Hello Davos!

We're SOMPO HOLDINGS and we're delighted to meet you.



SOMPO HOLDINGS

SOMPO HOLDINGS is looking to create a range of services that work together like the attractions at a theme park, to encourage the customer to return to experience it many times. SOMPO HOLDINGS is creating better services for the security, health and wellbeing of customers in insurance, nursing care and related businesses. Working together with you, we can help you live your best life and business.

Creating More

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SPECIAL DAVOS ISSUE

YOUR MOVE, HUMANS

How to Navigate the Fourth Industrial Revolution

TIM COOK on next steps for privacy
CHRISTINE LAGARDE on digital currency
JUSTIN TRUDEAU on greener growth
QUEEN RANIA on equity in education
ANAND GIRIDHARADAS on shunning the 1%
AL GORE on a sustainability revolution
JANE GOODALL on nurturing nature
MELINDA GATES on funding children's health



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DAVOS SPECIAL **Beyond** AI's Myths A reality check for jobs and society 12 Big Ideas By Kai-Fu Lee for 2020 Christine Lagarde, Justin Trudeau, Melinda Gates, Al Gore and more on urgently needed solutions 2 | From the Editor 15 | Innovations already on the way 16 | China and Big Data's dark side 27 | John Lanchester on capitalism and

industrial revolution By Haley Sweetland Edwards **Deep Blues** Images of the world's oceans in peril Leaders for Change These eight young visionaries are making a difference ON THE COVER: World Economic Forum founder Klaus Schwab, photographed in Geneva by Mark Peckmezian for TIME

Game Plan
Davos summit
founder Klaus
Schwab on the fourth

ILLUSTRATION BY PETER GRUNDY FOR TIME

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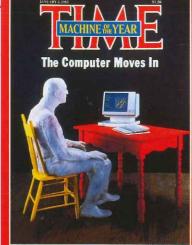
in numbers

in 2030: a portrait

what elites get wrong

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Covering the Future

AS A RELATIVE YOUNGSTER among legacy publications like the Wall Street Journal (1889) and the New York Times (1851), 96-year-old TIME wasn't around to cover the first or second industrial revolutions, in which steam and then electricity transformed the world's economies. But we were early to the third, the one led by microchips and software, and stayed on it for half a century, perhaps most famously in a piece (written, ironically, on a 15-yearold Royal 440 typewriter) that named the computer "Machine of the Year" for 1982 and heralded the dawn of a new era.

About that era, we nailed some predictions (a "TV set hung like a picture," solar heating, autonomous cars)-and called a few things wrong (like clothes "whisked spotless ultrasonically" and accurate weather predictions). But the sharpest eye of the period belonged to Boris Artzybasheff, the most prolific cover artist in TIME's history, who as

early as 1950 saw right through the third industrial revolution and into the fourth. His prescient, surrealist images of computers over the course of the '50s and 60s, including three of the covers above, fused the technological and the human, connecting machines to people and machines to one another in ways that are only now becoming reality.

This special issue for Dayos 2019 was produced in partnership with the World Economic Forum, whose insights and expertise helped us navigate through the wonder, fear, upheaval and opportunity that the fourth industrial revolution has sparked. Will unprecedented global connectivity, advances in automation and artificial intelligence lead to a future of unemployment, misinformation and class warfare-or, harnessed differently, to more empowerment, creativity and sustainability? Author Anand Giridharadas urges the denizens of Davos to stay out of the way and avoid "thwart-

ing those who are working to bury this gilded age." Others see space for opportunity and optimism. Venture capitalist and TIME 100 alumnus Kai-Fu Lee asks us to look past our fears of "robot overlords" and rest assured that the qualities of creativity, trust and empathy will keep humans gainfully employed. Former Vice President Al Gore predicts a "sustainability revolution" will help tackle the threat of the climate crisis.

The issue closes with eight profiles of inspiring rising leaders from around the world, the youngest of whom is Samaira Mehta, a 10-year-old entrepreneur who says this wave of technological change doesn't have to be cause for alarm. "You can tell a computer to do something for you," says Samaira, who has developed two board games that teach kids about coding. "And you can tell a computer to do something good for everyone else."

Edward Felsenthal, EDITOR-IN-CHIEF @EFELSENTHAL

SPONSOR'S WELCOME LETTER

Finding the Common Good in the **Fourth Industrial Revolution**

HE FOURTH INDUSTRIAL REVOLUTION is transforming the way we see our world. It brings both big opportunities and big challenges, as Al may catch up with human brains, which will completely redefine the future. It is a moment of unprecedented disruption and extraordinary innovation, in which the most important thing to ask ourselves is, What kind of society do we want to build, and what kind of happiness do we want to achieve?

In this sense, technology represents both the bright and dark sides of our potential future. It is a source of human progress that can free us to be more productive, strengthen our economies and align our global interests. Or, through our failure to distribute and share it properly, technology can further expand the disparity of wealth between the haves and the have-nots, contributing to the rise of populism and serving as a source for the recent trade conflicts. In times such as these, wisdom may be more important than intelligence, since intelligence only serves to enrich part of the population. while wisdom is as diverse as human experience.

When I was thinking of the type of wisdom that would be most relevant to this issue of TIME, I was reminded of the traditional value system of my mother country, Japan. In the ancient Japanese regime, samurais belonged to the traditional ruling class. They were educated to focus on pursuing the "common good" of the society, not their individual interests. Unlike merchants, they did not try to exploit working-class people for their own gain. Rather, samurais devoted themselves to a life of poverty, while merchants were comparatively wealthy. The social and economic balance provided by the samurais allowed the sovereign to implement a more sustainable social regime, dividing power and wealth more evenly between the classes. To me, this traditional value system seems to characterize the present state of Japanese society, which has the least disparity of wealth among the OECD countries—the upper 20% earns only 3.4 times the income of the lower 20%, according to the book The Spirit Level, which examines why greater equality strengthens societies.

This kind of Japanese social approach can be a practical reminder of how important it is to shape a society that addresses the "dark side" of disruption and ensures that during a period of enormous change, no one is left behind.

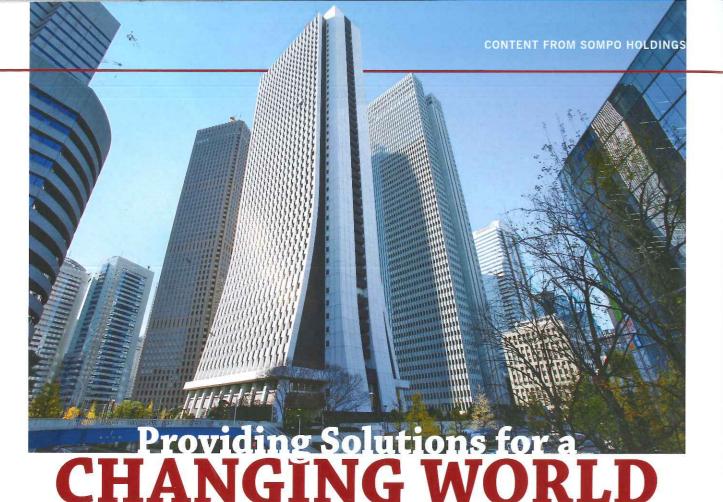
On the other side of the coin, the Japanese tend to immediately criticize any form of confrontation or challenges to our own competitive gaps. However, not all competitive challenges should be considered as "bad." Often apparent gaps or inconsistencies are intentional, and in those gaps we discover opportunities to learn and innovate and to embrace healthy competition. This newfound competitiveness comes from appreciating difference rather than continuity and challenging the past, especially in an era of VUCA—or Volatility, Uncertainty, Complexity and Ambiguity—in which we cannot predict what will happen next and one could be disrupted tomorrow. Business leaders should be willing to transform themselves and their companies.

Originating as a property and casualty insurance company, Sompo Holdings is now transforming itself into a diverse business group. We like to think of this broader vision in terms of a "theme park"-like approach that transcends socioeconomic divides and creates a shared cultural experience. For us this means providing a universal service aligned with a philosophy of pursuing safety, security and well-being-for everyone, leaving no one behind.



KENGO SAKURADA President and CEO Sompo Holdings, Inc.

Sompo is proud to partner with TIME to bring you this special Davos issue.



Sompo—Japan's traditional insurance sustainable planet. provider—is transforming into a global force for innovation, advanced technology, health and well-being.

A CHANGING WORLD creates

both risks and opportunities. As we enter what's being called the Fourth Industrial Revolution, advanced technologies, unprecedented innovations and globalization are unleashing a period of disruption that's altering our work, our lives and the planet.

This week, business and political leaders will gather for the World Economic Forum in Davos. Switzerland, where they will witness a world in two camps: one that is resisting these seismic changes, and one that is embracing transformation and the potential to design and build a safer, healthier, more just and more

One company that is choosing to embrace that change is Sompo. Established in 1888 as Japan's first fire-insurance company, Sompo has always understood risks and opportunities. From its earliest days, the firm began branching out into other forms of insurance, and by the mid-20th century it was expanding across the world. In recent years, Sompo Group has grown into a \$34 billion conglomerate, employing more than 80,000 people in 30 countries on six continents. From its foundation of property and casualty insurance, Sompo has steadily invested in, acquired and founded life insurance, nursing care and health care, and other businesses in Japan and overseas.

Striving for new frontiers is in Sompo's DNA. Under president and group chief executive officer Kengo Sakurada, the company has embarked on a transformation

The Sompo Japan Head Office Building, Shinjuku district, Tokyo

that is changing the very nature of its enterprise. "My goal is to hear people say, 'Sompo used to be an insurance company," Sakurada says. To achieve that goal, he is

technology for its own sake. Sompo views technology as a means to solve business challenges and create rewarding customer experiences. The labs stay focused on the benefits of technology to people-whether families, freewheeling millennials or elderly individuals in need of care. From these three Digital Lab locations,

Sompo's integrated global platform is where expertise and new solutions are shared across countries and continents.

leading Sompo into new areas, such as health care, digital research and development, cybersecurity and artificial intelligence (Al). Sakurada says he sees the firm as providing a "theme park of services for the security, health and well-being of our customers by working to resolve social issues through our business

One of the ways Sompo is striving to realize this vision is through the establishment of the Sompo Digital Lab. Since 2016, the company has launched labs in Tokyo, Silicon Valley and Tel Aviv. Collectively, the labs identify innovative start-ups and partner with them to generate new products and services for a digitallysavvy generation.

"Sompo is taking a broader innovation approach," says Babson College professor Thomas Davenport, a leading expert on data-driven management and an adviser to

Sompo Digital Lab. "The goal for each lab is to work with Al and other technologies

that can help to transform Sompo's businesses for the digital era," he says. The labs are contributing to the development of on-demand insurance, smart homes and devices for digital health and senior care.

But the labs are not concerned with

Sompo is taking innovation global.

The firm has expanded and acquired insurance companies in Europe and the Americas and has reorganized to integrate and align all of its commercial insurance businesses outside of Japan into a common and highly effective platform, Sompo International, to best serve its customers.

When the reorganization is completed in 2020 to include the company's consumer businesses, Sompo will be well on its way "to fulfill our vision to build the first truly global integrated insurance and reinsurance business," Sakurada says.

Sompo's integrated global platform is where expertise and new solutions are shared across countries and continents. One prime example is Sompo's direct impact on an industry essential to our survival: the food and agriculture industry. "AgriSompo," launched in November 2017,

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currently provides agricultural insurance and reinsurance across Asia, Europe and

the Americas, with plans to expand

Farming is a risky livelihood, and Sompo's policies protect farmers from large financial losses when droughts, floods or other disasters strike. Sompo is also developing and

Artificial Intelligence at Sompo

BUSINESSES ACROSS THE GLOBE are discovering the transformative power of artificial intelligence (AI). Sompo, one of the leading insurance holding companies in Japan, recognized early on that Al would play a critical role in its data-intensive industry, so it has been experimenting with a variety of advanced AI technologies since 2015. It has already deployed Al in some areas, where it is delivering considerable value.

Among Sompo's Al endeavors are experiments that use automated machine learning to predict the onset of heart disease and disorders such as dementia. The company is also working on improving data-



science productivity with automated machine learning; automating threat detection in cybersecurity; applying deep-learning algorithms for image-based cost assessment in automobile collision repair; and exploring applications for nursinghome care and patient safety.

Several Al-based systems already in operation include those for underwriting credit insurance, and applying natural language processing to customer interaction in call centers. Al is proving powerful in Sompo's business operations, even where skilled employees engage. The company has further established a Data Science Bootcamp to provide employee training in big data and Al—ensuring that the human talent at the company's heart is poised for success in the Al era.



Sompo Digital Lab

Sompo views technology as a means to solve business challenges and create rewarding customer experiences.

implementing technical solutions that help farmers manage the potential impacts of extreme weather, often linked to ongoing climate disruption.

Another industry essential to our survival is caregiving. Three years ago, when Sompo recognized the severe shortage of qualified caregivers in Japan's nursing care industry, the

Companies must never lose sight of their social purpose and what it means to be human.



company began deploying AI, robotics and other new approaches to augment the work of caregivers and deliver quality patient care. Sompo is also using its resources to mitigate dementia, which affects about 50 million people globally, a number that will double in the next 20 years.

In Japan, the company launched its "Sompo Dementia Support Program" to undertake cross-group initiatives that realize the goal of "a society that strives to prevent dementia and enables people, even if diagnosed with dementia, to continue living with dignity as individuals." For patients and their families, Sompo provides insurance products and care services and is engaged in research, raising awareness and creating an ecosystem of support and services.

Caring for our elders involves recognizing the importance of experience, as well as celebrating and supporting the activities and people that hold us together as a global community. The Seiji Togo Memorial Sompo Japan Nipponkoa Museum of Art in Tokyo embodies this vision, featuring works by Gauguin, Cézanne and Van Gogh on display. They serve as a reminder that no matter how much we transform the world, companies must never lose sight of their social purpose and what it means to be human.



THE PLAYING FIELD

How to keep the next industrial revolution from becoming a winner-takes-all event By John Lanchester

FOR THE FIRST TIME IN DECADES, THE SAME TOPIC currently dominates the conversation everywhere in the world. From Shanghai to San Francisco, the top-of-mind subject is inequality. It's even worrying the winners who gather at Davos. In 2018, the World Economic Forum's Global Risks Report called it "an increasingly corrosive problem."

Although it is a tentative process, big economies have begun recovering from the financial crisis. The trouble is that the rewards of that recovery are mostly going to the people who were already rich. In the U.S., the top 0.1% of the population owns more wealth than the bottom 90%, and the ratio between a top CEO's pay and the pay of a

typical worker has grown from 30 to 1 in 1978 to 312 to 1 today. In the richest and most powerful country the world has ever seen, poor men die 15 years younger than rich men, and overall life expectancy is falling. Frustration at this state of affairs has driven voters to populist and nationalist parties in the U.S., Europe and Latin America. The upshot is that both the 2017 and 2018 reports from Davos called for "fundamental reforms to market capitalism"—a startling thing to emerge from the capitalist winners' enclosure.

Capitalism, however, has been here before. One of its great historic strengths has been its ability to reform and change shape as social needs and democratic demands shift. In the late 19th century, parties of the right in Europe brought in a wave of progressive reforms to suit the times, from expanded union rights to the social insurance that began the creation of the modern welfare state. In these cases, there was a pragmatic and also a moral imperative at work to improve the lives of ordinary citizens.

Yet today, politicians and thinkers have largely stopped making the case for capitalism as a moral good. What we have instead are abstract ideas about the supremacy of markets. At the same time, the surges in inequality seen in country after country are corroding the moral principles that underpin capitalism. The ethical basis for capitalism

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ILLUSTRATIONS BY MARK SMITH FOR TIME