

Society 5.0 at “Davos”

The Fourth Industrial Revolution and Leadership

Globalization 4.0

On September 10, 1898, the Empress Elisabeth of the Austro-Hungarian Empire lost her life after being attacked by an assassin as she was leaving the Hotel Beau-Rivage on Lake Geneva to board a steamship. This marked the beginning of the breakdown of the Habsburg Monarchy that had been integral to maintaining order in Europe.

“Globalization 4.0: Shaping a New Global Architecture in the Age of the Fourth Industrial Revolution” is the theme of Davos 2019, the annual meeting of the World Economic Forum (WEF) [1]. The WEF defines Globalization 1.0, 2.0, and 3.0 as dating respectively to 1850, 1950, and 1990, with Globalization 4.0 being the present day.

The notable technologies that characterized each of these eras, going back to Globalization 1.0's steam engines and railways, all encouraged the movement of people. Ideas such as laissez-faire individualism spread on the back of these developments, giving rise to social problems such as inequality and leading to two world wars.

In the example of Empress Elisabeth, she would sometimes travel around Europe by steamship and other means, going incognito having become weary of the courtly life. Given her unhappiness with the Habsburg autocracy, it is ironic that

she came to be stabbed by an anarchist. This trend of social upheaval led to the First World War, which was triggered by the assassination of her nephew-in-law Crown Prince Ferdinand.

The WEF recognizes an ongoing cycle in which technology changes the structure of society and gives rise to new issues.

WEF founder, Professor Klaus Schwab, meanwhile, distinguishes between globalization, which he sees as a consequence of technology, and globalism, which is the idea that the neoliberal order should take precedence over national interests.

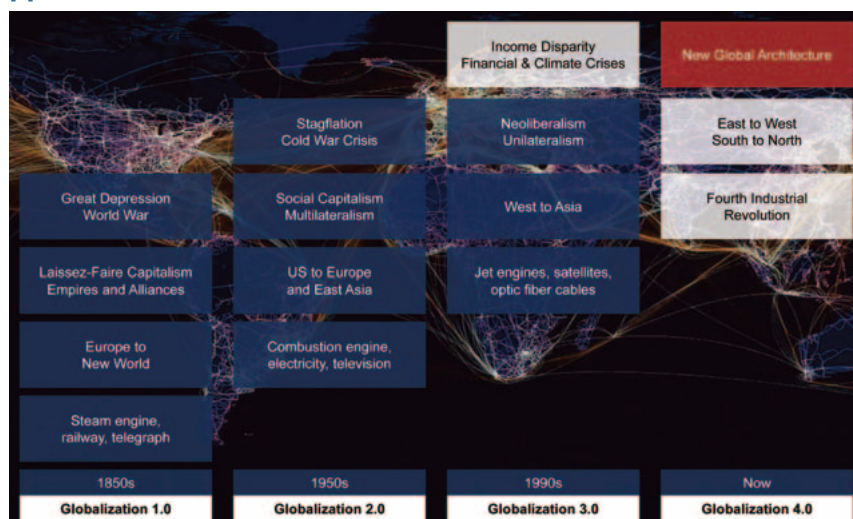
Globalism sometimes leads to certain countries or companies seeking to profit at the expense of others. Accordingly, the WEF is calling for people to learn from the past and to create an architecture for our times that will prevent technology from bringing about a zero-sum society.

Fourth Industrial Revolution and Leadership

The International Business Council (IBC) of the WEF, of which Hiroaki Nakanishi, Executive Chairman, Hitachi, Ltd. is a member, is made up of 100 or so leaders from global corporations and meets each January in Davos and again in late August at the WEF headquarters in Geneva.

In August, Nakanishi often stays at the Hotel Beau-Rivage at the recommendation of the WEF. From the hotel, he crosses the Pont du Mont-Blanc bridge in sight of the Jet d'Eau, a Lake Geneva landmark, and proceeds along the shoreline where large numbers of yachts are moored. On reaching the prestigious local yacht club, he turns away from the lakeside

[1] Globalization 4.0



[2] View of Lake Geneva from WEF headquarters



Source: World Economic Forum

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[3] Hiroaki Nakanishi attending a session (second from right)



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and follows an upward path to the area's most up-market residential district.

This neighborhood also contains the Villa Diodati, where Lord Byron once stayed along with his friend, the poet Percy Bysshe Shelley, and others. Continuing past a vineyard growing the Swiss grape variety Chasselas, the route leads to the WEF headquarters. Benefitting from the slope of the land, the building offers expansive views of Lake Geneva [2].

As meetings of the IBC follow the Chatham House Rule, it is difficult for an outsider to know what is discussed. However, Nakanishi says that the participants express their opinions openly and forthrightly and can engage in highly meaningful debate.

The "CEO's modern dilemma" is one of the topics pursued by the IBC over the last few years. They have discussed leadership by business people that takes account of the benefits to society and management for the long term in the face of certain trends that call for short-term results.

At the IBC meeting entitled "The CEO's Modern Dilemma," held at Davos on January 22nd, 2019, senior corporate executives from companies like Royal Philips as well as Nakanishi, presented case studies that, in a break with precedent, were published on the WEF website.

After the IBC meeting finished, Nakanishi went on to a session entitled "Business Leadership in the Fourth Industrial Revolution" where he appeared alongside fellow IBC members IBM Chairman, President, and CEO Ginni Rometty; SAP CEO William McDermott; and Procter & Gamble Chairman, President, and CEO David Taylor. Maintaining the vigorous tone of the IBC meeting, they engaged in a wide-ranging debate on leadership that covered a variety of different contexts, including managing for the long term, employment and work skills, and the handling of data [3].

Given that the digitalization that accompanies the Fourth Industrial Revolution will change the structure of society, Nakanishi spoke about how important it is to find a consensus on what sort of society we want, without getting too caught up on particular issues, a point he has been emphasizing over the last few years at Davos.

In his recent book, "Shaping the Fourth Industrial Revolution," Professor Schwab identified four elements needed for the new style of leadership. These are (1) A focus on the entire social system rather than on individual technologies; (2) Seeking to use technology to empower people rather than having it deprive them of their rights; (3) Adopting human-centric design concepts; and (4) Incorporating social values into technology. This is broadly in line with the direction being taken by Nakanishi.

Davos as a Town for Debate

The Steigenberger Hotel Belvedere [4] is located one or two minutes from the Congress Centre, the main venue of the Davos Meeting. In 1929, the hotel became the venue for another meeting at Davos of a quite different sort. This was the International University Conference launched by leaders from France, Germany, and other parts of Europe for the young people on whom fell the burden of reconstruction in the aftermath of the First World War. The event was dominated by what came to be known as the Davos disputation in which Ernst Cassirer, a leading proponent of the Neo-Kantian School, and the up-and-coming philosopher, Martin Heidegger, author of the monumental "Being and Time," argued over the interpretation of Kant's ideas. It seems that, both then and now, Davos is a venue for debate by global leaders in pursuit of a better society.

[4] Steigenberger Hotel Belvedere



[5] Hiroaki Nakanishi attending “The Nippon Challenge: Society 5.0” (second from right)



On January 23, Nakanishi joined Minister of Economy, Trade and Industry, Hiroshige Seko, President Makoto Gonokami of The University of Tokyo, and Makiko Eda, Chief Representative Officer of WEF Japan to appear before journalists from Europe, America, Asia, Africa, and elsewhere at a media briefing entitled “The Nippon Challenge: Society 5.0.”

Mr. Seko raised the idea of Japan, host of this year’s G20, building bridges of trust based on fair and mutually beneficial rules, and talked about four challenges, including rule-based trade and the formulation of an international framework for cross-border data flows.

This was followed by Mr. Gonokami whose topics included the value of collaboration between industry and academia in a knowledge-intensive society, using Hitachi-UTokyo Laboratory as an example. He also spoke about the comprehensiveness of fundamental research in Japan based on the long-term perspective that is a strength of universities, and how universities are sharing the accumulation of knowledge in a wide range of fields via the high-speed/high-capacity science information network (SINET).

Holding a pamphlet on Society 5.0 produced by the Japan Business Federation (Keidanren), Nakanishi talked about how he wants to share a vision of the ideal society with the global community, working with government and universities to promote Society 5.0 through avenues such as the Davos Meeting and B20 Summit [5].

Finally, Ms. Eda commented on how the WEF welcomes collaboration between government, industry, and academia and hopes to do what it can in its role as an international platform for joint public and private action.

It is very moving that leaders from Japan should propose the new concept of Society 5.0 at the same place where Ernst Cassirer engaged in debate, a man who was among the first to write about a shift in world view from tangible substance to intangible relations among substances, in his work “Substance and Function.”

The Fourth Industrial Revolution and Business Ethics

Brave New World

Toshiaki Higashihara, President & CEO, Hitachi, Ltd., identified the question of how world leaders should address the relationship between business ethics and advanced technologies such as artificial intelligence (AI) as the key focus at this year’s Davos Meeting. In this, his view corresponds to that of Professor Schwab who believes that technology should incorporate social values. In fact, numerous sessions devoted time to the matter of technology and ethics.

The gothic novel “Frankenstein” written by Mary Shelley, wife of Percy Bysshe Shelley, as a form of amusement at the Villa Diodati is, in fact, a story about technology and ethics. Whereas the Creature was depicted as beastly and cruel in the well-known movie, the original story had him as an intellectual being who loved Goethe. In contrast, the young Victor who fashioned the Creature out of ambition was guilty of lacking ethics, and when asked by the Creature how he can play with life, feels strong regret at having encroached on the realm of God. This is how the term “Frankenstein complex” came to be applied to the emotional conflicts felt by scientists in fields like AI development.

At a 2016 session entitled “A Brave New World,” where Nakanishi first appeared as a panelist, the main subject was development and ethics, including AI. Nevertheless, behind the optimistic title, the talk was dominated by the pessimistic topics of “what if AI steals jobs?” and “what if robots attack people?”

The session title “A Brave New World” comes from a science fiction novel by Aldous Huxley, which in turn took the expression from Shakespeare’s play “The Tempest.” “Brave New World” was an early example of a dystopian novel, written amid the uneasy state of society on the eve of the Second World War and envisaging a future in which technology exerted rigorous control over people.

On the subject of technology, people tend to be pessimistic about the future. Recognizing the significance of the debate over technology and ethics, Nakanishi claims to feel a little queasy about talk that focuses on technology rather than people.

Accordingly, as a co-chair of the subsequent 2017 Davos Meeting, Nakanishi talked about Society 5.0 as a human-centric future society and suggested that we should find a consensus on what sort of society we want to create.

As before, Nakanishi told a story in the Society 5.0 pamphlet that was the very opposite of a dystopia. The aim is a society

that releases people from the various constraints that hold them back so that people everywhere can always feel at ease and can create value while coexisting with nature.

Brave World Travel

Television was one of the key technologies of Globalization 2.0. During this era, Hitachi sponsored a documentary program called “*Subarashii Sekai Ryoko*” (literally: “brave world travel”). The program followed people who drew on technologies developed before the industrial revolution to live in harmony with nature in harsh environments such as on far-off islands or deep in the forest.

One notable episode of the program was entitled “Kula: Argonauts of the Western Pacific” and was the work of director, Yasuko Ichioka, who had previously been employed at Hitachi. The episode, which won a major award from an international society, covered research by Bronisław Malinowski that applied the world view of moving from the tangible to the intangible to the field of cultural anthropology.

Kula is a system of exchange that operated between remote islands in the Western Pacific Ocean. It worked by the flow of trade between people of virtue on the islands of two different items, known as “veigun,” that themselves lacked any economic value, a side effect of which was to encourage the exchange of things that did generate economic value. By passing through the hands of people of virtue, the veigun enhanced social value, underwriting trust in the exchange of goods in much the same way as a blockchain while also maintaining the Kula-based civilization (what can be described as an autonomous distributed civilization) that encompassed islands with different languages and cultures.

People would build canoes so they could participate in the Kula system and cast magic spells on them to ward off danger. This is an example of social value being embedded in technology.

This is where the origin of our current thinking lies. However much technology may advance, people remain at its core. Cultural anthropology has progressed by accepting cultures that are different from our own and adopting a relativistic approach to our own and other cultures. This viewpoint is more important than ever in the world of today where both technology and globalization have made significant advances.

The Fourth Industrial Revolution and Diversity

Microsoft’s Windows 95 was one of the factors that played a part in the emergence of Globalization 3.0. Its packaging included the image of a woman, Lord Byron’s daughter, Ada Lovelace.

[6] Lorena Dellagiovanna at a session (second from left)



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Ada was responsible for the programming of the Analytical Engine, a programmable calculating machine designed by Charles Babbage. As a result, Babbage is spoken of as the father of computing and Ada as the first ever programmer.

The Industrial Revolution called for diversity from its very beginnings. Of course, this remains true today. The WEF also emphasizes this point, with all of last year’s co-chairs being women and six of this year’s being under forty years of age (Microsoft CEO Satya Nadella being the sole exception), four of them women.

Likewise, with Hitachi, Hitachi Vantara CIO, Renee Lahti, participated last year, while this year’s delegation included Lorena Dellagiovanna, who has served as an executive of Hitachi Rail Italy and elsewhere. On January 24, she participated along with the CEOs of multinational companies and Indonesia’s Minister of Industry as a panelist at a session on this year’s main theme of “Globalization 4.0,” and made an impressive case for the future of manufacturing [6].

It is likely that Hitachi will continue to send a wide variety of different people to Davos.

The Fourth Industrial Revolution and Data Governance

Roman Holiday

The term “Roman Holiday” comes from the phrase “Roman holiday” in Byron’s poem, “Childe Harold’s Pilgrimage.” The meaning of “Roman holiday” includes that of gaining an advantage at the expense of others. In the movie of the same name, newspaper reporter, Joe Bradley, gets the idea of making a quick buck by selling out the privacy of a princess, while the princess herself, having become tired of nightly parties, dreams of escaping her duties and falling in love with Bradley.

Nights at Davos are also lively with functions hosted by governments or corporations. "Japan Night," an event to promote Japanese cuisine, is one notable example. This year's event was supported by 29 Japanese sponsors, including companies, a university, and an organization, with assistance also from the Ministry of Agriculture, Forestry and Fisheries, the National Federation of Agricultural Cooperative Associations, and the Japan External Trade Organization (JETRO). Held on the night of January 23, the event was a greater success than ever, being attended by Prime Minister Shinzo Abe for the first time.

Meanwhile, there was a major issue going on behind the scenes. With the European Union (EU) having introduced the General Data Protection Regulation (GDPR) in May 2018, event organizers needed to pay close attention to how data was handled. The organizers of Japan Night, too, took steps to comply with GDPR, including locating its secretariat and servers in EU territory.

Prime Minister Abe, in the day's keynote address, proposed holding discussions focusing on data governance at the G20 summit (the "Osaka Track"), and put forward the idea of establishing a system for trust-based data flows. Given that use of data is central to Society 5.0, establishing such international rules is a top priority.

In the movie, Bradley abandons the idea of selling out the princess's privacy, handing the photographs secretly snapped by his photographer friend to the princess, thereby ensuring her "right to be forgotten." The princess goes back to her duties and they each give up on their respective Roman holidays.

Regulations such as GDPR are clearly essential for protecting privacy. On the other hand, data collected in sectors such as healthcare or transportation can also serve the public good. Moreover, the nature of data makes it easy for companies or countries to establish monopolies or oligopolies. The establishment of a system for trust-based data flows would provide a backbone for the architecture being advocated by the WEF.

Architecture of the Fourth Industrial Revolution Era

International Rules and Terroir

Having completed all their scheduled activities, the Hitachi delegation got together on the evening of January 24 for a private meal at a restaurant. Everyone enjoyed their choice of dishes, pairing them with wine made from Chasselas grapes that is said to be rarely exported outside Switzerland.

Thanks to advances in cultivation techniques and globalization, it is now possible to obtain wine made from such varieties as Chardonnay and Riesling from all different parts

[7] Toshiaki Higashihara at a session (left)



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of the world, whether it be Europe, Chile, Australia, or India. Connoisseurs of wine, on the other hand, place a high value on what is called *terroir*, which refers to the factors out of which the taste of a wine emerges, such as soil, climate, and terrain.

As society re-orient itself from the tangible to the intangible, the establishment of international rules is urgently needed in a wide variety of fields, with opportunities to achieve dominance in business still to be found even under standardized criteria.

Malinowski made the claim that, were culture different, people would desire different forms of wellbeing, and he came up with participant observation, an important technique in cultural anthropology for recording the unquantifiable behaviors of different people.

Hitachi, too, has adopted this technique in its NEXPERIENCE methodology for co-creation with customers, and has staffed its Global Centers for Social Innovation, located in different parts of the world, with designers who have knowledge of fields such as cultural anthropology.

As I listened to Higashihara's recap of events while enjoying the pairing of Swiss food and wine, I also speculated for myself.

Economic Chivalry and the Standard of Life

Higashihara has described Davos not as a place to reach conclusions, but as a forum for debating directions [7]. In fact, given how many different topics are grappled with at Davos, to reach conclusions would be difficult. The question, then, is how to turn into action the ideas that the participants come up with in the course of their debates.

Three issues of particular concern to Higashihara are: (1) achieving a human-centric society, (2) risk management, and (3) a fair distribution of benefits.

There are some who say that this year's event felt quieter than last year when all of the G7 leaders except Japan were present. The WEF staff, on the other hand, will all tell you that this assessment misunderstands the nature of the meeting, which is not about putting on a (political) show.

In this regard, Japan has a significant role to play in promoting Society 5.0 through collaboration between industry, government, and academia, while continuing to engage with the international community through avenues such as the B20 and G20.

Meanwhile, although this year's theme was about creating a new architecture while learning from the past, it seemed that much of the debate addressed current problems directly, leaving little scope to reflect on history.

While neoliberalism tends to be seen in the same light as market fundamentalism, Adam Smith, as well as talking about the "invisible hand," also argued for the importance of morality, while Alfred Marshall, an admirer of Kant and originator of neoclassical economics, promoted the ethics of "economic chivalry" for business leaders. Had Smith or Marshall attended Davos, no doubt they would have advocated for the development of rules for data that are based on ethics.

Marshall also came up with the idea of the "standard of life." This is different from the term "standard of living" used to indicate economic prosperity and includes things like people's inner wellbeing. As a concept, it is very close to that of quality-of-life.

He also claimed that improving people's standard of life supported economic chivalry, arguing that quality of education, higher wages, and shorter working hours are important. These are things that can only be achieved through collaboration between industry, government, and academia.

Returning to the recap by Higashihara, he described a number of things, including that advances such as those in data analytics facilitate the use of systems thinking to resolve problems; plans to manage risk and develop businesses by using backcasting to design the future; and that the need for business leaders to pursue social value is greater than ever. However, the comment that made the strongest impression was that harking back to the philosophies of our founders in the Meiji era will be essential to the pursuit of social value.

In fact, Professor Schwab has also made the point that expressing these philosophies in their corporate ethos is a good way of incorporating social value into technology.

Hitachi's corporate mission of "contributing to society through the development of superior, original technology and products" again springs to mind.

The Fourth Industrial Revolution has had a major impact and the pace of globalization has been very fast. While the tendency is to focus on what is happening right in front of us, I am reminded of the importance of looking at the system as a whole and of the significance of our founder's thinking as an unshakable architectural foundation.

I hope to have further opportunities to write about the thinking of our founders in the future.

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