Addressing the question of what Japan should do next, we arrived at an answer: "We should shift toward creative work." In other words, instead of pursuing mass quantities in both manufacturing production and services, we should be content with limited numbers but create things that other countries cannot make—high-quality, unique products.

However, it was also apparent that all Asian countries would eventually move in this direction. We thus believed Japan should strive to be recognized globally as the home of Tokyo, Asia's predominant hub for creative industries—science, technology, art, design, film, and music.

What should we do to achieve this? Rather than simply entering into a competition between cities, we concluded, Tokyo must innovate through knowledge and become a "creative city."

From this emerged the idea of hosting an annual international conference, something like a cultural version of the World Economic Forum (commonly known as the "Davos Forum"). The Davos Forum is a space where new ideas from around the world converge. People gather from across the globe to exchange the latest information in various fields, and attendees return to their countries to share what they've learned. This is why so many people want to attend. Similarly, the ICF aimed to become a forum where creators worldwide would want to be present each year. Setting the stage at Tokyo's Roppongi Hills, we sought to realize this "Creative City Tokyo" concept. Specifically, we established it as an international conference to "envision the future of cities and lifestyles" by asking, "How will we live twenty years from now?"

A city is like a vast container. Among its contents are art, technology supporting the city's development, and the urban design that forms the vessel itself. We believed these three areas would become central fields for discussion.

The program committee for each session consisted of four people: Heizo Takenaka, Hiro Ichikawa, Joichi Ito, and myself. In our planning meetings, we first discussed what each of us found to be most interesting at the moment. Then, from our respective fields of expertise, we recommend people who we believed to be important at the time. Since we each came from different backgrounds, other committee members often didn't know these recommended individuals. However, our criteria were clear: we would select people working on issues related to future ways of living—our future life-

styles. For example, we didn't just choose someone who "studies Mars" but rather someone researching how humans might live if they were to inhabit Mars.

Over those ten years, we hosted more than 400 speakers, including people from art and design, technology and science, and those who could discuss cities in terms of grand visions. Moreover, all of our guests were engaged in diverse and remarkable activities.

I feel that by listening to discussions from varied fields, the ICF gave me a bird's-eye view of our current living conditions. Using the information and insights gained from ICF, we held the "Future and the Arts" exhibition (2019–2020) at the Mori Art Museum. That exhibition examined near-future cities and lifestyles through the lenses of art, design, and architecture arising from the influences of cutting-edge technologies such as AI, robotics, biotechnology, and genetic engineering. While art and technology might seem mutually distant at first glance, they are quite similar. At the frontier of creative activities, where new perceptions of reality and visions compete, the boundary between art and technology disappears. Many discussions based on the latest insights ultimately led us to contemplate broader questions: How should humans live? What does it *mean* to live? What is the nature of reality and the universe surrounding us? Are the economic and political principles supporting our society adequate?

The ICF became an excellent platform for these many discussions. We realized how having people meet and talk, introduce the latest ideas to others, and mutually exchange and refine these ideas is crucial for human development.

In the ICF's early days, we program committee members were relatively optimistic about technology. There was a general sentiment that as technology progressed, society and our lifestyles would improve. However, around 2017, the darker aspects of the internet and more negative aspects of technology began appearing in the media. Of course, all technology has two sides, both positive and negative aspects, so it's ultimately a question of how humans *use* technology. It's not simply about technological advancement; we humans must act responsibly when using technology.

Furthermore, there are urgent issues such as sustainability and environmental problems that cannot be solved by technology alone, and it seems our attitudes toward technology have become more cautious. Joi Ito was the first among the program committee members to change his perspective. Feeling the limitations of capitalism, in an interview following the decade of the ICF, he spoke about the need for "a societal paradigm shift."

Also, we never imagined that a pandemic would occur in 2020, seven years after we started, followed by a war that would shake the world. But wars break out, technology advances, and ideologies change, so we keenly felt the need to grasp and contemplate what kind of situation we were in.

Having been involved in art for many years, I've consistently maintained that culture and art are especially important in difficult times. Art includes intuition, comprehensive ability, and insight, which fortify our thinking with confidence and vitality. Art produces diverse interpretations, not single answers. However, many people ask, "Which interpretation is correct?" Everyone seems to think there's a correct answer somewhere, like in a college entrance exam. To such people, I respond,

"First, please tell me what *you* think." Everything must begin with expressing what you yourself think.

Being "creative" doesn't mean creating everything from scratch. Simply changing how you look at things or shifting your goals is sufficiently creative. The German artist Joseph Beuys said that "changing society [social transformation] is art." A mail carrier consciously changing how they deliver mail, someone peeling potatoes making an aesthetic change in their peeling method—these too are creative acts. As Beuys declared, "Everyone is an artist." Art is no longer just about paintings and sculptures.

In other words, taking a different perspective is what's creative, and that's the important thing. I believe this leads us to fundamental philosophical questions—questions about our worldview.

Sen no Rikyu is an example of someone who made many such value transformations. Instead of the perfectly balanced white porcelain from China that had been highly prized until then, he declared pottery that looks like lumps of earth, made by roof tile craftsmen, as "beautiful." These tea bowls later became known as "Raku ware" and were designated as important cultural properties. Rikyu was a master at changing perspectives and creating new value.

The Frenchman Marcel Duchamp laid a urinal on a pedestal and claimed, "this is art." This, too, was a value transformation. If we are to see things differently and transform values, we must keep our thinking flexible. Therein is the importance of contemporary art.

People trained in value transformation don't think about things in conventional ways; they begin by questioning common sense. Without such questioning, creative work is impossible.

Try different approaches instead of sticking to established "correct" methods. Even if someone says something is not allowed because there are laws against it, it's important to consider whether those laws have become outdated, whether they can be changed. Having fundamental, root-level doubts is the source of creativity. Such doubts lead to social transformation.

Both Soichiro Honda and Akio Morita tried doing things their way, unrestrained by the rules and common sense of their time. They broke what existed before. Breaking is creating. Japan will certainly fall behind the times without more people who can think this way. New ideas aren't something only special people can come up with. Again, simply making a conscious change to your perspectives and methods in daily tasks—that alone is creative.

The ICF concluded after ten years. This book is a record of a valuable space where many people gathered, thought, and conversed. While being a record of the past decade, it considers the future. I believe readers of this book will see how their immediate predecessors thought about and acted upon many global agendas. I hope it will prompt them to consider what they think about them.

There are not always correct answers. There are only better responses. I hope this book will inspire many people to strive to be creative and that Tokyo will become a world-leading creative city.

Fumio Nanjo
Editor

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What we need by 2035: A revolution on the scale of the Meiji Restoration

Tokyo should be placed under direct governmental control

The Innovative City Forum (ICF) is an international conference that discusses "envisioning the future of cities and lifestyles" under the question "How will we live twenty years from now?" The first forum was in 2013, the tenth anniversary of Roppongi Hills, and it has been held every autumn since. Speakers have included researchers and practitioners involved in cutting-edge technology and urban development, as well as people involved in art and creative fields, gathering from around the world. They have proposed, shared, and discussed their visions of future possibilities. As a culmination of these ten years and looking toward the next decade, Heizo Takenaka, who leads the ICF alongside Fumio Nanjo, discusses "Tokyo in 2035." Takenaka states that "2035 is a very important year for Japan. Major transformation is necessary." What kind of major transformation might we be facing?

What we need by 2035: A revolution on the scale of the Meiji Restoration

Nanjo The ICF has continued its activities for ten years, since its start in 2013. I'd like us to consider how Tokyo has changed and how it should evolve looking ahead to 2035, roughly ten years from now.

Takenaka I think 2035 actually has a very significant meaning. First, population projections show that by 2035, Japan's elderly, those aged 65 and over, will make up one-third of the total population. Next, at current rates, China's GDP will surpass that of the United States by 2035. And there's one more thing. If things continue according to plan, gasoline-powered vehicles might become unsellable by 2035. Japan's industry is entirely dependent on automobiles. More specifically, it has become entirely dependent on Toyota. The media keeps praising Toyota Motor Corporation, but we're truly

in danger if things continue as they are. Japan has a trade deficit, meaning we've become a country where imports exceed exports. Thanks to the travel balance and interest income, our current account balance is barely positive, but even that is gradually declining. In this situation, if the automotive industry, which truly supports Japan's exports, takes damage, Japan's macroeconomic balance could seriously collapse.

While the global situation is likely to change dramatically, I think Japan is currently at a kind of "landing." Japanese people have many complaints, but they're not really struggling. The unemployment rate is 2.5%, the lowest in the world. Salaries aren't very high, but then again prices aren't very high compared to other countries. There are grievances, but people aren't desperately struggling. That's the situation we're in.

Nanjo That's exactly why it's a problem.

Takenaka It is indeed. Because there's no incentive to change.

Nanjo Nothing changes. We can't transform.

Takenaka We're in a state that's often described as "too comfortable to change."

Nanjo According to one theory, the utopia that post-war Japan aimed to create has actually materialized here and now in that we can live comfortably without risks. Someone said, "Heaven has been created right here."

Takenaka I think many people think that way. But no matter how you look at it, it's not sustainable. What will happen to Japan's export industries, and can we support our aging population? The biggest sustainability issue, I believe, is the "nursing care refugees." Nursing care—the process of people dying—requires tremendous time and effort. More people are having to leave their jobs to care for family members. This is even happening among corporate executives. And caring for family members doesn't increase income. This isn't sustainable. In other words, we need to drastically change Japanese society.

Nanjo Even thinking about one's own situation, the shortage of caregivers is troubling. Doesn't this mean we have no choice but to accept more immigrants?

Heizo Takenaka

Professor Emeritus, Keio University / Chairman, Institute for Urban Strategies, the Mori Memorial Foundation / Former Minister for Economic and Fiscal Policy / Member of the Board of Trustees, the World Economic Forum

After serving as Visiting Associate Professor at Harvard University and Professor at the Faculty of Policy Management at Keio University, he began his cabinet career in 2001 in the Koizumi administration as Minister for Economic and Fiscal Policy, followed by positions as Minister for Financial Services, Minister for Privatization of the Postal Services, and Minister of Internal Affairs and Communications. From 2006, he served as Professor at Keio University and Director of Academyhills, among other positions. Currently, he is a Professor Emeritus at Keio University and Member of the Board of Trustees of the World Economic Forum. He holds a PhD in Economics. His numerous publications include *The Truth About Structural Reform: Minister Heizo Takenaka's Diary* (Nikkei Publishing) and *Economics of Research & Development and Capital Investment* (recipient of the Suntory Prize for Social Sciences and Humanities, Toyo Keizai Inc.).

Takenaka Yes, but not only that, we need to dramatically change our current systems. I think by around 2035, we'll face a time when we need a Meiji Restoration-level transformation. The question is whether we'll have the proper leaders when that time comes. While there are various opinions about the Meiji Restoration, people like Toshimichi Okubo and Hirobumi Ito were truly remarkable. Another wonderful thing about Japan at that time was how they utilized talent. Toshimichi Okubo was a low-ranking samurai from the Satsuma domain. Until he was around 29 or 30, he had never even met the lord of the Satsuma domain. Yet about eighteen years later, he became a close advisor to the Emperor. He was assassinated at 47, but that kind of talent utilization existed. Even Korekiyo Takahashi was born out of wedlock, he wasn't the child of a legal wife. Despite that, he served as Minister of Finance six times.

Nanjo To be honest, wasn't it also a class struggle? We might also consider it a revolution where people from the bottom rose up, and those at the top were brought down.

Takenaka Yes, it probably was a revolution.

Nanjo The movement itself came forcefully from Japan's edges, didn't it? Yamaguchi, Kagoshima —domains on the periphery completely overturned the center.

Takenaka Although I'm not an expert on this, there's a theory that it was actually the shogunate bureaucrats who supported it. The top changed, but there's also a theory that the people who handled the practical work remained largely unchanged.

Nanjo I see. Sounds like today's structures.

Takenaka Yes, it's about changing those at the top. Such major change is called "shock therapy." Changes come all at once through a kind of shock treatment. While Japan is often said to be a country that dislikes major changes, it's actually the opposite—it's a country that can't change gradually. Rather, it can *only* change dramatically. The Meiji Restoration was a rare example of shock therapy even by global standards, and postwar democratization was also a tremendous shock therapy. I truly believe that a change of comparable magnitude will come around 2035. Before then, we need to discuss how to handle foreign workers, and we'll need to properly implement something like basic income distribution.

We Need an Artistic Society That Doesn't Suppress Dissent

Nanjo Let's reflect a bit on the activities of the ICF. The ICF was a valuable platform where technology, science, economics, politics, and the arts came together. We started because Japan lacked such venues, and we hoped to eventually gather people from around the world, as does the World Economic Forum in Davos.

Takenaka The Davos forum actually started as a local business seminar. Professor Schwab from the Geneva School of Economics and Management began with about 200 people. Through various

factors, it became a unique global conference. Consistency is key. Dr. Schwab visited Japan around 1965, going to different companies on his own, asking them to participate and contribute funding. Conferences like the ICF need to replicate such efforts.

Nanjo After Japan's economic bubble burst, I thought, "Our era as a mass-production nation is over; we must become a creative country." And the ICF's original concept was the idea that, shouldn't we at least aim to be seen as Asia's most creative country? That's why we called it the "Creative Davos." I'd like to hear your thoughts on this concept.

Takenaka Let me address this from an economic perspective. There's a long-standing concept called "unbalanced growth theory." It suggests that economies can only develop through imbalances, especially during periods of technological innovation when we must accept these imbalances.

Nanjo You've mentioned before that diversity and the dynamism within imbalances drive global development.

Takenaka While "unbalanced growth theory" has existed for a long time, it gained attention about ten years ago when Paul Krugman began discussing it. When technological systems change, imbalances naturally occur.

Nanjo So it's in these imbalances where various developments emerge.

Takenaka That's right. A society's strength is reflected in things like how many Olympic medalists it produces. In America, everyday service is terrible, isn't it? I think Japanese people work very hard, so why do we lose to such a country? It's because we don't value the kind of person who can become a gold medalist.

A creative society is one that accepts imbalances—in other words, "heterodoxy"—and lets unconventional people thrive. Not orthodoxy, but heterodoxy. Yet Japan still tends to crush those who are different. From an economic perspective, during the catch-up phase, especially in manufacturing where the goal was to cheaply make good products that are small and compact,

Fumio Nanjo

Curator / Art Critic

Graduated from Keio University, Faculty of Economics in 1972 and Faculty of Letters, (Philosophy, Aesthetics & Science of Arts) in 1977. After working for the Japan Foundation from 1978 to 1986 and other organizations, he participated in the launch of the Mori Art Museum (2002), served as Director from Nov. 2006 to 2019 and Senior Advisor from 2020. In 2020, he began working as General Advisor of Towada Art Center, Senior Advisor of Hirosaki Museum of Contemporary Art and in May 2023 he was appointed Executive Director of Arts Maebashi. The directorship of international exhibitions he has assumed from 1990s to the date include; the Japan Pavilion, Venice Biennale (1997); Taipei Biennale (1998); Yokohama Triennale (2001); Singapore Biennales (2006/2008); KENPOKU ART (2016); Honolulu Biennial (2017); Kitakyushu Art Festival Imaging for Our Future: Art for SDGs (2021), Fuji Textile Week (2021/2022/2023) and Ennova Art Biennale vol.1 (2024). His publications include *A Life with Art* (2012) among others.

it was better to have many people performing at 80% rather than a few at 120%. Like in a game of tug of war.

But now that Japan stands at the frontier, we need to focus on creating those 120% or 150% performers who can win Olympic gold medals. Doing so ultimately leads to creating a highly creative society. Japan is still lagging in transitioning from a tug-of-war society to an Olympic society.

America has its gold medalists—Steve Jobs, Bill Gates... Japan has such people too, but we crush them somewhere along the way. For example, Shuji Nakamura, who invented the blue LED, wasn't valued in Japan and found success in America instead. There are many cases like this.

Nanjo So we want to make Japan a place where many people have the spirit to do things differently without suppressing those who are different. To achieve this, my original idea was that we should become an "art society" By which I of course don't mean painting pictures. Artists must all have different ideas. Being the same as others isn't the way to go—they strive to be different. Artists are essentially a tribe of people all trying to be heterodox. An "art society" is one that embraces this spirit. This goes hand in hand with creativity.

But Japan is a monotonous, uniform society, isn't it? I believe art education is the key to encouraging the emergence of more diverse individuals.

Takenaka I understand exactly what you mean. At the risk of preaching to the choir, art is about free expression and personal expression that indirectly influences society. When you look up "art" in dictionaries, you often find references to "having indirect influence on society." While artists are important, I think having "a society that appreciates art" is even more crucial.

Japan has many excellent artists. However, like Shuji Nakamura whom we mentioned earlier, many find more success overseas than in Japan. Takashi Murakami is a typical example. He graduated from Tokyo University of the Arts' Japanese Painting Department, didn't he? He wasn't valued in the Japanese painting world but found success in New York. I believe art education should not only nurture artists with free thinking but also teach people how to appreciate art.

Nanjo Indeed, countries like America are quick to recognize new artists, aren't they? While Japan is slow to do so.

Takenaka Very slow. That's exactly why you and I taught that "Art and Society" course at Keio University for five years, sponsored by Mori Building. There still isn't another course like that is there?

Nanjo No, there isn't. I'd love to do it again.

A Valuable "Heterodoxy" in Japanese Society, Whose Rival Is NASA

Nanjo I recently met with Kazuhide Sekiyama from Spiber. He was energetic and spoke passionately. He might be one of Japan's few surviving heterodox thinkers.

Takenaka Sekiyama started his company at a young age to create fibers based on spider silk. He focused on the concept that "even jumbo jets will bounce off spiderwebs." When launching his company, he was asked "Who are your rival companies?" And when he answered "NASA," everyone laughed. But he was serious. That's the kind of thinking we're talking about.

Nanjo Exactly. He was talking about how crucial environmental issues are. When I asked him how Spiber's threads relate to environmental issues, he explained that composite proteins can be used to create various materials. The biggest impact is that many products can be switched from plastic to these materials. Then there's the issue of meat consumption. Humans currently raise lots of livestock as meat. Yuval Noah Harari calls this a sin. One might consider him as saying this from a moral standpoint, but it's not just that. Sekiyama says this is an environmental issue. He asked, "Do you know how much greenery is needed to raise one livestock animal? If we stopped eating livestock, environmental destruction would stop. That's why we're making artificial meat now." Apparently, they're using Spiber's products to make steaks. If they catch on, we can prevent more destruction of greenery. He also talked about various other topics, including energy issues, saying that nuclear fusion is the ultimate goal and that humanity will always struggle with energy unless we succeed in achieving it.

Takenaka We can indeed consider NASA as Sekiyama's rival.

This relates to Hegelian dialectics—there's a thesis and an antithesis. Completely different ideas clash to create something new, a synthesis. In Japanese society, there's a reluctance to accept these new, directly opposing ideas. You say art education is necessary to change this, and I completely agree.

Nanjo Instead of working within existing frameworks, it starts with questioning whether these frameworks are even valid. You did that in politics, didn't you?

Takenaka And I'm still criticized for it. [laughs] It was possible then because we had a leader, Junichiro Koizumi, who understood. A leader's role is crucial. That's why I want to emphasize that we need leadership and entrepreneur education alongside art education. I think they're all interconnected.

Nanjo Exactly. I've always felt Japan lacks leadership education. For example, in Hollywood entertainment movies, you see proper leaders saying things like "I stay, but you should escape." Whether it's war movies or science fiction stories. Japan completely lacks this kind of education.

Takenaka That's so true. Actually, there's an interesting university in Bilbao, Spain. It's a proper university recognized by the EU where you can get degrees in leadership and entrepreneurship. When students enter, they first have to create a company. They can't graduate unless they make over two million yen in profit over four years. In other words, they make students create real businesses. They have to do everything themselves.

I found this fascinating. Think about it—you might forget things you simply studied, like how

many founders are needed to establish a corporation under company law or how to handle depreciation under accounting principles. But if you actually do it, you won't forget. Your graduation depends on it. When I visited, there were quite a few international students from Korea and China. But not a single Japanese student.

Nanjo Perhaps Japanese people think it's enough to join a big company.

Takenaka That's exactly it. And there's another reason why I think art is truly important. There's a phrase Joichi Ito often uses: "Compasses over maps." Having a compass is more important than having a map. A map shows you today's society—get into a high-ranking university, join a prestigious company, become a manager, and consider success as getting a company car and a secretary. But such maps are becoming obsolete. What's important then is having a compass, knowing what you want to do and whether you have the specialty to achieve it. That's the era we're living in. I too deeply feel the importance of art in the sense that you're talking about.

Richness of time, not money, produces art

Nanjo You once said that in Japan, there are forces both promoting and suppressing art. There were two factors promoting it: gaining free time through technological advancement and increased means of expression. And the suppressing factor was stagnating income, right?

Takenaka The promoting factors are very clear. AI and other technological developments will bring us more free time.

During the Koizumi administration, we had discussions about creating a long-term vision. When we gathered various scholars and experts for free discussion, an important concept emerged: the idea of being "time-rich." As life expectancy increases, we're gaining more and more time that we can use freely. Meanwhile, with AI, work that used to require ten people might be done by just two. So theoretically, effectively implementing work-sharing would mean producing the same value with one-fifth of current work hours. Considering aging society and increased healthy life expectancy, we'd have an overwhelming amount of time. We may not become wealthy in terms of money, but we'll be "time-rich." The question is how to use this time.

Nietzsche said that art is supreme, that it's of the highest value. When people have sufficient economic background and time, they naturally turn to art and creation. J.K. Rowling wrote the Harry Potter series while receiving unemployment benefit. There's no doubt that having time leads to creative output.

However, having time also means we must invest in ourselves. We need to invest in ourselves to earn income for a longer life. That's why I believe human capital investment and art will be crucial going forward.

Nanjo That's exactly it. As I see it, humans have developed tools to make their lives easier. AI represents the ultimate cutting edge of such technology. If AI works in our place, humans will have

more time and an easier life. New technologies are historically connected. Since these are things that humans sought and developed, there's no need to fear them. And as you say, there's no doubt that people will have more free time than before, and given that time, art is the only answer.

Takenaka However, there's a theory that there are two types of tools. First, there are convenience tools that anyone can use, like rice cookers. Then there are things like computers, where you have people who can use them and people who can't. They're an incredible technology for those who can use them, but they inevitably create a group who can't use them. Unlike rice cookers, this isn't technology that everyone can use, so we need social systems to bridge this gap. Two possible systems come to mind, one being education that makes technology inclusive so everyone can use it, the other being a system premised on the emergence of overwhelming imbalances. As mentioned earlier, work that once took ten people can now be done by two. While effective work-sharing could make everyone prosperous, if handled poorly, eight people might become unemployed.

Nanjo People will certainly become unemployed. But unemployed people are people who now have time. We just need to establish proper systems. So I'd say basic income is the only answer.

Takenaka You've said everything I wanted to say. [laughs] That's right, while there's still opposition to basic income, we're heading toward a society where it will be unavoidable.

In exchange, we need to create new mechanisms for income redistribution, systems like basic income, or we risk creating a miserable society. There's talk about this in terms of "new capitalism" or "positive cycles of growth and distribution," but right now all the government says is "raise wages."

Nanjo But wages aren't rising, are they?

Takenaka Right, because simply telling low-productivity sectors to "raise wages" won't make it happen.

Nanjo We had these kinds of discussions at the ICF, didn't we?

Takenaka I might have mentioned it in a breakout session. Above all, Japan has an extremely low understanding of basic income.

Nanjo Are there countries already discussing this?

Takenaka Switzerland held a national referendum on implementing it about five years ago, but it didn't pass the vote.

While it's not a complete basic income system, the Tokyo Metropolitan Government is giving all high school students and younger 5,000 yen a month. That would be a partial basic income. The requirements for basic income are that it's given unconditionally and continuously. Because you can't know everyone's individual circumstances, right? What Koike is doing is quite smart. The Ministry of Finance always says "Just give it to those who really need it," but you can never fully understand each person's individual circumstances.

Nanjo I agree, it should be a simple proposition.

Takenaka That's exactly right. In a democratic society, complicated systems are bad systems because only bureaucrats and a select few who understand the complexity can voice opinions about them. Democracy needs simplicity.

Nanjo They say the same about technology, that complex technologies don't become widespread. Simple, straightforward technologies do. I'm worried about Toyota's hydrogen fuel cells. That won't spread.

Takenaka Have you seen the front page of today's *Nikkei* newspaper?

Nanjo No, I haven't.

Takenaka It reported that Toyota is going to do something revolutionary with "solid-state battery EVs." Though I'm not sure how much of that is true.

Nanjo Europe is backtracking, saying electric vehicles alone might not be the only path forward. Everyone in Japan was overjoyed about this, but I think that's not quite right.

Takenaka With current technology, making batteries requires enormous amounts of electricity, producing lots of CO_2. Making hydrogen also produces huge amounts of CO_2. So with current technology, even if we converted all gasoline vehicles to electric vehicles, total CO_2 emissions wouldn't decrease.

Nanjo It's hard to know which is better.

Prepare for the Terrifying Changes AI Will Bring

Nanjo I'd like to hear your thoughts about AI and technology. The recent changes across each phase have been incredible, haven't they?

Takenaka They truly have been. These days, ChatGPT and generative AI come up at almost every meeting. I attended Davos in January 2023, and I'm embarrassed to say that was the first time I heard the term "generative AI." ChatGPT was released around November 2022, right? By the following January, it was already being discussed at Davos, and now it's all anyone talks about.

Nanjo All other technology news has been blown away now, hasn't it? Like NFTs…

Takenaka Nobody even talks about Web 3.0 anymore.

Nanjo Just that missing this wave would be a huge mistake.

Takenaka Truly disruptive things are happening. Google is in a difficult situation now. Google earns ad revenue from each search. But now, things that used to require about ten Google searches can be done with a single ChatGPT query.

Google knows this. That's why they had stopped developing generative AI themselves, but now

they've been forced to restart. I hear they've declared a "Code Red" emergency situation and resumed development.

And what's happening as a result is that Microsoft is gaining an overwhelming advantage. ChatGPT isn't really making "judgments," it's just processing big data linguistically and arranging text to match themes. So having lots of text data is advantageous. Microsoft has Word data from around the world.

Nanjo Are they reading all of it?

Takenaka Sure. So Microsoft is said to have an overwhelming advantage. The era of Google's dominance might change in the blink of an eye. I recently attended an Adobe conference in Greece. Adobe makes various software, but is most famous for its PDF format. I asked an Adobe executive, "Is ChatGPT advantageous or disadvantageous for you?" What do you think he said?

Nanjo I'd guess that it's advantageous.

Takenaka That's exactly right. They say it's overwhelmingly advantageous. And the reason? Because they have Photoshop. Adobe has image data from around the world. They say we're entering an era where combining these images will allow automatic movie creation. There's already a program called Midjourney, where if you input something like "Asian sunset with birds flying," it instantly generates a matching image. And it will similarly become possible to create books.

Nanjo But what comes out is always something pretty typical, isn't it?

Takenaka Except that if you prompt it to "create a heterodox painting," it might do that too.

Nanjo When I discussed this with Professor Yutaka Matsuo from the University of Tokyo, we talked about how Van Gogh is famous because he created something completely different from what existed before.

Takenaka Something original, yes.

Nanjo Right. I asked Professor Matsuo if AI can make leaps like Van Gogh did. He replied that it might be possible. However, when AI creates something strange, only humans can decide whether it's "art." So while AI might create it, we concluded that judgment remains human.

But the story doesn't end there. Later, someone said to me, "But what happens when AI starts judging the art that AI creates?" Humans are taken out of the picture. We might enter an era where AI passes judgment on what AI creates. Then it can eliminate humans. [laughs]

Takenaka Actually, I saw something incredible at Davos 2023. There was a huge screen in the venue showing AI art, these strange moving images that looked like octopus tentacles—at first I thought, what on earth? It was mysterious, but the more you watched, the more captivating it became. Thinking about it calmly, the AI had synthesized information about what humans respond to.

Nanjo There's also a work created by an artist named Refik Anadol, dynamic movements shown on a screen about five meters tall. It's already being exhibited at MoMA, and it's completely created

by AI.

Takenaka Indeed, it's AI art. We must consider that this generative AI movement has probably just begun. In just the eight months since October 2023, we've seen so much change… We need to be prepared for terrifyingly accelerating changes from here on.

Nanjo We didn't discuss this level of AI at the ICF, did we?

Takenaka No, we didn't. It's all too recent.

Nanjo With the emergence of ChatGPT, AI's ability to generate images… how do you think these developments will change society?

Takenaka This transformation has just begun, so we can't yet see the whole picture. However, from a macro perspective, productivity should increase significantly. That's why we'll need the new distribution systems we discussed earlier, like basic income.

Another thing—when AI takes over work, what remains for humans? Just creativity and physical presence. I think we'll see the emergence of means to enhance human creativity and physicality, along with systems to evaluate them.

The Key to Environmental Issues Lies in the Global South

Nanjo Environmental issues now stand as a major global challenge. How do you think things will develop?

Takenaka When discussing environmental issues, if we look at which country produces the most CO_2, it's overwhelmingly China, which currently produces about twice as much as the US. Japan is around fifth place.

Nanjo But hasn't China made significant progress in adopting electric vehicles?

Takenaka Yes, but they use enormous amounts of electricity to produce those vehicles. Moreover, their technology is inferior, so battery lives are short, and they're constantly discarding unusable electric vehicles. I think it's wasteful.

Recently, the term "Global South" has become common. It's a very beautiful term, isn't it? Essentially, we can't improve the global environment without involving the Global South—it won't work with just America, Europe, and Japan.

I may have mentioned this before, but IMF Managing Director Georgieva told an interesting joke: Two people were walking in a forest when they encountered a bear. One person changed into sneakers, and the other asked, "Can those sneakers help you outrun a bear?" The first person replied, "I don't have to, I just need to outrun you." This illustrates how CO_2 measures won't work if only developed nations participate.

However, there's a sequel to that joke. When they asked a bear expert, they said, "Actually, bears chase the fastest runner." [laughs] India, as G20 chair, strongly advocated for involving the Global

South. India's position was "We're different from the G7, but we're also different from Russia and China," that they are their own entity.

Nanjo Is China not included in the Global South?

Takenaka Sometimes it's included, sometimes not. Someone asked about this in the Diet. I believe Prime Minister Kishida answered that it's not included. It's not part of the Global South that India advocates for, but in some contexts, it is.

Incheon—Through and Through an "Art Airport"

Nanjo I recently visited Incheon Airport in South Korea. They said they're going to develop the vast area outside the airport "entirely with art."

Takenaka Isn't that an IR [integrated resort]?

Nanjo The IR is already established within the Paradise Hotel & Resort. And it's incredible. It's completely zoned according to target audiences—areas for families with children over here, for young couples over there, bars and clubs that way, a casino, and so on. There's also a shopping mall, and you can easily enjoy yourself there for two or three days. It's an integrated resort in the truest sense. And they're saying they'll make everything around the hotel art-focused.

Takenaka Sounds wonderful!

Nanjo They've already prominently placed works by Jeff Koons and Yayoi Kusama's *Great Gigantic Pumpkin* in the center of the hotel. When I asked about the specifics of "doing everything with art," they said they're building museums and galleries.

But that's not all. What really impressed me was their plan to build a bonded warehouse. And it's going to be massive—about 600 meters long and 50 meters wide. Since bonded warehouses are absolutely essential in the art world, everyone from neighboring countries will likely use this huge facility. I've long been saying Japan should build large-scale bonded warehouses. But with Korea building such a warehouse, everyone will go there instead. [Tokyo's] Haneda [Airport] became an international strategic special zone and got a bonded warehouse, but it's too small and completely inadequate. I wonder why they don't make one at Narita [Airport] like at Haneda.

Takenaka Yes, that's why we're asking them to integrate Haneda and Narita operations and give the concession to the private sector. While Narita has incorporated in form, its president is a retired bureaucrat from the Ministry of Land, Infrastructure, Transport and Tourism. The Ministry won't let go of that position. As for Haneda, they say they can't do anything because the terminal building is publicly listed. But they could delist it or buy all the shares—there are ways. Haneda Airport represents enormous vested interests.

Nanjo And while Haneda talks about using art, it's nothing compared to Incheon.

Takenaka Because Haneda has guaranteed customers. Both Haneda Airport and JR [Japan Railways] Central will have customers no matter what they do, and those who currently hold rights won't let them go. You know how they finally got duty-free shops in the arrival area? That only happened because we kept pushing for it.

Nanjo Don't all airports have duty-free shops?

Takenaka Yes, but Japanese airports only had them in departure areas, not arrival areas. When we looked into why, there's apparently an international convention stating that duty-free shopping is only allowed during departure. However, that convention is forty or fifty years old, and no other country follows it anymore. That's why foreign airports have duty-free shops in arrival areas. Only Japan was strictly adhering to it.

When we investigated why Japan was so strict about this, it turns out it's because they were sending retired bureaucrats to positions in the organization managing this international convention. Another case of bureaucratic harm. This is now changing, finally. Look at how the Itami and Kansai airports have changed significantly under private management.

Nanjo So Japan keeps following regulations that are no longer necessary due to vested interests. That costs money. So when you want to do something new, you need an additional budget. It's a pretty awful situation.

Takenaka Take ETC [Electronic Toll Collection] as another example. Even after introducing ETC, they keep lanes for non-users. They should just eliminate them, but in Japan, there's always the argument of "what about those who don't have it?"

What I find terrible now is the "Individual Number Card" [national identification number] issue. Minister Kono is being criticized for that, right? When you create a new system on a national scale, there will be some imperfections. But in a population of 124 million, they find a few flaws and call for scrapping the entire system—what kind of country is this? It's a country that doesn't accept agile development. It demands 100% perfection and refuses agility. This is going to be a serious problem in this age of innovation.

Japan: A Country That Budgets for Empty Buildings

Nanjo Art is incredibly strong throughout Korea, not just at Incheon Airport. Japan has been completely overtaken. Korea has four national museums of contemporary art and four municipal art museums in Seoul. They apparently have 65 museums and science museums. And they're still building more everywhere. They keep increasing and developing art museums. It's the opposite of Japan, which is reducing them.

Moreover, it's not just about quantity. When I visit the National Museum of Contemporary Art, it's bustling with visitors, like a department store. It's actually crowded. And most visitors are young people in their twenties to early thirties.

Takenaka And this is despite Japan's overall budget having increased enormously. During the Koizumi administration, the general account budget was around 84 trillion yen. It reached about 100 trillion during the global financial crisis, and it's 140 trillion yen for 2024. But the cultural budget hasn't changed.

Nanjo Meaning as a proportion, the cultural budget has actually decreased.

Takenaka What I want to point out is that money isn't available for culture because it's being spent on strange things. They allocated 3 trillion yen just to cover slight increases in electricity and gas prices. But the UK's inflation rate is 10%, while Japan's is only 4%. We should be able to put up with that much. My brother lives in California, and at its worst, his electricity bill reached around $600, about 80,000 yen. Japan gives out 3 trillion yen in subsidies for just a small increase. It's shocking. And no newspaper criticizes this.

Nanjo Where does all this money come from?

Takenaka Well, they don't have the money, so they're saying "We'll work something out in 2025 or beyond." It feels like they're writing a lot of promissory notes right now.

They pass out 3 trillion yen, while the Agency for Cultural Affairs' budget is about 100 billion yen. When I heard the news that the San Francisco Giants came up with 80 billion yen to trade for Ohtani, I remembered that the Agency for Cultural Affairs' annual budget is 100 billion yen—only 20 billion more…

Nanjo So Japan builds museums but then keeps reducing their budgets afterward. I'd understand if it were business—unsuccessful companies can fail. But museums are different. You need to provide budgets to nurture them.

Takenaka To put it frankly, it isn't the museums they wanted, it was the construction work for museums.

Nanjo As public investment, yes.

Takenaka We talked about this before—in the 1990s, Japan built 1,000 music halls. That averages to about 100 per year, meaning two were being built every week. Similarly with museums in the 90s, one was being built every two weeks. They just threw up some buildings, then kept reducing their budget.

Nanjo And there seem to be trends—periods when they build only museums, then libraries, then public halls.

Takenaka Yes, the same pattern followed everywhere.

Tokyo Should Become a Central Government Territory

Nanjo We believe Tokyo should become a creative city, but what do you think will happen to

Tokyo, or what should be done with it?

Takenaka First, looking at Japan as a whole, the population is declining. In my home prefecture of Wakayama, the population will decrease by 20% in the next decade or so. Akita Prefecture too will decrease by 20%. It's clear that current villages cannot be maintained.

However, Japan's current national land plan assumes that people have the right to keep living where they are, with the government providing infrastructure and public services. But this can't be maintained in marginal regions anymore, we just can't afford the high infrastructure costs. We have to ask people to relocate to core cities, offering to cover their relocation costs. We're approaching a time where there will be a major shift in national land policy. People from Tohoku will likely move to places like Sendai, people from Wakayama to Osaka, and so on.

Another major issue is Tokyo. I believe Tokyo shouldn't remain in its current form but should become a central government territory, like Washington D.C. in America. China already has like four or five directly administered cities.

It's impossible to group Tokyo and Tottori, the prefecture with the smallest population, under the same Local Autonomy Law. The scales of their budgets are just too different, and their populations differ by about twenty times. Local autonomy's basic goal is to ensure residents can live peacefully. However, Tokyo is more than that—it's Japan's strategic base. It should become a special district, and ultimately, the Tokyo governor should become the "Minister for Tokyo."

Take Minato Ward, for example. When Roppongi Hills was being built, some people opposed it due to sunlight rights. While such claims might understandably come from residents' desire to live peacefully, the point is that Tokyo, including Minato Ward, is a strategic base, so we need to move beyond such claims. It's an area that must be strategically considered.

If we make it a direct territory, a special district, and change the basics of national land planning, I think Tokyo has incredible potential, especially with the future Maglev connection to Osaka. That's why I believe we must fundamentally change Japan's national land plan and local government framework by 2035.

As I've mentioned before, urban economist Richard Florida takes satellite photos of Earth at night.

Nanjo He's the author of *Who's Your City*, right?

Takenaka That's right. When you take satellite photos at night, you can see twenty to thirty light clusters on Earth, called "mega-regions." Innovation happens within these clusters. He estimates GDP based on the size of these lights, and the largest light cluster in the world is the area centered around Tokyo.

Nanjo People also say we spread too wastefully horizontally, don't they?

Takenaka Yes, but while there is too much spread, Tokyo in the future will be connected to Osaka by Maglev. The second largest cluster is America's East Coast, stretching from Boston through New

York and Philadelphia to Washington D.C.

Nanjo Minoru Mori used to say that Tokyo should become more of a vertical city, that Tokyo's sprawl is wasteful.

Takenaka He did. In 2022 alone, Tokyo's net population influx was 40,000 people. The government talks about regional revitalization and says they'll send 10,000 people out, but I want to say, "Look, 40,000 are coming in." And looking at the entire metropolitan area, including Kanagawa Prefecture, it's more like 100,000 people coming in. People just naturally gather in cities.

Nanjo At this rate, it seems like Japan will be made up of just "Tokyo" and "the rest of the country." Will Tokyo keep growing while everything else keeps shrinking?

Takenaka That's why we need other cities to become bases. Not so much spreading of Tokyo but spreading of other areas. They need to become bases. For example, the concept of resorts emerged in Britain during the era of urbanization. When people live in cities, they need resorts.

Nanjo Even if we consolidate and eliminate smaller municipalities, cleaning it all up would be a huge task.

Takenaka Protecting nature will certainly incur costs.

Nanjo I know the area around Lake Towada has many abandoned buildings. Previously, they couldn't clean up the ruins, but the law changed about two years ago and demolition has finally begun.

Takenaka Right. Or take Hakodate, famous for its nighttime views. There too, vacant houses are rapidly increasing, so the city is actually paying to keep lights on in empty houses to preserve the night view. With a declining population, it's impossible to maintain every village. When I say things like this, I'm accused of being anti-rural, but we need to face such realities.

Nanjo One town actually did that, right? Telling people living in mountain villages to move to the city? They had to abandon villages with just a few residents, telling them to move to the city because they couldn't keep the bridges repaired.

Takenaka Quite a few marginal villages have already shut down.

Nanjo Isn't that number increasing?

Takenaka We know it will increase, so we need to create a framework to deal with it.

Thinking about post-disaster reconstruction, whether it's in Tohoku or Kobe's Nagata Ward after the Great Hanshin Earthquake, we can't just restore declining areas to their original state. They'll just decline again. We should have built completely new cities.

Actually, the reconstruction planning council after the Great East Japan Earthquake was terrible. Each ministry controlled things to protect its vested interests and budgets. If we had used a new approach at the reconstruction council—giving all the budget to local governments and letting them decide and implement everything—things might have been different.

Nanjo Who decided on those massive seawalls? Was it the national government?

Takenaka Probably. Since budgets are divided by ministry, regular roads are built with the Ministry of Land, Infrastructure, Transport and Tourism's budget, farm roads with Ministry of Agriculture, Forestry and Fisheries budget—everything was compartmentalized with each ministry trying to protect their territory.

Nanjo Politics is tough, isn't it?

Takenaka It is. But ultimately, it's the citizens' fault.

Nanjo Bureaucrats have considerable decision-making power, don't they? Shouldn't we be looking at things from a higher level, not just ministry by ministry?

Takenaka Politics should control that, but politicians are chosen by citizens, so citizens bear responsibility too.

The Merits and Demerits of Bureaucratic Politics in Postwar Japan

Nanjo I feel that bureaucrats in the 1950s and 60s, during the post-war reconstruction period, had considerable vision. They had ideas about building cities and showed strong leadership. I think architects like Kenzo Tange emerged by riding that wave. I feel there are fewer bureaucrats with such vision today.

Takenaka I disagree with you slightly. I don't think they had that much vision even back then. However, from postwar reconstruction to our economic boom, what needed to be done was extremely clear—we just had to catch up. The bureaucrats did well in preventing bottlenecks for that catch-up process. For instance, they managed details well to prevent bottlenecks like steel shortages when producing passenger cars. But I don't think they had a proper vision.

Kent Calder, now at Johns Hopkins School of Advanced International Studies (SAIS), wrote an interesting book called *Strategic Capitalism*. He explains that Japan's high economic growth was triggered by Kawasaki Steel's Chiba Plant implementing "integrated steelmaking." At the time, MITI worried about supply-demand balance, and so opposed integrated steelmaking. The Bank of Japan also opposed it, saying they couldn't use precious foreign currency for it and couldn't change allocations. The BOJ [Bank of Japan] governor then was Hisato Ichimada, known as "the Pope" for his autocratic style. He reportedly boasted, "If they move ahead with that, I'll see that Kawasaki Steel becomes covered in weeds." Yet despite opposition from both MITI and the BOJ, Kawasaki Steel did move ahead. And that became the catalyst that drove Japan's economy toward high growth. Their only allies were the banks in Otemachi.

So at the time, it was people centered around the Industrial Bank of Japan that had vision. That's why Kent Calder explained that the real headquarters wasn't in Kasumigaseki, Nagatacho, or the BOJ but in Otemachi.

It's a very convincing thesis. Actually, it's strange to expect vision from bureaucrats in the first place. Politicians should have the vision, and bureaucrats should work neutrally toward it.

Nanjo But bureaucrats often resist, don't they?

Takenaka They're part of what we call the "iron triangle"—a triangle formed by industries with vested interests, their representative "tribe politicians," and the bureaucrats who mediate between them. This should exist in every country. However, in Japan, bureaucrats have overwhelming power, leading to rigid coordination.

Nanjo Also, Japan has little personnel mobility, doesn't it? Many people stay in the same department or position for a long time. In places like America, you see much more turnover.

Takenaka Yes, that's exactly right. I first met Shinjiro Koizumi when he returned from America to become a politician. When I mentioned I had the pleasure of working with his father, he asked me, "Professor, what's the worst thing about bureaucrat-led governance?" Such an excellent question.

I answered that there were two things. Japanese bureaucrats have lifetime employment and seniority-based promotion. With lifetime employment, while there are "good for the citizens" policies, there are also "good for preserving their own power" policies. This inevitably happens with lifetime employment. Creating cushy post-retirement positions for their seniors is a perfect example. If bureaucrats didn't have lifetime employment, there'd be no need to create those positions.

The second point is that since they're not elected by citizens and thus don't have the public's trust, they can't make major policy decisions. Postal privatization, for instance, would never come from postal ministry bureaucrats. I told him those two points are the main problems with bureaucrat-led governance. Politics needs to handle this properly, and public opinion polls should indicate whether politics is doing its job well, but these polls are incredibly fickle. I was criticized quite heavily for saying public opinion can be wrong. [laughs]

Nanjo Public opinion…it's hopeless, isn't it? Autocracy is no good, but democracy isn't working well either.

Takenaka That's why autocracies are increasing globally. A Swedish scholar classifies state systems into four categories: complete autocracy, electoral autocracy, complete democracy, and something in between. According to this scholar's research, countries classified as autocracies have exceeded 100, about 106 countries out of 196 worldwide.

Nanjo So more than half are autocracies.

Takenaka Democracy is truly facing a crisis right now.

Nanjo Yes, and America, the representative democracy, is weakening too.

Takenaka America's economy is doing okay, but I think American democracy is in terrible shape.

Nanjo The ideology is broken, isn't it?

Was the Edo Period a Utopia?

Nanjo Our discussion about being time-rich and basic income reminded me of an anecdote.

During Japan's Edo period, there was a wealthy man named Guimet in Lyon, France. He had made his fortune in textiles. Guimet sent staff around the world to study local cultures and artifacts, bring them back, and write reports. His collection is now in the Guimet National Museum of Asian Arts in Paris. His staff came to Japan too and left reports saying something like "Japan is a unique country where even poor people do various things and seem to live happily. Their happiness doesn't seem related to the amount of money they have."

Indeed, thinking about it, everyone in the Edo period seemed to live through culture. Even without money, you could compose haiku, and there was shamisen music, *kouta* and *hauta* songs. Edo commoners had various recreational options and seemed to enjoy them as they pleased.

I thought perhaps the ultimate world where AI does all the work might be something like the Edo period. We let AI do the work, we receive our basic income, and we live for our hobbies. After all, life's happiness or unhappiness consists of how fulfilling we can make each moment. So if we can live enjoyably, maybe that's enough.

Takenaka Yes, but the Edo period wasn't sustainable, was it? New technology and innovation had stopped. In the expression of the time, there was *tenka taihei* [peace throughout the realm]—a phrase written even on sumo referees' fans. People lived peacefully under *tenka taihei* only having halted innovation and isolated themselves from foreign countries.

Also, Guimet's staff probably only saw Edo and Naniwa [Osaka]. The provinces would have been quite different.

Nanjo So they lived happily in isolation, with Japan as its own world, not needing development…

Takenaka Yes, but again, that wasn't sustainable. What happened? Half of Kagoshima burned down in half a day during the Anglo-Satsuma War, forcing Japan to open up. Satsuma had originally opposed opening the country, supporting imperial rule and expelling foreigners, but after their city was bombarded and burned, they finally realized that the current system—the *bakuhan* system—wasn't sustainable.

Nanjo Only realizing it through external pressure.

Takenaka And it's the same with Japan today. As I mentioned earlier, we're at a "landing"—it's comfortable, but it's not sustainable by any measure.

Nanjo Then how about isolating ourselves again?

Takenaka If we could continue isolation forever, with our prosperity increasingly falling behind America I mean, we've already been overtaken by South Korea, and we're falling even further behind. If that's acceptable, sure, fine. But I still don't think isolation can continue forever.

Nanjo Perhaps the Edo period was one utopian ideal.

Takenaka If it could have continued forever, yes. But it couldn't.

Nanjo So we really do need a Meiji Restoration-level transformation around 2035. Twelve years from now—I really would like to see it.

Takenaka Yes, so the question is, how do we prepare by reviewing laws, considering basic income systems, and so on? And it all depends on whether excellent leaders emerge. Regardless, 2035 will be an exciting year, don't you think?

June 2023

Hiroo Ichikawa

The "intangible value" that demonstrates what's best about Tokyo

The need for a public–private platform

Urban policy expert Hiroo Ichikawa expresses strong concerns: "While the world is moving forward, Tokyo is consistently standing still." He states that the Tokyo of 2035 will become a significantly deteriorated society if we continue on this path, having already missed the opportunity presented by the Olympics. However, he also points out Tokyo's various forms of potential, including its highly-regarded "intangible value," the redevelopment of the Tokyo Bay area, and the possibility of expanding its "nighttime economy." As Ichikawa shares ideas from his expertise in urban studies, Nanjo adds perspectives from the art field. What kind of strategy will these two develop to revitalize Tokyo?

Tokyo's Missed Olympic Opportunity

Nanjo How do you envision Tokyo and Japan in 2035?

Ichikawa At this rate, Japan will face a considerably precarious future by 2035. Considering how our population is aging, it will likely become a much less vibrant society, beginning to lose momentum around 2030.

Nanjo Lose momentum? That's frightening.

Ichikawa That's why it's all about how much we can push ourselves until then. If we don't make the necessary efforts, we'll be in real danger. The situation might change…if we work hard over the next ten years. That said, Japan's current bureaucratic sectionalism means things don't really move forward. There are countless urgent matters that need to be addressed, but there's absolutely no sense of crisis, and nothing changes because we're stuck with the same old bureaucratic divisions. I'm very concerned about this.

Nanjo You viewed the Olympics as a major opportunity for Tokyo, didn't you? Like how London

rose to first place in the GPCI [Global Power City Index] after hosting the Olympics, and there were expectations for Tokyo to grow as well. But we couldn't reach the top spot. Why do you think that is?

Ichikawa The simplest explanation is that the event, originally planned for 2020, was held in 2021 due to the pandemic. And it was held without spectators. Obviously, without visitors, there can't be any next steps. In the case of London, which hosted in 2012, there were post-event ripple effects due to the many overseas visitors. The city itself gained a reputation for transformation, and with many people visiting, London was perceived as "amazing," leading to increased investment and an upgrading of London's status. As a result, London overtook New York, which had been at the top of the GPCI.

This kind of impact is what hosting the Olympics is supposed to bring. However, there are various patterns among Olympic host countries. For example, there's the case of Tokyo hosting in 1964, where amid postwar emptiness and lack of development, the city rapidly adapted to motorization, developing infrastructure like the Metropolitan Expressway, Ring Road 7, Ring Road 8, and other roads.

Nanjo So Tokyo developed its infrastructure at just the right time.

Ichikawa That's common among host countries, including Beijing and Rio de Janeiro. They develop infrastructure through hosting the Olympics and establish a foundation for the city. London, however, was at a different level. Since the base infrastructure was already there, they succeeded in raising the city's quality. As to how, for example they focused on Stratford, the area in London with the highest concentration of low-income residents, as a development site.

Nanjo That's in the east of London, right?

Ichikawa Yes, they promoted using this most underdeveloped area in the east. In English, it's called "social inclusion." They began promoting the idea of successfully involving all socially disadvantaged groups. Through such promotional activities,

Hiroo Ichikawa

Professor Emeritus, Meiji University / Professor, Teikyo University / Executive Director, The Mori Memorial Foundation.

Serves in key positions including Executive Director of the Institute for Urban Strategies at the Mori Memorial Foundation, Chairman of the Institute of Metropolitan Policy, and Chairman of the Japan Institute of Emergency Managers. Internationally active as a Steering Board Member of the Future of Urban Development and Services Committee, World Economic Forum (Davos), and others. Specializes in urban policy, urban international competitiveness, crisis management, and telework, having published over thirty books on Tokyo and metropolitan areas. Has been involved with numerous organizations including the national government and Tokyo Metropolitan Government as chairman and policy committee member. Currently serves as president of the Japan Telework Society and the Japan Emergency Management Association. Graduated from Waseda University with a Bachelor of Architecture and a Master of Urban Planning, and further studied at the University of Waterloo where he was granted a Ph.D. in Urban and Regional Planning. Born in Tokyo in 1947. First-class registered architect.

they won against Paris and secured the Olympics. Within this process, they actually developed the area and demonstrated real change.

Given London's inherent strength, when the world saw that "London is amazing," this alone increased investment and attracted people, by which I mean not just tourists but talent. They succeeded in upgrading the city's status at a different level from cities trying to establish basic infrastructure through the Olympics. London is the best example of an Olympics hosted by a "mature" city, and they successfully rode that wave upward.

Tokyo tried to exactly imitate London. We attempted to host similarly in 2020, but unfortunately, due to COVID, it was held without spectators, and hardly anyone came. Tokyo has many wonderful aspects, but if people don't come, they can't see the city. We couldn't demonstrate to the international community that Tokyo is on the offensive.

Nanjo I see, that's certainly true. But now that the pandemic's over, inbound tourism is returning. People couldn't come during the Olympics, but couldn't we achieve the same effect now?

Ichikawa It's really not the same as the Olympics. Japan is just seeing the return of inbound visitors now, meaning only tourists are coming back. Like London, we need not just tourists but investors and people involved in industry to come in large numbers. Going forward, it's likely that only tourists will return, not business people. To increase the city's power, the potential for which we could have demonstrated through Tokyo's hosting of the Olympics, we need business people seeking new investment opportunities to come here.

Nanjo So because of the pandemic, Tokyo missed this precious opportunity to "push hard until 2030" that you mentioned. So what should we do from here? Does the lack of investment growth mean the environment still isn't good enough?

Ichikawa Yes. However, this isn't the responsibility of the Tokyo Metropolitan Government. The Tokyo government, of which I'm a member, has put forward the Global Financial City: Tokyo vision to improve the investment environment. But while there are things Tokyo can work hard at, many decisions are made at the national level. Corporate tax is decided by the Ministry of Finance, and hiring foreign workers involves the Ministry of Justice.

Nanjo So are you saying that the national government is creating barriers or otherwise making things difficult to accomplish?

Ichikawa It's not so much creating barriers as just being slow. Extremely slow to make changes. There's a reason for this: while people in Tokyo are well aware that Japan is in danger if Tokyo doesn't upgrade itself, this recognition isn't at all shared across Japan. Many politicians have their local constituencies, so they think "why should Tokyo get all the profits?" While Japan is barely managing only because Tokyo's efforts push money to regional areas, they don't see this. They only think about what they can bring to their own electoral districts. The civil servants in Kasumigaseki used to have some good sense, but now political power has become too strong, and others can't push back.

I'm very pessimistic about the situation. No one is talking about what to do now that our hopes for a rapid rise through the Olympics, that kind of big event, have fallen apart.

What Will Happen with a Scenario-less Osaka Expo?

Nanjo Well, we have the Osaka Expo coming up, don't we?

Ichikawa I'm not sure that's enough. What's crucial is how Osaka perceives itself. Can they create a scenario for how to pull themselves up while facing the reality of Osaka's urban decline? Without that, it might end up being just a local festival.

Nanjo Isn't that precisely why the Expo could be one means of rising up?

Ichikawa If there's a proper scenario in place, the Expo could indeed be a means to that end. However, this time we're hosting it without any substantial scenario.

Nanjo What kind of scenario do you mean?

Ichikawa I mean a vision for what they want Osaka to become. In Tokyo's case, whether we like it or not, we've found ourselves in the midst of global inter-city competition, so we're already in a position where we have to work hard. We didn't ask for it, but Tokyo is now in a world where it must compete, it's a "we have no choice" situation. While the specifics of why we have no choice vary, at least both the political and private sectors conduct everything in Tokyo according to global standards. People involved with Tokyo, including companies, look to the world because they know their companies won't survive if they don't work hard. In other words, Tokyo automatically operates by global standards in everything it does. But Osaka hasn't yet become part of that inter-city competition. They lack such self-awareness. Do you visit Osaka often?

Nanjo No, not really.

Ichikawa Osaka as a city has a kind of self-deprecating aspect. While their culture of self-deprecating laughter is fine in and of itself, Osaka hasn't yet created a "let's rise up out of our decline" scenario.

Nanjo I suppose there are people working on that, but maybe it's not integrated.

Ichikawa There are various interpretations. From our perspective as urban specialists, metropolitan area power is extremely important right now. When we talk about metropolitan areas, the Tokyo area consists of Tokyo itself and three prefectures: Saitama, Chiba, and Kanagawa. This Tokyo area moves as one unit. In a sense, since Tokyo is at the top, the surrounding areas have no choice but to follow. The Kansai region has Kyoto, Hyogo, and Osaka, but if you go to Kansai, you'll see they're all fragmented. They don't get along and won't cooperate with each other.

In terms of metropolitan population, the Tokyo area exceeds 36 million and is approaching 37 million. In comparison, the Kansai region, including Shiga, Nara, and Wakayama Prefectures, has

20 million people. That's an impressive metropolitan area, sure, but just by numbers. The view from within is one of fragmentation into Osaka, Kobe, and Kyoto. Kyoto and Osaka don't get along and don't collaborate. While there is some population movement with places like Nara serving as bedroom communities for Osaka, there's no mutual interaction.

Of course, sometimes it might be better for each area to move independently. It would be fine if they could compete while maintaining their own power, but Kansai isn't in that situation right now.

Nanjo That fragmented nature of Kansai is quite evident. Actually, it's even very relevant to art exhibitions.

When we plan traveling exhibitions, we have to decide where to hold them in the Kansai region. There are museums in Kobe, Kyoto, and Osaka, but problems arise when we need to choose just one location. We figure that if we hold it in Kyoto, visitors will come from Osaka and Kobe, but there's still this dispersion of population centers. So with each tour, we have to debate where we should do it this time. Like, is it Kobe's turn? In the Tokyo area, we'd do it in Tokyo without hesitation.

Ichikawa People tend to prefer dispersion, regardless of the city. They dislike concentrating in one place and prefer to spread out. In a way, while being a metropolitan area, the Kansai region's dispersion between Osaka, Kobe, and Kyoto is ideal in terms of power balance. However, while they could achieve more by combining their powers, the reality is different. Kobe has started to decline, Kyoto maintains its own stance, and Osaka and Kyoto don't get along.

An interesting thing happens when I give lectures in Osaka: scholars from there tell me, "Companies wanting to make it in the Kansai region end up going to Kyoto." Kyocera, companies like that. They give a big laugh, saying, "For whatever reason, they never choose Osaka." That self-deprecating attitude, that's Osaka. There's some appeal to their culture of finding happiness in laughing at themselves, but it also leads to a lack of crisis awareness. In Tokyo's case, we know that if we just leave things as they are, the world will leave us behind, regardless of whether we're happy or not.

Provincial Osaka and the "United States" of Tokyo

Nanjo There's a big commotion now about not having enough money for the Osaka Expo. What kind of scenario should Osaka have had?

Ichikawa Various people have given Osaka a shot. During the economic bubble, when Tokyo was getting too crowded, Kenichi Ohmae declared, "Osaka is next," and he went there. But he came back. While there are probably various reasons for that, I think the biggest factor was Osaka's strong locality.

First, in Osaka, you can barely do business if you don't speak Kansai dialect. And there's this impression that business only moves forward after you've had meals together and confirmed that you've "become friends."

I once asked a Kubota executive about this, and he said that in Osaka, "things don't start until

you understand the person first."

Nanjo So it's more like a province than a city.

Ichikawa That's right, it's provincial. In contrast, Tokyo is like the United States. It's a gathering of people from different places.

Nanjo So what kind of urban scenario is there for Osaka?

Ichikawa Well, there's no easy one.

Nanjo What about Kobe and Kyoto?

Ichikawa I like Kobe and Kyoto, so I hope they do well.

Nanjo Kyoto has a clear scenario, doesn't it? They have culture and tourism.

Ichikawa Kyoto is wonderful. I have a condominium there, so I visit occasionally. I love Kyoto. It has its own character, different from Tokyo.

Nanjo There are so many Tokyo people who own small rooms in Kyoto these days.

Ichikawa Well, real estate costs less than half what it does in Tokyo.

I can't quite explain why, but personally, I don't quite fit with Osaka's taste. Kyoto is very nice; it's truly a capital city. Cities that have been capitals for many years are different, aren't they? Though the people are another matter.

Nanjo It's a city where outsiders come and people are constantly flowing through, right?

Ichikawa Yes, but my acquaintances tell me you shouldn't live there. I hear that when you actually live there, there are different kinds of hassles than when you're just visiting. An acquaintance from Tokyo became a university president in Kyoto, so he moved there with his wife instead of commuting. They say that the moment they moved in, the surveillance began, with people saying outsiders had arrived. But as long as you remain an outsider, you're fine.

Nanjo Who does the surveillance? People at work?

Ichikawa Neighbors. When I bought my apartment in Kyoto, I was watched closely too. But it stopped the moment I went to introduce myself directly, showing them who I am. Basically, they're just very wary of outsiders.

Kyoto has its good points, but living there can be quite challenging.

The Tokyo Bay Area's Hidden Potential

Nanjo We talked about how London developed its eastern side for the Olympics. When considering Tokyo's suburbs, it seems there's still plenty of land around Odaiba. Shouldn't they have developed it more for the Tokyo Olympics?

Ichikawa They actually used quite a bit of the Bay Area for the Tokyo Olympics, including Odaiba

and Ariake. We won the bid against strong global candidates by promoting the theme of a "low-cost Olympics" and creating a rule that venues had to be within twenty minutes of the Olympic Village. That's why they built the Olympic Village in Harumi and constructed venues around there.

Nanjo Does this mean there are more permanent facilities that will continue to be used?

Ichikawa All the sports facilities will continue to be used, so there's an Olympic benefit. But the problem is that we still don't have a clear scenario for what to do with the Bay Area. We're discussing it, but…

Nanjo Isn't that the area closest to central Tokyo that's easy to develop?

Ichikawa Let me explain in more detail. In Tokyo, who does the development? It's private companies. The administration just needs to say "yes" or "no" to what private businesses want to do. However, the Tokyo Metropolitan Government owns a significant portion of the land in the Bay Area.

Land owned by the administration doesn't move easily because they don't develop it. Why? Because bureaucrats push back on anything that involves risk, and a rash attempt at "let's make Tokyo better, let's work hard" might fail.

Nanjo I can see that.

Ichikawa The easiest thing would be to sell it and let private companies develop it. However, they usually don't sell because they want to retain the assets. For instance, there are many examples of the Tokyo Metropolitan Government leasing their land through seventy-year fixed-term land leases. Private companies then develop on top of that.

The metropolitan land that exists in considerable amounts in the Bay Area hasn't even been leased yet. We're now discussing what to do with it. Actually, private companies haven't even joined this discussion phase. They're too busy with development in central Tokyo to extend their reach much farther, and the Bay Area is still somewhat far from the city center. Let me explain why. Remember the "World City Expo" that was supposed to be held in 1996?

Nanjo It got canceled.

Ichikawa Yes, it was canceled when Governor Aoshima replaced Governor Suzuki. I was on the World City Expo committee at the time, and just when I thought it was my time to shine, it was canceled. [laughs]

The first strange thing was transportation. The coastal development was actually copying London. In East London, they had a driverless, computer-controlled light rail system, which we copied with the Yurikamome. That's fine, but the Yurikamome winds and curves after leaving Shinbashi, like some child's toy. Why do that instead of building a straight subway line from central Tokyo?

Well, the Yurakucho Line runs along the edge of the Bay Area to Shin-kiba but doesn't reach Odaiba. When they started development in an area with no train service, they were short on time and decided to just build the Yurikamome and have it loop around. While development did occur, the connection to central Tokyo ended up being very poor. After leaving it like that, residential tow-

ers kept being built, and now it's full of high-rise apartments... That's the current situation.

The problem is that they should have built a straight railway line. They've finally started planning a new coastal subway line that will run straight from Tokyo Station to the International Exhibition Center, something I'm also involved in now. But the Bay Area's problem is that too many residential buildings were built. Initially, they had many plans including business functions, but once all those residential buildings went up, further development became impossible.

Nanjo With so many people living there, the Yurikamome must get crowded.

Ichikawa The Yurikamome loops around the Bay Area, so it's not too crowded with commuters and students. What's crowded now are the Oedo and Yurakucho lines. The Toyosu and Kachidoki Stations are breaking down during rush hour. To begin with, they never anticipated this many people would live there.

Nanjo So is Odaiba not very useful for Tokyo's development?

Ichikawa No, Odaiba already has quite a few buildings constructed. Fuji TV relocated there, and the JAL Hotel tried moving to Aomi, but it came back. There's also Venus Fort. That land was supposed to be leased rather than sold as a Tokyo development method, but they ran out of money and ended up selling it. Toyota bought that land, and it looks like it will become a sports facility called the Tokyo A-Arena.

Nanjo That's fine, but when you go toward the ocean, isn't there still lots of vacant land?

Ichikawa When you try to go to Odaiba from the city center, it's still far. There's a subway, but from Shinjuku it takes a big curve via Oimachi. Or you take the Yurikamome from Shinbashi. That one also loops around, so it's certainly inconvenient in terms of transportation. Development won't progress without a solid transportation network. Despite being relatively close to the city center, the Odaiba and Ariake area is kind of a transportation desert.

The Key to Bay Area Development is MICE

Nanjo So what's most important in the scenario for Tokyo's development and future growth?

Ichikawa The Bay Area still holds much potential, so it's definitely a keyword for the future. There's still plenty of undeveloped land, and what's more, the Tokyo Metropolitan Government owns it.

Nanjo Does the Tokyo Metropolitan Government have any plans?

Ichikawa They're starting to make plans, but there's no decisive strategy yet. The reason is that large-scale redevelopment in the city center is actively progressing now. Areas like Nihonbashi and Yaesu are being continuously developed, with existing buildings being rebuilt. Many areas within the Yamanote Line are within six kilometers of Tokyo Station, so they're close. Since development

guarantees people will begin activities there, it doesn't extend much to other areas. For the next five to ten years, redevelopment will focus on central Tokyo and after that comes the Bay Area. The Bay Area is absolutely necessary for the next stage. Tsukiji, which is at the midpoint of the Bay Area and city center, will start development soon, so once the developers are decided and Tsukiji's development begins, it will lead to the Bay Area if successful.

After that, the coastal subway line we discussed earlier will open. In that sense, the path forward has been determined, but getting there will take time, say ten to twenty years.

Nanjo What kind of place will the Bay Area become? Residential?

Ichikawa It definitely shouldn't be residential. We're considering the Bay Area in two parts, north and south. The north will be mixed-use, with commerce and MICE [meeting, incentive, conference, and exhibition] facilities. While art is involved, MICE-related facilities are especially important. Increasing MICE facilities is Tokyo's biggest theme right now. That's in the northern Bay Area, specifically Ariake rather than Odaiba. The Koto Ward side of Ariake. That area has relatively more metropolitan-owned land.

For the southern side, we envision an area where various social experiments can be conducted. Various experiments using DX [digital transformation], autonomous vehicles… Anything is possible there. Globally, there aren't many places near city centers where such experiments can be conducted, but Tokyo has one, so in that sense, Tokyo has a very valuable asset. It can become an experimental ground where Tokyo can do something with its world-class technology. But how to communicate this to the world? The issue is that progress won't happen without private sector involvement. Manufacturers and private companies won't move without seeing some benefit. If private businesses join in and everything is properly combined, it could become something huge. In terms of having such a place, I think Tokyo could actually become an outstanding city globally.

Nanjo So is the Bay Area the key to Tokyo's scenario?

Ichikawa For Tokyo to become a sustainable city, I think it's about how we can build upon its existing strength. That strength is world-class technology, so it becomes a question of how to use technology in the city. The best place to implement this is the coastal area, the southern side of the Bay Area, where there aren't many people yet. Unless it becomes a global showcase, people won't gather there.

Actually, I'm currently consulting with the Tokyo Metropolitan Government about the "Smart City" concept. A Smart City naturally involves DX. It's about operating a city using big data. The most famous example was "Google City," which Google started in Toronto, Canada. It was an attempt to create an ideal city by operating it while monitoring all people's behavior using big data. Since big data reveals individual characteristics, they could predict and prepare for people's next actions. They tried to create such a city. However, there was a requirement to get residents' consent for implementation, so when they tried to get that consent…

Nanjo They faced huge opposition, didn't they?

Ichikawa Yes, citing privacy invasion. This point is significant. When implementing DX, the moment it touches personal information, people say no. So Google City, the world's most famous smart city experiment, came to an end.

If we are to experiment in Tokyo, the Bay Area is essential. However, learning from Google's failure in Canada, rather than just chasing dreams, we need to experiment while considering both pros and cons. Autonomous driving is an obvious consideration, but the issue is taking things to the next level, how to operate a city using information technology. Like ChatGPT, technology increasingly gets ahead of human behavior. This is becoming a very difficult point, and we'll conduct experiments including this aspect in the Bay Area.

If we can make the Bay Area such a cutting-edge place, I think Tokyo will shine in 2035.

Enjoying the City 24 Hours through the "Nighttime Economy"

Nanjo You've been advocating for a "nighttime economy," saying that Tokyo needs to promote places that can be enjoyed from morning until night.

Ichikawa Yes, Tokyo's biggest drawback for inbound tourists is a lack of places to enjoy during the evening and night hours. Tokyo has quite a few regulations, like not being allowed to open shops at night. While there are movements to relax these regulations, they're slightly off track. It's like a movement to get permission for nighttime operations, but my idea of a nighttime economy is somewhat different; it's about making Tokyo a place where you can enjoy the overall nighttime environment as a package.

In Singapore, the city's seaside is called Marina Bay. They're using this resource to entertain visitors as a city-wide effort. For about two hours from around 7 or 8 p.m., they do projection mapping and fireworks displays. You can go see it before dinner or after. People gather at Marina Bay to watch the fireworks. They deliberately created such a place in the city. That's necessary as a unique aspect of Singapore as that kind of city. Tokyo isn't doing anything like this.

Nanjo I see. Hong Kong is amazing too. When you look from Tsim Sha Tsui, they light up all the buildings on the other side.

Ichikawa It's commonplace now. But what's common sense globally is considered nonsense in Japan. Take Shanghai for example. The opposite shore is the Bund, a wharf area, and they take tourists around by boat for about a three-hour cruise. They let people enjoy the night view while they cruise around. Tokyo doesn't do anything like this. That's why I've proposed the idea of "Bay Area Amusement" for Tokyo. However, trying to implement it is quite challenging. Looking at Tokyo's Bay Area night view, there are traditional *yakatabune* boats but nothing else. It's just lonely. Shanghai doesn't have fireworks like Singapore, but they have boats and bars. You can enjoy the night there for a few hours. I'm proposing that we should create places like this.

Nanjo For Tokyo, would that be in areas like Odaiba or towards Chiba?

Ichikawa Around Takeshiba, Hinode, and Shibaura. Using the warehouse district, it could be quite different if done well. Also Harumi and Odaiba, we could do something with those areas. But do you know what happens when I propose things like this?

Nanjo Regulations?

Ichikawa Yes, we come up against an overwhelming number of issues like "there are fishing rights," "this is a port district area where land development isn't easy," "there are territorial claims," and so on. We should just get rid of all these hurdles, but the bureaucrats' default position is that it can't be done, or it's too difficult.

These are resources. Tokyo has tremendous resources just in this area alone. Japan is a country that doesn't utilize its resources, and Tokyo is a city that doesn't utilize them. The reason is simple: various vested interests, authority, and privileges are entangled, making it impossible.

Nanjo Vested interests are easier to understand. What do you think about the area in Shinagawa that Terada Warehouse developed?

Ichikawa It's okay, but I wish it was more comprehensive. But that's a good example. However, since it's operated by a warehouse company, the involved department in the Tokyo Metropolitan Government is the Port Authority. It's a different bureaucratic territory.

Nanjo Someone from Warehouse TERRADA told me about this. Originally, the stevedores' union was strong, and it was difficult to get anything done. Vested interests prevent many things from being done along the waterfront.

Ichikawa And then they bring up fishing rights too. But if we don't resolve these issues, Tokyo has no future.

Running Subways Late at Night on Weekends

Ichikawa In London, they run the subway late into the night on weekends. When I ask if we can do this in Tokyo, they push back, saying things like they need to do vehicle maintenance at night.

Nanjo When we started Roppongi Art Night at Mori Art Museum, Minoru Mori called the Tokyo Metropolitan Government, asking if they could run buses and subways until morning during the Art Night event. But they wouldn't do it.

Ichikawa Tokyo's system is such that the Tokyo governor is like a president. It has to come down from the top. It's not easy... Officials tend to avoid doing things because if they don't go well they'll be seen as a failure. So they tend to think of how they can avoid doing things. It has to come down from the top. If the leader says to do it, they'll do it.

Nanjo So I guess a nighttime economy is about having entertainment in the city and port at night.

What else is needed?

Ichikawa Having shops open is certainly important too. Regarding this, the Amusement Business Act has already been amended, and since June 2016, it's legally possible to operate entertainment businesses with food and drink after midnight. But while the law has been amended, there's still a reason why the nighttime economy isn't spreading.

Nanjo Because everyone goes home early. They're healthy, aren't they?

Ichikawa The lack of nighttime transportation is a big reason. Tokyo Metro is crucial here—we need a decision to run it late at night on Fridays and Saturdays.

Nanjo People in theater often talk about this. Theater usually starts around 7 p.m. and runs for about two and a half hours. When the audience wants to eat afterward, only bars are open. Everyone's dressed up nicely, but there's no suitable place to dine. It's the same after concerts.

Ichikawa Something's not right. The GPCI has a nightlife indicator, on which Tokyo ranks very low, 27th in the world. London is ranked first.

Nanjo London has amazing theaters, too. And cinemas.

Ichikawa Yes, Tokyo seems to have misunderstood "nightlife," considering it to be like Kabukicho at night. They think that's what nightlife is. It's not. They don't understand entertainment.

While individuals feel this need, we're not having discussions about how to handle a nighttime economy as an urban package aimed at powering up Tokyo. Yet despite this fragmentation, there is a Japan Nighttime Economy Association that's active. They're doing something, but it feels a bit off the mark.

Nanjo Don't we need people who have experienced such things in foreign places, like, London, Singapore, and Shanghai?

Ichikawa For example, London has tours where you can go around the city by bus at night. Since facilities are lit up, tourists can enjoy just traveling through it. Tokyo doesn't even have places like that.

Nanjo Perhaps Japanese people just don't have the concept of enjoying the night? They just sleep when it gets dark, a kind of cultural difference. It's a chicken-and-egg situation, isn't it? Without places to go, the culture won't take root.

Ichikawa Cultural differences are fine, but Tokyo is already involved in global movements. Since there are global standards, we can't rise up unless we do things according to these standards.

In an Era Without Models, What Kind of City Should Tokyo Aim to Become?

Nanjo What should Tokyo aim for, or which global city should it use as a model? Should it be Lon-

don or New York, or should it develop its own unique identity?

Ichikawa I wonder what it's aiming for. Urban planning has a history, and Tokyo has generally learned from London, New York, and Paris. For example, creating garden cities in the suburbs was copied from Britain. And because of Manhattan, central-city development largely imitated America. But around the end of the twentieth century, Tokyo became the world's largest city. Until then, we could copy America or Britain's urban control mechanisms, but we ran out of countries to imitate. Compared to New York's 22 million people, Tokyo reached 36 million. As it became a mega-city, there was nothing left to learn from.

Nanjo I think everything went downhill when the bubble burst in the late 1980s. Before that, Japanese companies were doing things like buying New York's Rockefeller Center. After reaching the world's peak once, the bubble burst, and we entered an era where we couldn't find a model to imitate. This was true in every aspect. Japan was never good at proposing its own model of what it wanted to become. I think we've had no model since the era when we were trying to catch up with China.

Ichikawa We lost our goal. When Japan became world-class, it lost its objective.

Nanjo We need to create it ourselves, but we can't.

Ichikawa What's worse is that we were defenseless during our ascent. The moment we surpassed America, this huge nation, they got angry. They started bullying Japan in various ways. We had no weapons against that. When you surpass someone, you get knocked back down. We didn't know that. Japan isn't good at fighting.

Nanjo Because we're naive. We have no strategy.

Ichikawa There's also history. As an island nation, until being occupied by America after the war, we had never been colonized. We don't know how to defend ourselves.

Nanjo I think Japanese people have a farmer's temperament. It's a system of "let's all work hard together," believing that if you diligently plant rice, you'll definitely have rice in autumn, and everyone can live happily together. That mentality is embedded in us. But nomadic people aren't like that. They just need one capable person to catch the prey.

Ichikawa In ancient Mongolia, when people worked hard to grow crops, someone would attack and take everything away. Knowing this, they always had defense on their minds. In that sense, I think Japan is a fortunate country, but when you enter the global arena, being fortunate isn't enough.

I lived in Baghdad for a year. Look at Baghdad's history: they've been fighting for a thousand years. Their history is almost entirely about warfare, so their societal mindset of "attack or be attacked" is completely different from Japan's. Chinese people are similar to the people of Baghdad. They also think in terms of "attack or be attacked." Japan, even historically, wasn't like that. During the Mongol invasions, we were saved by typhoons, which we called "divine winds." [laughs] Every-

thing was coincidental, but my impression is that we never had the concept that fighting is about defending.

That's why with the Plaza Accord, Japan just kept getting beaten and was struck down completely. Having been raised in comfort, we were suddenly attacked. Japan started going wrong around that time, eventually heading toward the collapse of the bubble economy. And since then, we haven't been able to determine what our next goal should be. One thing we can say about humans is that we don't think about what's next unless we feel a sense of crisis. Humans think about the future because they feel a crisis, but does Japan have a sense of crisis now? No, right? You can tell by looking at the prime ministers. They respond to everything superficially, so it's a bit different from the sense of crisis you and I have. It's troubling to think about what to do in this situation.

Tokyo's Sense of Crisis Can't Be Shared Across Japan

Nanjo I was just talking with someone about how Japan isn't really struggling yet. That's why no changes occur and there's absolutely no fundamental reform. That person said nothing will change until we struggle a bit more.

Ichikawa Because there's no sense of crisis. However, Tokyo knows that, in reality, it has many global rivals and must fight to survive. People in Tokyo know this, but it hasn't become a consensus across Japan.

Nanjo Tokyo gets criticized for centralization and held back by regional areas. Shouldn't those areas be cheering "Go Tokyo," putting it forward as Japan's representative?

Ichikawa I no longer harbor such naive feelings. When some other place prospers, people become envious, they get jealous. That's Tokyo's fate, so we just have to move ahead even if we're envied. There's no need to fear being envied.

Since 2019, Tokyo has been sending over 900 billion yen annually to the rest of Japan, beyond local allocation taxes and subsidies. I was on a metropolitan committee formed to counter the national government. But it had absolutely no power. Initially, it was going to be 1 trillion yen taken annually, but with opposition from the metropolitan assembly, it was reduced by 100 billion yen to 900 billion. In other words, Tokyo is paying the rest of the nation an additional 900 billion yen beyond local allocation taxes. Even Tokyo residents don't know this well. We're having money taken from us, but we don't feel it.

This is natural because if you want money in Japan, Tokyo is the only place that has it. We'll probably continue to have money taken from us. So instead of making a fuss about being taken from, Tokyo should just say go ahead, take it, and keep earning. However, we should also demand they don't get in the way of our earning. That's all.

To be specific, remember we talked about improving Tokyo's investment environment? There's a committee called Global Financial City: Tokyo, of which I'm a member. We're working hard to create

an international financial center, but the national government insists we benefit not just Tokyo but Osaka and Fukuoka too. Because there are Diet members from there, you see. Osaka has the Japan Innovation Party, Fukuoka has [former Prime Minister Taro] Aso, and to save face for everyone, they say "let's make Osaka and Fukuoka financial centers too." But that's impossible. A financial center must be of such a high level that only Tokyo can pull it off. Yet along with various mechanisms to nurture Tokyo as an international financial center, they're starting to attempt the same in Osaka and Fukuoka.

Nanjo If there's a bunch of them, none can be a center. [laughs]

Ichikawa That's right. They don't really want to strengthen Tokyo, to strengthen it for Japan's sake, resulting in profits for all of Japan. They'll take what they can get, but when Tokyo tries to do something on its own, they interfere. Our history all along has been a structure like that.

Looking abroad, there are international financial centers in New York, London, and Hong Kong. Now that Hong Kong is losing power, Asia is in an uproar. That's why Tokyo, Singapore, and Shanghai are making moves.

Nanjo Japan really needs to substantially change its rules, or we have no hope. In Hong Kong, businesses don't leave. I hear it's really easy to do business there.

Ichikawa Everyone's saying Tokyo is difficult to work in, so we need to change it, but nothing changes, right? When we try to change things, every ministry has its vested interests. We need to reorganize everything. That can't be done without some kind of superpower.

Nanjo There was the special economic zone concept before, wasn't there? Wasn't that concept good logic for creating openings and saying "just this area is special," gradually loosening things up and making exceptions to rules?

Ichikawa Yes, that's what I'm telling Governor Koike, that special economic zones are the only way to create an international financial center. But she doesn't respond. Because you need Cabinet Office approval to create a special zone, it can't be done without national government consent. The Tokyo governor needs to have strong authority over the national government. Ishihara had some effect because he had LDP backing, but I'm quite pessimistic about the current situation. I do think Tokyo needs to change dramatically.

Tokyo's Strength: The Perspective of "Intangible Value"

Nanjo Let's talk about something more upbeat. [laughs]

For Tokyo to succeed and grow from now on, what kind of city should it be able to call itself? For example, London has theaters, museums, things like that, right? I mean in that sense. While being very cultural, it's also a financial center. So in terms of multiple factors, you might say London is a city of "finance and culture." Similarly, what kind of city should Tokyo aim to become?

Ichikawa That's the biggest theme. For example, even though work is difficult and systems are problematic, Tokyo still attracts quite a lot of people globally. In the GPCI survey, New York ranks first as the "city where people want to work," followed by Tokyo. Particularly among Asian countries, people want to work in Tokyo; they want to come here.

So despite government deregulation being slow, there are many people who want to come anyway. Why is Tokyo so loved? There are various reasons, but we need to understand why people around the world like Tokyo. From there, we can think about what kind of city it should become. So while GPCI is a ranking of cities' comprehensive power, though we don't talk about it much, there's also a separate indicator called a city's "intangible value." This indicator is actually interesting, I love it. We use it because we need to understand Tokyo's good points.

Nanjo At some point, you started talking about "intangible value." I said, "Isn't that different from culture?"

Ichikawa The original English term is "urban intangible value." We call it just "intangible value." It's about how we view Tokyo's value, considering how people feel about and evaluate cities. We look at urban value from six aspects: efficiency, accuracy and speed, safety and security, diversity, hospitality, and metabolism.

Nanjo By that measure, Tokyo is strong, isn't it?

Ichikawa Tokyo is at the top. But what's important is second place. You'd think it would be London or New York that Tokyo always competes with, but it's not. It's a city that has good efficiency, comfort, and hospitality. Can you guess where?

Nanjo Is it in Northern Europe?

Ichikawa Close, but it's not Northern Europe—it's Vienna. In other words, Tokyo, with its metropolitan area of over 36 million people and city population of 14 million, has a taste similar to Vienna. Vienna has a population of about 1.9 million. Despite being a mega-city, Tokyo most resembles Vienna.

Nanjo They don't seem similar at all. [laughs] How did you decide on these six elements? Did you create categories where Tokyo is strong?

Ichikawa I decided on them. Of course, I anticipated areas where Tokyo would be strong. However, I think this is quite a significant theme, that it must capture why people like Tokyo. Many people want to come and actually do come. We started investigating from the idea that there must be something good beyond economic power. As a result, Tokyo and Vienna competed for first and second place. Singapore was third, Toronto fourth. New York finally comes in at fifth. Copenhagen is sixth, followed by cities like Berlin. What we kind of understood is that while New York is somewhat different, these are all cities with a unique sense of comfort, a feeling of security when you're there.

This will continue to be valid, and I think people making policies for Tokyo need to know this. If you ask where Tokyo's strength lies, it's that despite being a mega-city, it moves in an orderly fash-

ion. There's no other example like this in the world. In various places, I talk and write about the fact that we need to consider why Tokyo is so orderly.

I believe the answer isn't just its administration, but its people. The moment people enter Tokyo, they follow Tokyo's unwritten rules; there's something invisible at work. Like, when you're standing in line in Osaka, someone might cut in, but that doesn't happen in Tokyo. There's an atmosphere that says you shouldn't do that.

Nanjo Really? [laughs]

The Invisible "Rules" That Keep a Mega-City Moving Orderly

Ichikawa To add a bit more, for example many international students come to universities. In particular, many Chinese students come, and at first, they tend to be loud. But after a year, they too start speaking quietly in elevators. So even people from overseas change. This is because Tokyo has these huge unwritten rules, and those who come here end up following them. Tokyo is a city that makes people do this.

Nanjo I wonder if that's a good thing.

Ichikawa Regardless of whether it's good or bad, I think this overwhelming, invisible power of Tokyo makes people's behavior somewhat orderly. While individual actions play a role, it's different from Osaka, for instance. I think this is a selling point for Tokyo. While it's a mega-city with various conveniences and economic power, people can actually live securely in these detailed aspects. There are Westerners who look down on Tokyo, saying they don't want to come, but once they arrive, they're surprised. They say Tokyo is amazing. What's amazing? For one thing, when we take them to the Imperial Palace they're amazed by its beauty. When they go around the city, it's very clean, the food is delicious, and there's hospitality. Most are surprised. There are certainly some Westerners who look down on Asia. But even such people, when they come to Tokyo, seem to think, "What's this? It's an Asian city, but it moves with a Western sensibility." This is Tokyo's advantage, and since Tokyo has power, I think it depends on how we can maintain these good points or how people recognize and act on them.

At least, that's my personal view of Tokyo. The question is whether we can maintain it.

Nanjo Right. If we increase immigration, there's a high possibility things might break down.

Ichikawa No, even if immigration increases, it'll be fine if there are rules, and I think Tokyo's rules have staying power. And if problems arise, we can create new regulations if necessary. Right now, there's a common theme among global cities called the "mosaic phenomenon." In some part of every mega-city, there are always people of different ethnicities living there. There's a pattern where this mosaicking and ethnic diversification lead to deteriorating security. In certain areas of London or Paris, it suddenly becomes dangerous.

But that mosaic phenomenon hasn't occurred in Tokyo. For example, while there are concentrations of Indian people living in Kasai or many Chinese people in Toshima Ward, it hasn't become a mosaic yet. Tokyo's challenge, as a global city, is how to prevent this. What to do next. Whether it becomes a mosaic or not is one indicator. If it does become a mosaic, how do we get these communities to maintain Tokyo's rules? I actually think this is an administrative challenge.

Nanjo I think there's a possibility of the mosaic phenomenon occurring when the number of different racial groups increases. The challenge is how to permeate the "rules" despite that. I want to believe Tokyo's power will prevail, like you say.

Creating a Platform for the Administration and the Private Sector

Nanjo So development of the Bay Area utilizing technology, a nighttime economy, and maintaining the level of our intangible value are all important, aren't they? These seem to point us in the direction Tokyo should take.

Ichikawa We haven't touched on art at all.

Nanjo Oh, we haven't. [laughs] Well, since we're at the end, I'll say this: I think our competitiveness will decline unless we significantly revitalize culture too. Right now, Tokyo is considered somewhat cultural, but compared to London, New York, and Paris, we still have far fewer museums. London, New York, and Paris are more segmented. They have many genre-specific museums, design museums, fashion museums, architecture, and so on. Japan and Tokyo hardly have any of these.

Ichikawa Museums in New York, Paris, and elsewhere keep changing. Who's doing that?

Nanjo Government administrations and nonprofit organizations. People from the industry come together to create museums and operate them as NPOs. Everyone gives money to these.

Ichikawa Why doesn't Japan do it that way?

Nanjo Because Japan has a different donation culture, so even if we tried, we couldn't gather money. The administration has to handle everything, but when they build museums, they keep reducing the budget after the construction is done. So they don't develop.

South Korea is the opposite. Their administration runs things too, but they have four National Museums of Modern and Contemporary Art. Additionally, Seoul has four municipal art museums. They're continuing to increase their museums, while Japan thinks it's fine to just keep cutting expenses. Of course, I understand there are areas that should be cut, but there should also be areas where we increase expenses, saying "let's nurture this." There's no such prioritization.

Ichikawa So why don't you create an NPO? I'm the chairman of the Institute for Metropolitan Policy Studies. It includes all major developers, general contractors, and railways, about 25 of them. We operate based on that. Regarding the museum discussion, I think perhaps you should do it. Private companies will naturally participate if there's profit to be had. You get them to join by showing them

how it will generate revenue. As background, we need to consider that Japan is in danger if things continue as they are. So what do we do? We create a platform where the administration and the private sector come together. Even if individuals have opinions, they won't be effective if scattered. A platform is absolutely necessary.

Nanjo In South Korea, the administration and private sector actively work together.

Ichikawa But who will do it in Japan? That's why it has to be you, Mr. Nanjo.

Nanjo I could do it, but it needs to be sustainable, and it won't survive unless it succeeds as a business. Including that aspect, I think there's a need to create a new type of museum.

Ichikawa Well if you're going to create a new museum, you should create a platform. Include both the administration and the private sector in it. It's actually quite easy to do in Japan. Once you create it, discussing what to do next makes it easier for stakeholders to take action.

As you mentioned earlier, London, New York, and Paris are all starting to move toward new things. You just need to start by saying "This is getting serious, let's gather the stakeholders." Within that gathering, companies will think about how to make money, so you tell them, "this will be profitable." Since building museums is expensive, you can first decide whether to start with them. Not just for museums, but first gather people who share awareness of the issues, and when discussing what to do next, if you have many private sector participants and administration involved, things tend to move forward. It doesn't work alone.

But creating the platform comes first. You share the awareness that Tokyo is in danger if things stay like this, that we need to do something.

When People Gather, the Administration Takes Action

Nanjo You really have a strong sense of crisis, don't you?

Ichikawa Sure, a tremendous sense of crisis. Because while the world is moving, Tokyo remains stuck, not moving at all. It's dangerous if this continues. Singapore is already quite active as an international financial center, sending various missions to London and trying to take over from Hong Kong. Tokyo's movements are too slow.

Nanjo Tokyo doesn't have that kind of strategy. There's talk about bringing the art fair currently held in Hong Kong to Tokyo, but the approach is childish and completely inadequate. There's no strategy.

Ichikawa You could do it. It's a waste to leave things as they are. Create a platform. If you think about what to do for Tokyo, no one will say no.

In May 2021, we gathered private companies like JTB and all these software and hardware resources, we invited various Tokyo Metropolitan Government bureaus and Governor Koike and started a movement to realize an "International Exchange Creative City." The pandemic interrupted

us, but we'll hold it again. Everyone actually has awareness of the issues, so they gather quickly. Private companies will join if there's business potential. And when people gather, it becomes easier for the administration to provide funding.

Nanjo When people gather, it does become easier for the administration to act.

Ichikawa When you do it, you need to use "strengthen Tokyo" as your catchphrase. Without that, the Tokyo Metropolitan Government won't get on board. But include it and no one will complain. I really want you to give "strengthening Tokyo through art" a shot. That gives you a legitimate cause, doesn't it? What do you think?

Nanjo Various faces come to mind, both enemies and allies.

Ichikawa If you create a platform, there are no enemies or allies. If you try to do it, Governor Koike is someone who will understand. When the administration gets involved, the private sector will move, won't they?

Nanjo Okay, let's try it. Let's create it.

Ichikawa Indeed, let's create it. If we just keep saying things are dangerous, time will fly by. It's only eleven years until 2035, so we have to act now.

June 2023

Joichi Ito

Tokyo must aim to become a "city of diversity"

Educational diversity is tied to the diversity of people

Expressing his passionate hopes for Tokyo, Joichi Ito says, "I want it to become a city with much more diversity and a more profound culture." While Japan's conservative nature helps preserve traditions, it also tends to reject external influences. However, evolving technology is relentlessly changing Japanese society. "Japan needs a paradigm shift," says Ito, to which Nanjo adds, "We must become a society where being different has value." Their dialogue covers many topics, from AI and society to capitalism, education, reskilling, and art and digital technology, and the common theme that emerges is one of hope.

A Paradigm Shift Beginning from Tokyo

Nanjo Looking ahead to 2035, what would you like to see realized in Tokyo?

Ito I want Tokyo to become a city with much more diversity and profound cultural depth. I believe this is important both for Japan and for the world, and I think we're moving in that direction. I feel that both Japanese and foreign people sense that culture is Japan's most important asset.

Nanjo People may feel that way, but it seems that political decisions don't reflect this at all…

Ito That's right. The 2035 political situation is going to be very important at the national level. Looking at America, there's such a huge difference between the coastal and inland cultures that it's almost like two different countries. Some people even think America might split in two. Setting aside whether that's good or bad, I think it's possible that Tokyo could increasingly drift away from the rest of Japan in a similar way and become extremely disconnected. Even after the pandemic, Tokyo's population has continued to grow as it becomes more of a hub.

Nanjo That's why I've been suggesting Tokyo should be open to foreigners while other areas remain closed, charging around 50,000 yen to enter the closed regions. Kyoto, in particular, should implement something like that. Also, some people say that Japan isn't really struggling that much

yet. They think that once things get bad enough, we'll have no choice but to make various changes.

Ito We were saying the same thing a decade ago. So there's a possibility that we'll die before we ever feel the struggle. [laughs]

Nanjo We'd rather isolate ourselves. Close the country and start over. But since that's not feasible, I hope Tokyo becomes a city of openness and diversity.

Ito I hope so too. No, Tokyo *must* become a city of diversity. Otherwise, it will move in a dark direction.

Nanjo I completely agree about diversity and culture. What other selling points do you think Tokyo has as a city?

Ito I recently read an article written by a foreigner living in Japan. A critical one, but it was quite interesting. Many people are coming from overseas, and Japan, especially Tokyo, is highly rated as a destination. It has lots of Michelin-starred restaurants, it's mysterious but clean, everyone's polite, and there are many other positive elements. Yet the article said it's a terrible city to live in. It mentioned that there are too many annoying rules, the apartments are small, it's not welcoming at all, and no other city is so unfriendly to foreigners.

I think this really represents a peculiarity of Japan—the gap between the show we put on and what we really feel. The image visible from the outside, what tourists see, is completely different from what it's like to live here. I'd imagine Kyoto is even more so. While there's naturally a difference between traveling somewhere and living there, this tendency is stronger in Japan than in other countries.

I think ultimately Japan has a strong desire not to change. The people are conservative, and many find fulfillment working diligently in their current jobs, without innovation or expansion. That's why so many of our traditions have been preserved. Working hard within established rules is part of Japan's charm, but it also means excluding outsiders. However, Japan is now clearly at a turning point. Due to our aging population and various other factors, from a macro perspective, we can't continue like this, we need external influences. Looking back at history,

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(Photo by Kiyoshi Mori)

foreign influence played a crucial role during the Meiji Restoration and in postwar Japan. That's what's important now.

Only about 3% of Europeans oppose foreigners and immigrants. Even in conservative areas of America, it's only around 10–20%. But in Japan, about half are opposed. (According to an October 2018 Yomiuri Newspaper survey regarding acceptance of "immigrants" moving to Japan with the intention of permanent residence, overall "in favor" was 43% and "opposed" was 44%.) Among developed nations, there probably aren't many countries with such strong opposition to immigration.

Historically, Japan has had periods of accepting foreign culture, such as when Buddhism was introduced, during the period of trade with European countries, and during the Meiji Restoration. We're in such a period now, and change needs to happen, but we have no leaders. Usually, someone like Sen no Rikyu would emerge and lead the way, saying "Let's do this," but no such leaders are emerging now.

Since the country isn't collapsing or losing a war but rather declining gradually, maybe it's a shock factor we're lacking. I'm not quite sure myself. In this context, Tokyo's position is that it's where many foreigners come, where there's the most influence, and where culture is concentrated. I feel like a paradigm shift, a cultural shift, will start from Tokyo. Another thing is the youth culture in this city. I recently read that over half of young people today don't want to own land. Almost everyone in our generation wanted land, but that's not the case now. I think young people are experiencing a shift in consciousness—they're less attached to material things, more aware of environmental issues, and more conscious of inclusion. If this becomes concentrated in Tokyo and forms a culture, there's a possibility that it could trigger change in Japan and from there change in the world. I feel that change will come not from our elderly leadership but from cultural changes among our youth.

Nanjo Japanese people are, for the most part, having farmer's mind, and they cherish their land. By contrast, hunter-gatherers constantly move from one place to another, right? This nomadic culture causes less damage and is less capitalistic. It's a culture where there's a leader, and if he is good to hunt, everyone can eat, so everyone values that leader. In Japan, everyone planted rice together, and since the rice will ripen in autumn, there's no need for such a leader. We instead have a culture where everyone is on the same level. Somehow, I feel that our current era is shifting toward a nomadic culture. The art industry is clearly already there—it's a hunter's world.

In 2022, Emmanuel Todd was our final pre-session speaker at ICF. As a historical demographer, he left us with the criticism that Japan's biggest problem is its population issue, and to solve it, the country must open up to immigrants or incentive to have babies. Nonetheless, Japanese politics isn't considering doing so at all. I think he might be right.

Ito From a macro perspective, he's absolutely right. But for anything to change, everyone's mindset needs to change first.

Setting Goals for Long-term and Society-wide Optimization

Ito By 2035, in terms of technology, I think blockchain and AI will have become commonplace. If things go well, white-collar, salaryman-type jobs will have decreased considerably in Japan. Not to say that there will be zero impact on manufacturing and such, but we might see a serious shift from managerial work toward cultural industries. Then the question becomes, what will Tokyo experience, what kind of city will it become? Politics will certainly play a role in this.

Nanjo That's something I wanted to ask about. At the ICF, we've introduced various technologies: biotech, blockchain, Web3, then NFTs, and now we seem to have arrived at AI. However, compared to the positive mood in the ICF's first half, I feel somewhat differently about the latter half. How do you view these changes in the relationship between technology and society?

Ito Well, there are several axes to consider that from. Technologies like AI started about fifty years ago, and technologies using encryption as an extension of the internet, like cryptocurrency, began about thirty years ago. During this period, the number of connections and technological capabilities have been steadily, gradually increasing.

However, such technologies come in waves, like a fashion trend, and each time, they're reported as if they have suddenly appeared out of nowhere. Everyone gets excited, then gradually becomes disillusioned, thinking, "I knew this wouldn't work." But it's not like the technology disappears—the research continues. In other words, while the media, investments, and society show fluctuations, the technologies themselves tend to continue progressing very smoothly.

Nanjo Is technology itself developing in a very linear way?

Ito Well, not exactly linear—probably more like an S-curve, but it's not a bumpy route. For example, I've been researching VR since the early 90s, and I've been working with AI since the 80s. Particularly with the internet, we were definitely optimistic in the 90s. There was this idea that if everyone connects, there will be peace. But recently, we've seen more of the dark side of the internet, especially with recent Trump-related issues and cybersecurity problems. Over the past decade or so, negative aspects have been increasingly emerging.

It's the same with AI. With any technology, you only see light at first, but more shadowy aspects gradually emerge. I think the ICF has covered both sides, and the latter half naturally included more discussion of the shadows. While this is certainly an important progression, I think we might be getting somewhat caught up in society's fluctuations.

Nanjo I see. However, looking at the bigger picture, there are various problems in the world, especially environmental issues. Very broadly speaking, isn't there a view that technology will ultimately solve these problems?

Ito I don't think that's right. Technology is like a booster rocket—it adds power to what humans are already capable of. For example, current human society is focused on short-term capitalism, with the

goal of overwhelming others through short-term financial optimization. Unless that goal changes to long-term thinking and environmental protection, we'll never solve these problems, regardless of what technologies are available.

Technology amplifies human goals, so environmental protection needs to be the goal. If the main goal remains accumulating things, power, and money to win over others, no amount of technology will solve environmental problems. I think we need to decide what human goals should be, and then technology can serve those goals.

However, one thing I want to say is that technology does change social structures. Seven thousand years ago, the development of accounting techniques changed social structures, giving birth to city-states and centralization. Later, double-entry bookkeeping and mathematics emerged, creating capitalist economies and enabling the formation of larger nations, capitalist economies, and corporations. Now, we have new technologies with enough capability for the governance of the entire planet. Whether that governance will continue environmental destruction or move toward environmental protection depends on us humans.

About thirty years ago, I thought humans would generally move in a good direction, but now I'm about fifty-fifty on that.

Nanjo I see. So technology could be considered management technology, one that administers and operates various resources to manage the whole. But based on what you're saying, the danger is that our goal has become short-term economic objectives…

Ito No, the goal has become optimizing money through short-term economics. That's the goal of ordinary companies.

Nanjo So you're saying there should be different, broader goals for society as a whole?

Ito I think we should be working for society as a whole in the long term, not just optimizing for ourselves. Currently, most power structures aren't oriented that way, whether at the individual or company level.

Nanjo So the current system operates on short-term economics, chasing money and profits. However, we actually have other goals, like sustainability and protecting the earth's environment. These two exist side by side, and if left alone, we won't move toward sustainable goals. But if we design incentives here and create new systems, couldn't profit-making and long-term goals align?

Ito Well, I have a somewhat different view on that. What everyone is trying to do now is take these "short-term profit optimization machines" and lead them toward environmental protection by providing incentives, like walking a dog on a leash. But the people designing these systems are also within the system, so even while implementing carbon measures, they still have that short-term thinking in their blood. I think they'll eventually find ways around it and return to self-optimization.

That's why I think we need to change the fundamental approach of calculating in terms of short-

term money. Who's designing these systems? It's ultimately politics. And since politics is also driven by short-term capitalist economics, no matter how you design it, it will eventually be pulled back into economic reality. That's why we need a paradigm shift. When you operate based on money—which is an extremely fast and simplified form of value—I think you'll end up with today's corporate behavior no matter how you design the system.

Toward "Intrinsic Motivation"

Nanjo Do you think such a paradigm shift is possible?

Ito I think it completely depends on how you try to implement it. Working only with rules within the current system is far too weak. We need to work at the cultural layer, the paradigm layer, and that involves things like architecture and art. I mentioned earlier that young people don't want to own land, which I think might be a positive trend. If we develop a culture where young people think they don't need money or that companies that just chase profits are appalling, then capitalist short-term optimization will lose its energy. But if we keep raising children who think, "I want to get into a good school, then a good company, then become rich and I'll win," nothing will change no matter what rules we put in place.

Nanjo That's very close to what I was thinking about. In the end, isn't it a matter of aesthetics?

Ito Yes, we need to change the aesthetics, not just the rules.

Nanjo When someone throws a cigarette butt on the street, saying "that's uncool" is more powerful than just saying "don't litter." I think change comes from things like that.

Ito Yes, that's aesthetics. By contrast, incentives are just tricks. That's why we need to reach a point where people just don't want to do certain things anymore.

Nanjo Earlier you said you're fifty-fifty on humanity's future. Broadly speaking, are you negative or positive about where we're going?

Ito I'm slightly positive but not as much as before. I feel it's going to be quite challenging.

Nanjo When I previously planned and held the Future and the Arts exhibition, I felt the future looked dark. So many technologies are emerging that humans can't control, and several of them could potentially cause catastrophic results. Nuclear power was one example, but AI and biotech too have such potential—I wondered if we could control these.

Ito There's a nonzero possibility that we slip up and everyone dies because we lose control. However, I think there's a greater risk of things going wrong due to human malice even if we can completely control the technology.

Nanjo It's a fundamental ideological or rather philosophical issue. Education must be involved in this. Education needs to change now. How do you think it can be changed?

Ito During the Industrial Revolution and mass production eras, we needed many standardized people who would strictly follow orders as factory workers and company employees.

Nanjo Like soldiers in a sense, right?

Ito Yes, like soldiers. However, physical factories will gradually become robotized. And I think the robot-like humans who currently fill large corporations will increasingly be laid off due to AI. Humans will still be needed for decision-making, direction-setting, and management, but we won't need people who do the same things as everyone else. I won't say zero, but we won't need as many as before. Despite this, the current education system remains unchanged, still focusing on academic ability, filtering by test scores and trying to produce people who can precisely follow instructions.

Another point is that "intrinsic motivation" isn't really valued now. For most people, doing a good job at work is motivated more by doing it because they're told to rather than from some intrinsic motivation.

In Japanese education, it's okay for children to play and have fun until around first grade, but gradually it shifts from play to training children to do what's expected of them even if it's boring and not what they want to do. However, I think we should focus on developing "play" aspects, doing things because we enjoy them. So school needs to be fun. Why? Because in the future society, we'll need many self-motivated people, those who will create art, engage in management, and start businesses without being told to do so. In other words, people who are driven by intrinsic motivation.

Great Potential Arises from the Edges

Nanjo So we need to nurture people who do things because they enjoy it, rather than producing the foot soldiers of the past, but our current education system doesn't do this at all, does it?

Ito Right. And since AI is there to provide support, it's fine if someone is weak at math or poor at writing. Moreover, as things are, our education exists only for standardize" people. It excludes those who can't speak Japanese or who can't hear or can't see. But I think what's really important is having everyone, including those with disabilities, come together first and to value the oddities that emerge.

The tricky part is what to do with gifted students. There's a distribution curve of academic ability, and it's actually unclear whether the kids at the edges are ahead or behind. At MIT, probably 60–70% of students are on the autism spectrum. Yet while Japan as a whole has produced only 29 Nobel Prize winners, MIT alumni alone account for 98. I think Japan is pruning its "edges." They're only nurturing the middle of the curve, cutting off both geniuses and those with disabilities. Japan needs to implement comprehensive education with high diversity that includes these people.

Furthermore, even those in the middle are squeezed in tight—even if they have things they want to do, like art or things they're not good at, they're pushed to pass standardized tests. But going forward, we need an uneven society that develops people's strengths and interests.

Nanjo So while art exists separately, are there minimum requirements for technical knowledge

and skills that people need as the basis for envisioning the next step in developing technology? Is providing that minimum knowledge what education is about?

Ito I think there are various layers, but we need to do much more in terms of understanding technology and designing with new technological tools—Japan is very behind in this area.

Nowadays, you don't need to be a programmer to write programs—you can do it in natural language, you don't need coding skills like before. Everyone should have exposure to various technological tools and find their own way of using them, of designing with them. Additionally, while technology has conventionally been designed for technicians, we can now design tools for people who lack specialized knowledge.

However, it's better if the actual users design these tools. Take cameras, for example. Cameras have significantly evolved partly because photographers themselves worked with the technology. In contrast, when the users of technology are separated from those creating it, the design doesn't improve as much. For instance, there's now a huge gulf between the creators and users of television broadcasting and publishing.

Games keep evolving because the people making games overlap with creative types. Similarly, we need to involve technology in its production. Japan's problem, especially regarding technology, is that the decision-makers are rarely technologists. They make decisions that they outsource to technicians. So technicians are treated somewhat like construction workers, while the architects are people who don't understand the technology. That's the current design structure. But really, the people who create and those who think about technology should be the same.

Tools Not for "Education" but for Learning What You Want to Learn

Nanjo I've considered education as needing to provide some minimum level of common knowledge, but that's things like laws, isn't it? Shouldn't we think of the law as the minimum rules we need to follow to live together in society? But in Japan, there are many bureaucrats and politicians who use these rules for their own convenience.

Ito Since becoming involved with various education businesses, I've had to think carefully about this as I move forward. "Education" is something one does for another, while "learning" is something you do for yourself. While this framing of education might be fine, I'd rather provide everyone with tools to learn what they want to learn, to more freely do what they want and head off in their desired direction. Schools should be more like gathering points where you can create projects, receive coaching, and do what you want to do. Rather than today's robot-like mandatory education, we could consider schooling in a much more open way.

Nanjo There's Steiner education, right? Where children don't study subjects like math at first but instead draw pictures and make music. Then they start teaching things when children become interested in them. Is that the kind of thing you're talking about?

Ito Yes, and while I suppose it depends on the child, I think there are quite a few who develop better that way. I'd like to be able to provide that kind of education for such children.

Nanjo Well, that's mostly how it is in the arts, isn't it?

Ito I think it's the same with mathematics. Real mathematicians, many of them, learn mathematics like art. They love mathematics, and mathematics is their form of expression. But the mathematics taught in schools is more like numerical applications, and the way it's taught is boring. They don't teach the inherent beauty of mathematics. Rather, it's more like, given this kind of problem, use this formula to spit out an answer. It's a robotic way of using mathematics.

Nanjo It's expression using symbolic equations, right? That's hard for people to grasp. You can't use that kind of expression without being taught the language.

Ito That's true, but for example, I think people's relationship with language is very different when they use it to practice writing poetry versus using it to read instruction manuals. When you look at kids who are extremely strong in mathematics, including looking at their relationship with their teachers, what's at the core is expressing beauty through numbers. Their application isn't the starting point.

Even setting aside prodigies, I think context is very important when teaching. And that's true for everything. Taking art as an example, if you only taught how to use paint to make road construction signs, well, I won't say there wouldn't be any children who become artists, but there would be far fewer.

As I mentioned earlier, it's important to first teach in a way that draws out a child's intrinsic motivation and their interests; we can move to the productivity aspect later. Currently, much of Japan's compulsory education isn't taught in an enjoyable way at all—it's just do this or you'll be punished. When that happens, children won't do any more than necessary.

Nanjo So you're now president of the Chiba Institute of Technology. Are you considering any reforms as a university?

Ito With a system of 10,000 students and 250 faculty members, reform isn't easy, but we're conducting various experiments. For example, we currently have 318 students in our Web3 course. It's split evenly between undergraduates, graduate students, and members of the public. In this course, we issue tokens that determine grades. You can earn these tokens by teaching others, organizing events, and doing various other activities. Everyone's very engaged, forming project teams for hackathons and helping each other when they don't understand something. I went to an event last week with students and members of the public, and everyone kept working until late at night. We're doing both online and offline activities, and only a handful of our faculty are being paid. I have an online community of about 1,000 people with community tokens that can't be converted to money. Everyone's really enthusiastic in this world where you earn tokens for teaching in the community, completely separate from money.

Nanjo Do you frequently appear there yourself?

Ito I drop by occasionally, and I've given two lectures and participated online. Since it's a course about Web3 tools, everyone uses them, and everyone's rankings are visible. One of our top students is a female artist with no technical background who's running an interesting ecosystem project that everyone helps with. These are the kinds of experiments we're starting now.

Nanjo That sounds interesting.

AI Will Create Personalized Education Systems

Nanjo I think there's no doubt we're entering an AI era, so the question becomes: what will happen to humans in this age? Including education, what will happen to what humans have done and will do? AI feels a bit different from previous technologies, like it might bring about more fundamental reforms or changes. How do you view this?

Ito Regarding education, I think there will be very positive and strong impacts. Through analysis, we can quickly understand what a child currently comprehends and what they're trying to do. We can develop a highly personalized system that analyzes what a child wants to learn and do at any given time and continuously provide content to that end.

The interface will feel like a game, suggesting "Try this" or "Next step could be that." It becomes a very personalized system. I think we'll be able to provide those tools for learning what you want to learn that I mentioned earlier. Additionally, the system will properly report to parents and teachers about what's happening. It can provide coaching and support for children, telling parents things like "When they come home from school today, why not try this?" or "They responded well to this but not so much to that."

When children ask "Why, why?" whereas parents might previously have postponed answering or been unable to answer, the system can provide answers continuously. This way, we can identify quite early if a child has the potential to become, for example, a genius artist. We can even create a personalized system for teachers and parents that says things like, "They're weak in this area, so let's use such-and-such a technology to support them." This benefits not just children but also their teachers and parents. As long as we're careful to keep final judgments in human hands, I think it can become a very good tool even in general education settings.

Also, I think it's strange to force children to learn things AI can do for them. Can you do long division by hand?

Nanjo I don't remember how.

Ito You don't remember, right? But does that make you feel inconvenienced?

Nanjo Not at all. [laughs]

Ito And do you consider yourself stupid because you can't do it? No, right? Having a tool for that

is enough. For example, being able to multiply with a calculator allows us to do calculations and creative work that we couldn't do before. Calculators came out when I was in fourth grade, and I begged my father—a physics and chemistry scientist—to buy me one, but he said no. So I told him, "I want to calculate planetary orbits in astrophysics, but I can't do it without a calculator!" I asked him, "Could you do astrophysics when you were in fourth grade?" He said, "No." Then I said, "See? I want to build on top of that and do the next thing."

So what we need to do is raise the goals. Instead of drilling things that can be left to tools, what's important is raising children's goals higher. If we keep giving the same tests and humans don't develop at all, then of course AI isn't good. But since AI greatly expands what we can do, we need to lead children into this expanded world. And children have more imagination than we do, so they'll go farther, saying "With tools like these, we can do things like that." I think it's wrong to ban existing tools, make children study unnecessarily, or put meaningless pressures on them.

An Era in Which Everyone Does "Something Close to Play"

Nanjo I understand that AI will almost certainly make great contributions to education. But there are also those who say it will steal human jobs, causing social disruption. What do you think about that?

Ito Some jobs will certainly disappear. I was reading an article this morning about how people used to harvest ice from frozen lakes and distribute it as a commodity worldwide. Apparently, 90,000 people were involved in the ice industry. In an era without refrigerators, everything from drinks to other items was distributed using this natural ice via ships and such. But once refrigerators were invented and became common in households, that industry disappeared. Similarly, some of today's jobs will undoubtedly disappear.

However, thanks to refrigerators, people who couldn't previously afford ice gained access to safely stored medicine and food. Overall, it was a huge positive. While AI will certainly eliminate some jobs, it will increase productivity.

The negative aspect of AI is that as productivity and power increase, negative elements also gain power—things like weapons and discrimination. While there are many such concerns, I fundamentally think the positives are greater. Some jobs will disappear, and there will be localized negative impacts. Reskilling will of course be necessary. But our possibilities will expand dramatically.

Nanjo I've been thinking—tools were developed because humans wanted to make things easier, right? At first, there were only things like stone arrowheads. From there, various blades and machines were invented, and AI is just an extension of that line.

In other words, tools are fundamentally created to make things easier for humans. And AI can do many things, so shouldn't humans just take it easy? Why don't people think that way? I think we should let AI handle a lot of work and spend the saved time doing something more like play, but

people worry that everyone will lose their jobs. The issue is what happens to income, but couldn't we establish a system like basic income to ensure everyone can survive at a minimum level and then let people play freely with the increased productivity? What do you think?

Ito Discussions of basic income bring us back to our earlier discussion about capitalism. Currently, the optimized value is for each individual to accumulate more money than necessary. As a result, what happens is that people who are good at making money keep accumulating more, while those who aren't don't get much, creating a wealth gap. This is the basic state of today's capitalism.

If our goal were to become working together, I think we could create social security in the form of something like basic income. However, values today lie in having more and more things, without limits, and that's what every country's growth strategy is about. Rather than saying we'll only go this far, it's all about expanding as much as possible. That's the negative aspect.

Connecting this to what you were saying, Kitaro Nishida, one of the founding members of the Chiba Institute of Technology (then the Kōa Institute of Technology), used the term "pure experience," which he described as the experience before analysis begins. Like, your first experience when you see a bird, before you start analyzing it, is just seeing it, like a pure meditation on nature. Humans can do this. After "pure experience," the brain analyzes and applies logic. AI can't have "pure experience."

For instance, if we were to go out for a walk today, we might think wow, it's getting hot, environmental issues are most important. But if we have a friend struggling with caring for elderly parents, we might consider aging as the foremost problem. Your experiences determine your ethical priorities. For Japanese people as a whole, everyone has different experiences, and Japan collectively settles on various values and trade-offs. In other words, "these are Japan's priorities" is something felt based on the experiences of all Japanese people.

Our business is to convert this into actual action. AI is involved in that, but AI doesn't exist in the real world. It can't have experiences. So I think humans' ultimate value is to experience the real world, to play around in it, and to inform systems that incorporate AI about our impressions and preferences, the experiences that we enjoy. We have to collectively decide to do things like address environmental issues even if it means less food, and we need to communicate to make these decisions.

So what you're thinking of as play, going to the theater or whatever, is actually communicating with everyone about ethics and preferences. I think we're entering an era where society can function properly if humans just do that. What you might think of as "just play" is actually "experiencing," something only humans can do, and I think that's definitely good, even necessary. There's a high possibility that what you're calling something close to play will become the main thing we need to do.

Technology will Revolutionize the Art World

Nanjo I'm thinking along similar lines but with slightly different logic. If we consider what the meaning of human life is, well, there isn't one. But we have to fill the time until we die. So doesn't "winning" mean spending our lives in the most interesting and enjoyable way? Shouldn't we set that as life's purpose?

Today, life's purpose has been replaced with things like making money. But if you ask what people want to do with all that money, they say "things I enjoy." Yet how many people end up just accumulating money while losing sight of what they enjoy? It seems somewhat similar to the idea that we should just go straight to doing what we enjoy from the beginning.

Ito Very similar.

Nanjo That's what art is. Life's value becomes whether you can spend each moment in the most interesting way. That's why most corporate workers suck at it. [laughs]

Ito If they're not enjoying it, that is.

Nanjo True, I suppose there are corporate workers who enjoy what they do.

Ito But art is important regardless. It relates to that cultural shift we discussed earlier, for one thing.

Nanjo Previously, you talked about how a revolution might occur in the art world. Was that about NFTs, and what made you come up with that idea or prediction?

Ito I suspect that as a representative of the art industry, you'd know better than me. [laughs] Stimulating human values is very important, and various technologies for mutual stimulation are being incorporated into art. Digital products don't have quite the same experiential value or edge when it comes to stimulation as real-world things do. What's really interesting about Web3 and NFTs is that they've enabled digital products to have things they never had before, things like scarcity, structural interconnectedness, uniqueness, time limits… These programs can now be realized more realistically. That's one point about how digital expressiveness has greatly improved.

Also, by connecting with NFTs, we can now do things in the real world that weren't possible before through Web3, like creating spaces that you can only enter if you have a specific NFT, or having real-world events triggered by holding certain NFTs, or connecting physical and digital elements. The recent "Bright Moments Tokyo" event, for example, had people buy NFTs and come in person, where they could mint [create new NFTs] with artists, get that experience, creating NFTs of memories and potentially selling them later. I think this is the first time we've had a medium for media art that properly connects to the real world. I don't know if that's revolutionary, but it's significantly different from what we've had before.

I'd actually like to ask you about this. Until now, various new media have emerged in art, become trendy for a while, and imparted their respective impacts. We've had media art and digital art all

along, but I think this might be the first time we've had elements that could really expand them. Do you agree?

Nanjo You mean through technologies like NFTs, right? I think so too. However, I suspect we've yet to see the basic form it will settle on.

Ito I agree.

Nanjo Various forms and ideas are emerging, but everyone's still in the experimental phase, so I don't think we can see yet where it will all converge.

The National Stadium parking lot is quite a large space that's accessible from outside. Recently, an artist and some people from the metaverse gaming world created an amazing "light space" there. There were many monitors set up with spherical objects floating inside, smoke flowing, and lasers shooting around. After having this immersive experience, you go upstairs to a gallery, where there are 365 circular objects created in various colors. They change the design, making one each day, and you can buy printed cards or a book with a complete set. When you buy a card, you receive it as an NFT. I bought one for my birthday, and with that card, what you bought instantly appears here. So they're saying anyone can use it without creating an NFT wallet. There are also many real-world products in their product lineup. They provided this kind of experience, and many young people gathered. It's quite a successful, famous gaming company in Japan.

Ito Did you like it from your perspective?

Nanjo I did. The spatial experience was interesting. Even viewed just as art, I think it was very well done.

Ito Once artists start using the medium things get interesting, don't they?

Nanjo This was a collaboration between artists, a gaming company, and three equipment companies, and seeing that made me think there are various possibilities. I'm not sure if this is the kind of "revolution" you talk about, but it definitely feels like a next step, something new. I don't think traditional art forms like sculpture and painting will disappear, but they'll further expand.

That's why I often think lately, when people see innovative works and say "This isn't art," I wonder how much art they've actually seen. If you've seen a lot, you can't say such things so easily. It's too scary. The moment you deny something, that expression can become mainstream.

Ito That's right. You can't say such things if you reflect on history a bit.

Nanjo That's why studying art history is important. If you want to see new things, perhaps paradoxically, you need to know some history. When you study the dramatically changing history of art, it becomes harder to say something isn't art. And if you ask what art is, nobody can define it. When there are many similar expressions, there will naturally be some you want to acknowledge and some you don't. Perhaps we can call the cream-of-the-crop, the high-level, quality works, art. You could also say it's not about genre, but rather that art is the top-level work within each creative field.

Ito That perspective might also depend on the viewer's personality. Looking intently at works where you're not sure if they're art or not is like being a startup investor. By contrast, dealing with art that's already been evaluated, thinking "If we show this in this museum, it'll gradually increase in value" is like people trading public stocks. I find that boring, but such people do exist, so that too can be an enjoyable perspective.

Nanjo I tend to always be too early. I jump the gun, so it doesn't turn into money. [laughs] I really feel like galleries and such watch the situation and monetize it by being one step behind.

From Education to Japanese Diversity

Nanjo I'd like to close by asking you once again, what should Tokyo do? Speaking concretely, while we say the city has considerable culture, it has far too few museums. If you go to Paris, London, or New York, there aren't just art museums, there are fashion museums, architecture museums, design museums, all sorts. There are so many choices, and choices are culture. Without choices, we become like China or Russia. But our politicians still don't seem to understand this at all.

Ito Traditional crafts won't continue without money either. There's a high possibility that traditional crafts that have continued for hundreds of years could easily disappear. So traditional crafts go bankrupt, and modern art stagnates. Even though culture seems to be moving a bit now, it might fail due to economic factors. That's quite connected to politics, isn't it?

Nanjo There are too few producers thinking about how to sell things. We should have more cultural producers.

Ito Yes. I don't want to criticize national policy too much, but if you make people feel something has "value," it becomes valuable, doesn't it? The yen's value is determined by how the world feels about the yen. When Sen no Rikyu said "This tea bowl has value," it became more valuable than a castle. Similarly, we need producers with taste who can lead confidently and persuasively. When Rikyu said "This tea bowl is amazing," there was a system where Hideyoshi would distribute it and create value. Similarly, LVMH industrializes fine wine and beautiful design. I think this too is an amazing system.

Nanjo They've done it well, haven't they?

Ito Yes. With LVMH, you have designers and winemakers, but in the middle, you need artists, tastemakers. If you go to an LVMH winery, the vintner doesn't think about money, but is still the most important person. Universities need a system where research can be published, but professors are at the center. At universities, it's the professors who aren't concerned with making money who are the most important. But in Japan, I feel we haven't properly created a system to nurture and support artists, scholars, and actual creators.

Nanjo In a movie about Rikyu, there's a scene where a samurai is being sold a tea bowl. The samu-

rai asks, "Is something like this really worth so much, just because you say it is?" What Rikyu deemed valuable was a warped, hand-molded tea bowl, whereas Chinese white porcelain had traditionally been considered the finest. But when asked how something like this can be so expensive, Rikyu answers, "Because I say it is." That's incredible confidence, isn't it? To think that if I say something is good, it becomes valuable. In other words, he's creating value. He's saying he finds value in a thing, and he's the standard. I think that's strength. Ordinary Japanese people can't really do that.

Ito But Hideyoshi was there, too. I don't know if Hideyoshi thought things through this far, but in those days, you had to give money, rice, or land to your capable retainers. But after Rikyu appeared, you could create the same value with tea bowls that cost practically nothing to make. It was the right business model. Having Rikyu by your side, allowing you to continuously create rewards for retainers—that was a good system.

Nanjo Rikyu initially sided with Nobunaga, right? After Akechi Mitsuhide killed Nobunaga, Rikyu had no choice but to work with Hideyoshi, but when Hideyoshi built his golden tea room, Rikyu said "Such things are meaningless."

Hideyoshi was no fool, he knew Rikyu was critical of him. Apparently, Hideyoshi wrote in his diary, "Every time I meet Rikyu, I am killed." Not literally, of course. Rather, Rikyu killed his spirit by saying, "How can you not see this beauty?" It was an intense battle. In the end, Rikyu was forced to commit seppuku. I think there was quite a clash of aesthetics there.

Ito Such clashes need to happen, don't they?

Nanjo Yes, I think the art industry won't become strong without the emergence of many people who can do that.

Ito But I wonder if something like that won't happen in youth culture. For instance, young people saying they hate certain designs or aesthetics, stating, "We won't buy such things, we won't go to such places."

Nanjo Something like that should emerge, shouldn't it? Going in that nomadic direction you mentioned. For example, there's a shift happening where people don't want to own land or things, so naturally, an aesthetic shift could occur too. We need to pick up on that. Moreover, within Japan's mood of needing to be the same as everyone else, the idea that being different has value is frowned upon. That could become a significant issue for future growth.

Ito That's why I think what Japan needs first is what I mentioned earlier—creating an environment where children with disabilities and autism can learn together. It reduces the discomfort toward people different from yourself. Japanese people now think it's fine to have only standardized humans. We need to increase diversity a bit. Starting with educational diversity could naturally lead to national diversity, I think.

Nanjo I'd like to mix some artists in there, too.

Ito Yes, indeed. [laughs]

Nanjo The reason I say that is, looking at school classes, art is the only subject where it's better to say something different from others. Mathematics and such have answers. Art is the only class where you're praised for saying something different from others, where everyone can feel it's okay to be different. You're actually praised for being different. Maybe that's where change could happen in Tokyo.

Ito I'd like to believe so.

The future of cities as viewed by the ICF: Reflections on our 10-year trajectory

PART 1 Keynote speech

ICF2015 Keynote Speech

"Differences"

Nicholas Negroponte
(Professor and Co-Founder, MIT Media Lab)
https://youtu.be/UC3YI3xY3TU?si=GByq4nEdEFpv6SNH

As I was listening to the questions, I was thinking about the cities of London, New York, and Paris and what is the difference between them and Tokyo. The big difference is that they are very multicultural. So maybe when you see Abe (the then-prime minister) tomorrow, you can urge him to accept, and I'm very serious, a hundred thousand refugees from Syria to come to Japan, and in 20 years, you will have a very different society, and the multicultural nature of it and intermarriage are really important. I used to come here 10 times a year, and I miss that. Coming in from the airport yesterday reminded me how much I miss coming to Tokyo. Frankly, this is the best city in the world.

The History of MIT's Media Lab

I am going to start with an explanation about something that most people do not know: Why is MIT's Media Lab so grateful to Japan? It is because it started in Japan. You may have heard that I am the co-founder. But very few people ever ask who is the other founder. That person happens to be a man who died about 20 years ago named Jerome Wiesner. And what is key about Wiesner is that he was Jack Kennedy's science advisor. When Kennedy became president of the United States, he brought Wiesner—who was a close friend, they knew each other; they sailed together; they were really quite close— to be his science advisor. And one of the first things Kennedy did was to say: "Jerry, go to Japan and help the Japanese rebuild their technology, particularly in the world of electronics." So Jerry came to Japan in the early 60s and met with many companies, the typical ones, Toshiba, Hitachi, Mitsubishi, Matsushita, etc. Twenty years passed. Kennedy was assassinated, and Wiesner came back to MIT and became its president. It is always good to have the president as your partner. He came to Japan to present the idea of Media Lab, which had not been well received in the United States. But when he got to Japan the people whom he had seen 20 years before because of President Kennedy were now the CEOs, the chairmen, and the chief technology officers of all of these big companies. In your culture, you have very long memories. You are very grateful, and you remember people. If somebody was very helpful to you 20 years ago, you will be very helpful to them. That is a wonderful trade. So we benefited from that history, and people in Japan welcomed the idea and funded it. And when we went back to the United States, we had such momentum from Japan. We were able to then use it in the United States.

Personal Memories

There are a lot of personal aspects to my talk today because there are a lot of memories that come back. One of them is that I had Kenzo Tange as a professor. When Kenzo Tange is your professor, you do not forget it. I saw, throughout his life, he was always very generous. And I knew Fumihiko Maki, who was teaching at Harvard at the time and who ended up designing the beautiful Media Lab building we have today. So there are lots of circles that come around, at least in my life and my institution's life, that always seem to come back to Japan. Our director is Japanese. The second lan-

guage at faculty meetings is Japanese because we have three faculty members who speak Japanese, and they don't hesitate to speak to each other in Japanese. And when John Maeda was there, he would speak in Japanese. So this is home. This is a homecoming, and it is very important for you to think about it that way.

Differences

I studied architecture, and I have always been interested in cities. And because of my age and history, I had people like Buckminster Fuller as professors and great opportunities to think in the ways we want to think today. The part that always interests me is "differences." Because differences are where new ideas come from. New ideas do not come from homogeneous thinking. They do not come from people who all have the same background. They do not come from people who are all the same age, culture, or gender. You need differences, and very often the differences lead to misunderstandings. You say something, and the other person may not even hear it correctly or may misinterpret it. But they may respond: "That is a great idea! I had not thought about it that way." So sometimes, it is even accidental, but it comes from differences. So I think maximizing difference is very important, and it takes a heterogeneous environment. I believe it has to be culturally heterogeneous, certainly intellectually, and so on.

I'm perhaps being a little bit too personal, but I have always lived in cities. In my entire life, I have never lived anywhere but in a city. Insofar as I was brought up in any one place, I was brought up in New York in Manhattan. What do you have to be to grow up in Manhattan? You have to be rich, otherwise you move to the suburbs because of the cost of living. Then you move because it is safer. Then you move because you might want to have a garden. And then you move because with the American education system, it is stupidly paid for by real estate state taxes. So you can be in a place that has higher taxes for better schools. So people left. In my generation, if you will, we left the city. Some rich people stayed. Some maybe even had bodyguards; some had chauffeurs and doormen, and it was wonderful, but for very few people. Now, it's changing. Not only are people coming back, I think the suburbs are dead. What young person do you know who would want to live in the suburbs? None. They do not want to commute. Even though you can have a Kindle and read books, they do not want to commute. They want to be where the action is. All of this is because our zoning laws 30 years ago were about land use. (This is for offices; this is for factories; this is for residential— stupid rules.) Instead, you want to be able to go from your apartment to cafes, offices, etc. In other words, we have changed quite substantially. At school, I did very well in art and math. And in the last year of high school, I said to my headmaster, "Because I am good in math and I seem to be good in art, I clearly should study architecture." But this man, he was so wise, I did not understand what he told me. He said, "I like gray suits, and I like pinstriped suits, but I do not like gray pinstripe suits." I thought, "What are you talking about?" So I did not think about it, and I went to architecture

school. I loved it. I would do it again. I recommend it to everybody as a general education and as a professional education. But at the end of architecture school, I realized that my pinstriped suit was computers, not architecture. And the one person who was able to persuade me and who became a very dear friend, Steve Jobs, said, "It's about art. It is about art and technology. Those are not separate questions. They are a single question." And for me, that has been the single question in my life. So when I started, I still thought I was an architect. I still thought that maybe the way to make this pinstriped suit was to bring computers and architecture together. When I look at a piece of work I did in 1968, it looked like architecture, but it felt like it was computer-aided design until I realized, and it took me a while, that I wasn't going to design cities and environments on computers. Instead, it was to maybe think of them as computers. Maybe, buildings are computers we live in, and maybe, they are built without architects.

Architecture Without Architects

The reason for the above sentence is that in the 1960s there was an extraordinary show at the Museum of Modern Art in New York. It was about a book called Architecture Without Architects. It had a huge impact on me. It was by a man named Bernard Rudofsky, who also worked at MIT as a professor. His idea was that if you look at architectural environments, for example, Italian villages and towns on the tops of mountains, they have evolved by the people building them, who had a set of tools that were limited. Or you did things, like paint the houses white to reflect the sun or keep insects out, that gave a homogeneous character to the architecture, which made it quite splendid, and that is where we could go now. This was in 1968. So in 1969, I said, "Let's do an experiment. I have always found, and people at Media Lab find this all the time, that one of the places to experiment with ideas is in museums. Museums can be places for the bellwether of tomorrow. This has happened over and over again. I think it happens in the Mori Art Museum. It happened time and time again. I happened to do it in a museum in New York called the Jewish Museum. We built an environment that was inhabited by gerbils. Gerbils are little animals that are like rats. They would run around, and this robot would build the environment. And if the gerbils moved things in the environment, it would decide whether that was intentional or accidental. The decision was based on how much a block was moved. This was all fantasy, but people would keep going back to see this architecture evolve as the gerbils moved it over days and weeks. So because MIT is the kind of place that does that sort of thing, it became a place where academic departments were like Swiss cheese. They had holes in them, and you could go through the walls. And I started to believe that almost anything could be done. Now, think about today. What is the biggest limousine service? It is a company without cars. What is the biggest hotel? It is a company without rooms. What is the biggest school? It is a school without classrooms. So almost everything that we think of as being the biggest or the most popular is without the elements that we usually thought were the functional and required constituent parts, but they may not be, and that changes a city.

Normal Market Forces

I should warn you. I am going to end up with a recommendation that is so extreme that you may not accept it. But I am usually invited to these kinds of events to give extreme recommendations. So every morning, I ask myself, "Can normal market forces fulfill what I want to do today?" If the answer is yes, I stop doing it because normal market forces will do it. My role in my whole life has been to do what normal market forces cannot do. The reason I'm interested in that is that I feel very strongly about the things that I cherish in my life. I suspect the things that you cherish in your life were not brought to you by normal market forces; they were brought to you in other ways. It is not that market forces are not good. They are the basis of an entire economy and are the cornerstone of capitalism and civic enterprise. But there are things that normal market forces cannot do. I would even say that when you look at the world that way, you don't try to optimize one thing, like return on investment, because you don't have shareholders; you have stakeholders; you have humans. I just gave a talk to the International Telecommunications Union, which was at an annual meeting of all the cell phone carriers. In the whole world, there are a lot of them, about 2,000. I begged them at the beginning of my speech, "Please for the next few minutes when you listen to me, forget your role as a CEO or CTO of a company, and listen as a person, as a human, and then agree or disagree, and then go back to your role." I'm not diminishing that role, but try not to use it as a filter for everything you hear.

Self-Driving Cars

The impact on cities from the things that are happening right now is probably bigger than that of the elevator. The form of Tokyo comes from the elevator; almost nothing else drove that form as much as the elevator. It changed cities all over the world. So what is more important than the elevator? One thing that is more important is driverless cars. By the way, my next sentence is not my extreme prediction; it is a mild recommendation. The city of Tokyo should declare some date, maybe it is 2025 or 2022—you figure the number out—when only self-driving cars are allowed. Only do it quickly—lead the world—because the self-driving car will eliminate parking, which takes up a massive amount of space to store cars that are very rarely used. It would eliminate most roads because there wouldn't be traffic as we know it, and it would reduce the number of cars by 90% because, I assume, there would be shared economies, shared vehicles. Imagine what Tokyo would look like with no parking and with only 10% of the vehicles you currently have. That would change the city of Tokyo.

A student of mine back in 1986 was doing something he called "Backseat Driver." We knew of GPS, and we knew the idea was that it would tell you where to go. It was a mapping system long before Google Maps existed. So this speech production system (Backseat Driver) was the thesis of my student. But how you give instructions is a very complex subject. For example, if you are driving in the city and you are a hundred meters from the next intersection and you say, "Take a right at the next intersection." It is very clearly that intersection. But as you start getting closer and closer to the

intersection, for example, you are now only 20 meters away from the intersection, what does the next intersection mean? Does it mean this one, right here, or does it mean the next one? So the transition from the clarity of next at a distance to the ambiguity when you are close is a common linguistic one that we don't really think of about because as you get closer you say, "Take this intersection." Or you say, "You passed it." In other words, you will use different language as a consequence of where you are while you are driving. So this was his thesis material. After this young man, his name was Jim Davis, finished the thesis we, as we always did, passed his ideas on to the lawyers at MIT to see if it was something MIT should patent because I thought it seemed like a really good idea that would be the future. But the lawyers said, "No! Don't patent it. It will never happen. It will be illegal because there will be liability issues if you say, 'Take the next right,' but it's a one-way street and you have an accident. So whoever makes the machine will be sued." So much for lawyers and so much for vision because it is now very much part of our life, and I think it will very dramatically affect cities.

The Role of Cities

The role of cities has changed, and it is changing now. The role of cities, we can say for sure, is social. In my era, adolescence lasted three years. You were an adolescent for three years, and by the time, you were 19, you were an adult, and by the time you were 22, especially if you wanted to have sex, you were married. Now adolescence is 20 years long. It starts very young, whatever 13 or 14, and it ends very late, early 30s. It is almost 20 years. This may not be as true in Japan, but it is true in the United States and Europe, adolescence is a big period of life, the most exciting period, a very interesting one. People of different genders live and share, and the shared economy is very much part of that 20-year period. Those people want to have fun; they want to go out for dinner; they want to go from their apartment to a bar and meet friends and have new relationships. They do not want to be in the suburbs. They want to be in the city. The city is the social scene for those people. The shared economy is absolutely critical. In my era, a sign of wealth was how many houses you had. If you were a rich person, you'd say, "I have four." And someone else would say, "I have six." And then you'd say where your houses were. They do not really aspire to that; they do not even think they have to own a house. One of our professors is Kent Larson, who worked on Media Lab's car. He asked a class of about 30 people how many wanted to own a car. No hands went up, not one hand. Doesn't it tell you something that not one person wanted to own a car? I was giving a talk the other day in Boston, and the speaker on the stage was Ariana Huffington of the Huffington Post. The moderator asked her, for some reason, about cars, and she said she didn't have a car; she just used Uber. And somebody else said that although they lived in LA, the highway city of the planet, they also didn't own a car; they just used Uber. There is no economic reason to own a car anymore. Uber is cheaper. UberX is cheaper than a taxi. It is more convenient. You do not have to store it or pay excise tax or interest if you have you finance it. It is again a message about the future, the shared economy. So I am going to end with my controversial suggestion.

Why Do People Move to Cities?

For the past 20 years, I have worked mostly outside of cities. I have tried to look at the 70% of people in the world who do not live in cities. Now, why did people move to cities? Historically, one of the reasons rural people and poor people moved to cities was the promise, a false promise for most of them, that if they came into the city, they would find work; their kids could go to school; and they would get a better life. The truth is that in the rural environment they were living, they had a pretty good life. Maybe medical care was not great. Maybe their income was not high. But the quality of life, which in many regards we admire, was a lot better than in the city, which meant living in slums with gangsters and being unsafe, etc. So the promise of moving to the city has historically been, so far, a false promise for many people. So my question 20 years ago was: How do you end isolation so that when people move to the city, it is not a false promise but a real aspiration? That is the way you want to live. It will probably be young people who make the move because that is where they can date and meet people. Now, I have worked on projects like One Laptop Per Child and am working on a satellite project right now to connect people. So I bumped into a very simple question, one that I've been asking more and more, and that is: "Is connectivity a human right?" Now when you ask that, it is an example of differences because one part of your brain says connectivity is like electricity, elevators, and so on. But human rights are another part of my brain, and I put them together. And if somebody pushes back and you see their push, I say, "Okay, don't call it a human right. Is it a civic responsibility like street lights, roads, primary schools, basic medicine, emergency medical care, the police?" I can go down the line of things that are not necessarily human rights, but they're civic responsibilities. So whether you think it is a human right or a civic responsibility, one thing that is true for all those things is they are free.

Free Education

What does free mean? Free means that it is paid for by an economic model that assumes that all of society has been lifted up in some way and is prospering. And guess what? People pay taxes, and those taxes are used for the common good. That common good includes infrastructure, which is education, roads, and so on. In fact, I will go as far as to say that in many parts of the world, I don't know Japan well enough in this situation but in the United States it is particularly true, the worst thing that has happened to public education is private education. This is because private education has sucked out of the system the people who really care, who can do something, and who want the most for their children. Who is left in public education? The people who do not have the position, power, money, or rank to actually change it and make it really good. When you look at the countries that are prospering in education and are doing the best by various measures, tests, rankings, and so on, Finland is almost at the top of all of them and is usually an outlier. And guess what? Finland has no private education, none. It is all public education. It is considered part of the responsibility of

society, and society makes society better by elevating everybody. Rich people use sidewalks; rich people use the lights in the street; rich people will, hopefully, even send their children to public education. So the point is, it is not a matter of who pays for it because you will charge some subset of the people.

I spoke recently at the UN, where many people in the audience were heads of state, and I said, "'Mr. and Mrs. Heads of State, I come to you to make a suggestion. I will educate every child in your country from first to twelfth grade, and I will do it at no cost to you. But Mr. or Mrs. President, it will all be private education.' But you say, 'Oh, no. We cannot do it that way.' There will be some reason why. So I say, 'Okay, then, I have another idea if you do not like the first one. How about I will educate half your children for twice the cost, and I will use all my profits to educate the other half?' You think about it for a moment, and you say, 'Well, that sounds a little better. But I am sorry, I cannot do it because it is part of my responsibility as a head of state, and Mr. Negroponte, it is a mission, not a market.'" Missions and markets are very different, the biggest difference I know. So if I can end on a difference before my suggestion, the biggest difference in the world is the difference between a market and a mission. That doesn't mean you cannot do some good things as a company, some corporate social responsibility, etc., that are an important part of achieving in your market because your shareholders respect you; your customers respect you; but that is still market stuff. That is not mission stuff. It is good. Please do not stop, if anybody is doing that. But ask yourself, what is the difference between a mission and a market? One of the reasons it is perhaps easy for me to say things that are perfectly outrageous to groups who really don't want to hear them is I have no lawyers behind me. I am not here representing MIT. This is not MIT's voice. I do not have a vested interest, so at least you can probably believe that what I am saying is what I feel and not because I'm marketing something, or I want to get something done, and so on. I'm too old for that, anyway. So my suggestion is the following: If you believe, as I do, that connectivity is a human right, then, one aspect of human rights, which is absolutely undeniable, is they are free. A rich person does not get a little bit more of them and a poor person a little bit less. Maybe, there is unfairness in courts and other things, but human rights are defined by their only requirement: you have to be a human. That is the only requirement, and if it is a right, it is free. So for a city, especially a big city, that wants to go from number four to number one, what can it do to achieve that? Make the internet free in Tokyo, totally free, whether that is 10 megabits, a gigabit, etc. And the companies, the DoCoMo's and others, they get paid the same way that companies get paid for building schools, cleaning streets, and running things. This does not include content and information, just the basic internet service. If Tokyo made it free for everybody in Tokyo, then, and you can look at the numbers, the numbers probably work. It is plausible. People will look at you, and guess what? They will copy Tokyo because right now the places that are doing it are cities like Chattanooga, Tennessee. But which city is going to copy Chattanooga? So it is something that a big city should consider doing, and I hope that is the one thing you take away from my introduction. Thank you very much.

ICF2019 Keynote Speech

"Global development on a finite planet towards 2050 What is the challenge? How could Japan, the US, and China help?"

Jørgen Randers
(Professor Emeritus, BI Norwegian Business School)
https://youtu.be/JZIMV8X3E_A?si=9rQQCc54qUD1L5fc

I am, of course, delighted to be in Japan and in this august meeting to talk about something that I have been talking about for 50 years. This coming spring, it will be 50 years since I first gave a talk on these topics. I have been working all these years to make the world a better place, to make it more sustainable, more environmentally friendly, and, in particular, more happy.

Despite my work, I have not succeeded. The current world is less sustainable than it was in 1970, and I am getting old. So I am a little desperate. I am really worried about the fact that no one seems

to be listening to my very good advice. In this talk, I will answer many of the wonderful questions that were asked in this session. I see the answers as being largely split 50-50; the audience is very split on the important issues, and I clearly belong in one of the categories, as you will see.

The Main Message

The world is facing a planetary emergency. It is not only a crisis; it's a real emergency in the form of continued warming, which is, of course, the same as climate change. If humanity only responds by doing what is profitable in the short term, the world will end up leaving a damaged planet to our grandchildren. So if we continue to only do those things that seem profitable from a capitalistic point of view, we will do too little, and the effect will be that the future world will be very damaged, destroyed, and reduced.

My conclusion is that we need to do much more, and that includes implementing measures that are not profitable or cost-effective in the short term. We need to choose expensive solutions to save the world in the long run. This is my take on the question of China versus the U.S. We need systems change. We need to change to a system that can choose expensive solutions in the short term to get a better world thirty to sixty years into the future. American capitalism is not capable of doing this. The short-term view of voters and the market ensures that most activity focuses on what is profitable or what increases consumption in the short run. If you disagree, you are in good company. Most people disagree with me. This is very sad, but it is the truth. So let us start with the first part. Assuming we continue to do what we have all been doing recently, which is at any point in time make decisions that maximize profitability and cost efficiency in the short term, what will actually happen over the next 30 years? What I am doing here is to give you a very quick run through of the book *2052 — A Global Forecast for the Next Forty Years*, which I wrote roughly 10 years ago. It is a very detailed 400-page description of what will happen up to 2052. It is based on a computer model, which is freely available on the web, so you can make your own forecasts if you want. The book splits the world into five regions, and it looks at the developments in each of those regions. And when you sum those regions, you get world development.

Population

The world's population is actually going to reach a peak inside this forecasting horizon, and by 2050, we will have a population of the order of nine billion people, and it will be declining. The reason the world population will be declining in 2050 is that women will choose to have ever fewer children, both in the rich world, where women much prefer to be educated and have a job rather than having a lot of children, and in the poor world, where most people now live in slums. And in a slum, it is very costly to have children. As a result, the number of children will continue to decline spectacularly.

The Economy

Concerning the world economy looking ahead, we will continue to have an expansion in the GDP in the production of goods and services, but the growth rate will decline. We will not have the 3.5% plus annual growth, which was the average from 1970 to 2010 in real terms. We will be closer to 3, 2.5, or 2%. The reason is that as a national economy gets richer, the growth rate slows. This is because fewer and fewer people work in agriculture; fewer and fewer people work in manufacturing; and most people work in services. It is very difficult to increase productivity in services, so as you get very rich, such as the United States of America, growth rates are very low. At lower levels of income, like China, you have very higher growth rates, but over time, the growth rates go down. So the growth of the world economy over the next thirty years will be lower than it was in the past.

Energy Use

Energy is the main input in economic development. Economics always talks about labor and capital, but it is the use of energy that has lifted our standard of living. Energy use will continue to rise, but it will rise more slowly because of the interest in energy efficiency at all levels of society.

Energy Composition

The composition of energy use will also shift. Currently, we largely rely on the use of coal, oil, and gas. But over time, we will electrify society. We will gradually increase the amount of electricity that is being used, particularly that part that comes from renewable sources, from the sun, wind, biomass, hydro, and in your country from nuclear energy, which is not normally called a renewable electricity source, but at least it is a non-CO_2 emitting energy source. So in this context, nuclear energy is part of non-fossil electricity. Once we know how much fossil energy is being used in the future, it is easy to calculate how much CO_2 is emitted into the atmosphere. You can see that over the next 30 years, CO_2 annual emissions will increase for another 10 to 15 years before they reach a peak, and then they will start declining. So by 2050, if we only pursue profit, we will be roughly at the same emission levels that we are today. Of course, the goal and the plan is to cut a lot, 50 to 80% by 2050. I forecast that unless we deviate from profitability and cost-effectiveness, we will end up only cutting by roughly 10% by 2050. If that is the case, the world will get very warm.

Global Temperature

Looking at the temperature of the world from 1850 to 2100, we are roughly 1ºC above pre-industrial temperatures. If my forecast is correct, we will rise more than 2ºC by 2050 and will reach a peak of a 2.5ºC increase in 2075 before the temperature starts decreasing a little bit, 40 years after the decline in

CO_2 emissions. So it's a very long delay in the response time of the world system. It takes 40 years from starting to reduce emissions until the temperature peaks. This is, of course, a rather grim scenario. An increase of 2.5ºC is going to make the cyclones in Japan even worse than the ones you have seen. It will shift weather patterns; it will make dry places drier and wet places wetter. The sea level will rise. This will not matter much in my country of Norway, which has steep coastlines, but it will be a big problem for Bangladesh, where everyone lives on flat lands. India has already built a fence to keep people in Bangladesh on their side of the border. So this is not going to be a very nice future. That is the upshot. The world will at the same time press against a number of other planetary boundaries.

Planetary Boundaries

The ozone layer is improving, but in other areas, we have overshot planetary boundaries. On ocean acidification, we are moving in the wrong direction; the ocean is becoming more acidic. On forest degradation, we are cutting down the tropical and temperate forests of the world. On nutrient overloading, we are fertilizing our agricultural areas so much it is starting to be a problem for the ecosystem. On freshwater, we are moving toward extreme overuse of available resources. On biodiversity loss, we are facing a catastrophic situation where we have already, essentially, killed all the coral reefs, and we are about to start killing a lot of other biodiversity. On air pollution, we are moving in the right direction. The Chinese have a 10-year plan for this, and they are executing it. And finally on toxic contamination, the situation is bad but stable. In sum, the margin between human activity and planetary boundaries is getting ever narrower. We are pressing harder against the limits of the planet, and the safety margin is going down.

Let us then look at developments in Japan, China, and the United States. In terms of population, China will experience a very big decline in population. In the United States, it will expand slightly, and in Japan, it will decline very gradually. On GDP, because the Japanese economy is already so rich, it is not going to grow very much from now until 2050. The same is true for the United States. But because China is still relatively poor, it will expand, and by 2050, it will be ten times larger than Japan and five times bigger than the United States. If you look at CO_2 emissions, they will decline as we approach 2050. In the United States, they are already declining because they are replacing coal with gas. And in Japan, they are also slowly going down. In China, they will continue to rise for a while before they also start going down.

Global GDP per Person

It is more interesting to look at GDP on a per capita or per person basis. Japan continued to grow even after its population and GDP started to stagnate in 1990. So Japan has done a surprisingly good job expanding the GDP per person even in a period of an aging and declining population. Looking

at the United States, there is somewhat more growth there, but of course, the Chinese will catch up, so by 2050, they will be on average as rich as Europe or Japan and just a little poorer than the Americans. CO_2 emissions per person will come down. Here, Japan will be the winner because of its large use of nuclear energy. I forecast that it will continue with this policy because the power stations are there and it is climate neutral.

Why Is It So Slow?

China, Japan, and the United States are moving in the right direction, but they are not moving fast enough. CO_2 emissions are going down so slowly that the temperature will exceed the Paris goals. So why is this shift so slow? I have been speaking about this for 50 years, and it was known 30 years ago that the IPCC was established to take care of this issue. Still, very little is happening. The reason is that the green solutions, the climate-friendly solutions, seem to be more expensive than the fossil fuel solutions. Consequently, in a competitive world, individual firms cannot choose the more expensive solutions, otherwise they get competed out of business. Second, it is very difficult for Western governments to put in place regulations that would make green solutions cheaper or cost-competitive compared with dirty solutions. The reason why this is difficult is that whenever a government tries to do so, for instance by increasing the price of gasoline to make electric cars competitive, people vote against this because they don't like higher taxes; they don't like higher costs of gasoline; and they don't want to lose their jobs in the dirty sector. So we are in a situation where firms cannot change, and democratic societies are unable to put in place the regulations that are needed to make it profitable to move ahead.

Is there a solution to this problem? One possible solution is to follow the Chinese model, where they basically decide what should be done from a long-term perspective. Another simple solution that ought to be possible to present to people is to cut the use of coal, oil, and gas in an orderly manner from 2020 to 2050 by 3% a year, so you gradually get to a situation of zero use of coal, oil and gas by 2050. It is important to state that 70% of all man-made greenhouse gas emissions come from coal, oil, and gas. So if you only attack this one thing, you solve the whole problem. You do not have to think about all the other impacts on the climate. Of course, it helps to think about them, but normally, it confuses people because there are so many options. In my view, CO_2 emissions will probably peak in the mid-2030s and will start declining until they reach zero in 2100. If this happens, temperatures will rise 2.5ºC, exceeding the Paris goal. On the other hand, if we phase out coal, oil, and gas in a linear manner over a 30-year period, temperatures will rise less than 2ºC. So this one policy move is enough to save the situation.

The question then is: How we can move from the current situation to phasing out oil, gas, and coal in an orderly fashion over 30 years? There are two ways. One is legislation that makes the green

solution more profitable than the dirty solution. An example of this is in my country of Norway. Ten years ago, we introduced a ban on the use of oil and gas for heating purposes that was to be applied ten years into the future. So since January this year, no one has been allowed to heat their homes with these fuels, and we live in a much colder environment than Japan, but it has worked. People have had to change the furnaces in their homes, etc. Another example is the ban in Beijing on cars that use fossil fuels. As you may know, Beijing has too many cars. Now, if you want a car, you have to buy an electric car. You cannot buy a car that uses fossil fuels, and this helps. A third example is the major subsidies for sun and wind power introduced in Germany in 2000, where the government paid for solar panels to be installed on buildings. So these kinds of regulatory changes can very much accelerate the shift by making clean energy more profitable than fossil fuels. However, as mentioned already, it is difficult for democratic governments to make these kinds of changes because people don't want them. The second thing that could be done to accelerate the shift from environmentally damaging solutions is for governments to take the lead. Basically, governments start building solar panels and windmills and then send the bill to their citizens in the form of increased taxes, particularly on rich people. Non-profitable solar panels, floating windmills, which would be one of the major solutions for Japan, the hydrogen society, all of these things will not happen by themselves because they are not profitable, but governments can start doing these things by using taxpayers' money. The total bill will not be very huge. It's a couple of percent, perhaps 3% of GDP, so you do not require a humongous tax increase to do this. Or you can do it by government borrowing, which is perhaps politically much easier. So that's my vision. I'm a desperate old human being who sees that the world is moving very happily toward a planetary emergency, considering issues like the ones discussed here, which are short-term small adjustments to a big system that is running in the wrong direction. I see there is a solution that is so simple it ought to be possible to tell people. But I understand that they don't want to listen.

Hope

I have been told by my younger colleagues that I am a doomsday prophet. But I should not be a doomsday prophet, and I should always end on a positive note. As urban dwellers, you ought to do three things. The first is to strengthen ongoing initiatives to reduce climate gas emissions. For example, push energy efficiency, local production of renewable power and heat; provide public transport; electrify transport; create heating and air conditioning smart grids; and handle waste storage locally. These things are all important, but they will not solve the problem. The second thing is that cities ought to lobby for national legislation that makes green solutions more profitable. Whenever I consult with big businesses, I tell them the most important thing they can do is to try to get laws that make green more profitable. That's not unethical. It is actually our duty in the 21st century. The third thing cities should do is support political parties that are willing to raise taxes on the rich to pay for green solutions, for example, renewable electricity and electrification. There is more than enough tax

potential. I am rich, and my social class should pay the bill, the couple of percent of GDP that it will cost to create a better world in the future. Thank you very much.

The future of cities as viewed by the ICF: Reflections on our 10-year trajectory

PART 2 Speech

Innovative City Forum 2013

Mori Art Museum Session 2

"What's Happening in Asia Now"

Dr. Eugene Tan

https://youtu.be/iLsPe8YS6CM?si=ainM9phzugwdqWLR

Art in a City's Future: Singapore and Southeast Asian Art Histories

In projections as to what the city-state of Singapore could be like in twenty years' time, "Art" has been given centre stage. The visual arts in particular have had a steadily rising profile from the late 1990s to the present. This burgeoning artistic scene in Singapore has been made possible by a confluence of factors. The first is the recognition by the state that the arts need to be a more important part of society in Singapore, as demonstrated by the establishment of the National Art Gallery and other developments in Singapore that I will speak about later.

The other factor relates to the relationship between the development of art and the identity of Asia in the era of globalization. The identity of Asia is one that has always been determined by its economic realities. And while in neoliberal capitalism an underlying premise is continued economic progress, the notion of economic progress is even more significant for Asia, whose identities have long been determined by its economic realities, the consequence being that the development of art and economic modernization in Asia are intimately linked. Current understandings of Asia have largely been derived from the region's growth as an economic power led by Japan in the postwar period, followed by the rapid growth of the so-called "Tiger" economies of Hong Kong, Singapore, South Korea, Taiwan, as well as the currency crisis faced by Southeast Asian economies at the end of the 1990s, and, more recently, the economic resurgence of China, India, and Southeast Asia through the potential their fast-growing consumer markets are seen to have. The economic potential of Asia has been further highlighted in recent years given the contrasting economic woes in Europe and America. And within Asia, with Hong Kong now a part of China, Singapore has emerged as an important economic centre in Asia from which to reach out to the rest of the markets in Asia, thereby strengthening its strategic position within the region.

The strong correlation between economic development and modernity in Asia, as in many parts of the world, has also resulted in the increasing dominance in the region of a market for art. The current domination of the market in art, which is perhaps more pronounced in Asia due to the less developed cultural ecosystem, is, in effect, a conflation of economic globalization and cultural globalization. The importance of the market has resulted in the disproportionate level of power that collectors now hold within the complex and intricate power relationships that exist between them and gallerists, curators, and art critics who determine the workings of the art world. This has resulted in a situation where art's commodity status, in effect, dominates its other social, art historical, and aesthetic values. Singapore has emerged with the potential for it to effect a different role in the region with institutions such as the National Art Gallery, as well as other developments in the country.

Singapore's Visual Arts Ecology

Between the opening of the Singapore Art Museum in 1996 to date, there have been significant additions to the ecology of the visual arts in Singapore. Singapore's inaugural participation at the Venice Biennale in 2001 was one such development. The Singapore Pavilion has seen presentations by artists such as Lim Tzay Chuen, Ming Wong and Ho Tzu Nyen. While Singapore did not participate this year, in order to focus on the process of developing our artists for this platform, the selection and planning process for Singapore's participation in 2015 is already underway.

The Singapore Biennale has emerged as an important platform for the production of new work by regional artists since its first edition in 2006. The artistic director for the first two editions, in 2006 and 2008, was none other than Fumio Nanjo. The next edition which opens next week, will be even more focused on art from Southeast Asia than previous editions. Complementing these institutional initiatives are developments which have focused on growing the marketplace. ArtStage Singapore was started in 2011 by Lorenzo Rudolf. It has since also successfully positioned itself as a fair for Asian art through its platforms which focus on the artistic scenes of various Asian, particularly Southeast Asian countries.

Another recent development is Gillman Barracks, which opened in 2012. As its name suggests, Gillman Barracks is a former British military camp which has been converted into a new arts district. Envisioned as a site for the production, discussion, and exhibition of art, it comprises more than fifteen international and Singapore galleries, as well as the new Centre for Contemporary Arts that will house a residency program, a research centre, as well as an exhibition program. The German-born curator Uta Meta Bauer was recently named as its Director ahead of its opening later this month. Galleries at Gillman Barracks include ShanghART and Pearl Lam Galleries from Shanghai, Tomio Koyama, Mizuma and Ota Fine Arts from Tokyo, and Southeast Asian galleries such as The Drawing Room and Silverlens from the Philippines, as well as Arndt and Michael Janssen from Berlin. The addition of these primary galleries into the cultural ecosystem in Singapore will invariably also inject a new dimension into the arts landscape of the region. With Art Stage Singapore establishing itself as a platform for Southeast Asian art, Gillman Barracks with its galleries and the new Centre for Contemporary Art, will further establish Singapore as a centre of art production in the region.

Complementing these developments is the establishment of the new National Art Gallery, which also speaks to Singapore's positioning within Southeast Asia. Art in Singapore's future is borne out of a historical awareness and sense of locale: our recognition of historical and geographical moorings in our region. The commitment to research in the visual arts of Southeast Asia is at the core of the National Art Gallery: a commitment to be the locus and the facilitator of discourse about the production of art, its presentation, as well as the shared and singular histories of nations and indi-

viduals that have been the backdrop and catalyst of art practice and research in the region.

Image of the site at present

The National Art Gallery will be situated in the heart of Singapore's historic civic district where it will occupy the conserved and enlarged spaces of two national monuments, the former Supreme Court and City Hall. City Hall is the building on the right. The building on the left, the one with the dome, is the former Supreme Court. Both buildings were built during the time Singapore was a British colony, City Hall was built in the 1920s to house Municipal Offices and the former Supreme Court in the 1930s. City Hall was the name given to the building in 1951, after Singapore was granted increased powers of self-governance. In 1959, the first prime minister of Singapore, Lee Kuan Yew and his cabinet were sworn in, and they established their offices there, signifying the new government's break from British colonial rule. Over the years, the ministries' that were housed there moved to larger premises at they outgrew City Hall. In 2000, City Hall became a part of the judiciary who were already in the former Supreme Court. The former Supreme Court was designed by British architect Frank Dorrington Ward, with columns and sculptures created by Italian artist Cavalieri Rudolfo Nolli whose work can be found at other significant buildings in Singapore. It is telling that the government decided to give these two historically significant buildings for an art museum, and a testament to the government's intention to make art a more significant part of our city and our society.

Image of the marquette (NAGA in the near future)

At the site now, new spaces are being created underground and above the existing buildings. As you might be able to see from the image of the marquette, the architect has designed a new rooftop, which links the two buildings together, along with bridges that run between the two buildings as well as a new basement level.

Key milestones

Here are some key milestones in the development of this project. In 2007, the then-Ministry of Information, Communications and the Arts held an international architectural design competition. Resulting from which Studio Milou Architecture was selected in 2008. In 2011, work officially started at the former Supreme Court and City Hall buildings. And we are scheduled to open in the latter part of 2015.

Our building

Here are some details about the building. It has been gazetted as a national monument. It has a total

floor area of about 60,000 sqm, of which about 18,000 sqm will be exhibition and programming spaces. Here is a short video that gives you a sense of what the building will be like from the architect's point of view.

Our mission

Our mission is "to be a leading visual arts institution that inspires and engages our people and our neighbours, creating a dialogue between the art of Singapore, Southeast Asia and the world." We are interested not only in being a site, a space, where art is seen, but also in being a locus of exchanges, a facilitator of discourse, about art and visual culture.

Map of maritime trade routes in SEA between the 12th and 15th centuries

Singapore has a rich history as a conduit of exchanges: from the exchanges of commerce and trade in its beginnings as a free port, bringing with them the flows of peoples that have engendered its cosmopolitanism. And of course, the flows of peoples from different cultures bring with them flows of ideas. The region itself begs to be defined in terms of flows, from the trade winds and maritime trade routes of the early times to the grouping of ASEAN, a grouping based on multi-lateral and mutual social political and economic benefit.

Southeast Asia Gallery

How then can the National Art Gallery contribute to the visual arts ecology in Southeast Asia? Extensive gallery space in our museum will be given to a long-term display of Southeast Asian art. The Southeast Asia Gallery spans across Levels 1 to 5 of the former Supreme Court Building, making this one of the first attempts to present the art histories of Southeast Asia in such a comprehensive manner.

As this plan shows, in addition to the Southeast Asia Gallery, we will also have a gallery devoted to the long term display of art from Singapore, as well as galleries for changing exhibitions.

The display in the Southeast Asia Gallery will be based on a thematic chronology which demonstrates the depth and diversity of art in the region within a paradigm of shared historical experiences. Our aim is not to offer a comprehensive overview of every country but to highlight key impulses to art making across the region. At strategic points in the narrative, we will also feature materials drawn from other fields of visual culture, such as architecture, photography, illustration and film.

In short, what we aim to achieve through the Southeast Asia Gallery is as follows:

1) Historicize the development of art in Singapore and Southeast Asia from the nineteenth century

to the present day
2) We are also seeking to (re-)write the art history or histories of Southeast Asia through reflexivity about how this history is being written

Southeast Asia is a region of shared and distinct histories, of significant common ground in terms of the social, political and historical through experiences of and struggles with colonialism, nationalism, industrialisation, through conditions of hybridity and globalisation.

The art in the region demonstrates Southeast Asian artists' reflexive exploration of issues that arise from these contexts. The discourse that attends to the art and art making needs therefore to be highly reflexive. The understanding of history has evolved in recent years which also begs questions as to the epistemological issues at stake.

Further, the National Art Gallery's exploration of Southeast Asian art historiography raises the banner of Southeast Asian art from a museological base in Singapore. This calls for mindfulness as the terrain consists of trajectories from distinct nation states, each with its own abiding concerns and positioning in relation to each other and the world.

These are some of the issues and questions we seek to address through the Southeast Asia Gallery:

- How do we understand Southeast Asia?
- What are the concepts of 'art' in Southeast Asia?
- What shared experiences connect artists across Southeast Asia?
- What are the key impulses that drive art in Southeast Asia?
- What are the significant influences and events that affect art in Southeast Asia?
- Who are the key artists and practitioners that shaped art in Southeast Asia?
- How is art in Southeast Asia linked to the region and the world?

The Southeast Asia Gallery is presented in 5 sections, each corresponding to a time frame. Starting with the theme of "Authority and Anxiety" in the 19th and early 20th centuries, we move on to the span between the 1900s and 1940s where the theme of "Imagining Country and Self" is explored. Next is the 1950s to the 1960s and the theme of "Manifesting the Nation." The period of the 1970s to the 1990s is an era of experimental redefinitions of art, after which we pause at the period of the new millennium up to the present where we examine "Southeast Asia and the Global Condition."

Authority and Anxiety (the 19th and Early 20th Centuries)

For artists, the colonial presence in Southeast Asia (or the European influence in the case of Siam) introduced new genres, modes and styles of representation. The nineteenth century is identified as

the point of entry as this period represents a profound change and even crisis in the art history of the region, and it can also be understood as marking the beginning of the modern period.

The gallery will show examples of how Europeans represented the land, people and material cultures of Southeast Asia through diverse visual practices such as topographical drawings, mapping and illustrations for travelogues and ethnographic texts. The display will also refer to the taxonomy of the early colonial museums in Southeast Asia to demonstrate the evolution of 'art' as a category. As part of a complex and interactive process, these different forms of representation had an impact on how Southeast Asians viewed their own culture and history.

Art was used to suggest colonial authority over the terrain of Southeast Asia through means such as mapping, ethnographic photography, illustration and landscape painting.

At the same time, Southeast Asian artists also used art to assert their own cultural authority within the colonial setting. Early forerunners of modern Southeast Asian art created ambitious compositions in Western-style painting, subverting colonial expectations of local artists. This gallery will also show how Southeast Asian artists localised the conventions of European painting, either through combining them with pre-existing representational codes or using them to communicate local concerns, such as proto-nationalist sentiment.

Imagining Country and Self (the 1900s to the 1940s)

In the display for the 1900s to 1940s we will be highlighting works that show the idealised landscapes of Southeast Asia by European and Southeast Asian artists. From the popularity of picturesque landscape painting to the proliferation of local themes and materials, Southeast Asian artists showed a heightened sensitivity to their locale in the tropics, itself a symptom of a nascent nationalistic consciousness. During the same period, European traveller artists exoticised the tropics in their representations, demonstrating the influence of Gauguin and the allure of orientalism.

The influence of European artists as founders of art academies is also explored in this section. Victor Tardieu in Vietnam and Silpa Bhirasri (Corrado Feroci) in Thailand were pioneering transnationals as they combined Western art education and aesthetics with emphasis on locality, insisting that their students infuse traditional arts and crafts in their practice.

Manifesting the Nation (the 1950s to the 1960s)

Between the 1950s and the 1960s, the region emerged from the Second World War and post-colonial nations were birthed. Artists assertively engaged with ideas of nationhood, modernity, and interna-

tionalism, representing the issues of newly emergent nation states. As independent states came into being, the narrative of Southeast Asia continues to examine the meaning of art in this increasingly complex environment driven by notions of nation, internationalism and modernity. The idea of "multiple modernities" rather than the singular Eurocentric narrative of modern art is examined here, which aptly describes the artistic paths of Southeast Asian artists in their milieu.

During this time, the social realist impulse was an important trajectory, which was not a style but a shared socio-political orientation toward the common people. Artists who espoused abstraction advanced an aesthetic approach which enabled them to position themselves as internationalists in the prevailing contemporary trends of that time. Both the social realists and the abstractionists were embroiled in the struggle for power to determine whether art was to be framed by nationalism or a broader internationalism. While perceived as internationalists, in actuality abstract artists also drew significantly from local contexts, such as spirituality and indigenous motifs. The search for an indigenous modern aesthetic also continued through the use of locally distinct materials, such as batik and lacquer paintings.

Redefining Art (the 1970s to the 1990s)

This next section will present a display of the broad spectrum of artistic activity taking place against the backdrop of a region emerging from the turbulent political conditions of the previous era. Bracketed by major world conflicts such as the conclusion of the Vietnam War in the mid-seventies (and leading up to the end of the Cold War in 1989) as well as other international political crises, the art in this period is marked by an anti-formalist tendency that gravitated toward cultural and political awareness. The shift in power politics and greater consciousness-raising activities spilling over from the West had awakened a pluralism of voices that was made possible by the wider articulation of Southeast Asia's postcolonial position, especially with the exposure of Southeast Asian artists studying in the West.

The ensuing growth of mass media and globalised art/consumer markets also meant that art had to reflect the increased pressures of contemporary societies in Southeast Asia. Whilst serious in its aims, art during this period is also typified by parody, irony, satire and incongruity as it provokes the examination of the dilemmas of daily life. Conceptual installations and performative practices were brought to the fore as well as representations that engage with identity politics.

Southeast Asia and the Global Condition (the 2000s and later)

The last section of the Southeast Asia Gallery, in a way, is the most pertinent to the discussions at this forum, and it brings us back to my discussion at the start of my presentation. It examines the

factors and context of a burgeoning visual arts ecology in Asia in recent times. The internationalization of art through the global biennale phenomenon and the opening up of the once Euro-American centric discourse of art to include other sites of production, such as Africa, Latin America and Asia, offer a familiar-enough picture of what needs to be taken into consideration for meaningful examinations of the visual arts in any locale. However, situated as we are within a region that is experiencing unparalleled interest in art collecting, curating, and research, Singapore can offer fresh perspectives and platforms for a remapping of a global art history that takes Southeast Asian art into account. Given the complexity and diversity of Southeast Asia, a better understanding of its development of modernism can allow us to better understand the development of art globally. This is perhaps the role that Singapore with the new National Art Gallery can contribute toward. Thank you.

Innovative City Forum 2013

Mori Art Museum Session 3
"Creative Cities and Life in the Future"

Dr. Glenn D. Lowry
https://youtu.be/BZSIG9EtLic?si=23kBC49eTI8_y170

Thank you so much, Fumio. It's a pleasure to be here, especially on the 10th anniversary of the Mori Art Museum, and to think a little bit about the way in which museums animate, activate, and make our cities valuable. Fumio asked me to speak a little bit about the way in which the Museum of Modern Art over the last decade has expanded and I took that to mean not just within the city but as an institution and as an idea around the world.

Let me begin by simply locating the museum because the Museum of Modern Art is fundamentally an urban institution. It is located just to the south of Central Park in one of the densest environments in the world in the center of Midtown Manhattan, and it is literally nestled in the street, surrounded

by skyscrapers and other buildings. It is this aspect of the museum, a kind of urban centrality, that gave rise to the institution as a very particular kind of place. That is because if you think about most museums, especially in the 1920s when the Museum of Modern Art was founded, they were often located in the middle of a park or a garden and were set apart from the city, at least in North America. If you have ever been to the Metropolitan Museum of Art, you will know what I mean. The founders of the Museum of Modern Art, however, thought of it as a place that was grounded on the street, that drew its energy, its livelihood, and its meaning from its relationship to the city as an urban space. This idea of the museum rooted in the street, rooted in the city, is precisely what Yoshio Taniguchi took as his point of departure a decade ago when he redesigned the museum and expanded it. This was because his notion was to take that street and extend it within the institution, to make the institution, if you wish, a mirror of its urban environment. This is reflected not only in the way people circulate and navigate within the institution but also in the idea that at the heart of the museum there was a central atrium or gathering place that could, in its own way, mirror Central Park as a place where you went to take a moment to breathe, in the middle of the urban environment, to take a moment to reflect, to be with friends, and to relax. So he saw the museum as not only a place of energy but also a place of gathering and ultimately as a place of repose. Here the garden in the museum becomes the moment where you can suddenly slow down, and I think that is an essential aspect of what museums can do within cities. They can provide an awful lot of energy, but they can also provide a space to think, reflect, and decelerate. As we have tried to understand our role in the city, we've also recognized that we're a private institution, and one of our realities is we have to charge admission, which is not something that makes it easy for us to engage the largest possible audience.

So what we have done recently is to turn our garden into a free space where anyone from the city of New York can come before we open to relax and enjoy a moment with sculptures. And this lets the museum seep outside of its own space. Now, the Museum of Modern Art is in many different places. It is an institution on 53rd Street in Midtown Manhattan. It is also MoMA PS1, a center for contemporary art on the opposite side of the East River, about two and a half miles from Midtown Manhattan, and this is very important because MoMA PS1 is a very different place. It allows a very different audience to engage with the museum. If Manhattan is this dense urban environment, Long Island City and Queens are much more spread out, and the demographics are fundamentally different. Where the Museum of Modern Art has a huge international audience, MoMA PS1 has a more local audience. Where the Museum of Modern Arts audience tends to be 40 to 50 years old, MoMA PS1's audience tends to be 25 years old and is rooted in the outer boroughs of Brooklyn, Queens, and Staten Island. This allows the museum to play a dual role within the city, engaging not one but two boroughs in a dynamic. And I always admire the way you look back on Manhattan from MoMA PS1, recognizing that New York is a much more complicated place than a single borough.

Now, one of the things that we can do in Long Island City is to build architecture because one of our

responsibilities is architecture, along with painting, sculpture, photography, film, and media. So every summer, we build a temporary structure that becomes the site of a music festival, and that music festival allows us to bring thousands of young people together to experience new music, architecture, and the city in a different way. We realized that this provided an opportunity for us to think about the museum not only as a place where you look at art in a traditional sense but also as a place where you can think about art in very different ways.

Partnerships with Other Institutions

This led us to start imagining the museum as a partner with other institutions around the world, so we've taken the Young Architects Program and extended it to Rome with the Museum of the 21st Century. And every year we run a joint competition with the Museum of the 21st Century, as well as with Constructo in Santiago, Chile, and most recently in Istanbul with the Istanbul Modern. So now the idea of the Museum of Modern Art and its programs must be seen as part of multiple cities. I think this is very important because there is a tendency when we think of the city to think of a single location on a particular latitudinal and longitudinal axis. But the global world cities are all interconnected with each other through digital media, as well as more physical means, and through these partnerships, what we're really doing is knitting together a number of different urban centers in a shared conversation and dialogue. This is something that we also are doing with shared programs, which we are developing on a bilateral basis with institutions like the Art Gallery of Western Australia and many others, where we can share our collections and expertise, learn from other institutions, and, thus, continue to build the idea of the museum as an aggregator of information, possibilities, and ideas.

If you extend that now through a range of educational initiatives, like massive online courses or MOOCs, what we have learned is that the museum can become a hub for a whole set of activities that can reach a very different and much broader audience than we ever imagined. We launched our first MOOC this summer. It was an online course for teachers, and we had 17,000 participants, 66% of whom were not from the United States, who stayed throughout the course. And much more importantly, you begin to see on a map like this that we touch over a hundred countries. So a single place can radiate out and connect literally dozens and more places with each other. What fascinates me is not the idea of a center with spokes but rather a kind of open network that constantly reconstitutes itself each time a new institution or new place joins and it reconfigures all the existing relationships.

Now, if the museum is a physical place in Manhattan and Long Island City and a series of programs that radiate around the world, it is also a digital space, and it exists online. I think most museums have learned that their online audience is as important as their physical audience. But what's interesting about an online audience is its growth is exponential and infinite, whereas physical audienc-

es are limited by space. More importantly, I think we have all evolved to realize that what we do online does not have to be identical to what we do in physical space. Thus, we can take the idea of the museum and continue to expand and engage it. In this context, we recently launched something called Audio Plus, which is a way of imagining the museum in your hand. It's not simply an audio guide that lets you learn about the museum. It's a handheld social networking device that lets you connect with everybody in the museum who's using the device at the same time and share ideas, start conversations, organize meetings, and even take photographs and share them. In the first five weeks of launching this, 500,000 photographs have been shared among users. What that tells me is there is a community that is hungry to connect with each other within the city about art. That community can begin the conversation within the museum. It can also extend it outside the museum in an ongoing loop. If you just look at the impact of social media in the context of the museum, you can immediately see the number of people who are using social networks to talk to each other about experiences in the museum.

This is also an integral part of the city because the city must understand itself both as a physical and metaphorical place, and that is what's taking place in the conversations online. When you add it all together, this place, which if limited to only those who walked in through the door might draw three million people a year, actually has a worldwide audience of some 41 million people a year if you include all the people who visit on-site, who see our programs off-site, who connect online through social media, and who share our educational initiatives. You begin to understand that the scope of our institution, like the scope of many other institutions, is larger than the entire population of the City of New York. This radiation, if you want to look at it that way of the impact of what we do I think highlights how powerful museums are within the social fabric of their cities. There are very few other kinds of institutions that can touch this many people so consistently and bind them together in a shared conversation about art.

Now, if this has been about the way the museum has connected outward, I want to also talk for a moment about how the museum has endeavored to change its relationship with the city. We began a series of experiments to take the museum outside its own walls and to make it woven into the way in which people experience New York. Several years ago we did a project called Sleepwalkers by Doug Aitken where Doug turned the entire exterior of the museum into a cinematic multiplex that told a story about five New Yorkers and their imagined existence. But what it really did was to provide anyone who was wandering down the streets at night the opportunity to see something new and different and stop for a moment and think about their city and how it operated.

In a similar vein, this summer we presented Rain Room in which we took over an empty lot near the museum and did this project with Random International, a London and Berlin-based group, that imagined what it would be like to be in the middle of a thunderstorm with the rain pouring down

and you are the only person who remains dry. This was a little bit of magic. It was a project that started in London and no doubt will travel elsewhere in the world, but it drew hundreds of thousands of people to think about an experience in their city that would have been impossible to present inside the museum because of the amount of space required and the amount of water that was circulating. It would have been an extraordinarily difficult challenge.

So we were able to take a project and weave it into the fabric of the city and allow New Yorkers to think about their city differently or, more specifically, engage our public in the very act of being a citizen within the institution. In another project called Measuring Your Universe by Roman Ondack, anyone who walked into a room would have their height and initials inscribed on a wall. So you begin this project with one or two people coming into a room and it being noted the day they came in and their height. Eventually, you begin to have a wall that marks all the various people who came into the museum until, ultimately, you have this extraordinary kind of vortex reflecting each person. What's important about this project is that it allows a group of people who would otherwise be anonymous to be inscribed into the institution as individuals. By doing that, it lets people who use the museum take ownership of it. Now, they are as much a part of the institution as any work of art on the wall. This ability of the institution to grab hold of the public and frame them and embed them into the museum is a way of taking the anonymity of what it's like to walk through the city, where you pass hundreds of people, and suddenly have each one of those memorialized within the institution.

I want to conclude by suggesting that what museums can do better for a city than almost any institution I know is to be a home for the multitude, a place where literally tens of thousands of people a day can find something interesting, can connect with others and with art, and can feel a part of the fabric of the city. But at the same time, it can be a place where a single person can find a unique experience and literally jump for joy. When museums can fulfill these two different roles between the large and the small, the individual and the mass, the particular and the general, they become like catalytic engines that can drive the cultural and intellectual life of the city. I always like this image that Yoshio created for us of the museum exploding out of its walls, where its energy becomes the energy of the street and the street becomes the energy of the museum. In this way, a place like the Museum of Modern Art is an inherently urban institution and part of the larger intellectual life of the city. Thank you very much.

Conducted in 2013

Mori Art Museum Session 3
"Creative Cities and Life in the Future"

Sir Nicholas Serota
https://youtu.be/i5h-Ph1mLFk?si=0vOlmjTlf6tYppno

Thank you, Fumio, ladies, and gentlemen, like Glenn it's a pleasure to be here on an occasion when you celebrate not only the 10th anniversary of the Mori Museum but also the 10th anniversary of Roppongi Hills. An incredible vision created by Minoru Mori, inspired by his love of Le Corbusier and already a treasured place within the city of Tokyo.

Sadly, I was not here this morning, having had to be in London until late last night for the Frieze Art Fair and meetings of our International Council. But I want to pick up some of the points that have just been raised by Glenn and to remind you that Tate Modern is only 13 years old, even though it stands in a long history and tradition of museums. Museums have always been centers of learning,

research and display and they have also played a very strong civic role. However, that civic role has changed quite dramatically in the last 20 or 30 years. This is an acceleration that began in the 60s, both in terms of the numbers of visitors and the kind of experience that they were seeking. It went further with the creation of the Pompidou Center in Paris, especially in the way the building relates to the city. In Bilbao, the opening of the Guggenheim in the late 90s drew attention to the explosion of new museums in Spain and established a model of urban regeneration that has been much admired and indeed copied across the world.

When Tate Modern opened in 2000, the ambition was to create for the first time a proper Museum of Modern Art in London and create a new museum in a new quarter in London. The site was a former Power Station located in a part of London that had been previously neglected, in spite of its central location within the city. We also wanted to create a new kind of space within the museum. Here you see an image of Turbine Hall and a plan that reminds us that we are right in the heart of the city, opposite Saint Paul's Cathedral and right on the river itself. Here is a view of Bankside Power Station 25 years ago, and you see that in the nineteenth century, the whole fabric of the medieval city, with a pattern of small streets, was broken by the introduction of an industrial scale, later reinforced by the building of the railway, a broad street, and office blocks.

Turbine Hall is the raw industrial space that distinguishes Tate Modern from other museums. It has provided a space in which we can give artists the opportunity to make installations. Here we see Olafur Eliasson's installation in 2003 and Carsten Höller's in 2006, both of immersive installations that respond to the space and encourage people to engage with the work of art in what becomes a social experience where individuals explore their own identity and find themselves in conversations with others.

Over the past 10 years, the growth of audiences at Tate Modern and their reactions to different forms of presentation have encouraged us to think about ways we could offer different kinds of experience within the museum, not just looking but also debating and engaging with others. With more than five million visitors a year there are also pressures on our existing spaces and we need new spaces where we can show new time-based media

As many of you will be aware, we are now in the process of building an extension and we opened one new section for a short season last year so that we could begin to explore the opportunities that the extension will offer. At below ground level these spaces were formerly the oil tanks for the power station, now converted into spaces for installation, performance, conversation, dialogue and discussion. The most successful event that we staged last summer was a conference called 'Undercurrents'. It was a two-week festival organized by young people aged between 16 and 24 in which they invited artists and performers to use the spaces in all kinds of different ways. It is this kind of fresh

thinking and the response of artists that will help us to develop the museum of the future.

Here you see an image of Charles Atlas performing in the space. His work is in part made in homage to Merce Cunningham, the choreographer and director of the legendary dance company which fundamentally changed the way that contemporary dance was conceived in the sixties. Cunningham had himself performed at Tate Modern earlier in the decade. This piece performed in the Tanks therefore carried with it memories of a Cunningham performance in Turbine Hall.

In thinking about our approach to building an extension to Tate Modern, I have to take you back 10 years. In 2001after a year's experience of the building and over five million visitors, we became conscious that the building was very much landlocked, looking out onto the river but not connecting to the other parts of the city. We commissioned Richard Rogers and Partners to do a study of the routes leading south to the Elephant and Castle, a very neglected part of London, We were keen to establish, or indeed re-establish, links to the south from Tate Modern connecting through onto the main thoroughfares and the main points of circulation. Here you see the plan made by Rogers which suggested that links could be enormously strengthened by a relatively small number of interventions. So for instance in this plan you can see a group of office buildings that were due to be replaced. We managed to persuade the planning authorities that they should make a break exactly where you see the double-headed arrow, opening up a pedestrian path and views from Southwark Street to Tate Modern, tying it into the grain of the city. This kind of intervention goes far beyond the traditional role of the museum in relation to its community but it does suggest that museums can use their influence for the benefit of the community as a whole.

Here you see two parts of the city, the rich and successful City of London and the poor Bankside Southwark to the south, with Tate Modern sitting between. In 2003 we invited a young architectural practice called Witherford Watson Mann to develop some proposals based on the recommendations of the Rogers study. In an area that was wholly urban and almost totally without tree, Witherford Watson Mann came up with the improbable but beautiful notion of creating a notion of the 'Bankside Urban Forest'. Their plan was to re-open or strengthen some of the existing routes that ran south but which had been broken by the building of the railways by using the viaducts that run beneath the railways and the small streets. They also looked again at small parts of urban fabric that are remain undeveloped and not built on to see whether they could improve the whole context of life in that part of London by a number of small-scale interventions.

Here you see a very run-down café on a very tight site close to one of these railway viaducts. And here you see the intervention made by Witherford Watson Mann to turn this into a more public space that can work at different times of the year in different weather. Another kind of intervention is the greening of the city by using a very small plot to build and to create a little orchard or to rede-

sign this small piece of land on the edge of the pavement close to Tate Modern and to introduce seating in collaboration with the artists Heather and Ivan Morison. New buildings are now appearing immediately around us. Here a building by Richard Rogers and Partners, which changes the scale of the city is brought to a human scale by planting and by placing shops and cafes at ground level even if there are private residential apartments above. Here is an aerial view of Tate Modern and the plans for the redevelopment and extension of the building. You see to the left, four lozenge-shaped buildings that are the Rogers towers. You see Tate Modern, Turbine Hall with its glass roof and then to the southwest the new extension rising above the vestigial elements of the oil tanks. And this is an image taken 10 days ago of the building as it rises, a pyramid around the central core which will provide galleries, educational and social spaces. Here an image of a work by Aldo Tambellini, a film program in the tanks using these spaces, making it possible for the Tate to engage with the way in which artists are developing their ideas about working across disciplines.

And here Anne Teresa de Keersmaeker, the first performance in the Oil Tanks, the recapitulation of a work that had been made 20 years ago performed for a new generation, again a reinterpretation of what a museum can offer to its audience. It isn't simply about preserving a work of art as an object which sits on a wall or in a gallery. It is also about the research that is required to re-enact a seminal work that sits within the area which is embraces performance, dance and visual art. Increasingly we find ourselves covering all these disciplines rather than simply the static visual, exploring the interconnections between art, film, dance theatre and the spoken word.

Glenn mentioned that during the last five years MoMA has been using the internet to develop and share a whole range of programs with schools across the world. In a similar way Tate has created a program which builds on the experience of Turbine Hall and reaches forty thousand young people every week in schools across 19 countries in the world.

This is exactly the kind of way in which a museum of modern art is bound to work in the 21st century and I look forward to discussing these and other points in the panel discussion that follows. Thank you.

Conducted in 2014

Urban Development Session
Envisioning Global Cities 2025: New Definitions of Prosperity and Livability
The Urban Strategies and the Emergent Value in New York

Vishaan Chakrabarti
(Holliday Professor and Director, Center for Urban Real Estate, Columbia University / Partner, SHoP Architects)
https://youtu.be/2V1RDKG3QSM?si=38e7BDN68TgU9Vbk

The urban development session, organized by The Mori Memorial Foundation's Institute for Urban Strategies, was centered on the visions of global cities over the next ten years. Experts in urbanism and architecture were gathered from London, New York, Paris, and Tokyo to elaborate on the ongoing development projects and policies in their respective cities and engage in a lively discussion on the visions of the global cities in 2025. This section sums up some of the highlights from the session.

Overwhelmed by complexity of the times we live in

It can be said that cities are really a global salvation and can help us in terms of prosperity, sustainability, and social change. It is found that people, especially in our dense cities today, feel overwhelmed by the complexity of the times in which we live. The world has always been a complex place, but today because of technology, we have a view into the complexity of the world and the world beyond us in a way that we never had before.

How to live on our planet

The seven billion of us live in a quite scattered array across the planet. If all seven billion of us lived not at skyscraper density but actually only about three or four story brownstone density, about 75 units to the hectare, then all seven billion of us could fit in the state of Texas in the United States. It means that how we live in terms of density will dictate the future of the world. If we can live in a more dense way, we will certainly lower our carbon impact and create a better planet. What I found in talking to people about that is that density or intensification causes a sense of namelessness and facelessness that scares people.

Beauty

We became lost in that world. I think we have really lost our way in terms of understanding true beauty. I want to talk about how in the 21st and 22nd century, beauty could actually be a way in which people can embrace the complexity of the world. In order to do that we no longer need an architect as a superhero. We need an extraordinary group of skills. We need men, women, and people of all different orientations, races, and skills to try to give us that beauty and give us that lens into the complexity.

A network city model

We should not live out in the horizontal sprawl and try to use technology, windmills, and solar panels to fix that 20th century model. Instead, we should use our cities to build densely and leave nature natural. We should be able to access nature in a much more direct way which are connected largely

by train. At the same time, we understand that the hub and spoke model of our cities is actually changing. The idea that people live outside of our cities and commute into a central business district every day is changing very rapidly. Because of technology we are moving into a network city model. In this model, throughout a big city you can find an archipelago, a series of islands of places where people live, work and play across many districts.

The Domino project

We are really rediscovering the area in that 10 kilometer belt outside of Manhattan. This is part of a new waterfront for Brooklyn named the Domino project. We tried very carefully to move and interpret the complexity of the city in terms of the lower scale of this neighborhood, the scale of the bridge and the factory and then the scale of the skyline. It is really about building neighborhood. It is critically important how these buildings meet the street in terms of building that neighborhood. We found that 85% of our new technology jobs are in heritage buildings. They are in pre-war buildings because those people do not actually want to be in tall towers. They want to be in a different kind of work environment. So this is something we are very much trying to build in New York. We are also trying to emphasize a new skyline in Brooklyn. Brooklyn is sort of the next chapter in New York's history.

Barclays Center, a sense of civic delight

The Barclays Center is the first arena in the United States that has no parking associated with it. There is not one single car parking space. The building is made of corten steel. This is only possible because of the computer. It is designed on the computer and it goes directly to the metal fabricator. What is important about this kind of city building is that it is part of the city and integrates into the city in terms of new and old as well as high and low. This is something that is very important if we are going to talk about intensification. People need to feel the texture and the kind of delight of a place. Perhaps in the complexity of our times it gives us a window in terms of how we think about the world in which we live.

Delivered in 2022

Program Committee Session
web3, DAOs and Society

Joichi Ito
(Director, Co-founder, and Chief Architect, Digital Garage, Inc. / Director of the Center for Radical Transformation, Chiba Institute of Technology)
https://youtu.be/8Qp6Brjle-Y?si=mrFT1a6B4eTwfiFZ

Accounting, Born 5000 Years Ago, Led to web3

I would like to discuss web3 in its historical context. web3 is an accounting layer, and accounting itself is, in a sense, a technology. The clay tablets used in the Sumerian cities of Mesopotamia 5,000 years ago can be considered the first accounting ledgers. The invention of accounting enabled centralized management of urban assets, leading to the emergence of Mesopotamian cities with populations of tens of thousands.

Next, about 600 to 700 years ago, Italian trading companies created double-entry bookkeeping using paper and pen. Additionally, financial concepts like insurance and interest rates emerged

from probability theory and statistical research by mathematicians with a fondness for gambling. Financial systems and balance sheets based on double-entry bookkeeping made it possible for many people, not just central authorities, to gather investors. This led to the birth of corporations and capitalism.

Current accounting systems haven't evolved much from that era's double-entry bookkeeping, profit-and-loss statements, and balance sheets. While innovation has occurred in the financial layer, there hasn't been much innovation in the accounting layer. Also, a characteristic of today's accounting system is that everything must be reduced to numbers. For example, let's say I promised Mr. Takenaka "I'll give you 100 million yen if it rains tomorrow." If there's a 50% probability of rain, that promise would be valued at 50 million yen in accounting terms, but in reality, it's worth either 100 million yen or zero, never 50 million yen. This is how today's accounting system forces complex and uncertain information into absolute numbers. Furthermore, by calculating everything in terms of yen or dollars, we lose complex information and diverse relationships and perspectives. For instance, some aspects of environmental destruction and wealth inequality stem from the fact that we assume a very simple world and optimize toward it, failing to model complex and diverse human systems.

People working on blockchains and web3 are trying to change accounting systems to manage such complex elements. Think of a blockchain as a ledger that anyone in the world can view and write in but where no one can tamper with the transaction history. It's managed neither by nations nor individuals. While databases require physical locations like countries or universities and must be managed by people there, a blockchain is like a public bulletin board in a park that anyone can write on or view. Whether the numbers written on a blockchain are correct is verified by everyone acting as validators, similar to how banks count money and everyone confirms the numbers match.

There are fees for writing to a blockchain. If you want to conduct a transaction and write it to a blockchain, it's like dropping money into an offering box next to the park bulletin board. This money is then distributed as dividends to the people, the managers, who verify the correctness of the written numbers. While current accounting requires energy because corporate auditing firms publish accounts for everyone to verify, this can now be done on a blockchain. You can write not just payment histories on a blockchain but also contracts and programs. Using the earlier example, you could write a contract stating "I'll give you 100 million yen if it rains tomorrow" and program it to automatically transfer the money once there's confirmation whether it rained. I believe this will dramatically change our world.

The most widely used blockchain in web3 is Ethereum. Their annual report describes themselves as a "protocol for human coordination." Indeed, accounting helped to coordinate people's activities even in centralized Mesopotamian civilization. However, while traditional accounting has managed things operating within the economy, blockchains will now enable us to manage complex things that couldn't be converted into monetary value or managed before, such as carbon emissions and SDGs. Furthermore, with the integration of AI and new digital technologies and as standardiza-

tion progresses, I believe we'll develop management systems even more complex than current accounting. This is one major perspective.

web3's Impact on Democracies and Economies

web3 is a new set of services and technologies centered around blockchains. While some say databases could replace it, web3 is fundamentally different because databases require designated owners and access rights, whereas web3 is open and has overwhelming transparency. web3 can also openly implement standardization processes. This extreme transparency and information disclosure will likely majorly impact democracies and economies. However, analytical tools, an important next step beyond transparency, are still lacking.

Beyond numerical transparency, the ability to program blockchains is another key feature. Tasks currently handled by law can be managed through programming. Contracts can be executed digitally without lawyers, tools can be created to ensure product delivery upon payment, and fraud can be made technically impossible. New organizations will emerge as various tools become programmed organizationally. This is the concept of Decentralized Autonomous Organizations or DAOs.

Let me share some examples. When email addresses first appeared, people didn't adopt them for about ten years, saying faxes were good enough. In those days, downloading a single CD would take a full day, but continued internet use, despite its inconveniences, led to convenient services like Netflix. Similarly, while blockchains may be expensive and difficult to use now, I believe they will improve with widespread adoption even if web3 currently only interests limited groups of people, like those involved in NFTs and cryptocurrency investment.

Speaking of which, let's talk about NFTs. In March 2021, the artist Beeple's artwork sold for $69 million, shocking the art world. Furthermore, it gained attention as a new business model for digital artists because the artist can receive royalties when an NFT artwork is resold.

The difference between NFTs and cryptocurrency is that while each unit of cryptocurrency has the same value, NFTs can be issued as unique individual items. The most popular type of NFT art has been collections, notably the Bored Ape Yacht Club monkey images. While each has different characteristics and valuations, their initial use was as social media profile pictures. This is my Twitter profile page. Profiles are normally circular, but when you use an NFT you own as your profile picture, it becomes hexagonal. The hexagonal shape means Twitter is checking blockchain records on web3 to verify that you are the legitimate owner of this NFT. Currently, if you buy stickers in one messaging app, you probably can't use them in other apps. However, with NFTs, since ownership is recorded on a public bulletin board, NFTs can be used anywhere regardless of where they were purchased. Also, there are now parties that you can only attend, programs you can only participate in, and items you can only buy if you own a Bored Ape NFT. A community of Bored Ape holders has thus emerged, and like golf club memberships, there are movements where holders work together to

increase value.

Recently, a metaverse has also emerged within such community activities. The 4,500 Bored Ape holders can have three-dimensional experiences in this metaverse and sell NFT land within it. Looking at the entire Bored Ape project, they've raised over 100 billion yen through Bored Ape issuances, third-party allotments, and metaverse land sales to create this world within the metaverse. In other words, this art project is creating something that competes with Facebook and Microsoft. Like how Mickey Mouse evolved into Disney World, I think this progression from art to platform is characteristic of web3.

The reason such companies haven't yet emerged in Japan is largely due to legal regulations and the fact that while people with technical knowledge exist in the gaming industry, they're not in the content creation industry. So far, only simple uses like attaching art to NFTs and selling them in markets have emerged.

NFTs can be used as certificates beyond art and entertainment monetization. At the Chiba Institute of Technology, we use them for academic credential certificates. The credential format is completely open, and the verification software is open-sourced, so anyone can use it. This protocol was created by my team when I was at MIT, and now various universities, including Harvard, are using it. For example, when accepting technicians from Vietnam, we could have Vietnamese universities implement it. Since the credential verification software is open-source, if Mori Building's HR department wants to view academic credentials, they can use the software as-is. If multiple universities tried to create and centrally manage a neutral academic credential site, the organizational energy and costs would be enormous. The fact that we were able to do this in just one week is a characteristic of web3.

DAOs Will Change Society

Finally, let's discuss DAOs in more detail. DAOs are highly transparent organizations because everything—what everyone does, what money exists, and what movements occur—is visible on the blockchain. They are global organizations that anyone can participate in with low organizational costs and simple establishment. They can quickly issue tokens, which are similar to stocks. Since web3 wallets can be used, bank accounts aren't necessary. Because organizations can be created without lawyers, accountants, or bank accounts, I think they will be used by small municipal projects and early-stage ventures that previously found it difficult to organize.

Traditional companies had investors and management, but venture capital brought innovation through stock options that allowed regular employees to profit. DAOs issue tokens that are more like currency rather than stocks. Tokens cannot have third-party allotments after issuance. This guarantees that your ownership ratio won't be diluted, ensuring high transparency. A common recent example is launching a project and distributing about half of the tokens to customers. Customers can profit like investors and participate in the company's projects.

Experiments are rapidly being conducted in municipalities. For example, Shiwa Town in Iwate Prefecture is running a DAO through their town council, and it's very easy to understand their activities because everything is transparent, such as how much Hometown Tax donation money has been received and how it's being used. I believe web3 will be increasingly used in collaborations between municipalities, the private sector, and the national government.

In my podcast community, we issue tokens that can't be bought or sold with money. We use a bulletin board to recruit volunteers for tasks we want the community to pursue, and everyone verifies when tasks are completed. For each hour of work, you receive 100 Henkaku community tokens, which can be used to buy community NFTs. This is a closed community, and joining requires obtaining a "Membership NFT." This NFT is equivalent to ten hours of volunteer work and cannot be purchased with money. To invite new people to the community, you must perform ten hours of volunteer work. This entire system is written in software, so no administrative office is needed. There's no appointment committee or accountant—everything is automatic. Currently, the tokens can't be converted to money because no law allowing that has been passed yet, but with the Stable Coin Law coming around June next year (the Revised Payment Services Act of June 2023), it will become a mechanism where actual money can be involved.

Systems are emerging for analyzing DAO governance through uncertainty computing and AI systems that facilitate group discussions. There's also a delegation system where you can delegate voting rights to someone more knowledgeable than yourself. For example, I might delegate my votes on economic matters to Mr. Takenaka, who might delegate his votes pertaining to other fields to experts in those areas, ultimately concentrating votes with the most knowledgeable specialists, who will then discuss the issues.

Prime Minister Kishida initially declared "web3 from Japan." Overseas, I think there's global cooling toward web3 after being caught up in a web3 bubble, with exchanges like FTX collapsing. Japan is trustworthy and solid but slow-moving. However, this is actually perfect—if Japanese corporations enter slightly later and create a reliable, proper web3, I think they could lead the world. I believe around 2023 is the timing to start building this.

Delivered in 2022

Program Committee Session

The Unknown Role of Art

Fumio Nanjo
(Special Advisor to the Mori Art Museum)
https://youtu.be/cigfjTn0tK0?si=qX-jV1mKiTywhHvw

Art Exists in the Viewer's Perspective

I believe my role is to discuss art and its relationship with various social phenomena and urban issues. Many of you might think of art as a matter of personal taste or individual concern. However, art has now grown into an industry, and we can say that it has developed a very deep connection with society.

The ICF has invited many cultural figures, artists, designers, and others, who have spoken on various topics. Many of these individuals work across genres, making them difficult to categorize. In other words, many discoveries and inventions are being made at the boundaries between art and

other fields. This is where new possibilities for innovation can be found. With this context in mind, I would like to describe what art is today.

But first, let me first touch briefly on art history. In 1917 in New York, a French artist named Marcel Duchamp presented a work called *Fountain* at an exhibition. The work consisted of a urinal laying on a pedestal, signed with the name "R. Mutt." However, this work was refused to be exhibited. Since he was the director of this exhibition, he sparked a debate about whether his work should be recognized as art. By separating the urinal from its usual function and placing it on a pedestal, he probably wanted to say that it appears as a sculpture of an unusual form. In recognizing this as a sculpture, as art, he was saying that art exists in that perspective. In other words, art can exist without making something by hand. Art exists in the eye that chose this everyday object. Art can be made from everyday objects, and those objects can become the subject matter. He also said that the audience creates half the meaning of art, meaning that art also exists on the viewer's side. Many of the ideas in contemporary art today can be traced back to Duchamp's works, known as "readymades," which were made from such manufactured objects.

For example, this is Andy Warhol's work depicting Marilyn Monroe, a very representative piece of pop art. The image of Marilyn was reportedly taken from a newspaper photograph. In other words, it was readymade, a transferred image. It directly addresses everyday subject matter and declares, "This is our reality." Such an approach might not have emerged without Duchamp.

At the top left is Donald Judd, a minimalist. He eliminated unnecessary decoration and narrative, reducing it to this form. He argued that when reduced to this state, it would be universally beautiful to everyone. This idea that less is more became a trend, likely founded on Duchamp's conceptual approach.

The two works in these photographs are examples of conceptual art. The upper work, by Joseph Kosuth, is an ordinary chair placed in the center, a photograph of that chair taken in this location on the left, and the dictionary definition of "chair" written on the right. In other words, it presents three parallel elements: a linguistic definition, an image of a chair, and the physical chair. This method raises the philosophical question, "What is a chair?"

The lower work is by On Kawara, a Japanese artist. From 1966 onwards, he painted only dates. Each morning he would make a canvas by hand, write the date on it, place it in a box. Like a Zen monk, he proved his existence in time and place. This can be considered a work about one person's existence. Such art, centered on philosophical and linguistic questions, also has its roots in Duchamp.

Furthermore, technology continues to advance. For art, technology is like brushes and paint, enabling the creation of many new works. The upper right work uses biotechnology tissue culture to recreate Van Gogh's ear. It is made from human cells, and it lives in liquid - such things are now emerging as art.

Below is TeamLab's *Borderless* venue in Odaiba, where a 10,000-square-meter space is surrounded by digital technology projections that interact with people. This goes beyond viewing paintings—it's art that you experience physically. This type of art is called "immersive art." It's like the metaverse

becoming reality.

"Art Thinking" as Comprehensive Cognitive Ability

So is there a way to define art? A commonly used phrase is "Art is now a concept." It's not art because it's a painting or art because it's a sculpture. It's not about what you do making it art but rather the concept that matters. Conversely, something can be art even without form if it has a concept. In other words, what emerges is the importance of "perspective."

Going further, there was a German artist named Joseph Beuys who was active from the 1960s to the 1970s. While Beuys was a master and a guru, I believe his fundamental origins can be traced back to Marcel Duchamp. One of his important concepts was "social sculpture." He argued that artists shouldn't just paint pictures - changing society is also art, approaching advocacy for social innovation and revolution. Thus, even a mail carrier or someone peeling potatoes could be an artist. He said that if their method is self-aware and creative, that makes them an artist. "Social transformation" thus became a very significant component.

Today, "art thinking" is considered important in business. Doing some research, I found needs for "the ability to review business from a comprehensive perspective amid increasing corporate needs and uncertainty," and for "creativity in reconsidering business goals." Reconsidering goals suggests we're no longer in an era of simple business objectives like "let's earn 10 million yen." We've entered an era where we need to consider impacts on sustainability when setting goals, making "goal reconsideration" extremely important. Of course, education and human resource development are also very significant roles of art. It's about what kind of goals we set. The same applies to art. Artists create works that no one has commissioned. They might not make money, but they continue to create works based on concepts they believe are important. Their goals differ from simple economic efficiency. Their goal-setting comes from within. And that's what distinguishes it from design.

Looking closely, such needs are required in all fields, not only business and art. The idea is that many educational, economic, technological, nursing care, and social issues must and can be connected with artistic creativity. Japan has many such problems.

I recently spoke with Emmanuel Todd during a pre-session. He strongly emphasized that Japan has no future unless it solves its population crisis. The issues of declining birthrates and an aging population naturally connect to care-giving and labor issues, as well as energy, resource, and environmental problems. Everything is interconnected and thus must be solved as a single ecosystem. This requires comprehensive thinking abilities, which is exactly what art has been doing intuitively.

Looking back at the ICF's first days ten years ago, when Japan had long lost its economic strength from the mass production era, we felt that "creative industries" were the only way forward when considering what Japan should do. That Tokyo should become the most important hub for this and stand out in Asia. I believe it should excel in arts and culture. It should project an image of being

more creative and cultural than any other Asian city. This will attract talent and investment from abroad. From this perspective, it also becomes a lifestyle issue. Lifestyles are naturally changing.

Over these ten years, we've seen various proposals: new scientific technologies emerging, changes in infrastructure supporting daily life, cars evolving, robots appearing, art transforming, even children potentially being designed through biotechnology. Our options for how to live will continue to increase. I'm very concerned about whether humans can understand right from wrong and control these properly. However, I feel that no one can stop these various changes from progressing simultaneously.

Art's Power to Envision and Develop Our Future

These are some works from the Future and the Arts exhibition I organized in 2019. The top left is a fashion piece by Yuima Nakazato using a new fiber with the same strength as spider silk. The strange child-like sculpture in the middle is by Australian artist Patricia Piccinini. It's a detailed sculpture suggesting how children might be designed differently in the future using biotechnology to adapt to the environment, like different organisms. On the right is a robot conducting at a concert. Above is artificial meat created by a Dutch artist, and restaurants using this artificial meat are already taking reservations.

How will such lifestyle changes affect cities? I think there are two major issues. One is sustainability. What the architectural and major infrastructure systems that make up cities are made of, material issues and energy efficiency, human mobility efficiency—all these will likely be consolidated as sustainability issues. The other issue concerns the significance of cities' existence. Depending on lifestyle changes, more people might live outside cities. There's also the reality that many people now live in both urban and rural areas. This gathering and dispersal, distribution, and movement may become crucial factors in determining the survival of cities.

Various cities are being proposed around the world. This is a floating city by Pomeroy Studio, where unit blocks can be continuously added. It says "Zero energy," suggesting the possibility of a self-sufficient energy supply. Here is an image of Paris in 2050 from their website. Paris is envisioning a new urban image filled with green-covered architecture.

This is Neom in Saudi Arabia. The line-like structure in the middle is a future city made along a 170-kilometer line. It's a city enclosed by 500-meter-high glass walls spanning 170 kilometers, where you can travel from one end to the other in twenty minutes, making everything instantly accessible. Essentially, different cities exist in each block. (Video) I'm not showing this because I think it's good. Indeed, it might be impossible. However, I believe there's significance in the very act of conceiving and presenting such concepts.

Finally, here's a house on Mars. NASA is holding a competition for houses to be built on Mars. The idea is that humans will someday venture into space, and this explores what housing might look like then. Since we can't bring everything from Earth, they're researching how to use Martian soil

and mud to 3D print houses that recreate Earth's environment inside. They're studying how this might work and what form these houses might take.

So what does art bring us? Maybe the power to envision things that we don't know are possible but might become necessary: ways of human living, thinking as solutions to environmental problems, humane solutions for world peace, and ways of thinking as dreamlike fantasies. This is the power of art. It draws grand visions and creates a future aiming in that direction. And it's about transforming goals. We cannot achieve new visions by setting the same goals as before. We need to change our thinking and accept diverse solutions and methods. This requires a society that embraces diversity. In other words, art isn't about paintings and sculptures; it's about highly flexible creativity and methodology in thinking about things.

I reconsidered what it means to create a city. Art cannot do concrete things, but it can present visions. What should these visions be based on? I think it's deep insight into how the lives of people there will evolve. Design cities with this insight. Who can do this? Surely not just the residents. We need a place where artists who can envision the future and people who face the future with determination, who can discuss and be active. This ultimately makes people happy. I'd like to conclude by saying that art can open up the future in a deeper sense than you might think.

The future of cities as viewed by the ICF: Reflections on our 10-year trajectory

PART 3 Dialogue

2022

Pre-session

Where are we? : A sketch of human history

Fumio Nanjo and Emmanuel Todd

https://youtu.be/AjnGjWYxSzU?si=0fKGOCt7eLFQqR2N

The future of cities as viewed by the ICF: Reflections on our 10-year trajectory

PART 4 Discussion

2017

Art & Science session

Theme 2: "Symbiosis" discussion, part 1

"The world of symbiosis: From cells to the universe"

https://youtu.be/qCLYYoKcSDo?si=G0qZhXdQsIQ2Kdk3

2017

Biotechnology session

"Biotechnology and future urban/genetic design"

https://youtu.be/rOPJt8pvYIM?si=3KhVIdZS_VBH1e7v

2019

How will we live tomorrow?

Mori Art Museum: Programs related to the "Future and the Arts" exhibition

Breakout session 1: Metabolism of city and architecture

https://youtu.be/h58sB6TqLF8?si=hoDnBI-Ab_p-8RLj

2019

How will we live tomorrow?

Mori Art Museum: Programs related to the "Future and the Arts" exhibition

Breakout session 3: Transformation of capitalism and well-being

https://youtu.be/VCWwOJo3Rt0?si=oUtkO4Q3rXp_xR-D

2021

Breakout session B–3: Visions of tourism

The new relationship between the value of experience and consumption

https://youtu.be/i3q7Sblv8Dg?si=2gDAL-0DhcyHOjlG

2022

Program Committee session

https://youtu.be/McOMs1L9yao?si=k-0Dm-sDfbJghnsE

Innovative City Forum
Our ten-year trajectory

*Honorific titles omitted and job titles are from the time of the events

ICF2013

Keynote Address

1. "Environment, Architecture and Lifestyle"
   Kazuyo Sejima (Architect)
2. "Toward a Material Ecology"
   Neri Oxman (Assistant Professor, Media Arts and Sciences, MIT Media Lab)

Leading-edge Technologies Session

"Leading-edge Technologies and the Future of Society"

- Leading-edge Technologies Session Workshop A: Technologies Interfacing with Nature
- Leading-edge Technologies Session Workshop B: Playing Games to Map the Brain

Joichi Ito (Director, MIT Media Lab)
Fiorenzo Omenetto (Professor, Department of Biomedical Engineering, Tufts University)
Sebastian Seung (Professor, Computational Neuroscience, Brain & Cognitive Sciences Dept. and MIT Media Lab)
Elizabeth Diller (Founding Principal, Diller Scofidio + Renfro)
Neri Oxman (Assistant Professor, Media Arts and Sciences, MIT Media Lab)

Urban Management, Policy and Strategy Session

"The Strategy for Creating Urban Centers"
- Strengthening urban center to revitalize a city

Hiroo Ichikawa (Dean, Professional Graduate School of Governance Studies, Meiji University / Executive Director, The Mori Memorial Foundation)
Shingo Tsuji (President & CEO, Mori Building Co., Ltd.)
Choe, Sang-Chuel (Professor Emeritus, Graduate School of Environmental Studies, Seoul National University)
Liu Thai-Ker (Director, RSP Architects Planners & Engineers (Pte) Ltd / Chairman, Advisory Board, Centre for Liveable Cities)

Culture and Creativity Session 1

"Cities of Beautiful Lifestyles"

Fumio Nanjo (Director, Mori Art Museum)
Harry Waluyo (Director General for Media, Design and Science Based-Creative Economy, Republic of Indonesia)
Victor Lo Chung-wing (Chairman of Board of Directors, Hong Kong Design Centre)
Muneaki Masuda (Representative Director President and CEO, Culture Convenience Club Co., Ltd.)
Aaron Y. L. Lee (CEO, JUT Foundation for Arts and Architecture/Managing Director, JUT Group)

Culture and Creativity Session 2

"Aesthetics in the Future, as Defined by Innovation"

Tim Brown (CEO and President, IDEO)
Kenya Hara (Designer)
Kohei Nawa (Sculptor)
Francois Bancon (Division General Manager, Product Planning Dept., Nissan Motor Co., Ltd.)

Culture and Creativity Session 3

"Art Emerges All Around Us"

Jun'ya Yamaide (Executive Director, NPO "BEPPU PROJECT" / Artist)
Huang Sheng-Yuan (Principal, Fieldoffice Architects)
Hideki Kasai (Proposal Department, Obayashi Corporation)

GPCI (Global Power City Index) Session (by The Mori Memorial Foundation)

Global Power City Index 2013: Discuss what will be new urban values

Yoshiaki Fujimori (President & CEO, LIXIL Corporation)
Mark Norbom (President & CEO, GE Japan Corpora-

tion / Vice President, GE)
Karen Tang (Executive Director, The Better Hong Kong Foundation)
Saskia Sassen (Robert S. Lynd Professor of Sociology and Co-Chair, Committee on Global Thought, Columbia University)
Hiroo Ichikawa (Dean, Professional Graduate School of Governance Studies, Meiji University / Executive Director, The Mori Memorial Foundation)

The Asahi Shimbun GLOBE Session
"The Future, Seen from Tokyo"
Mika Ninagawa (Photographer / Film Director)
Michael S. Molasky (Professor, Faculty of International Research and Education, Waseda University)
Yoshiaki Koga (KODANSHA Senior Deputy Director (International Business Division) India Project Director)
Toshiaki Miura (Editor-in-Chief, The Asahi Shimbun GLOBE)

Urban Land Institute Session 1
"Olympics & City Planning"
Bill Kistler (Managing Partner, Kistler & Company)
Adam G. Williams (Practice Leader, Design + Planning/Buildings + Places AECOM)
Yasushi Aoyama (Professor, Meiji University Graduate School of Governance / Former Vice Governor of Tokyo)

Urban Land Institute Session 2
"Use of ICT for Future Work-style Innovation and Urban Development"
Kazuhiro Suzuki (Managing Director, Enterprise Sales Operations, Cisco Systems G.K.)
Tomoyuki Shirakawa (Director, Business Innovation Center System Engineering, Cisco Systems G.K.)

Mori Art Museum Session 1
"The History of Art Foretells the Future"
David Elliott (Founding Director, Mori Art Museum)
Manuel J. Borja-Villel (Director, Museo Nacional Centro de Arte Reina Sofia, Madrid)
Shuji Takashina (Director, Ohara Museum of Art, Kurashiki)
Mami Kataoka (Chief Curator, Mori Art Museum)

Mori Art Museum Session 2
"What's Happening in Asia Now"
Lars Nittve (Executive Director, M+, Hong Kong)
Eugene Tan (Director, The National Art Gallery, Singapore / Programme Director, Singapore Economic Development Board)
Chung Hyung-Min (Director, National Museum of Modern and Contemporary Art, Korea)
Fumio Nanjo (Director, Mori Art Museum)

Mori Art Museum Session 3
"Creative Cities and Life in the Future"
Glenn D. Lowry (Director, The Museum of Modern Art, New York)
Nicholas Serota (Director, Tate, London)
Kiyoshi Kurokawa (Academic Fellow, National Graduate Institute for Policy Studies)
Joichi Ito (Director, MIT Media Lab)
Fumio Nanjo (Director, Mori Art Museum)

ICF2014

Special Session co-organized by the Japan Foundation Asia Center and Mori Art Museum
"The New Relationship between Art and the City as Seen in Asia"

- Theme 1: A New Relation between Art and the City
  Marco Kusmawijaya (Director, Rujak Center for Urban Studies)
  Karndee Leopairote (Assistant Professor, Thammasat Business School / Executive Director, the Future Innovative Thailand Institute)
  Jason Hsu (Curator, Shareable Cities & TEDxTaipei / Co-founder, MakerBar)
  Fumio Nanjo (Director, Mori Art Museum)

- Theme 2: Media Art Goes Public
  Gunalan Nadarajan (Dean, The Penny W. Stamps of Art and Design at University of Michigan)
  Toshiyuki Inoko (Founder of teamLab)

Tetsuya Mizuguchi (Founder, Resonair / Project Professor, Keio University Graduate School of Media Design)
Fumio Nanjo (Director, Mori Art Museum)

Theme 3: Art into the Society

Kittiratana Pitipanich (Director, Design and Creative Business Development Department, Thailand Creative & Design Center)
Venzha Christ (Media Artist, Director of HONF Foundation)
Richard Streitmatter-Tran (Artist / Director of Dia/Project, Ho Chi Minh City / Senior Lecturer, RMIT University Vietnam)
Jason Hsu (Curator, Shareable Cities & TEDxTaipei / Co-founder, MakerBar)

Keynote Address

1. "Embracing Complexity through a New Science of Design"
   Joichi Ito (Director, MIT Media Lab)
2. "Creative Chaos: Art and Design for Chaotic Future"
   Apinan Poshyananda (Permanent Secretary, Ministry of Culture, Thailand)

Leading-edge Technologies Session

"Synthesis of Matter, Information and Life"

Kevin Slavin (Assistant Professor, Media Arts and Sciences, MIT Media Lab)
Andrew "bunnie" Huang (Open Hardware Designer)
Connor Dickie (Co-Founder & CEO, Synbiota Inc.)
Joichi Ito (Director, MIT Media Lab)

Urban Development Session

"Envisioning Global Cities 2025: New Definitions of Prosperity and Livability"

Peter Bishop (Professor of Urban Design, The Bartlett School of Architecture, University College London)
Vishaan Chakrabarti (Holliday Professor and Director, Center for Urban Real Estate, Columbia University / Partner, SHoP Architects)
Dominique Perrault (Architect and Urban Planner / Founder of Dominique Perrault Architecture / Professor at the EPFL / Member of the Grand Paris Scientific Council)
Hiroo Ichikawa (Dean and Professor, Professional Graduate School of Governance Studies, Meiji University / Executive Director, The Mori Memorial Foundation)

Art & Creativity Session

"Designing the Creative City"

Christophe Girard (Mayor of the 4th district of Paris / former Deputy Mayor in charge of Culture from 2001 to 2012 / Initiator of "Nuit Blanche" event)
Karndee Leopairote (Assistant Professor, Thammasat Business School / Executive Director, the Future Innovative Thailand Institute)
Justine Simons (Head of Culture for the Mayor of London / Chair of the World Cities Cultural Forum)
Fumio Nanjo (Director, Mori Art Museum)

Art & Creativity Session

"Future of Art in the City"
Carsten Nicolai (Artist)
Seiichi Saito (Rhizomatiks / Creative & Technical Director)
Gunalan Nadarajan (Dean, The Penny W. Stamps of Art and Design at University of Michigan)
Marco Kusmawijaya (Director, Rujak Center for Urban Studies)

ICF2015

Keynote Address

1. "Differences"
   Nicholas Negroponte (Professor & Co-Founder, MIT Media Lab / Founder, One Laptop per Child)
2. "Not a necropolis, but a histopolis; when cities come alive"
   Oron Catts (Director of SymbioticA, The University of Western Australia)

Leading-edge Technologies Session 1

"The New Metabolism"

Products, building and cities can come to life
David E. Benjamin (Principal, The Living / Assistant

Professor, Columbia University Graduate School of Architecture, Planning and Preservation)
Ryuji Fujimura (Lecturer at Toyo University / Representative Director of Ryuji Fujimura Architects)
Sputniko! Assistant (Professor, Design Fiction Group, MIT Media Lab)
Joichi Ito (Director, MIT Media Lab)

Leading-edge Technologies Session 2
"Second Brain for the Smart City"
Learning from the Urban Microbiome
Kevin Slavin (Assistant Professor, Media Arts and Sciences, MIT Media Lab)
Christopher Mason (Associate Professor of Computational Genomics, Physiology, and Biophysics, Weill Cornell Medical College)
Jessica Green (Director, Biology and Built Environment Center, University of Oregon / Co-founder and CTO, Phylagen Inc.)
Joichi Ito (Director, MIT Media Lab)

The Japan Foundation Asia Center Session
"Evolving Asian Cities and Platforms"
Innovators who are continuously developing creative platforms
- Exploring the future of Asia with innovators
Hiroaki Shono (Co-founder, ACN / President, vision track inc.)
Eisuke Tachikawa (CEO/Founder, Design Studio Nosigner)
Jackson Tan (Artist & Co-Founder, PHUNK / Creative Director & Curator, BLACK)
Jiradt Pornpanitphan (Editor in Chief, Cheese Magazine, BOOKMAKER CO., LTD.)
Planning and Cooperation: Arina Tsukada

Special Session
"Global Initiatives in Art/Technologies/Cities"
WATERSHED's Initiatives (Bristol, UK)
- The possibilities of Playable City® that has been explored since 2012 and its development in Tokyo
Clare Reddington (Creative Director, Watershed)
Anna Grajper (Laboratory for Architectural Experiments (LAX) Architect)
Kei Wakabayashi (Editor in Chief, WIRED Japanese Edition)
Seiichi Saito (Creative & Technical Director, Rhizomatiks)

Urban Development Session 1
"Tokyo: Urban Identity in Globalization"
Is globalization homogenizing cities? What makes Tokyo a uniquely appealing city?
Sharon Zukin (Professor, Brooklyn College, City University of New York)
David Malott (Principal, Kohn Pedersen Fox Associates (KPF) / Chairman, Council on Tall Buildings and Urban Habitat)
Shunya Yoshimi (Professor, Interfaculty Initiative in Information Studies, The University of Tokyo)
Hiroo Ichikawa (Professor and Dean, Graduate School of Governance Studies, Meiji University / Executive Director, The Mori Memorial Foundation)

Urban Development Session 2
"Urban Development x Area Management"
Experts from London and New York offer Tokyo insights on city creation
Ricky Burdett (Professor, London School of Economics)
Tim Tompkins (President, Times Square Alliance)
Michael Kimmelman (Architecture Critic, The New York Times)
Hiroo Ichikawa (Professor and Dean, Graduate School of Governance Studies, Meiji University / Executive Director, The Mori Memorial Foundation)

The Japan Foundation Asia Center Session
"Future in Asia: Redesigning for Community"
Exploring the possibilities of community design toward social issues such as natural disasters and economic disparities
Ryo Yamazaki (CEO, studio-L / Professor, Tohoku University of Art And Design / Guest Professor, Keio University)
Hirokazu Nagata (Chair, Plus Arts NPO)
Ruttikorn Vuttikorn (Design Director, Club Creative Co., Ltd.)

Art and Creativity Session 1
Redefinition of Design "Is this a matter of design?"
Shohei Shigematsu (Architect, Partner, OMA)
Gustaff Harriman Iskandar (Artist/Director, Common Room Networks Foundation)
Katherine Higgins (Producer, MIT Center for Art, Science & Technology)
Fumio Nanjo (Director, Mori Art Museum)

Art and Creativity Session 2
Redefinition of Design "What is it that you design?"
Hyungmin Pai (Professor, University of Seoul)
Benjamin Loyauté (Curator & Designer)
Usman Haque (Founding Partner, Umbrellium / Founder, Thingful.net)
Fumio Nanjo (Director, Mori Art Museum)

Art and Creativity Session 3
Redefinition of Design "Design returns to nature"
Joichi Ito (Director, MIT Media Lab)
Oron Catts (Director of SymbioticA, The University of Western Australia)
Jessica Green (Director, Biology and Built Environment Center, University of Oregon / Co-founder and CTO, Phylagen Inc.)
Fumio Nanjo (Director, Mori Art Museum)

ICF2016

Keynote Address
1. "Heatherwick Studio: Ideas for the future"
Thomas Heatherwick (Founder and Design Director, Heatherwick Studio)
2. "Post Post-City"
Gerfried Stocker (Artistic Director, Ars Electronica)
3. "Machine Intelligence, Art, Augmentation and Agency"
Blaise Agüera y Arcas (Principle Scientist, Google)

Leading-edge Technology Session 1
"Symbiosis with Artificial Intelligence"
Hiroaki Kitano (President and CEO, Sony Computer Science Laboratories, Inc.)
Blaise Agüera y Arcas (Principle Scientist, Google)
Joichi Ito (Director, MIT Media Lab)

Leading-edge Technology Session 2
"New Metabolism: Krebs Cycle of Creativity"
Neri Oxman (Assistant Professor, Media Arts and Sciences, MIT Media Lab)
Joichi Ito (Director, MIT Media Lab)

Art & Creativity Session 1
"The Universe and Living in This Extreme Environment"
Tom Sachs (Artist)
Masayuki Sono (Co-founding Partner, Clouds Architecture Office)
Melodie Yashar (Architect, Space Exploration Architecture / Assistant Professor, Pratt Institute)
Zack Denfeld (Artist / Co-founder, the Center for Genomic Gastronomy / Researcher, Science Gallery, Dublin)
Fumio Nanjo (Director, Mori Art Museum)

Art & Creativity Session 2
The Japan Foundation Asia Center Session
"Lifestyle in Asia in the Future – Ideas from History, Culture, and the Environment"
Ang Ming Chee (General Manager, George Town World Heritage Incorporated)
Vo Trong Nghia (Architect / Founding Partner, Vo Trong Nghia Architects)
Yukinori Yanagi (Artist)
Fumio Nanjo (Director, Mori Art Museum)

Future Tokyo Session: TOKYO2035
- Future Living "With whom, where, and how will people live?"
- Designing a technology-imbued home representing a diversity of values
Naoki Adachi (Founder and CEO, Response Ability, Inc.)
Hiroaki Katayama (President & CEO, Stratasys Japan)
Keisuke Ichihara (Executive Officer, Rakuten, Inc.)
Yukihiro Maru (President and CEO, Leave a Nest Co., Ltd.)

- Future Work "Why, where, and how will people work?"
  - Designing a style of work interconnected with technology

  Izumi Okoshi (Head, Dentsu Innovation Institute)
  Koichiro Yoshida (CEO / Founder, CrowdWorks Inc.)
  Akiyuki Minami (CEO/Co-Founder, coconala Inc.)
  Tatsuyuki Negoro (Professor, Waseda Business School / Director, Research Institute of Information Technology and Management, Waseda University)

- Future Mobility "Why and how will people move around?"
  - Designing forms and ideals of mobility transformed by technology

  Koji Koizumi (Founder & CEO, R.GENE Inc. / Chief Editor, IoT NEWS)
  Tsuguo Nobe (Chief Advanced Service Architect and Director, Intel Corp / Visiting Associate Professor, Nagoya University)
  Genki Kanaya (President and CEO, akippa Inc.)
  Hisashi Taniguchi (President & CEO, ZMP Inc.)

- Future Entertainment "Why, where, and how will people be entertained?"
  - Designing outdoor spaces reformed through technology and biodiversity

  Hiroo Ichikawa (Professor and Dean, Professional Graduate School of Governance Studies, Meiji University / Executive Director, The Mori Memorial Foundation)
  Hiroaki Kitano (President and CEO, Sony Computer Science Laboratories, Inc.)
  Michitaka Hirose (Professor, the University of Tokyo, Graduate School of Information Science and Technology)
  Tatsuo Sasaki (President, Sasaki Architects and Associates)
  Hideki Kasai (Manager, PPP Business Department, Technological Business Development Division, Obayashi Corporation)

Special Session

"Second Brain for the Smart City: Holobiont Urbanisum"

Kevin Slavin (Assistant Professor, Media Arts and Sciences, MIT Media Lab)
Masayuki Ishikawa (Japanese Manga Artist)
Larry Weiss (Chief Medical Officer, AOBiome LLC)

ICF2017

Keynote Address

1. "The Age of New Nomads / The Future of Tradition"
   Kenya Hara (President, Nippon Design Center Inc. / Professor, Musashino Art University)
2. "Discovering the designs that enable societal development"
   Danielle Wood (Scholar of Societal Development)
3. "Fragments of anthropo-technologies in the post digital age"
   François Roche (Architect / personal secretary of s/he _ New-Territories)

Art & Science Session

"Human Augmentation and the Designed World of Symbiosis"

- Theme 1 "Augmentation"

  Discussion: Augmentation Body
  Viktoria Modesta (Bionic Pop Artist / Creative Director / MIT Director's Fellow / Futurist)
  Jun Rekimoto (Professor, Interfaculty Initiative in Information Studies, The University of Tokyo / Deputy Director, Sony Computer Science Laboratories, Inc.)
  Ken Endo (Researcher, Sony Computer Science Laboratories, Inc. / CEO, Xiborg Inc.)
  Tetsuya Mizuguchi (CEO, Enhance / Project Professor, Keio University Graduate School of Media Design)
  Maki Sugimoto (Associate Professor, International University of Health and Welfare Graduate School / CEO, Mediaccel Inc. / COO, HoloEyes Inc.)
  Joichi Ito (Director, MIT Media Lab)
  Chiaki Hayashi (Co-founder, Loftwork Inc.)

  Discussion: Augmented Sensibility
  Alexis André (Researcher, Sony Computer Science

Laboratories, Inc.)
Yoichi Ochiai (Media Artist / Advisor to President, Assistant Professor, University of Tsukuba)
Nao Tokui (Founder & CEO, Qosmo Inc. / Media Artist / DJ)
Shunichi Kasahara (Associate Researcher, Sony Computer Science Laboratories, Inc.)
Hiroaki Kitano (President and CEO, Sony Computer Science Laboratories, Inc.)
Chiaki Hayashi (Co-founder, Loftwork Inc.)

- Theme 2 "Symbiosis"
  Discussion: The World of Symbiosis: From Cells to the Universe
  Masatoshi Funabashi (Researcher, Sony Computer Science Laboratories, Inc.)
  Honor Harger (Executive Director, ArtScience Museum at Marina Bay Sands)
  Christopher Mason (Associate Professor, Department of Physiology and Biophysics, Weill Cornell Medicine)
  Lena Okajima (Founder and CEO, ALE Co., Ltd.)
  Ariel Caitlyn Ekblaw (Space Exploration Initiative Founder & Lead, Graduate Researcher, MIT Media Lab)
  Fumio Nanjo (Director, Mori Art Museum)
  Hiroaki Kitano (President and CEO, Sony Computer Science Laboratories, Inc.)

  Discussion: Symbiotic Cities
  Neri Oxman (Architect / Designer / Inventor / Associate Professor, MIT Media Lab)
  François Roche (Architect / personal secretary of s/he _ New-Territories)
  Rob van Kranenburg (Founder, the IoT Council, theinternetofthings.eu)
  Fumio Nanjo (Director, Mori Art Museum)
  Joichi Ito (Director, MIT Media Lab)

GPCI 10th-Year Anniversary: TOKYO 2035
Urban Strategy Symposium "TOKYO 2035: Enhancing a Radiant World City"
Saskia Sassen (Robert S. Lynd Professor of Sociology / Member of the Committee on Global Thought, Columbia University)
Richard Bender (Professor Emeritus of Architecture, College of Environmental Design, University of California, Berkeley)
Allen J. Scott (Distinguished Research Professor of Public Policy and Geography, University of California, Los Angeles)
Peter Nijkamp (Fellow, Tinbergen Institute, Amsterdam / Professor, Adam Mickiewicz University, Poznan)
Hiroo Ichikawa (Professor and Dean, Professional Graduate School of Governance Studies, Meiji University / Executive Director, Institute for Urban Strategies, The Mori Memorial Foundation)
Heizo Takenaka (Professor, Toyo University / Professor Emeritus, Keio University / Chairman, Institute for Urban Strategies, The Mori Memorial Foundation)

Biotechnology Session
"Biotechnology and Future Urban/Genetic Design"
- Visualize Microorganisms, Design Life, and Invisible Living Things in the City
Christopher Mason (Associate Professor, Department of Physiology and Biophysics, Weill Cornell Medicine)
Mari Miyamoto (Business and Technical Applications Manager, Oxford Nanopore Technologies Ltd)
Kazuharu Arakawa (Associate Professor, Institute for Advanced Biosciences, Keio University)
Sebastian S. Cocioba (Molecular Florist)

Media Art Session
"The Possibilities of Cities and Media Art"
- The Initiatives of Media Ambition Tokyo, and the Future of Cities Undergoing Mediatization
Junji Tanigawa (Space Composer / CEO, JTQ Inc.)
Tetsuya Mizuguchi (CEO, Enhance / Project Professor, Keio University Graduate School of Media Design)
AKI INOMATA (Artist / Part time lecturer, Tama Art University / Visiting Researcher, Waseda University)
Kinya Tagawa (CEO, Takram / Visiting Professor, Royal College of Art)

World Economic Forum Session

Top 10 Urban Innovations: Cities as Systems

"What are future cities in the era of the Fourth Industrial Revolution?"

- Cities as Global Systems Learned from the Best Practices in the World

Toshiko Mori (Robert P. Hubbard Professor in the Practice of Architecture, Harvard University Graduate School of Design)
Harry Verhaar (Head of Global Public and Government Affairs, Philips Lighting)
Cheryl Martin (Head of Industries, Member of the Managing Board, World Economic Forum)
Takayuki Morita (Executive Vice President, Chief Global Officer and Member of the Board, NEC Corporation)
Yoshiki Hiruma (Environmental CSR Departments, Development Bank of Japan Inc.)
Hiroko Kuniya (Trustee, Tokyo University of the Arts)

Innovative City Brainstorming

"The Fourth Industrial Revolution and a New Lifestyle"

- What will happen to the Economy, Society, Cities, and Civic Life?

Nobuhiro Endo (Chairman of the Board (Representative Director), NEC Corporation)
Heizo Takenaka (Professor, Toyo University / Professor Emeritus, Keio University / Chairman, Institute for Urban Strategies, The Mori Memorial Foundation)
Kumi Fujisawa (Co-Founder, Think Tank SophiaBank)

- Theme 1: Redefining Urban Infrastructure / Social Infrastructure

Ken Jimbo (Associate Professor, Faculty of Policy Management, Keio University / Senior Research Fellow, The Canon Institute for Global Studies)
Naoaki Mashita (President and CEO (Founder), V-cube, Inc.)
Yoshikuni Takashige (Vice President, Marketing Strategy and Vision, Fujitsu Limited)
Hiroaki Kitano (President and CEO, Sony Computer Science Laboratories, Inc.)
Kazumi Kudo (Representative Director, Coelacanth K&H Architects Inc. / Professor, Toyo University)

- Theme 2: Drastic Change in Enterprises, Work Styles, and the Livelihood of Individual People

Noriyuki Yanagawa (Professor, Faculty of Economics, The University of Tokyo)
Naohiro Yashiro (Dean of Global Business Department, Showa Women's University)
Yoshiro Hirai (President, Itoki Corporation)
Takashi Kono (Deputy Director, Information Economy Division, Commerce and Information Policy Bureau, Ministry of Economy, Trade and Industry)
Yuko Nakazawa (CEO, UPQ Inc.)

- Theme 3: The Future of the Sharing Economy and People's Sense of Trust

Teruhide Sato (Founder and Managing Partner, BEENEXT PTE. LTD.)
Eiji Hara (President, Public Policy Planning & Consulting, Co.)
Seiji Yasubuchi (Representative Director and Country Manager, Japan, Visa Worldwide (Japan) Co., Ltd.)
Fujiyo Ishiguro (President & CEO, Netyear Group Corporation)
Masami Takahashi (President, Uber Japan Co., Ltd.)

- Theme 4: The Role of Art in the Era of Artificial Intelligence

Seiichi Saito (Creative & Technical Director, Rhizomatiks)
Yutaka Matsuo (Project Associate Professor, Department of Technology Management for Innovation, Graduate School of Engineering, The University of Tokyo)
Yuichiro Okamoto (Professor, College of Humanities, Research Institute, Tamagawa University)
Sputniko! (Appointed Associate Professor, RCA-IIS Design Lab, Institute of Industrial Science, The University of Tokyo)
Katsuaki Sato (Founder and CEO, Metaps Inc.)

The Japan Foundation Asia Center Session

"Innovation for Happiness"

Opening Session:

- Special Talk 1

Tri Rismaharini (Mayor of Surabaya City, Indonesia)

- Special Talk 2
  Mika Ninagawa (Photographer / Film Director)
- Special Talk 3
  Honor Harger (Executive Director, ArtScience Museum at Marina Bay Sands)
  Fumio Nanjo (Director, Mori Art Museum)

Talk Session: Three Dialogues Revolving Around Asia

- Theme 1: Time
  Amy Besa (Founder, the Ang Sariling Atin Culinary Heritage Institute)
  Noritaka Tatehana (Artist)
  Chiaki Hayashi (Co-founder, Loftwork Inc.)
- Theme 2: Place
  Niramon Kulsrisombat (Director, Urban Design and Development Center / Assistant Professor, Department of Urban and Regional Planning, Chulalongkorn University)
  François Roche (Architect / personal secretary of s/he _ New-Territories)
  Keiji Ashizawa (Architect)
  Fumio Nanjo (Director, Mori Art Museum)
- Theme 3: Community
  Somchai Songwatana (CEO/Art Director, FLYNOW / Founder, ChangChui)
  Ryuta Ushiro, Chim↑Pom (Artist)
  Ellie, Chim↑Pom (Artist)
  Nozomu Ogawa (Director, Art Center Ongoing)

ICF2018

Keynote Address

1. "Hypercities"
   Timothy Morton (Rita Shea Guffey Chair in English, Rice University)
2. "Landscapes of the Future"
   Daan Roosegaarde (Artist / Innovator)
3. "Island Cities Under Water: The Case for Marshall Islands"
   Kathy Jetñil-Kijiner (Poet, Director)

Art & Science Session

"Innovation for Happiness: In Search of a New Sense of Values in Happiness"

Kickoff Discussion - Progress in Science and Technology and Changes in the Sense of Values; What Is the meaning of 'Happiness' in the future?
Fumio Nanjo (Director, Mori Art Museum)
Joichi Ito (Director, MIT Media Lab)
Hiroaki Kitano (President and CEO, Sony Computer Science Laboratories, Inc.)
Chiaki Hayashi (Co-founder, Loftwork Inc.)

- Theme 1: The Future of Our Surroundings
  "Does happiness begin where the conflict between humanity and nature ends?"
  Yusuke Obuchi (Associate Professor in Architecture, The University of Tokyo)
  Hanif Kara (Design Director, AKT II / Professor in Practice of Architectural Technology, GSD Harvard)
  Xavier De Kestelier (Head of Design Technology & Innovation, HASSELL Studio)

- Theme 2: The Future of Art
  "What are the new standards for beauty created by BioArt?"
  Shiho Fukuhara (Artist / Developer / Researcher)
  Amy Karle (Artist / Designer / Futurist)
  Guy Ben-Ary (Artist / Researcher)

- Theme 3: The Future of Trust
  "What is the form of trust secured by technology?"
  Kei Wakabayashi (Director, blkswn publishers Inc.)
  Mitsuhiro Takemura (Scholar of Media Aesthetics / Director, QON Berlin)
  Tatsuhiko Yamamoto (Professor, Keio University Law School)
  Daichi Iwata (Intrepreneur / Director, FinTech Business Development Office, NEC Corporation)

- Theme 4: The Future of Excitement
  "What is the science of emotions disclosed by the Brain Science and AI?"
  Akihiro Kubota (Professor, Art and Media Course in the Information Design Department / Director, Art Archive Center, Tama Art University)
  Takashi Ikegami (Complex Systems Science Researcher / Professor, Department of General

Systems Sciences, Graduate School of Arts and Sciences, The University of Tokyo)
Memo Akten (Artist)

- Theme 5: The Future of Love
  "What will the changes in the form of our love and where can we find happiness?"
  Yuichiro Okamoto (Professor, College of Humanities, Research Institute, Tamagawa University)
  Hiroshi Ishiguro (Professor, Department of Systems Innovation in the Graduate School of Engineering Science, Osaka University / Visiting Director, Hiroshi Ishiguro Laboratories, Advanced Telecommunications Research Institute)
  Ai Hasegawa (Artist / Designer)

- Theme 6: The Future of the Body
  "In a future of expanded physical capabilities, what new human image will arise?"
  Yoshie Kris (Director, SLOW LABEL)
  Dai Tamesue (CEO, Deportare Partners)
  Reiko Tsurumaru (Fashion Designer / Representative Director, General Incorporated Association Clothing Is Wearable Medicine)

Urban Strategy Session
"Tokyo's Future Identity: Leveraging the Past to Craft the Future"
Heizo Takenaka (Professor, Toyo University / Professor Emeritus, Keio University / Chairman, Institute for Urban Strategies, The Mori Memorial Foundation)
Hiroo Ichikawa (Professor Emeritus, Meiji University / Professor, Teikyo University / Executive Director, The Mori Memorial Foundation)
David Atkinson (Chairman and CEO, Konishi Decorative Arts and Crafts Co., Ltd.)
Takeshi Ito (Professor, School of Cultural and Creative Studies, Aoyama Gakuin University)
Ryo Kuroda (Author / Guide specialized in EDO era's historical sites in Tokyo)
Rie Azuma (Architect, Azuma Architects & Associates)

Art & Science Special Session
"Education Revolution: Transformation from Education to Learning"
- What is the world of learning created by new media?
Joichi Ito (Director, MIT Media Lab)
Fumio Nanjo (Director, Mori Art Museum)
Mitchel Resnick (Professor, Learning Research, MIT Media Lab)
Mimi Ito (Director, Connected Learning Lab, University of California, Irvine)
Masashi Kawashima (Executive Producer and Asia Pacific Director, Niantic, Inc.)
Andre Uhl (Research Associate, MIT Media Lab)

World Economic Forum Session
"Cities and The Fourth Industrial Revolution"
Toshiko Mori (Robert P. Hubbard Professor in the Practice for Architecture, Harvard University Graduate School of Design)
Akihiko Tobe (General Manager, Society 5.0 Promotion and Urban Solution Development Division, Social Innovation Business Division, Hitachi. Ltd.)
Masato Nakagawa (Executive Fellow, Global Technical Affairs, DENSO Corporation / Guest Professor, Hiroshima University)
Soichiro Takashima (Mayor, City of Fukuoka)
Alice Charles (Project Lead, Cities, World Economic Forum)
Makiko Eda (Chief Representative Officer, World Economic Forum Japan / Member of Executive Committee, World Economic Forum)

Innovative Business Session
"Creators Driving The Fourth Industrial Revolution"
- Reinvent cities through continuous DevOps
Tsubasa Nakamura (Representative, Voluntary Group CARTIVATOR)
Akira Fukabori (AVATAR Program Director, Digital Design Lab, ANA HOLDINGS INC.)
Risako Nakamura (Bunka Fashion College / Fashion Designer / Digital Fabricator)
Shoichi Arisaka (CEO, TechShop Japan)

Yoshikuni Takashige (Vice President, Marketing Strategy and Vision, Fujitsu Limited)

Brainstorming for IR4

"A Technological Society and Lifestyle for the 21st Century"

Heizo Takenaka (Professor, Toyo University / Professor Emeritus, Keio University / Chairman, Institute for Urban Strategies, The Mori Memorial Foundation)
Kumi Fujisawa (Co-Founder, Think Tank SophiaBank)

- Theme 1: Redefining "Work"
  What would humanity be without intelligence?
  Norihiko Sasaki (Chief Content Officer, NewsPicks, Inc.)
  Yutaka Matsuo (Project Associate Professor, Department of Technology Management for Innovation, Graduate School of Engineering, The University of Tokyo)
  Mayu Shono (President, HAPIKIRA FACTORY Corporation)
  Katsumi Okuno (Professor, Department of Intercultural Communication, Rikkyo University)

- Theme 2: Will the rise of the sharing economy, the gig economy, and local capitalism create a new economic era?
  Keiko Hamada (Supervising Editor in Chief of BUSINESS INSIDER JAPAN / former Editor in Chief of AERA)
  Noriyuki Yanagawa (Professor, Faculty of Economics, The University of Tokyo)
  Anju Ishiyama (Secretariat of the Sharing Economy Association Japan / Sharing Economy Evangelist, Cabinet Secretariat, Government of Japan)
  Naoki Aoyagi (CEO, Merpay, Inc.)

- Theme 3: Do times of upheaval call for "weak" leaders?
  Ryuichiro Takeshita (Editor-in-Chief, HuffPost Japan)
  Haruka Mera (Founder and CEO, READYFOR, Inc.)
  Yuji Mizoguchi (Founder & CEO, FiNC Technologies Inc.)
  Tomohiro Sawada (Total Producer, World YURU Sports Association)

- Theme 4: Can technology alleviate poverty in the most stratified societies?
  Daisuke Tsuda (Journalist / Media Activist)
  Tasuku Mizuno (Attorney, City Lights Law Office)
  Shunichi Maruyama (Executive Producer, Program Development Production Headquarters, NHK Enterprises, Inc. / Lecturer, Waseda University and Tokyo University of the Arts)
  Takashi Kishida (CTO, LITALICO lnc.)

The Japan Foundation Asia Center Session

"Innovation for Happiness from ASIA"
- Discovering Hidden Values

- Keynote: "The Language of Cinema in Film-making"
  Tran Anh Hung (Filmmaker)
  Megumi Sasaki (Producer / Director)

- Talk Session 1
  "Eat": Exploring Cuisines from Ancient Times to Cutting-edge Trends of Taste
  Duangjai Lorthanavanich (Associate Dean for Student Affairs, Thammasat Business School)
  Hiraku Ogura (Fermentation Designer)

- Talk Session 2
  "Sleep": Wonder of Sleep – From All Ages and Cultures
  Popo Danes (Architect)
  Masayoshi Shigeta (Director, Center for African Area Studies, Kyoto University / Professor, Graduate School of Asian African Area Studies, Kyoto University / Fellow, Research Association of Sleep and Society)

- Talk Session 3
  "Live": Future of Our Places-To-Be: Knitting Ties among Residents
  Chatpong Chuenrudeemol (Architect / Principal, CHAT architects)
  Sadao Tsuchiya (Lifestyle Expert / President of SADAO Co., Ltd. / Architect / Researcher about life / Consultant / HOUSE VISION coordinator)

ICF2019

Keynote Address

1. "Global development on a finite planet toward 2050 - What is the challenge, and how could the US, China and Japan help? -"
   Jørgen Randers (Professor Emeritus, Climate Strategy, Department of Law and Governance, BI Norwegian Business School)
2. "City as a multiverse - the next undiscovered territory as 'Common Ground'"
   Keisuke Toyoda (Architect / Co-founder & Partner, noiz / Co-founder & Partner, gluon)
3. "Future into Art"
   Fumio Nanjo (Director, Mori Art Museum)

Future and the Arts Session

"How Humanity Will Live Tomorrow"

- Breakout Session 1: Metabolism of City and Architecture
  Taro Igarashi (Architectural Critic / Architectural Historian)
  Michael Hansmeyer (Architect)
  Makoto Aida (Artist)
  Fabio Gramazio (Architect)
  Yusuke Obuchi (Associate Professor in Architecture, The University of Tokyo)
  Keisuke Toyoda (Architect / Co-founder & Partner, noiz / Co-founder & Partner, gluon)
  Masatake Shinohara (Program-Specific Associate Professor, Kyoto University)
  Shin Aiba (Professor, Tokyo Metropolitan University)
  Masatoshi Funabashi (Researcher, Sony Computer Science Laboratories, Inc.)

- Breakout Session 2: Lifestyle and Augmented Body
  Arina Tsukada (Curator / Editor)
  Hiroki Kuriyama (Member of the Board, Executive Vice President, Nippon Telegraph and Telephone Corporation)
  Mike Tyka (AI Artist / Engineer)
  Diemut Strebe (Artist)
  Kosuke Fujishima (Astrobiologist / Synthetic Biologist)
  Masahiro Kasuya (CEO, MELTIN MMI)
  Kohei Kikuchi (Puppet Culture Researcher / Lecturer (part-time), Waseda University)
  Amy Karle (Artist / Designer / Futurist)
  Yoichiro Miyake (Board Member, Digital Games Research Association Japan)

- Breakout Session 3: Transformation of Capitalism and Well-being
  Shunichi Maruyama (Executive Producer, Program Development Production Headquarters, NHK Enterprises, Inc. / Visiting Professor, Tokyo University of the Arts / Adjunct Lecturer, Waseda University)
  Simon Denny (Artist)
  Ai Hasegawa (Artist / Designer)
  Daisuke Araya (Professor / Director, Edogawa University Center for Liberal Arts and Basic Education)
  Kyoko Tominaga (Sociologist)
  Yosuke Yasuda (Associate Professor, Economy, Osaka University)
  Kohei Saito (Associate Professor, Political Economy, Osaka City University)
  Miho Ishii (Associate Professor, Institute for Research in Humanities, Kyoto University)

- Brainstorming for IR4
  A Society Transformed by Big Data
  - What Will Become of Its Governance, Economics, and Lifestyles?
  Heizo Takenaka (Professor, Toyo University / Professor Emeritus, Keio University / Chairman, Institute for Urban Strategies, The Mori Memorial Foundation)
  Kumi Fujisawa (Co-Founder, Think Tank SophiaBank)
  Masahiro Fukuhara (Founder and CEO, Institution for a Global Society)
  Tatsuhiko Yamamoto (Professor, Keio University Law School)
  Daisuke Tsuda (Journalist / Media Activist)

- Breakout Session 1: How Far Will Big Data Go?
  Norihiko Sasaki (Director and Chief Content Officer, NewsPicks, Inc.)
  Tomoe Ishizumi (CEO, Palo Alto Insight)
  Yuichi Ota (Founder CEO, DataSign Inc.)
  Shoko Takahashi (CEO, Genequest Inc. / Executive

Officer Head of Bioinformatics Project, euglena Co.,Ltd.)

- Breakout Session 2: How Will Big Data Change Democracy and Capitalism?
  Keiko Hamada (Supervising Editor in Chief of BUSINESS INSIDER JAPAN / former Editor in Chief of AERA)
  Kazuhiro Obara (Futurist)
  Hiroaki Miyata (Professor, Department of Health Policy and Management, School of Medicine, Keio University)
  Tatsuhiko Yamamoto (Professor, Keio University Law School)

- Breakout Session 3: How Will You Live as an Individual in a Big Data World?
  Ryuichiro Takeshita (Editor-in-Chief, HuffPost Japan)
  Katsue Nagakura (Science Writer / Editor)
  Naoya Fujita (Arts Critic)
  Ryosuke Nishida (Sociologist / Associate Professor, Tokyo Institute of Technology)

World Economic Forum Session

Workshop: G20 Global Smart Cities Alliance on Technology Governance

Atsushi Deguchi (Vice Dean, Graduate School of Frontier Sciences, The University of Tokyo)
Anil Menon (Member of the Managing Board, World Economic Forum)

The Japan Foundation Asia Center Session

"Reverse IDEAs"
- In Search of New Coordinates from Asian Dynamism

- Keynote
  "The Evolution of Islamic Fashion in Current Affairs"
  Alia Khan (Founder and Chairwoman, Islamic Fashion Design Council)

- Proposal from Art Talk Session
  "From Discarding to Recycling" - Celebrating the Death and Rebirth of Technology
  Ei Wada (Artist / Musician)

- Suggestions from Medical Care Talk Session
  "Asian philosophy"- Reconsidering the mind and body from an Oriental holistic viewpoint
  Toshiro Inaba (Medical Doctor / Assistant Professor, Cardiovascular Internal Medicine Department, Tokyo University Hospital)
  Mangestuti Agil (Professor, Faculty of Pharmacy, University Airlangga)

- Wrap-up
  Andrea Pompilio (TV, Radio Personality)

Urban Strategy Session

Tokyo 2035 - Radiant World City:
What Will People Want from the Urban Spaces of the Future?

Hiroo Ichikawa (Professor Emeritus, Meiji University / Professor, Teikyo University/Executive Director, The Mori Memorial Foundation)
Masami Takahashi (Vice President, Sales and Marketing, WeWork Japan)
Kazuhiro Obara (Futurist)
Masaki Hamura (Professor at Advanced Research Labs., Tokyo City University)

ICF Hub Session

Post-Industrial Revolution: What Comes After an Industrial Revolution?

For the sake of a sustainable society, this is time we should take to re-examine and debate our planet, our cities, and our species.

- Hub A: Proposals from global citizens: Visualizing the future of Japan from the perspectives of media, sustainability, education, politics, and gender
- Hub B: Community 3.0 "New way of living and working for millennials"
- Hub C: "Work Style Reform" by Young Innovators: Defining Your Own Way of Living
  Aki Higuchi (Founder and CEO, Selan Inc.)
  Tsubasa Kato (Community Manager, 100BANCH / President, BUFF School for Community Manager)
  Sho Hayashi (CEO, SHOCKby, Inc. / Director of Ventures, EDGEof, Inc.)
  Kristin Wilson (Master's Student, Graduate School of

Public Policy, University of Tokyo)
Risa Wakabayashi (Newscaster)
Akina Noguchi (Corporate Officer, Litalico Inc. / Laboratory Head, Litalico Lab)
Robin Lewis (Co-Founder & Chief Mizu Officer, MyMizu / Co-Founder & Director, Social Innovation Japan / Consultant, World Bank)
Tadayuki Sugahara (Owner, SUNDAY FUNDAY / Chief storyteller, Kosugiyu)
Rika Nakazawa (Manager / Corporate Lead, PR Team, Mercari, Inc.)
Saya Wada (Co-Ba Jinnan Community Manager, Tsukuruba Inc.)
Tomoka Furuya (Service Designer / Culinary Director)
Ippei Arai (Curry Producer)
Kyohei Okada (Owner, OHCHO™ / RECRUIT LIFESTYLE CO., LTD.)
Yuuki Tazawa (Physician / Researcher / Entrepreneur)
Naoko Yamanaka (Community Manager, Business Promotion Office, Campfire, Inc.)
Kota Takao (Manager, Future Value Creation & Solar Business Department of Shizen Energy Inc.)

ICF2020

"The Pandemic and Innovative Cities"

Art and Science Session

The Pandemic and the Expansion of Human Perception:
World brought about by the fusion of the real with the virtual

- Breakout Session 1:
  New Condition for Understanding the World -Understanding Reality-
  Akihiro Kubota (Professor, Art and Media Course in Department of Information Design / Director, Art Archives Center, Tama Art University)
  Sayaka Oki (Professor, Graduate School of Economics, Nagoya University)
  Futoshi Hoshino (Assistant Professor, Waseda University)
  James Bridle (Writer / Artist / Journalist / Technologist)

- Breakout Session 2:
  Living in the World of Plural Understanding -Understanding Reality-
  Akihiro Kubota (Professor, Art and Media Course in Department of Information Design / Director, Art Archives Center, Tama Art University)
  Youichiro Miyake (Board Member, Digital Games Research Association Japan)
  Ouchhh (Ferdi Alıcı, Eylul Alıcı) (Director and New Media Artist / Creative Director and New Media Artist)
  Aiko Hibino (Associate Professor, Faculty of Humanities and Social Sciences, Hirosaki University)

- Breakout Session 3:
  The Symbiosis of Human and Non-human: Communicating with Divers Others -Empathy for Others-
  Asa Ito (Director, Future of Humanity Research Center, Institute of Innovative Research, Tokyo Institute of Technology)
  Keiko Nakamura (Honorary Director, JT Biohistory Research Hall)
  Caroline A. Jones (Professor, School of Architecture and Planning, MIT)
  Junji Watanabe (Senior Distinguished Researcher, NTT Communication Science Laboratories / Service Evolution Laboratories)

- Breakout Session 4:
  Technology and Human Relationships: Searching for a New Common Ground -Empathy for Others-
  Asa Ito (Director, Future of Humanity Research Center, Institute of Innovative Research, Tokyo Institute of Technology)
  Mara Mills (Associate Professor of Media, Culture, and Communication, New York University)
  Tatsuhiko Inatani (Associate Professor, Graduate School of Law, Kyoto University)
  Kenichiro Mogi (Brain Scientist / Senior Researcher, Sony Computer Science Laboratory)

- Breakout Session 5:
  New Condition for Cities and Architecture -Collaborative Creativity-

George Kunihiro (Architect / Professor of Architecture, Kokushikan University)
Tsuyoshi Tane (Architect / Founder, Atelier Tsuyoshi Tane Architects)
Bijoy Jain (Architect / Founder, Studio Mumbai)
Xu Tiantian (Founding Principal, DnA_Design and Architecture)

- Breakout Session 6:
  Designing New Lifestyles -Collaborative Creativity-
  George Kunihiro (Architect / Professor of Architecture, Kokushikan University)
  Nada Debs (Designer)
  Yuima Nakazato (Fashion Designer / Founder & Director, YUIMA NAKAZATO)
  Ryosuke Sakaki (Art Director, DENTSU INC. / Founder, OPENMEALS)

Brainstorming Session

Transformation of Human Behavior Brought about as the result of DX and New Normal
- How can we evolve as human beings?

- Breakout Session 1:
  "Revolutionary Change in Communication"
  Exploring a new way of communication to build trust in a remote work setting
  Keiko Hamada (Supervising Editor in Chief of BUSINESS INSIDER JAPAN / former Editor in Chief of AERA)
  Yuichiro Komikado (Writer, Director, GEKIDAN NoMeets)
  Shun Hongo (Project-specific Researcher, Centre for African Area Studies, Kyoto University)
  Hiroki Hiramatsu (Corporate Executive Officer, Head of Global Human Resources & Corporate Affairs Unit, FUJITSU LIMITED)

- Breakout Session 2:
  "Revolutionary Change in Values"
  The search for alternatives to GDP to measure a country's wealth
  Kumi Fujisawa (Co-Founder, Think Tank Sophia-Bank)
  Yosuke Yasuda (Associate Professor, Graduate School of Economics, Osaka University)
  Yumiko Murakami (Head of OECD Tokyo Centre)
  Junichi Sato (Executive Officer in charge of Group Management Strategies, KAYAC Inc.)

- Breakout Session 3:
  "Revolutionary Change in Data Utilization"
  How can we use personal data to maximize the benefit to respond to social demand?
  Hiroaki Miyata (Professor, Keio University)
  Tatsuhiko Yamamoto (Professor, Keio University Law School)
  Katsue Nagakura (Staff Writer, NIKKEI xTECH, Nikkei Business Publications, Inc.)
  Tatsuo Igarashi (Mayor, City of Tsukuba)

Urban Strategy Session

Structural Changes in World Cities: What constitutes a fascinating city in the post-COVID-19 era?
Hiroo Ichikawa (Professor Emeritus, Meiji University / Professor, Teikyo University / Executive Director, The Mori Memorial Foundation)
Ben Rogers (Director, Centre for London)
Jonathan Bowles (Executive Director, The Center for an Urban Future)
Limin Hee (Director of Research, Centre for Liveable Cities)
Miki Muraki (Professor, Graduate School of Engineering, Chiba University)

Closing Session

"The Pandemic and Innovative Cities"
Special Guest: Markus Gabriel (Professor, University of Bonn / Philosopher)
Fumio Nanjo (Senior Advisor, Mori Art Museum)
Heizo Takenaka (Professor, Toyo University / Professor Emeritus, Keio University / Chairman, Institute for Urban Strategies, The Mori Memorial Foundation)
Hiroo Ichikawa (Professor Emeritus, Meiji University / Professor, Teikyo University / Executive Director, The Mori Memorial Foundation)
Akihiro Kubota (Professor, Art and Media Course in Department of Information Design / Director, Art Archives Center, Tama Art University)

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Kumi Fujisawa (Co-Founder, Think Tank SophiaBank)
Keiko Hamada (Supervising Editor in Chief of BUSINESS INSIDER JAPAN / former Editor in Chief of AERA)
Hiroaki Miyata (Professor, Keio University)

ICF2021

"Alternative Visions - Contemplating a new future, now"

Keynote Address

Emmanuel Todd (Historical Demographer)

Kickoff Session

Starting point for forum discussion

Director of Breakout Sessions: Kumi Fujisawa (Co-Founder, Think Tank SophiaBank)

- Breakout Session 1: Visions of Work
  - What is Work and How Will Remote Work Transform Society?

  Daiji Kawaguchi (Professor, Graduate School of Public Policy and Graduate School of Economics, The University of Tokyo)
  Akiko Asami (Chief Marketing Officer/Chief Product Officer, TIGER CORPORATION)
  Akie Nakamura (Chief Researcher, RENGO-RIALS)
  Makiko Hamase (Chief Human Resources Officer, Toyota Tsusho Corporation)

- Breakout Session 2: Visions of Learning
  - Creativity Needed in the Future

  Eisuke Tachikawa (NOSIGNER Representative)
  Miwa Seki (General Partner, MPower Partners Fund / Translator)
  Tomoko Kitamura Nielsen (Cultural Translator)
  Takayuki Shiose (Associate Professor, The Kyoto University Museum)

- Breakout Session 3: Visions of Trust
  - New Relationships among Art, Markets and Empathy

  Ai Koike (General Partner, GO FUND, LLP / Assistant Professor, Kyoto University of the Arts)
  Hironao Kunimitsu (Founder, gumi / Founder & CEO, Thirdverse, Co., Ltd.)
  Toyotaka Sakai (Professor, Keio University / Co-Founding Director, Economics Design Inc.)
  Daito Manabe (Artist / Programmer / DJ)

- Breakout Session 4: Visions of an Urban Future
  - Redefining the value of distance and density

  Masaki Hamura (Partner & Associate Director, Boston Consulting Group (BCG))
  Anju Ishiyama (Social Activist)
  Keisuke Toyoda (Institute of Industrial Science, The University of Tokyo (Project Professor, Vice Chair of Center for Interspace) / noiz / gluon)
  Andrés Rodríguez-Pose (Professor, London School of Economics and Political Science)

- Breakout Session 5: Visions of the Economy
  - Wealth or Wellbeing? A Look at Development, Growth and Sustainability

  Makiko Nakamuro (Professor, Faculty of Policy Management, Keio University)
  Toshiki Abe (CEO, Ridilover, Inc. / Representative Director, General Incorporated Association Ridilover)
  Mago Nagasaka (CEO Artist, MAGO CREATION Co., Ltd.)
  Ken Togo (Dean of the School of Liberal Arts and Sciences, Musashi University)

- Breakout Session 6: Visions of Tourism
  - The New Relationship between the Value of Experience and Consumption

  Arina Tsukada (Curator / Editor)
  Ellie Omiya (Writer / Artist)
  Takayuki Kubo (Professor, Associate Dean, College of Asia Pacific Studies, Ritsumeikan Asia Pacific University)

Naotaka Fujii (CEO, Hacosco Inc. / Distinguished Professor, Digital Hollywood Univ. Graduate School)

Closing Session

Updating our visions of the future - Enjoying life in the city

Japan Science and Technology Agency (JST) Research Institute of Science and Technology for Society (RISTEX) x ICF2021 Special Session

"The Future of Science-society Dialogue: Is consensus building possible in an era of emotion?"

Jiro Kokuryo (Professor, Faculty of Policy Management, Keio University)
Shigeki Uno (Professor, Institute of Social Science, The University of Tokyo)
Tadashi Kobayashi (Director-General, JST Research Institute of Science and Technology for Society)
Kenjiro Higashi (Project Manager of Decidim, Code for Japan)
Miyuki Tanaka (Curator / Producer)

Ritsumeikan Asia Pacific University (APU) x ICF2021 Special Session

"Diversity and Inclusion Paving the Way for the Future of Japan"

Lailani L. Alcantara (Dean, College of International Management, Ritsumeikan Asia Pacific University)
Miho Izumi (Chief Manager, Global Partners Consulting Group)
Shohruhbek Ibragimov (Yanmar Energy System Co., Ltd.)
Shira Damia Putrinda (Programme Manager, enpact)

Time Out Tokyo x ICF2021 Special Session

"Requirements for a New Age of Tourism - Weaving happiness, folklore studies, and technology into destination stories"

Arina Tsukada (Curator / Editor)
Takashi Kunitomo (CEO, ASOVISION Inc. / Visiting Professor, Ritsumeikan University)
Gaku Tomikawa (Representative, TOMIKAWAYA CO., Ltd / Local Producer)
Hiroyuki Fushitani (President, Original Inc. /Time Out Tokyo Inc.)
Yuko Inamasu (CEO, TOKI, Inc.)

ICF2022

"Beyond Transition – The Emerging Future" Pre-session
"Où en sommes-nous ? Une esquisse de l'histoire humaine" (Where are we? : A sketch of human history)

Emmanuel Todd (Historical Demographer)
Fumio Nanjo (Senior Advisor, Mori Art Museum)

Program Committee Session

Heizo Takenaka (Professor Emeritus, Keio University / Chairman, Institute for Urban Strategies, The Mori Memorial Foundation)
Hiroo Ichikawa (Professor Emeritus, Meiji University / Professor, Teikyo University / Executive Director, The Mori Memorial Foundation)
Fumio Nanjo (Senior Advisor, Mori Art Museum)
Joichi Ito (Co-founder, board member, and chief architect of Digital Garage / Director of Henkaku Center at Chiba Institute of Technology)

Joichi Ito "web3, DAOs and Society"
Hiroo Ichikawa "The Future of Central Tokyo"
Fumio Nanjo "The Unknown Role of Art"

Conclusion

"Could we create an urban version of Davos in Tokyo?" This was the original inspiration for the Innovative City Forum (ICF).

It was 2013, a milestone year marking the tenth anniversary of Roppongi Hills. When we were thinking about starting something new, I thought of the Davos Forum, where I had been serving as a board member for five years.

What I thought about most then was "What *is* a city? Why are cities important?" Regional revitalization is of course important, but when we look at the world, we see that development overwhelmingly occurs in cities. There are clear reasons for this: Knowledge-intensive industries vastly predominate our modern economy, giving cities, where diverse knowledge naturally congregates, an overwhelming advantage. We might call these urban industries.

So what makes cities attractive? I believe it comes down to two main points.

The first is innovation. While this word is frequently used in our technological age, to revisit Schumpeter's definition, it means new combinations and connections. Take smartphones, for example—they combine phone, camera, and various other functions through digital technology, and these connections themselves constitute innovation. Cities, where diverse knowledge and various elements concentrate, have an overwhelming advantage in creating such connections.

Consulting firms are another example. Suppose one receives a request to revitalize a company. When thinking about how to do so, they must consider which financial institutions, law firms, and accounting firms to connect. Perhaps they should also involve designers. The outcome varies depending on such combinations, which is why being in a city, where diverse combinations are possible, provides such a decisive advantage.

Cities are, in a sense, the wellspring of economic vitality. That's why even now, when regional revitalization is such a buzzword, Tokyo continues to grow in population. While Japan's total population decreases by about 700,000 people annually, the Tokyo metropolitan area's population increases by about 100,000. I believe these population figures clearly demonstrate the power of cities.

The second attraction is that cities serve as platforms for proposing new lifestyles. The most obvious example is fashion, but it goes beyond that—it's about culture itself. This is where Fumio Nanjo's definition of "art" becomes crucial.

Come to Tokyo, and you'll find new proposals of all kinds. Naturally, among these proposals, some survive while others are rejected, but at least there are always new proposals. Tokyo offers proposals for ways of living.

Upon reflection, I believe these two elements constitute Tokyo's greatest attractions. And our urban version of Davos has shone a spotlight on these aspects. This is what we have been doing for the past ten years.

Looking back, I think 2013 was a perfect year for the ICF to begin. We are now in the midst of the Fourth Industrial Revolution. With the emergence of generative AI, things will continue to change dramatically. As Hiroaki Kitano of Sony CSL, who spoke at the ICF, said: "We are now in the early stages of a Cambrian explosion." He says this because during the Cambrian period, the prototypes of all existing life forms appeared and the number of species increased dramatically, a phenomenon that is called the "Cambrian explosion."

So we are in the midst of a new Cambrian explosion. We're seeing an explosive emergence of new things that will form the foundation of our work and life ten, twenty, thirty years from now. Of course, AI and big data underpin all of this. And we're still only in the early stages.

So when did this movement toward an "explosion" begin?

While the advent of the internet was certainly fundamental, one of the most crucial developments was, in fact, the emergence of the iPhone in 2007 in the United States and in 2008 in Japan.

Despite its name, the iPhone is actually not a phone at all—it's a miniature computer. In other words, it's a gateway to digital networks. And many people now possess this gateway. Because people use this gateway to view information, make reservations, shop, and make payments, all their personal data accumulates. Digital big data accumulates. And when AI is combined with this big data, entirely new things emerge.

In fact, the practical combination of big data and AI was realized around 2012. According to AI pioneer Yutaka Matsuo, who has spoken at the ICF multiple times, deep learning technology was put into practical use by Canadian engineers around that time. Deep learning is a method where AI becomes increasingly intelligent through the continuous input of big data.

For example, in 2015, an AI defeated a human master at Go. While Go masters can read thirty or forty moves ahead, AI was able to surpass this by being fed big data from Go matches worldwide. This is deep learning.

Looking at the global situation this way, our launch of the ICF in 2013 was, in retrospect, positioned right at the start of a truly new era. Lifestyles are changing, innovation is changing, cities are changing, our lives are changing. And now we're seeing art that approaches human creativity created using generative AI.

Art and technology might seem like opposing forces, but this is completely wrong.

The Massachusetts Institute of Technology (MIT) represents the cutting edge of the engineering world. MIT's campus was very stark and inorganic when I was in Boston, but today it overflows with art. This fact likely has two meanings. One aspect is that art is now supported by new technology. As mentioned, generative AI is producing wonderful art. Since 2023, the main venue of the Davos Forum has featured AI-generated art displayed on huge screens. It's quite remarkable. While what's depicted—something like the moving tentacles of an octopus—might seem eerie, the longer you

watch, the more captivating it becomes. This is because AI has learned human aesthetic sensibilities.

For instance, why do we find music pleasing? It's because when we hear one note, there are several possible notes that might follow, and we find it satisfying when those expectations are met. Therefore, if AI learns these expected patterns of notes, it can compose music. Similarly with art, if we provide AI with data, it can learn what humans find aesthetically pleasing and create works that captivate us. This represents a direct connection between art and technology.

The second point is that as technology evolves, art becomes increasingly important to us. In a sense, this is more significant than the first point. Let me explain why.

Generative AI is advancing rapidly. For example, until now, writing a single academic paper could require reading fifty or more related papers. Even for a diligent and highly capable person, this can take two or three weeks. However, with AI, there's a program called Notebook LM that can instantly produce summaries, key points, and keywords.

So what happens then? Productivity increases enormously. Not just for scholars—lawyers, for instance, no longer need to examine past precedents one by one. This means humans should generally have more free time. And what humans should do with this time is engage in "something creative." Art is perhaps the most obvious example of this. Wherever intellectual groups gather, including at the Davos Forum, there are always art events. When Minoru Mori created an art museum on the top floor of Roppongi Hills, it was out of a desire to attract creative people to the space. In this sense, the relationship between art and technology is extremely close, and I believe MIT's campus symbolically represents this relationship.

Over these ten years, the ICF has witnessed the emergence of such remarkable developments. Furthermore, we've welcomed outstanding guests appropriate to each moment, selected by a program committee where Fumio Nanjo handled the art field, Joichi Ito handled technology, Hiroo Ichikawa handled urban issues, and I primarily oversaw economics and society as a whole, all while exchanging opinions. As a result, I believe we were able to host a wonderful diversity of guests.

We are now in the early stages of a new Cambrian explosion. Going forward, I want everyone to embrace "confusion." There is no magic wand in this world. It is from confusion that various new things emerge. I believe this is what the Cambrian period was like. I especially hope that younger generations will look toward the future while experiencing this confusion. That's why I want people to pick up this book, read it, and allow themselves to be confused.

In today's world, I feel there's a tendency to immediately seek simple answers. However, real-world events can rarely be simplified. No definitive conclusions can be drawn. At the Davos Forum, precisely because it brings together influential people from around the world, we never reach conclusions. We simply raise issues and have influential participants take them back home, asking them to do their best in their respective countries.

At the ICF, too, more discussion always resulted in more complexity, and we always ran out of time. But that's fine—I've always said that the "takeaways" are what matter. This book contains those ten years of discussion.

I would like to express my deepest gratitude to all our guest speakers, attendees, and corporate sponsors:

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Thank you all very much.

The ICF's record of various discussions during these "early stages of a new Cambrian explosion" is extremely valuable. I believe it will serve as a historical document that, when read ten years from now, will remind people, "ah, yes, that's what those times were like." While the ICF is drawing to a close for now, what these ten valuable years of sessions have produced will not disappear. And I believe it will lead to what comes next. I look forward to your continued support.

Heizo Takenaka

Profile

Heizo Takenaka

Professor Emeritus, Keio University / Chairman, Institute for Urban Strategies, the Mori Memorial Foundation / Former Minister for Economic and Fiscal Policy / Member of the Board of Trustees, the World Economic Forum

After serving as Visiting Associate Professor at Harvard University and Professor at the Faculty of Policy Management at Keio University, he began his cabinet career in 2001 in the Koizumi administration as Minister for Economic and Fiscal Policy, followed by positions as Minister for Financial Services, Minister for Privatization of the Postal Services, and Minister of Internal Affairs and Communications. From 2006, he served as Professor at Keio University and Director of Academyhills, among other positions. Currently, he is a Professor Emeritus at Keio University and Member of the Board of Trustees of the World Economic Forum. He holds a PhD in Economics. His numerous publications include *The Truth About Structural Reform: Minister Heizo Takenaka's Diary* (Nikkei Publishing) and *Economics of Research & Development and Capital Investment* (recipient of the Suntory Prize for Social Sciences and Humanities, Toyo Keizai Inc.).

Fumio Nanjo

Curator / Art Critic

Graduated from Keio University, Faculty of Economics in 1972 and Faculty of Letters, (Philosophy, Aesthetics & Science of Arts) in 1977. After working for the Japan Foundation from 1978 to 1986 and other organizations, he participated in the launch of the Mori Art Museum (2002), served as Director from Nov. 2006 to 2019 and Senior Advisor from 2020. In 2020, he began working as General Advisor of Towada Art Center, Senior Advisor of Hirosaki Museum of Contemporary Art and in May 2023 he was appointed Executive Director of Arts Maebashi. The directorship of international exhibitions he has assumed from the 1990s to date include; the Japan Pavilion, Venice Biennale (1997); Taipei Biennale (1998); Yokohama Triennale (2001); Singapore Biennales (2006/2008); KENPOKU ART (2016); Honolulu Biennial (2017); Kitakyushu Art Festival Imaging for Our Future: Art for SDGs (2021), Fuji Textile Week (2021/2022/2023) and Ennova Art Biennale vol.1 (2024). His publications include *A Life with Art* (2012) among others.

Hiroo Ichikawa

Professor Emeritus, Meiji University / Professor, Teikyo University / Executive Director, The Mori Memorial Foundation.

Serves in key positions including Executive Director of the Institute for Urban Strategies at the Mori Memorial Foundation, Chairman of the Institute of Metropolitan Policy, and Chairman of the Japan Institute of Emergency Managers. Internationally active as a Steering Board Member of the Future of Urban Development and Services Committee, World Economic Forum (Davos) and others. Specializes in urban policy, urban international competitiveness, crisis management, and telework, having published over thirty books on Tokyo and metropolitan areas. Has been involved with numerous organizations including the national government and Tokyo Metropolitan Government as chairman and policy committee member. Currently serves as president of the Japan Telework Society and the Japan Emergency Management Association. Graduated from Waseda University with a Bachelor of Architecture and a Master of Urban Planning, and further studied at the University of Waterloo where he was granted a Ph.D. in Urban and Regional Planning. Born in Tokyo in 1947. First-class registered architect.

Joichi Ito

Co-founder and Director, Digital Garage, Inc. / President, Chiba Institute of Technology / Co-founder, Neurodiversity School in Tokyo

Digital architect, venture capitalist, entrepreneur, author, and scholar. Currently working on a wide range of challenges, including the reform of education, democracy and governance, and academic and scientific systems. Former director of the MIT Media Lab and former board member of Sony and *The New York Times*. Member of the Digital Society Concept Conference at the Digital Agency of Japan. President of the Chiba Institute of Technology since July 2023. Recent major publications include *AI Driven: How AI is Evolving Human Work* (SB Creative) and *Technology as Liberal Arts: AI, Cryptocurrency, Blockchain* (Kodansha Bunko).

City, Art, and Innovation

The future of cities depicted through creativity and lifestyle

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