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The 8th edition

An Outlet for Creativity The future of Japan's vocational schools

By Sina Marie ABDALLOUI

Uniquely fusing together traditional education styles with real-life experience in the private sector, vocational schools represent a new future for post-secondary education. They are, according to Silke Bromann, a place where students can gain theoretical knowledge, while also receiving 'on-the-job' training (1). Marking an important shift towards job-based education, vocational schools diversify postsecondary options, offering students well-needed practical training.

Despite their unique approach to education, these innovational institutions only exist in a few countries across the globe. Vocational schools suffer from negative social perception and competition with universities. According to a report by the Australian Department of Education and Training, young adults in Japan feel pressured to pursue university in place of alternative institutions (2). Due to social pressure, many high school graduates disregard vocational schools, even if they are a fitting choice for their future goals.

From the diversity of educational institutions to innovational curriculum, Japan has much to lose by disregarding vocational schools. Germany illustrates the potential consequences that arise from devaluing these schools.

To discuss the issue, I interviewed Mrs. Annette Strecker, a teacher at "Berufskolleg Mettmann." "Berufskolleg" is the official term for vocational schools in Germany, which train students in professions such as economics, social work, craftsmanship, IT, and medieine. The institutions in Germany also allow students to improve upon their high school diplomas, opening the path not only to new jobs, but various kinds of higher education as well, including university. Mrs. Strecker became a vocational schoolteacher in personal hygiene in 1993 and observed the decline in Berufskolleg enrolment for almost 30 years. "During the time I started teaching we had 150 students every year, divided into five classes. Before Covid-19 started, we only had 40 students, and this de[.] clined to a total of 20 students." Sta tistics by the Schulforum Berlin support this observation, illustrating that high school graduates in





Top: Hair dresser in vocational school (provided by Mrs. Strecker) Middle: Ms.Hasegawa, The Grand Prix Soensho Award, provided by Ms. Hasegawa.

Below: Mrs. Annette Strecker



experience stress during their training process.

Another issue could be that students are attending vocational schools for the wrong reasons. "A great number of students who choose this path," explains Mrs. Strecker, "do so out of necessity, because they were unable to graduate with a higher educational diploma." Consequently, only a few students select vocational schools out of personal interest, resulting in poorly motivated students and high drop-out rates.

Negative social perception and low training compensation have robbed vocational schools of their potential to enhance our tertiary education systems. Mrs. Strecker emphasizes that social recognition, work hours, and training compensation need to improve for vocational schools to

achieve their full potential. After all, vocational schools can transform people's lives for the better. Mrs. Strecker described how some of her students have opened their own businesses and hosted educational workshops in their fields. Others have entered the cosmetic industry

Germany. Hasegawa entered vocational school, Nagoya fashion college, to become a fashion designer, proceeding to win the Grand Prix and the Special Award in a contest held by the fashion magazine, Soen.

The Japanese educational system should inform its students more about the professions they can pursue through vocational schools. During an interview, Hasegawa shared her own experience: "In high school, I also thought going to university was the norm. However, I realized that vocational school was the best way to become a fashion designer." The time Hasegawa spent at vocational school enabled her to gain new skills and learn about her chosen profession. Diverse and rigorous, the school's curriculum also provided insights into other careers. Hasegawa views vocational schools as places where people can achieve success and prepare for the diverse demands of a creative career.

"I was excited to create clothes from my imagination and see models actually wearing my creations," shares Hasegawa. To alter the social perception of vocational schools, we need to advertise experiences such as Hasegawa's. Her's is a story of vocational schools at their best. They can offer students independence, a sense of intrinsic satisfaction, and an outlet for creative selfexpression.

Hasegawa wants to pass on the following advice to high school graduates: "Regardless whether they go to vocational school or university, I think people should choose what best fits their goals."

Vocational training might help young adults in Japan pursue their interests and find jobs that inspire and worked for theatres. A few have them. But how can we instill this mindset in the public? We have to keep sharing success stories and providing knowledge regarding the benefits of alternate educational institutions. Many high school graduates remain blind to the vast possibilities and chances they can pursue through vocational school.

tend univer sity rather than vocational train

Why is vocational training less

appealing to German students? Mrs. Strecker claims one of the reasons is low compensation: people can barely cover their living expenses through their training wages. The long working hours required for training also leave no time for a healthy work-life balance. Lastly, due to the high-pressure atmosphere of job sites, students often

even worked for international companies and clients in America.

If nothing changes, vocational schools will continue suffering decreased enrolment rates, becoming less equipped to guide students to success. Moreover, the deterioration of the vocational school system may influence different business sectors. For example, the service industry, closely connected to vocational schools, may suffer staff shortages and decreases in service quality.

Risa Hasegawa, a renowned vocational school graduate in Japan, offered insights regarding how Japan can improve its vocational system and avoid the situation in

Notes:

(1)Silke Bromann. In: Haghirian P. (eds) Innovation and Change in Japanese Management.

(2)Schulforum Berlin. Schulforum-Berlin. https://schulforum-berlin.de/ category/schule-und-berufsausbildung/ (3)Australian Government – Department of Education and Training. Brief: Vocational Education and Training (VET) in Japan

Mental Care

Life in Isolation Dealing with the stress of quarantine

By Alessandro AZZOLLINI

While nurses and doctors worked overtime to keep healthcare systems afloat, and government officials pondered how to prevent an inevitable economic crisis, the effects of the pandemic over the mind were left unchecked. Mental health disorders can result in higher mortality risks and may exert negative influences on people's health even after the pandemic abates. How will we grapple with the psychological damage that arose from quarantine and COVID-19 stress?

As reported by Keio University in an article about COVID-19's impacts on anxiety, levels of psychological distress have been higher in younger age groups and people who are less economically stable. The study suggests that university students, often accruing debt at a young age, suffered from mental illnesses the most during the pandemic. So, what kind of mental baggage has accumulated in university students over the two-year pandem. ic? And how can we grapple with this mental baggage while recovering from COVID-19?

Dr. Rita Boscarelli, who received a master's degree in Develop mental and Cognitive Psychotherapy from La Sapienza University of Rome, has worked with teenagers and university students during the lockdown. She explains that the pandemic exerts the most harm on youth's mental health through social isolation. "Young adults are at a point on their life where they find themselves undergoing various transitions-going to school, moving, starting new jobs. The creation of new social relationships are vital to how their identity forms during these various changes. In contrast to adults, who have generally stable lives and social relationships, young adults are constantly forming new relationships, discovering their boundaries and who they are as they transition through life." The social isolation practices that accompanied the pandemic have disrupted this important psychological and developmental process. I interviewed students from Nagoya University of Foreign Stud ies and Italy's University of Turin, to expand upon Dr. Boscarelli's analysis. Many students agree that it was depressing to live in isolation and lose in-person social connection while living at home. They also described how social isolation disrupted their routine. Unable to meet anyone in person, they became accustomed to sleeping late and waking up even later in the morning. Additionally, students that have





Top: Student following classes at home during the pandemic. Below: Left is Dr. Boscarelli, a psychologist-psychotherapist who graduated in Cognitive Psychotherapy at La Sapienza University of Rome, with a degree in psychotherapy at the Cognitive Behavioral Training School and a master's in Developmental Cognitive Psychotherapy. Right is Mr. Azzollini. Photos: by Azzollini

spent the pandemic with their families were sometimes "unable to handle assignments or study adequately," due to distractions at home. Dr. Boscarelli believes that, if they are different, the family's and the student's routine can clash with one another, making students feel like they are losing their independence and unable to control their lives. online. Online interaction allows students to establish a support network where they can share their experiences of sadness or anxiety. They also deal with stress through entertaining distractions, such as watching films, listening to music and playing videogames.

Although entertainment is a practical way of managing stress and anxiety, Dr. Boscarelli says that it is "only a short-term solution -a temporary distraction with little therapeutic value." This indirect way of dealing with mental distress is called "Avoidant Coping," wherein one focuses their attention elsewhere instead of trying to solve their problem at its roots. These methods are useful, but they should be followed by a more targeted way of coping, namely "Approach Coping." This method directly addresses depression and anxiety at its roots, involving emotional support and the establishment of a healthy routine. From a psychological point of view, routine

has a pivotal role in preventing mental health problems. Maintaining good sleep and nutrition cycles, and setting objectives both reduces stress and anxiety, and helps boost one's sense of self-worth.

From a student's perspective, school is the best provider of a healthy routine; the same goes for going to work: both provide a change of scenery and social interaction. In addition, it is important to engage in physical exercise. Alongside maintaining one's health, exercise also reduc es cortisol levels. This hormone is responsible for the "fight-orflight" response that increases our blood-sugar levels, which can

harm the body if they remain high for extended periods.

Reflecting on the pandemic, there is no doubt that the situation could have been handled better. However, it seems impossible that we could have prevented the spread of the virus without any influence on our social routines. "Preventing what has happened would have been difficult," says Dr. Boscarelli, "and now we should focus on measures that cure the damage that has been done. Universities, for instance, could encourage extracurricular group activities, where students can establish routines and

From social isolation to unsettled routines, the pandemic has affected young adults' health in multifarious ways. "Because the pandemic has been occurring for a while now, its effects on mental health may become more diverse and long term," argues Dr. Boscarelli. "In other words we might be tackling the issue well into the future." To prevent long term psychological damage, it is important people begin taking precautionary measures.

The interviewed students unanimously think they can prevent mental stress during the pandemic by maintaining social connections new relationships with their peers."

In the end, the best coping strategy involves a routine where one can physically commute to work or school, engage in social interaction, and regularly exercise. Japan has developed the slogan, korona totomoni ikite iku, which suggests that we must learn to live alongside COVID-19, instead of continuously postponing social life until the virus is eradicated. Korona totomoni ikite *iku* involves developing ways to maintain our routines and social lives even in COVID-19– moving forward, this is exactly the kind of approach that will help us address further mental damage from the pandemic.

Animal Welfare

What is Becoming of Our Pandemic Pets?

By Kotobuki ODA

 $\operatorname{As}\,\operatorname{people}\,\operatorname{in}\,\operatorname{Japan}\,\operatorname{entered}\,\operatorname{isola}$ tion and stopped heading off to school, work, or vacation, they distracted themselves by buying pets. A quarantine companion and athome entertainment, pandemic pets comforted their new owners in many ways. However, as restrictions lift and people return to their former social lives, pets might find themselves neglected or abandoned.

According to a survey from the Japan Pet Food Association, the number of pet dogs increased by 14%, and cats by 16%, from 2019 to 2020. The association explained this increase as a result of quarantine loneliness: people craved the soothing, peaceful companionship of a pet. However, as they return to their social lives, owners are beginning to abandon their newly adopted friends

In their interview with Shūpure News, an NPO rescue team for orphaned dogs and cats explained why people are abandoning their pets. Some people abandon their pets because they are too noisy, or because they do not realize that pets can be high-maintenance, often requiring daily walks. Moreover, research by the Anicom Domestic Animal White Paper revealed the four most common reasons for pet abandonment: changing residence; unplanned breeding; inability to manage pet behaviour; and allergies.

Pandemic pet owners, who desired comfort during quarantine, need to hold responsibility for their pets even after the pandemic ends. Through proper training and support, pet abandonment is avoidable. Instead of discarding pets when they no longer need them, or can no longer afford them, owners must learn how to care for their animals in the long term.





people to buy pets that they may not have the resources to care for. To prevent these scenarios, the NAPC will visit pet shops and, in accordance with the Animal Welfare and Manage⁻ ment Act, provide consulting on ethical sales practices.

In cases where adoption has already occurred, the center offers training programs, providing pet owners with the necessary tools to care for their animals. Yoko Nīmi, a veterinarian at the NAPC, said: "helping pet owners with untrained animals is one of the best ways to prevent abandonment. Behavioral difficulties that arise from a lack of training often pressure owners to abandon their pets. For example, if a pet is barking uncontrollably, neighbors might complain, and if the problem persists, the pet owner might even face eviction. This is the kind of scenario that leads to pet aban donment." In NAPC's programs, owners learn how to teach their animals proper behavior for home and public spaces, as well as how to appropriately care for elderly cats and dogs. The center will even visit residences to observe how owners interact with their pets and provide case-by-case consulting.

Animal Protection Centers play an inevitable role in addressing pet abandonment issues. Not only do they teach people how to care for their pets in the long term, but they also host educational workshops that teach humans how to peacefully and enjoyably cohabitate with their animals. These efforts work to curb the national rate of abandoned pets.

During the pandemic, the Nagoya Animal Protection Center (NAPC) have made extensive efforts to decrease abandonment rates. Open for six days a week, the centre takes care of rescued dogs and cats, allowing prospective pet owners to

Top: Cat rescued by the Nagoya Animal Protection Center

Below: Building of the Nagoya Animal Protection Center

visit them. In 2020, the NAPC rescued and adopted 115 dogs and 1,120 cats. Because they have trouble adapting to new environments and demand more care from their owners, adult cats account for a large number of these rescued cats.

Ideally, the NAPC wants to address to risk for pet abandonment before adoption even takes place. To do so, the center offers trial terms, allowing prospective owners to see whether they are truly prepared to

care for a pet. This proactively addresses the root of the problem, pre venting those spontaneous pet adoptions that too often result in abandonment.

The center also collaborates with pet shops to improve purchas ing options. Unlike the NAPC, one of pet shops' main goals is to make profit, meaning that they may cut corners in order to sell pets. Pet shop employees often fail to screen pet owners and determine if they are prepared to own an animal. They are also known to withhold information regarding pets' behavioral or health issues, encouraging

As owners return to hybrid work schedules and find themselves spending less time at home, they have to find new ways to connect with their pandemic pets. The NAPC can provide a wealth of support and advice for those struggling with pets. "The media has been giving more and more attention to the issue," says Yoko Nīmi, "and awareness regarding animal protection centers has been increasing. I hope people will take advantage of the resources available to them and learn to peacefully cohabitate with their animals." Hopefully, at some point, pets across Japan will be able to enjoy life after the pandemic as much as their owners.

Global Warming

A Future "Hell on Earth" The world's youth on global warming

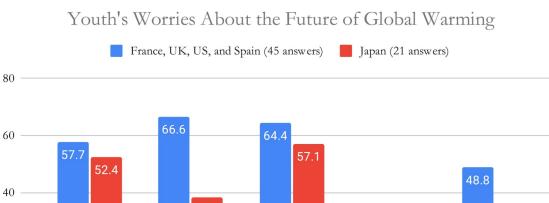
By Killian NOUELLE

Be it the recent floods in Nigeria and Germany or the wildfires in the United States, the world has suffered an array of natural disasters over the past few years. The window to act is closing fast. As governments and industries face public pressure to develop innovative solutions for global warming, many of them are only exacerbating the issue. China, for example, decided to increase its coal production in response to energy shortages. Further, Brazil's president, Jair Bolsonaro, failed to attend the 2021 UN Climate Change Conference, proceeding to encourage agriculture and mining activities in the Amazon rain forest. There is not a shadow of a doubt: actions need to be taken quickly if we want to salvage what is left of the environment.

But how do youth, who will likely experience the future consequences of global warming firsthand, feel about the climate crisis? What effect might the anxiety of global warming have on their mental health? What are their opinions regarding government and corporate action so far? To analyze how younger generations feel about the issue, we decided to interview two students from France and, survey 18–28-year-olds from five different countries (France, UK, US, Spain and Japan).

We began by asking participants what worries them most about global warming. The main concern participants have pertains to natural disasters, with 57.1% of Japanese and 64.4% of international students choosing this response. The floods, heat-domes, and wildfires that have repeatedly occurred over the past few years may contribute to these statistics. Moreover, 23.8% of Japanese and 13.3% of international students were worried that their residencies might be prone to such natural disasters. Japan's exposure to tsunamis, earthquakes and typhoons might account for this anxiety. In their written responses, students elaborated on these concerns. One participant wrote: "I'm worried about the living conditions on earth with the rapidly increasing temperature and upcoming food shortage.' Others worried about their future families: "Someday I would like to have a family, and I really struggle with the idea that my children might have to survive the hell-onearth that global warming will become." Another wrote: "I feel anxious about the future of humanity, and particularly the future of my





Increase in natural

disasters

38.1

Reduction of

biodiversity

be begging the question: are individual actions really enough?

One of our French respondents, Marina, explains the reasoning behind this skepticism: "Collective action on the individual level is not enough, because the real power to make change resides in

Photo: NO NATURE - NO FUTURE. Global climate change strike

Decreased quality

of life

Given their feelings of involvement, how might youth fight against global warming in the future? One method, popularized by the media, involves "small-actionsbig-changes." This method involves small, but consistent actions made on a daily basis. For more than a decade now, we have been told to reduce, recycle, and reuse as much as we can. Indeed, when reproduced on a large scale over time, certain actions, such as recycling and plant ing trees, can have long-term effects on the environment. Nonetheless, youth participants seem to be doubting the "smallactions-big-changes" narrative; only 34.3% of international and 17.6% of Japanese participants feel that individual actions actually make a difference. The world's youth seem to

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13.3

Residency prone to

natural disaster

the hands of governments and corporations." Another participant commented: "The real problem is that large companies need to regu late their impact on the environment, because the impact of environmentally harmful industrial practices is ultimately the greatest." Further, going completely green is simply not possible for some individuals-not everyone can afford environmentally ethical products. In other words, while the "smallactions-big-changes" method might have some effect on the environment, governments should avoid relying on individual efforts to counteract global warming. Instead, they must collaborate with corporations to combat climate change.

14.3

Unsure what to

expect

Provided by Markus Spiske

20

0

Graph explanation on page 6

children." From global warming to food shortages to child well-being, youth across the globe have dismal outlooks for the world's future.

Luckily, youth anxiety towards the climate crisis has the potential to translate into action. According to our survey, 97.4% of international and 73.9% of Japanese respondents feel involved in the global warming issue. "Many young people feel pressured to protect the planet," says Marina, a student from Bordeaux Montaigne, "because it is literally the world they're going to live in."

Continued on page 6

Industry

From Combustion to Electric Cars Can workers survive the change?



By Danny DEXL

Currently, a quarter of the European Union's CO2 emissions stem from road traffic. In response, coun[.] tries have begun introducing plans to transition from combustion engine cars to electric ones. Multiple countries have already issued phaseout dates for diesel- and petro -powered cars. Germany plans to halt new registration of combustion engine cars by the year 2030, the same year as Great Britain. Japan and Canada plan to cease sale by 2035. There are even plans for an EU-wide ban. Meanwhile, car man ufacturers, especially those from Germany and Japan, are preparing for a rapidly emerging electric vehicle market so that they can maintain domestic and international sales.

While these plans are welcomed by climate activists and scientists, critics claim that the transition will happen at the expense of workers from car manufacturers, possibly overworking them and jeopardizing their jobs.

may have unrealistic expectations for factories and employees. In September 2021, for example, Toyota CEO, Akio Toyota, warned that the challenges created by electrification should not be underestimated. Referencing the low sale of electric and hybrid vehicles, he expressed that the goals set by other companies may be unrealistic.

Overambitious goals might throw the workforces of car manufacturers into disarray—new company sectors will be created, and others phased out; new work forces will be hired, and others layed off. Endangering people's job security, this ultimately leads to friction amongst workers.

I interviewed Ms. Klaus, a project leader for the transmission development department in Mercedes' Stuttgart factory, to hear how workers feel about the transition to electric cars:

words, how well can Mercedes succeed in this newly burgeoning car market? Considering the ambitious plans of other competitors, it is difficult to know if Mercedes will be able to maintain current profits, or have to downsize. Should Mercedes incur losses, this will naturally affect employees.

Q: How do you think the transition will affect Mercedes' workers?

A: Some of the effects are already surfacing in the workplace. There is a noticeable split between teams that work on classic combustion engines and those that work on electric cars. This friction arises from worries that certain positions will be replaced by workers in new fields, such as chemistry.

Q: Is there any internal pushback to these plans?

A: Currently, employees have differing opinions. Some workers have embraced the change, recognizing the importance to combat global warming. Many of these works already drive electric cars. The majority of the workers against these plans are those who do not work on the newer technologies and are at risk of losing their jobs.

The issue of job security that Ms. Klaus describes remains a point of tension. In November of this year, Daniela Cavallo, chairwoman of Volkswagen Group works council, criticized COE Herman Diess after rumors surfaced about the termination of over 30,000 jobs. While official statements claim that jobs are secure, this is clearly doubtful, especially since entire company sections will become obsolete by 2035, when the legal mandate to halt combustion engine production will come into effect.

It is no question that the rapid changes necessary to combat climate change will come with consequences. Halting production of combustion engine vehicles is a vital part of this battle. Nonetheless, we must consider the social wellbeing of workforces while implementing these changes. To do so, companies should open communication channels with their employees, including them in decision-making processes.

Car manufacturers have set ambitious plans to transition to electric car manufacturing. While these changes are required by new legislation, it is important to keep in mind the well-being of workforces. Unlike executives, these groups are the most vulnerable to change. As entire industries and economies are restructured to combat climate change, companies struggle to maintain bottom-line profits. We need to ensure that workers are not lost in the battle.

Photos: Top & Below: Car manufacturing lines at Mercedes Benz.

Two of the largest car manufacturers, Volkswagen and Toyota Motor Group, are making plans for the transition. Volkswagen plans to focus on the development of electric cars and halt production of combustion engine cars between 2033 and 2035. Toyota decided to cut down new vehicle CO2 emissions by 90%. Daimler AG, the 3rd largest manufacturer by revenue, also plans to follow suit.

These plans are ambitious, but they are made by executives, and

Q: Mercedes has set high targets to achieve CO2 neutrality. Do you think they will succeed in reaching their goal?

A: Because it is government mandated, Mercedes must reach their goals. Considering Mercedes' size and the growing market of electric cars, it is definitively possible to reach these goals. However, the most difficult part involves reaching the customer and adapting to their desires. In other



From page 4

Our survey results paint a coherent picture: young people feel personally affected by global warming because it has a direct impact on their future lives. While they feel involved in the climate crisis, and engage in what little actions they can, they still feel frustrated and hopeless-worried that governments and corporations will fail to

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systematically protect the environment. Indeed, given the current state of global warming, if governments fail to own their responsibilities, today's youth will have a hard fight ahead of them.

<u>Graph explanation</u>

To understand youth sentiment regarding the climate crisis, I sent a questionnaire to students from Japan, France, the USA, the UK, and Spain. Surveying an international collection of participants allowed me to analyze youths' thoughts about the climate crisis on a comparative, transnational scale. In addition to the questions in the graphs, we also asked students how they became aware of the climate crisis, whether they feel implicated in it, and what daily actions they take to prevent global warming.

As a 23-year-old, I felt that I

could relate to many of the answers -especially the written ones-that we received from participants. I hope seeing the opinions of younger generations will be inspiring and informing for our readership.

Thanks to the data, we were able to understand more about how younger generations feel towards the climate crisis, and what they think should be done to solve the issue.



The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-inhand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

The SDGs build on decades of work by countries and the UN, including the UN Department of Economic and Social Affairs

In June 1992, at the Earth Summit in Rio de Janeiro, Brazil, more than 178 countries adopted Agenda 21, a comprehensive plan of action to build a global partnership for sustainable development to improve human lives and protect the environment. adopted the outcome document "The Future We Want" in which they decided, inter alia, to launch a process to develop a set of SDGs to build upon the MDGs and to establish the UN High-level Political Forum on Sustainable Development. The Rio +20 outcome also contained other measures for implementing sustainable development, including mandates for future programmes of work in development financing, small island developing states and more.

In 2013, the General Assembly set up a 30-member Open Working Group to develop a proposal on the SDGs.

In January 2015, the General Assembly began the negotiation process on the post-2015 development agenda. The process culminated in the subsequent adoption of the 2030 Agenda for Sustainable Development, with 17 SDGs at its core, at the UN Sustainable Development Summit in September 2015.

Member States unanimously adopted the Millennium Declaration at the Millennium Summit in September 2000 at UN Headquarters in New York. The Summit led to the elaboration of eight Millennium Development Goals (MDGs) to reduce extreme poverty by 2015.

The Johannesburg Declaration on Sustainable Development and the Plan of Implementation, adopted at the World Summit on Sustainable Development in South Africa in 2002, reaffirmed the global community's commitments to poverty eradication and the environment, and built on Agenda 21 and the Millennium Declaration by including more emphasis on multilateral partnerships.

At the United Nations Conference on Sustainable Development (Rio+20) in Rio de Janeiro, Brazil, in June 2012, Member States 2015 was a landmark year for multilateralism and international policy shaping, with the adoption of several major agreements:

Sendai Framework for Disaster Risk Reduction (March 2015)

Addis Ababa Action Agenda on Financing for Development (July 2015)

Transforming our world: the 2030 Agenda for Sustainable Development with its 17 SDGs was adopted at the UN Sustainable Development Summit in New York in September 2015.

Paris Agreement on Climate Change (December 2015)

Now, the annual High-level Political Forum on Sustainable Development serves as the central UN platform for the follow-up and review of the SDGs.

Parts Shortage

The Semiconductor Shortage

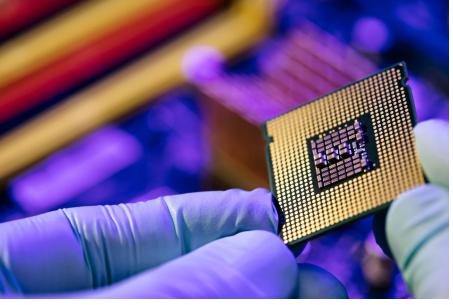
How a supply chain crisis compromised the global economy



By Kevin Souflan BOUDAM

Since early 2021, the world's electronics industry has been suffering a semiconductor chip shortage. Often greeted by an "out of stock" message on online retail websites, consumers are not spared from this shortage. Even the automobile industry, which require semiconductor chips for modern car systems – such as anti-lock braking systems – is struggling to meet demand.

A drastic rise in global demand and sudden decline in production triggered the global shortage before manufacturers had time to take counter measures. When COVID-19 triggered a global transition to remote work and online classes, a drastic increase in demand for electronics exhausted chip reserves. Only two companies possessed the technology to manufacture the most advanced 5-nanometer chips and fill this demand: the Taiwan Semiconductor Manufacturing Company, which produces made-to-order chips for other companies, and South Korea's Samsung. When these two manufacturers reduced chip production due to the pandemic, the electronics industry could not acquire the chips necessary to



Top: New cars waiting for shipping at Kinjō-futō port in Nagoya city, Aichi prefecture.

Photo: by Kojima

Below: Semiconductor chip, by Mykola Pokhodzhay.

'and since we expect the shortage of semiconductors to continue in the long-term, we will consider using substitutes where possible." Toyota Motors subsequently downsized its plans for November, and temporari ly halted all car production in Japan. Honda Motor cut their planned production for October 2021 by 30% for the same reasons. With car companies suffering decreased profits and production delays, we can suspect the industry's employment rates to decrease as well. On the other hand, Pfeiffer Vacuum, a French company that manufactures vacuum pumps, saw an increase in sales. "The semiconductor chip industry uses our vacuum pumps, and as chip manufacturers invested to increase their output and meet demand, we saw an increase in sales" said Corinne **Orenes**, International Purchasing Director at Pfeiffer. "However, because semiconductor chips are used in the manufacturing process of our vacuum pumps, we've also

experienced delays, and even shortages. To end this vicious cycle of shortages and secure our supply, we made commitments with our suppliers for more than one year into the future."

The most optimistic predictions from industry leaders expect the situation to be resolved within the vear. But as 2021 nears its end. with no improvement of the semiconductor chip supply, some consider the forecast unrealistic. In a recent interview with CNBC, Pat Gelsinger, CEO of Intel Corporation, a company specializing in computer chips, said that "we're in the worst of it now" and the situation will slowly get better throughout 2022, before finally reaching a prepandemic "supply-demand balance' in 2023. For consumers, a drastic decrease in chip supply means either a considerable hike in the price of electronics, or an inability to access them if they run out of stock. We can already see this unfolding in

the computer graphics card market. Medium-end graphics cards, which used to be sold for around 200 USD, are now in the 300-400 USD range. High-end cards, which originally reached prices of up to 800 USD, have passed the 1,000 USD mark, making them completely unaffordable for most.

In addition to companies, individual consumers are also suffering from this global shortage. Robert HANSEN, a freelance 3D Model Artist located in Melbourne, Australia, has decided to postpone up dating his computer until prices settle. "I don't believe now is the right time to buy a new graphics card, as prices have skyrocketed not to mention the fact that they are consistently out of stock." Unfortunately, in the shift to online work during COVID-19, not all consumers can avoid the high prices. "My biggest fear right now is my graphics card breaking down and having to buy a new one at the current inflated market price. I also might not be able to access a chip, which means I could miss important deadlines at work."

With the demand for electronic products only continuing to increase, consumers might be disappointed at the lack of stock. Moreover, companies who would have seen profits this season might fall short of their sales objectives.

As the effects of this semiconductor chip shortage ripple across the world, we should think about how to prevent future shortages. Some countries have begun developing long-term solutions. For example, the United States, whose Department of Defense (DoD) requires semiconductor chips for military equipment, struck a deal with Intel to "provide commercial foundry services in its multi-phase RAMP-C (Rapid Assured Microelectronics Prototypes - Commercial) program." This program will "facilitate the use of onshore foundry infrastructure, ensuring the DoD access to leading-edge technology." Pat Gelsinger, the CEO of Intel Corporation, maintained that "one of the most profound lessons of the past year is the strategic importance of semiconductors, and the value to the United States of having a strong domestic semiconductor industry." Of course, building new manufacturing factories takes time, and the impacted industries will not see a significant change in the semiconductor chip market quite yet. However, in the longterm, companies' solutions to the issue will considerably reshape the market and protect against global shortages.

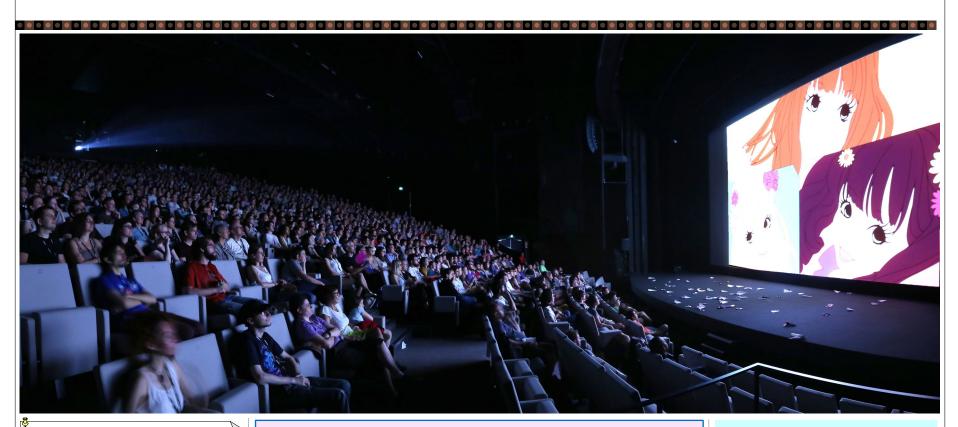
manufacture electronics.

The automobile industry has suffered the most damage during this shortage. On October 15th 2021, the European Automobile Manufacturers Association stated that "demand in E.U. shrank by 23.1% to over 718 thousand units, marking the lowest number of registrations for the month of September since 1995. This decrease in sales was largely caused by a lack of vehicles due to the ongoing semiconductor shortage."

The Japanese market incurred similar losses. "We have made repeated adjustments to our production plans due to a shortage of parts," announced Toyota Motors,

Animation

The Past and Future of Japanese Animation at the Annecy Film Festival



By Mathilda ORENES

Orenes: Could you explain the Annecy festival?

Mr. Sebastien Sperer: The festival first opened over 60 years ago-June, 1960–in Annecy, France. Since then, the festival has grown exponentially. Hayao Miyazaki himself presented his famous film, Porco Rosso, in the 1998 festival, winning the Crystal for Best Feature Film. In 2017 there were 115,000 entries and 10,000 accredited persons. Currently, the festival represents 87 countries, including Japan. Every year, the festival chooses the winning animations out of four different categories: feature films, short films, television and commissioned films, and graduation films. In parallel to the competition, we hold various events, including world premieres, retrospectives, tributes, and outdoor screenings. We even host panels with the filmmakers.

This film festival is very important not only for the city of Annecy, but also for professional and amateur filmmakers around the world. Thanks to the lineup's international reach, various countries and animators can share their culture through animation. For almost six decades, the Annecy International Animation Film Festival has been a trendsetter in the animation industry. Every year, the festival showcases original, high-quality animation from established and emerging artists across the globe. Recently, the trend of this international lineup has been Japanese films. What makes Japanese animation so attractive to the Annecy festival?

To answer this question, I interviewed Mr. Sebastien Sperer, who has been working for CITIA (La Cité de l'Image en Mouvement/ The City of the Moving Image), the organizing body of the festival, for over 22 years. He is currently a member of the festival's selection committee.



quality, but a unique, well-written script is key.

Large production companies avoid taking creative risks, tending towards "safe movies" that they know will attract viewers and money. However, here at Annecy, we like showcasing filmmakers with original and peculiar ideas. One example is Masāki Yuasa, who created unique films while he was an independent filmmaker with a limited budget. Now Yuasa has his own studio–I am proud that he didn't lose sight of his goal and maintained his unique style.

ment to nature and ecology is Masāki Yuasa's Netflix series, *Japan Sinks 2020.* Presented in 2020, the series is the adaptation of Sakyō Komatsu's 1973 disaster novel, Japan Sinks. It paints a future Japan on the brink of collapse due to incessant natural disasters and rising water levels. Since the late 20th century, Japanese films have addressed the ecological crisis, attracting interest in the wake of global warming.

Q: During your 22 years working for the festival, is there one Japanese film that really stood out?

A: Of course. The movie is *Paprika* from Satoshi Kon, who I consider to be the god of Japanese animation. The movie is set in an eccentric future where characters must search through the past to overcome problems and understand how they arrived in the present. Kon's visionary films create a queer temporality that extends across past, present, and future, challenging the way we experience time. I am also interested in Kon's method: he doesn't consider his work to be a lonely task because he claims to work with his "alter-ego." You can definitely sense this creative joy and passion while watching his movies.

Top: Annecy Film Festival Left below: Sébastien SPERER Provided by Sébastien SPERER

A: What I have noticed over the years is that Japanese films are losing their originality. What we want is uniqueness and a lot more work in the stories and the quality of the animation.

Nevertheless, despite this lack of unique innovation, we were still able to qualify three Japanese movies in the feature films category. This represents a quarter of the 12 qualifying movies selected from the submissions of 87 different countries.

Clearly the Japanese industry has to renew itself. After many years of innovative filmmaking, it must find its path to uniqueness once again. Luckily, it seems that a promising wave of movie directors will guide the industry into the new year. In this wave, women are taking the foreground, a difficult feat in Japan. One of the rising talents is Sawako Kabuki. She used to work in the Japanese porn industry and is now trying to break into the animation world with mature and quirky concepts, including music videos and sexually explicit imagery. In fact, she entered the "new wave-short films" category for her short movie, WHAAH (named after the sound of a baby crying) during the 2019 Annecy festival.

Q: What are your criteria for selecting the movie lineup?

A: Every year, more than 3,000 movies are registered but we can only select 250. In the selection we see everything. The criteria are subjective. It depends on what we think people want to see and our personal opinion. For me, the most important part is the writing work that occurs beyond the animation itself. It is obviously important that the animation and editing is of high-

Q: Amongst the 3,000 films selected each year, what makes Japanese animation so attractive?

A: One peculiarity of Japanese films is their recurrent references to nature and ecology. This aspect of Japanese animation has always attracted viewers because it echoes current ecological problems. The most recent example of this commit-

Q: What should Japanese directors keep in mind to win the Grand Prix next year?

Thanks to these new talents, we can expect interesting and promising Japanese films in the years to come. According to Mr. Sperer, these new and fresh concepts are what will make the 2022 edition of the film festival unique.

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